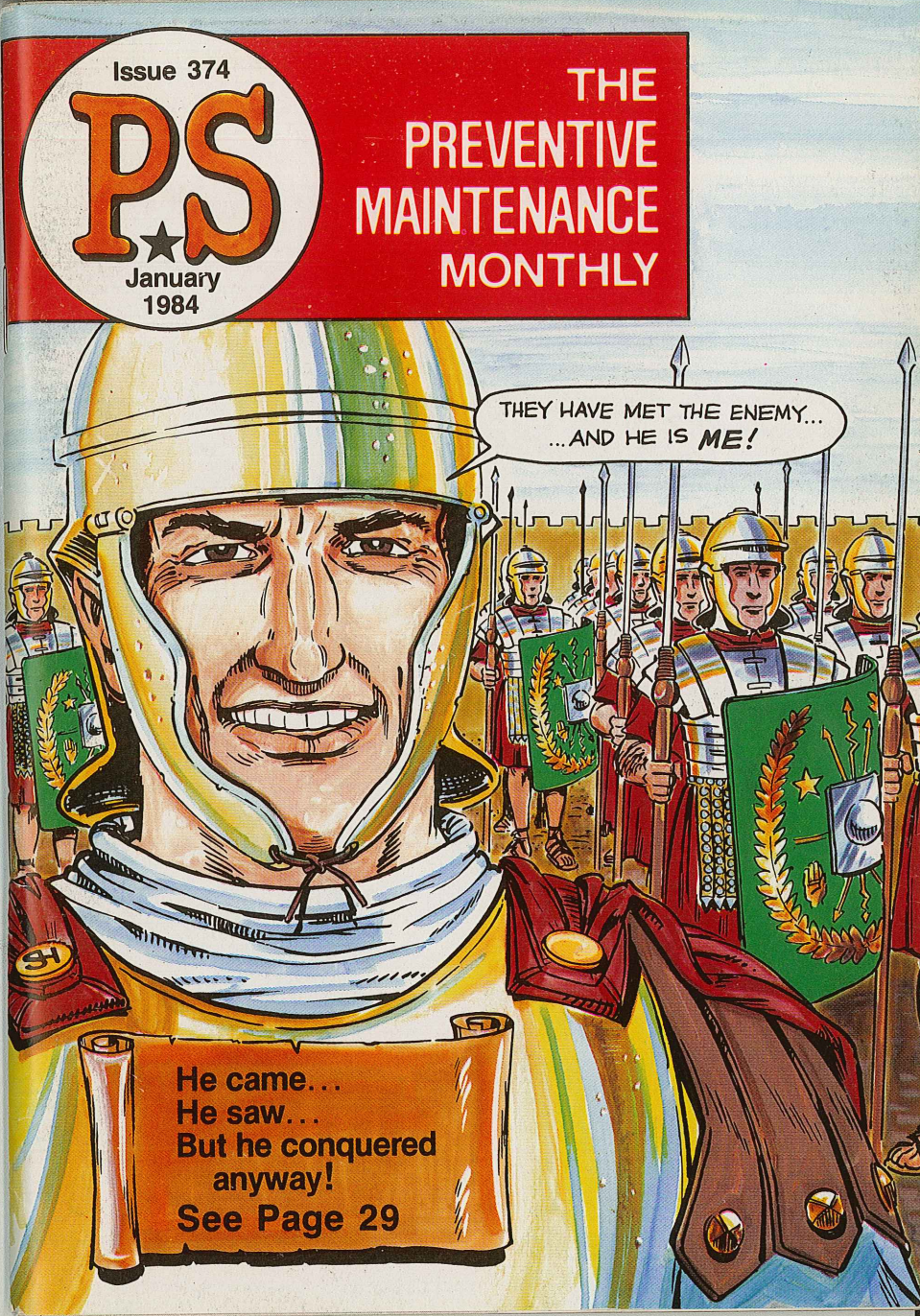
Issue 374

PS

January 1984

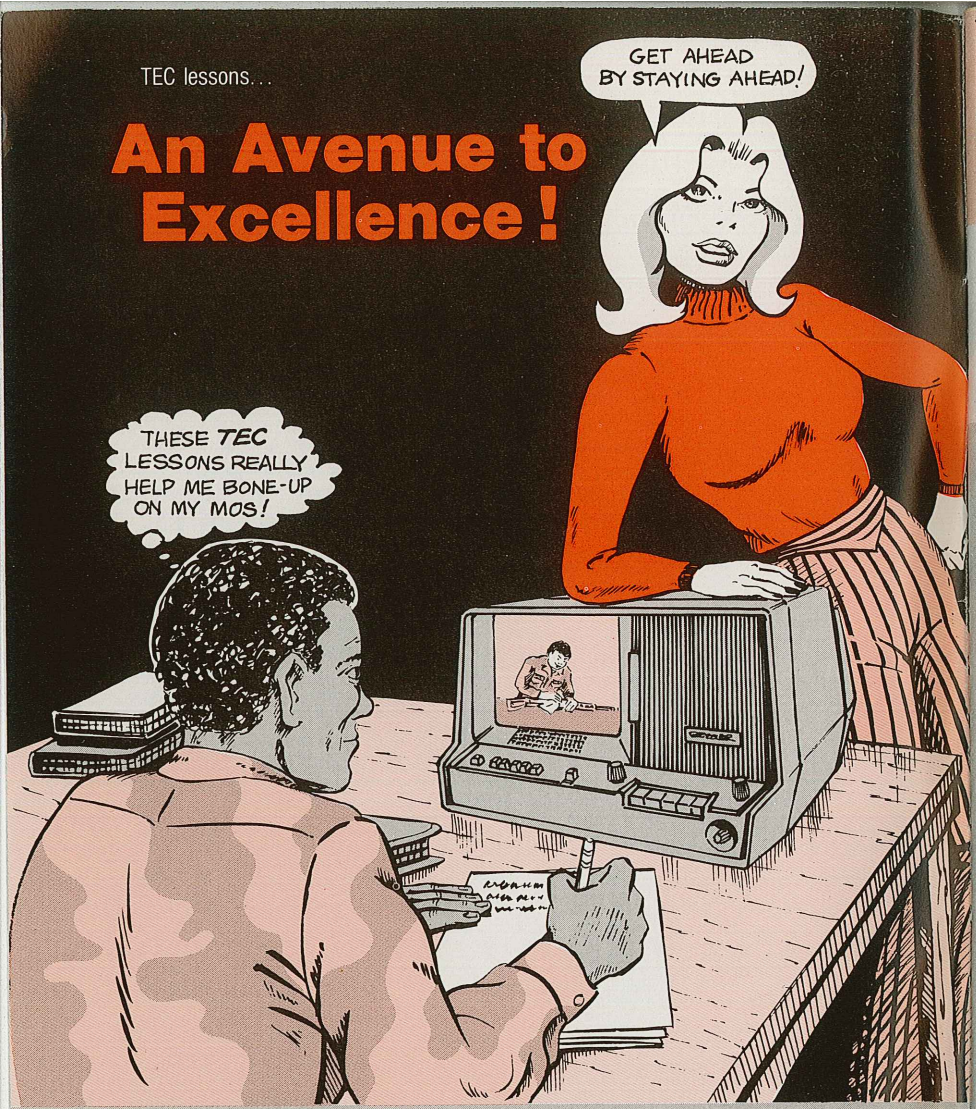
THE PREVENTIVE MAINTENANCE MONTHLY



See Page 29

TEC lessons...

An Avenue to Excellence!



What do you do when you've finished basic and advanced training? Train some more. The people who get ahead are always learning something new!

Training Extension Courses (TEC) are a great way to keep and upgrade your common soldier skills and special MOS skills. They're mostly short, easy to use and easy to follow.

Most TEC lessons are audiovisuals—a combination of pictures and sounds on tapes. You play them on a "Cue/See" projector. Your learning center has projectors.

No time to track over to the learning center? Your unit can borrow one from the supporting Training and Audiovisual Support Center (TASC). Those projectors—and the TEC lessons, themselves—come in protective cases. The projector can be powered by a field generator or standard current. So wherever you are, you can train.

TEC lessons **tell** you what to do and how to do it on a sound cassette. They also **show** you what to do and how to do it by film cassette. Most lessons also have a booklet or printed sheets to check, too. So you learn by looking, listening and reading.

Some lessons are set up for hands-on training. You listen to the tape on a standard portable cassette player as it "talks" you through a job or task.

You set your own pace. The time you take to complete the lesson is unimportant. What is important is for you to learn. After you finish a lesson, you take a test—included in the lesson. If necessary, you can repeat the lesson until you're ready to take the test. It's your training. So you pace it, you test it and **you** score!

TEC lessons can be used in basic, advanced individual or unit training. TEC also helps you to prepare for the Skill Qualification Test (SQT). Overall, TEC users score higher on SQTs than soldiers who do not use TEC.

TEC lessons are listed in the Extension Training Materials (ETM) Catalogs in the DA Pam 350-series. Instructions in the back of each Pam tell you how to get the TEC lessons.

PS THE PREVENTIVE MAINTENANCE MONTHLY

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

MSG Half-Mast
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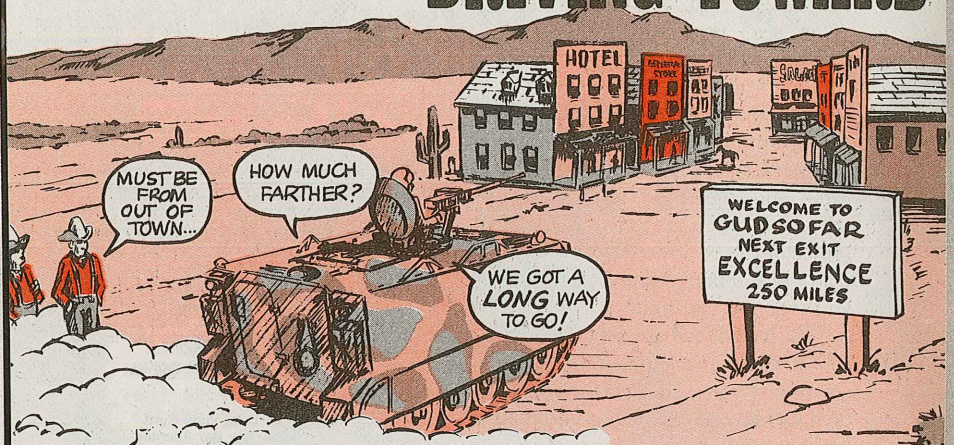
DRIVING TOWARD EXCELLENCE

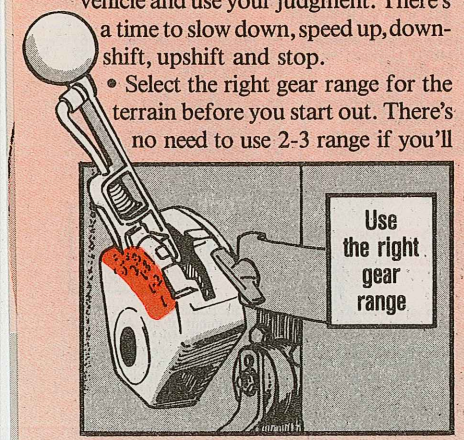


As the driver of an M113-series carrier, you've got a lot of responsibility. It takes skill and good judgment to keep your equipment in shape to fight.

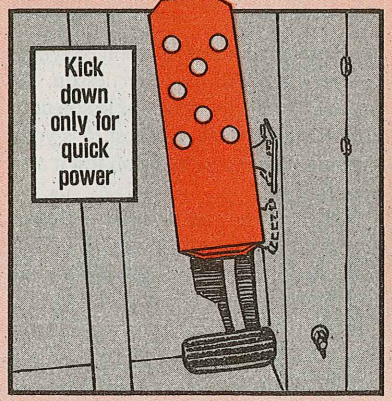
This really holds true when it comes to wear and tear on the engine and transmission.

You've got to know the limits of your vehicle and use your judgment. There's a time to slow down, speed up, downshift, upshift and stop.

• Select the right gear range for the terrain before you start out. There's no need to use 2-3 range if you'll be driving up and down steep hills. In fact running in the wrong range puts a big strain on the engine, forcing it to run harder. And, the strain increases the chances of transmission overheating.

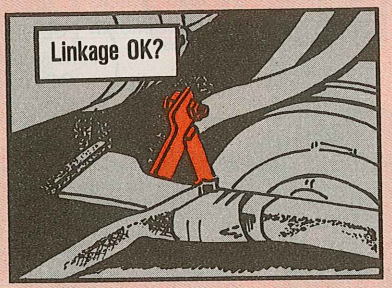


• Use the kick down feature of your transmission only for a needed burst of power. Don't put the pedal to the metal just to pull a heavy load—gear down instead.



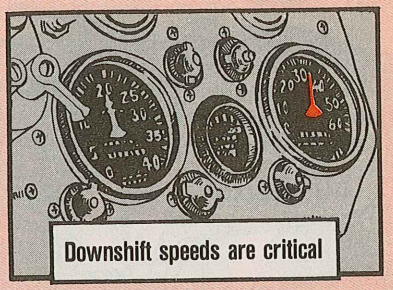
Put another way: If you need extra pulling power, go to a lower range. It's a whole lot easier on the engine and transmission.

• As for the transmission kickdown, make sure the one on your carrier works. If you don't get a downshift when you fully depress the gas pedal, the linkage may be messed up. If it is, you could be lugging your engine trying to get more speed out of it. Get your mech to fix it.



• Remember, too, that your carrier is not a hot rod. Accelerate smoothly and steadily, allowing your engine and transmission to do their work the way they were designed.

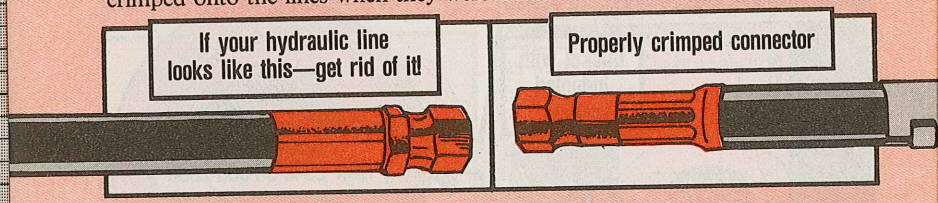
• Pay close attention to the right transmission downshift speeds shown on Page 2-67 of TM 9-2300-257-10. You don't go from 2-3 range to 1-2 at 35 MPH, for example. You could have more transmission parts flying than there are hornets in a nest.



Hydraulic Line Safety Hazard

Mechs, check your carriers now for bad pivot steering hydraulic lines.

These lines will fail under high pressure because the end connectors weren't crimped onto the lines when they were made.



You can identify the bad lines by the uncrimped connectors. As a stop-gap until you can get new lines, remove the bad ones and have DS crimp the connectors in a crimping device. Order new lines with NSN 4720-00-986-8699.

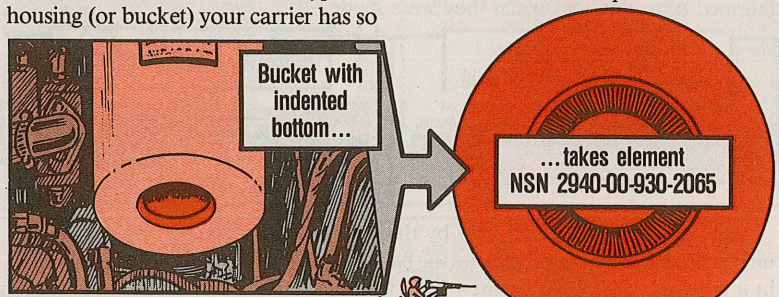
In Search of Clean Air

You can get all balled up in confusion, carrier crews, when you're trying to take care of your air cleaners.

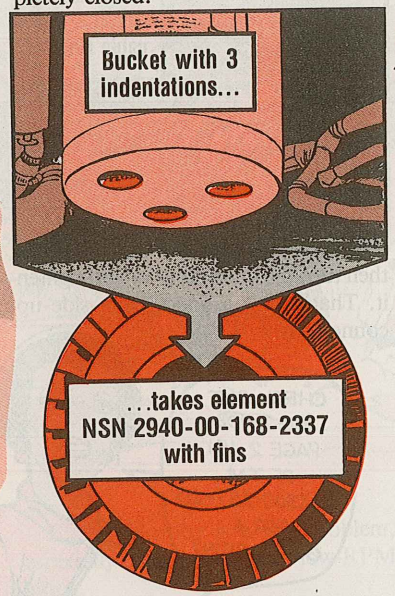
That's because there're 2 different air cleaner elements and 2 different housings used on your carriers.

You need to know what type of housing (or bucket) your carrier has so you can get the right element.

If you've got a housing with one circle indented on the bottom, its NSN is 2940-00-999-2119. The only filter element that works with that housing is NSN 2940-00-930-2065. It has no fins and both ends are open.

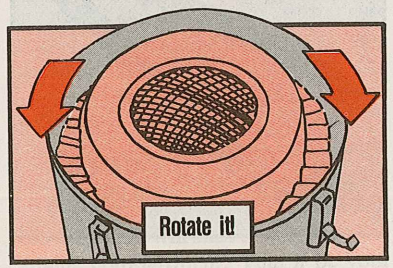


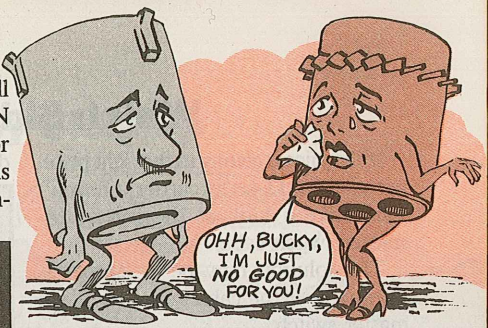
If you've got a housing with 3 small circles indented on the bottom, its NSN is 2940-00-103-5797. The element for it is NSN 2940-00-168-2337. It has fins at the top and a bottom that is completely closed.



These elements cannot be interchanged. They won't work right unless they're used with their matching housings.

(Tip: When installing the finned filter element, make sure you rotate it in the housing until it fits snugly onto the 3 indented circles on the housing. The assembly won't close right unless you get it in place.)

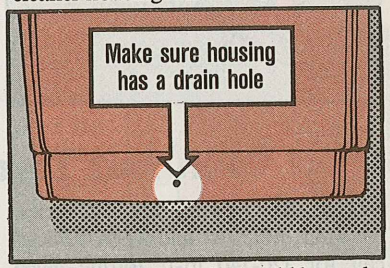




After you get the right element for your vehicle's housing, be sure to clean it right, too. Don't use compressed air unless you have to. Even then, use only 30 PSI. Your TM 9-2300-257-10 is wrong when it says to use 100 PSI.

The best way to clean the element is to gently shake it or soak it in soapy water. Pages 3-28 and 3-29 of the -10 TM tell you how.

While you're at it, make sure your air cleaner housing has a drain hole in it to let water out. The hole should be on the housing bottom. If yours doesn't have one, get your unit mech to drill one, with a 3/16-in bit.



Then mount the housing with the hole at the lowest possible point so the water will run out. A wet filter element is no good at all.

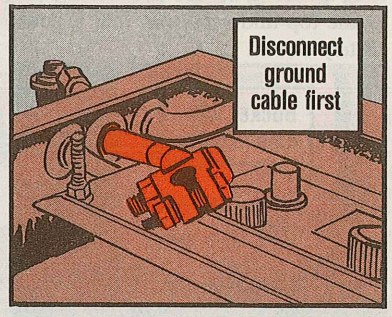
Which Side Is Up?

If the juice is getting to the right place, but your M113-series carrier still won't start, take a look at the battery-to-master switch cable.

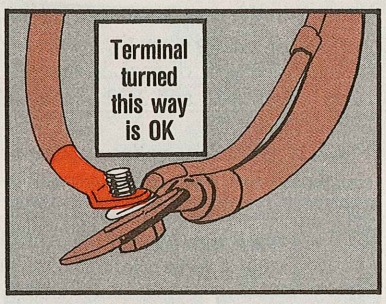
The solution may be as simple as turning over the cable terminal at the master switch.

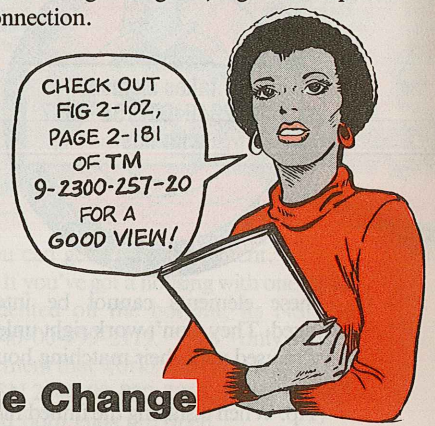
Seems some cables were installed wrong—with the raised side of the terminal against the back of the switch. That way, the terminal works itself loose. The electrical connection is good enough to pass a multimeter check, but not good enough to energize the starter.

If the raised side of the terminal is against the back of the switch, first disconnect the battery ground cable and



then turn the terminal over and tighten it. That'll give a good, right-side-up connection.

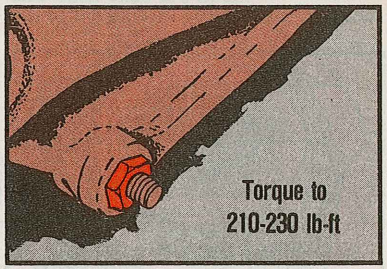




Pin Nut Torque Change

The –20 TM's for M113A2-series, M548A1, M730A1 and M901 vehicles call for 120-140 lb-ft torque when installing the nut on the roadwheel support arm shock absorber pin. That's not enough. The nut will loosen.

As soon as you can, torque all pin nuts to 210-230 lb-ft. This torque change will be added to your –20 TM's.



Blow-by Cleanup

Engine blow-by is a real problem, especially during periods of low-RPM idling.

It's so much of a problem that the airbox drain and crankcase breather collector can may need to be cleaned more often than weekly.

If enough crud collects in the "slobber box," there'll be too much pressure created in the crankcase. Your engine may burn too much oil, and performance may suffer, too.

At any rate, if you must idle at low RPM, like when you're downrange during a field exercise, keep a watchful eye on the collector can.

You'll be able to tell when it's full. The blow-by crud will start seeping into the engine compartment. That'll be your cue to remove the can and clean it and the plastic element inside.

In the field, just use a rag to wipe off the crud. If you're near your maintenance outfit, clean the can and the element with drycleaning solvent.

When possible, run your carrier at a higher idle so most of the blow-by is burned inside the engine.

M1 Tanks...

Lube as Needed

Remember the one about the squeaking wheel getting the grease? Well, that ought to be your favorite saying when it comes to lubing some parts of your M1.

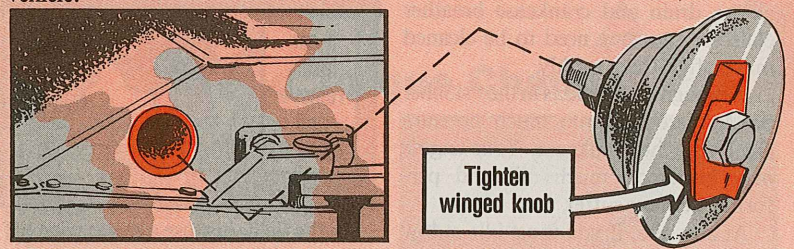
When you hear metal scraping on metal, something's getting worn out. Check it out and lube it, if that's what it needs.

There are quite a few lube points on your tank that get lube *as needed*, not just on a schedule. For example, look on the backside of Card 1, LO 9-2350-255-12. There are 21 oil can lube points that get lube when they need it, or at least every 6 months.

So-o-o-o, if the TC's hatch latch, for example, is sorta rusty and it sticks a little, don't wait—don't even hesitate. Get out the preservative oil (PL-M) or general purpose oil (PL-S) and squelch that squeak.

Exhaust Plug's a Water Stopper

Watering down the inside of your personnel heater is a bad idea, but that's what happens if you don't install the heater's exhaust plug before washing your vehicle.



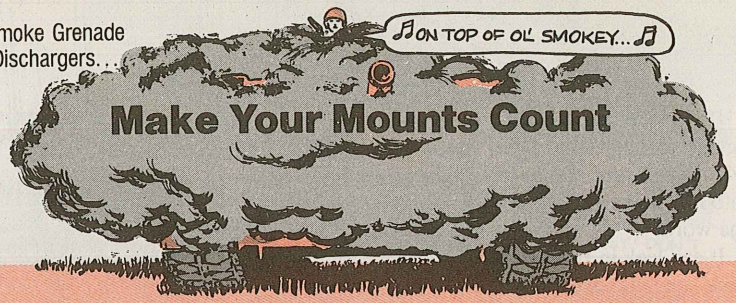
The result—a rusty heater that won't work when you need it.

The plug's listed as a Basic Issue Item in C2 to TM 9-2350-255-10-3, Page B-8. It's also called out in the -10-1 TM on Page 2-35.

Just slip it into the heater exhaust outlet and tighten down the winged knob on top of the plug.

Be sure to remove the plug after you wash your vehicle.

Smoke Grenade Dischargers...



Make Your Mounts Count

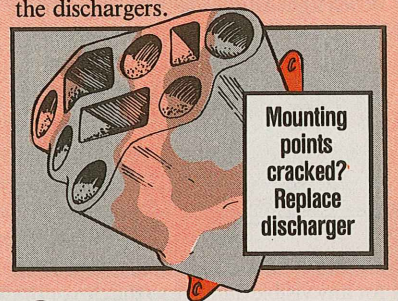
The MK1 and MK2 dischargers of your smoke grenade launchers can lay down smoke for your tank for a long time with a little help from you.

But, a little mistreatment can put those cast aluminum gems out of business but good.

Here are some ways to prevent damage:

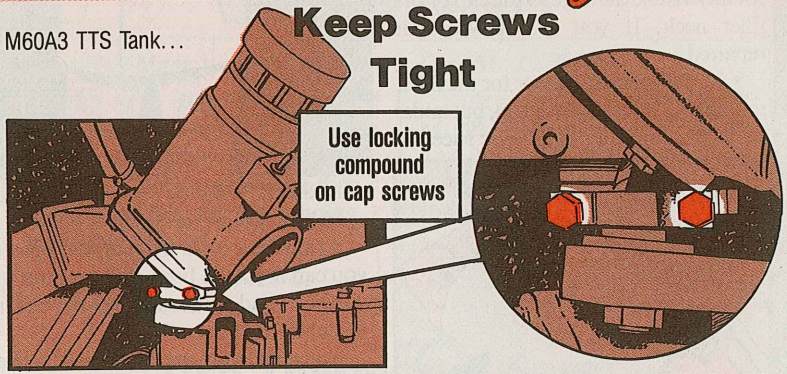
- The discharger is handy...but never use it as a step.
- Apply thread-locking compound and torque mounting bolts the way your TM tells you.
- Never over-torque. You'll crack the mounting bolt holes in the discharger.
- Do not weld cracked mounting points. Do not get them welded. It's not authorized.

If crews and maintenance types stick to these basics and the discharger still breaks at the mounting points, replace the dischargers.



M60A3 TTS Tank...

Keep Screws Tight



Are you losing the cap screws, PN MS-35307-310, on the commander's tank thermal sight (TTS) display of your TTS-equipped M60A3's ?

Put locking compound, NSN 8030-00-434-4162, on the screws just before you install 'em, as described on Page 15-50 of TM 9-2350-253-20-2.

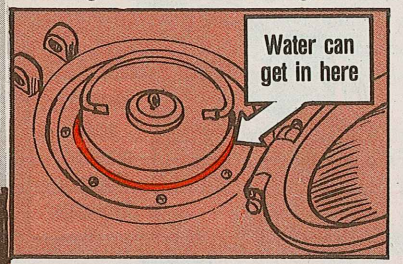
Fuel Filler Neck Leaks

If you've been beating your head against the wall trying to figure out where the water comes from that gets into fuel tanks on your howitzer, here's the word:

It can leak in from outside the filler neck opening. The filler neck doesn't seal well enough to keep water out on some vehicles.

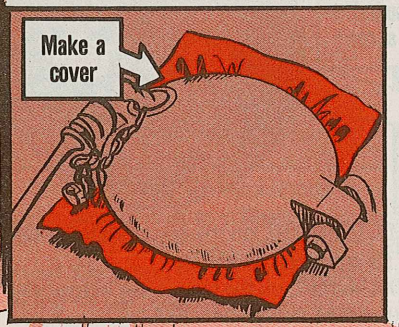
The headshed is working on a fix, but until they come up with one, you can cut your losses in a couple of ways.

• Make sure the filler cap is snugged down tight after each refueling. Check



for any visible damage to the cap or the filler neck. If you spot any, get it repaired.

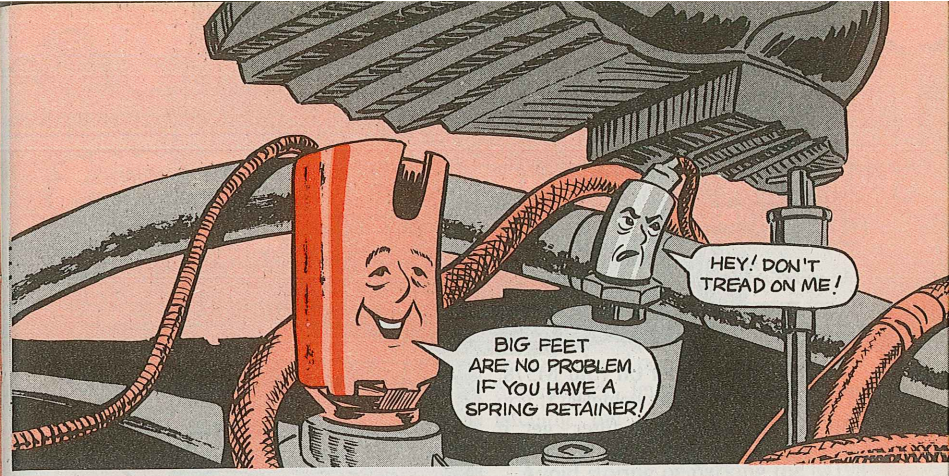
• Make yourself a cover for the filler, to be placed over the filler cap, but under the heavy outer cover. Plastic sheeting



may do the trick or you might use a sandwich bag or the like.

At any rate, cover the fuel filler as best you can if you've been getting water in your fuel and you can't trace the water to any other source.

You might even use a suction cup, like the bottom of a plunger. Use your imagination if you have to, but cover it up. It'll save extra work getting the water out of your fuel tank.



Sending Unit, Switch Protection

You mechs got a problem with broken sending units and switches on M109-series powerpacks?

After you tell those big-foots to pay attention to where they're stepping, try this fix:

Use spring retainer, NSN 2540-00-898-6429, to shield the temperature sending unit and the transmitter. It can be crimped at the bottom and forced over the base of the transmitter and switch. And it'll protect those vital units that seem to catch every big-footed guy who sleepwalks across the pack.

Safety Wire Is In

Dear Half-Mast,

Why is it that M109-series howitzers don't have safety wire on the fixed fire extinguisher handles? Just about every other combat vehicle has the handles safety wired.

CW2 C. T. P.

Dear Mr. C. T. P.,

Safety wire is now "in" on M109's. The next revision of the TM 9-2350-217- and TM 9-2350-303-series manuals will carry safety wiring of fire extinguishers as a requirement.

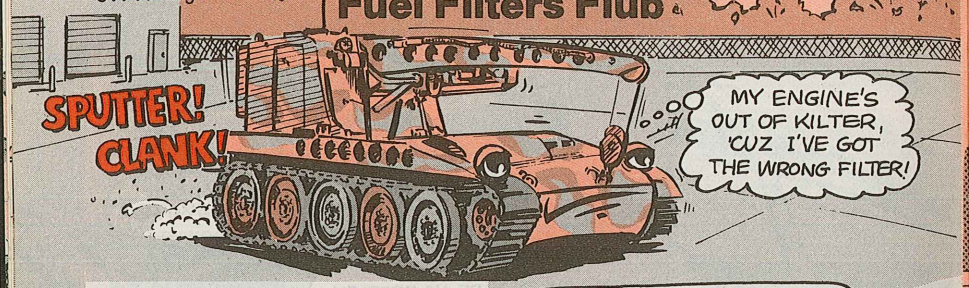
Half-Mast

Use Thermostat Seals

Replacing the thermostats on an M109-series howitzer will be an exercise in futility if you don't use new seals. Use seal, NSN 2930-00-345-8042, each time so your thermostat will work for you.

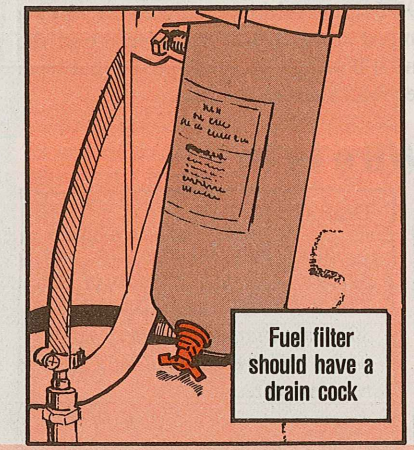
8V71T Engines...

Fuel Filters Flub



Check the fuel filter on your M578, M109-, or M110-series vehicles. If you find the spin-on type filter, get it replaced during your next scheduled service.

During overhaul, a few vehicles ended up with this filter. It fits OK, but it doesn't have a condensation drain cock. This means water in the fuel and a rough-running engine.



NSN 5330-00-846-9841 Gasket
NSN 2940-00-745-7730 Element
NSN 2910-00-922-2424 Shell

For the **secondary** filter parts, use:

NSN 5330-00-846-9841 Gasket
NSN 2910-00-287-1912 Element
NSN 2910-00-015-3609 Shell

Bearing Lube Oversight

Do you know organizational maintenance schedules an 18-month turret bearing lubrication at DS level for M110A2 SP howitzers and M578 recovery vehicles? Many troopers don't, and the lack of lube can put your vehicle down. Check out the support level services section of your vehicle's LO. Then get your paperwork straight so the service won't be "overlooked."

M198 Towed Howitzer...

Easy on the Breechblock Lever

Lighten up a little, crews and mechs, when you close the breechblock on the Big'un when the obturator group is removed. Slamming it shut may cause a broken breechblock lever.

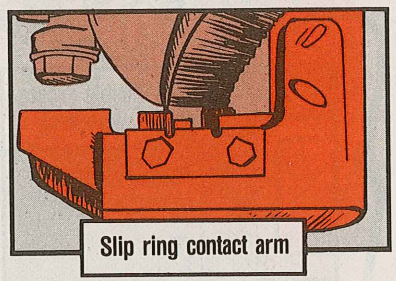
It works like this: If you close the breechblock with the obturator group removed, the breechblock rotates past the fully closed position. That causes the breechblock lever to override the latching pin on the breech ring. Eventually, the lever will break.

Avoid storing or parking the M198 without the obturator group installed. If you must do it, let the breechblock rotate down s-l-o-w and e-a-s-y so you don't break anything.

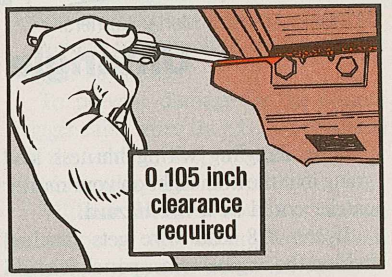
M109-Series Howitzer...

Keep the Slip in the Slip Ring

If the cab on your howitzer sometimes does the jitterbug when you traverse with power, one or more slip ring contact arms may be out of adjustment.



Getting a contact arm back in shape is no big deal—if you know how. You can either use a feeler gage to get the 0.105-in clearance required, or make your own adjustment gage.



Details on making the gage and making the adjustment are on Pages 7-3 and 7-4 of TM 9-2350-217-20N (M109A1 and A3 models), and on Pages 4-15 thru 4-19 of TM 9-2350-303-20-2 (M109A2 models).

M578, M110-, M109-Series Vehicles...

Easy on the Engine

A wooden block may be the only thing between a perfectly good 8V71T engine and one that has a ruined oil pan drain plug.

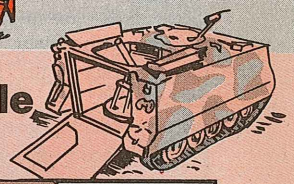
When you pull the powerpack, make sure you put wooden blocks under it before it's set down.

Otherwise, if the pack is set down hard, the plug can be driven back into the oil pan. That makes it hard to remove the plug come oil change time. It may even mean a trip to DS for repair.

Check out Page 4-19 of TM 9-2350-303-20-1 for info on making an engine stand and wooden blocks.

M106A2, M125A2 Mortar Carriers...

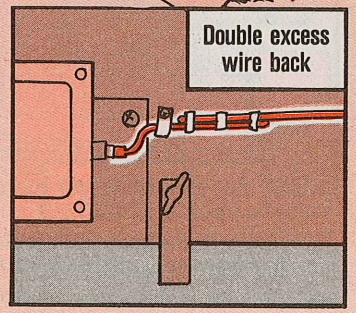
Untangle the Dangle

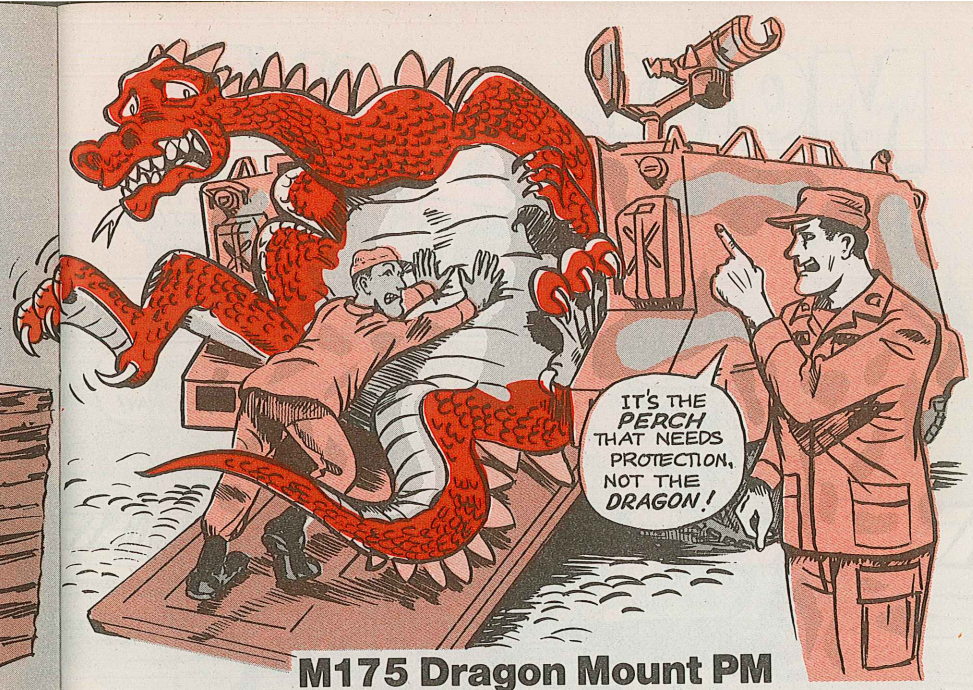


That dangling wiring harness lead going into the domelight on your mortar carrier could be a fire hazard.

If the #38 lead wire gets pinched behind the engine access panel, it could short out and cause a fire.

The solution: Double the excess length of lead wire back on itself and tape it 2 or 3 times with electrical tape. That'll keep everything "cool" in your carrier.



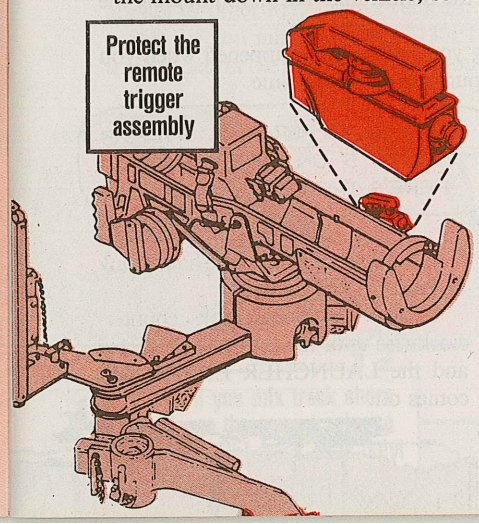


M175 Dragon Mount PM

The way you store and transport your M175 Dragon mount determines whether you can use it when your mission begins.

Like so:

When you store the mount in your track vehicle, protect the remote trigger assembly from damage by people or equipment. There's no specific way to tie the mount down in the vehicle, so the option is yours.



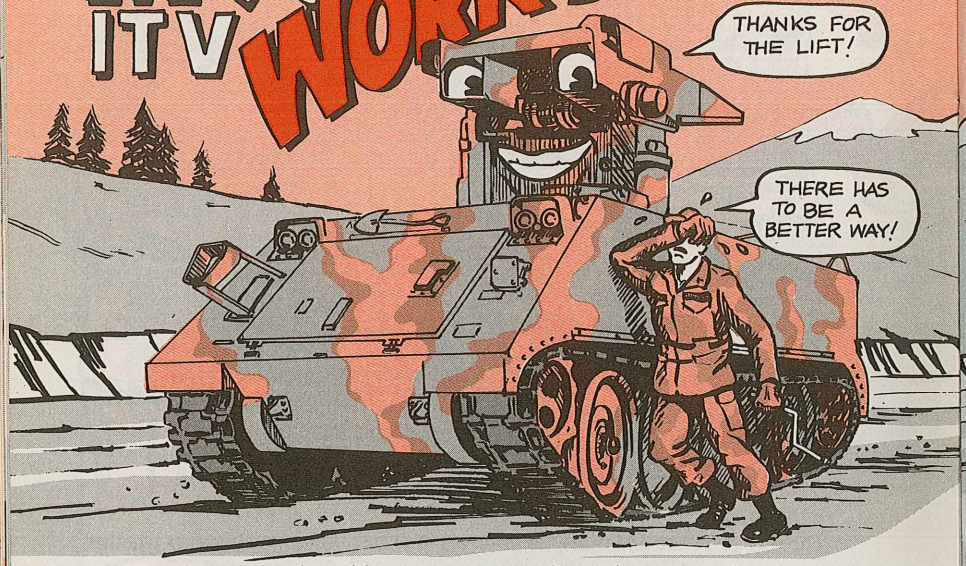
Vehicle movement also damages the trigger assembly.

To prevent damage to the remote trigger cable when the M175 is mounted on the vehicle, keep a spent round or field handling trainer installed.

Without the spent round or trainer, vibration of the moving vehicle and tracker swing arm wears the cable.

Follow the procedures in TM 9-1425-484-10 on operating, stowing and maintaining the M175. Changes 1, 2, and 3 to the TM are vital. They make many changes to Chap 2 on mount operation.

M901 ITV WORK SAVER

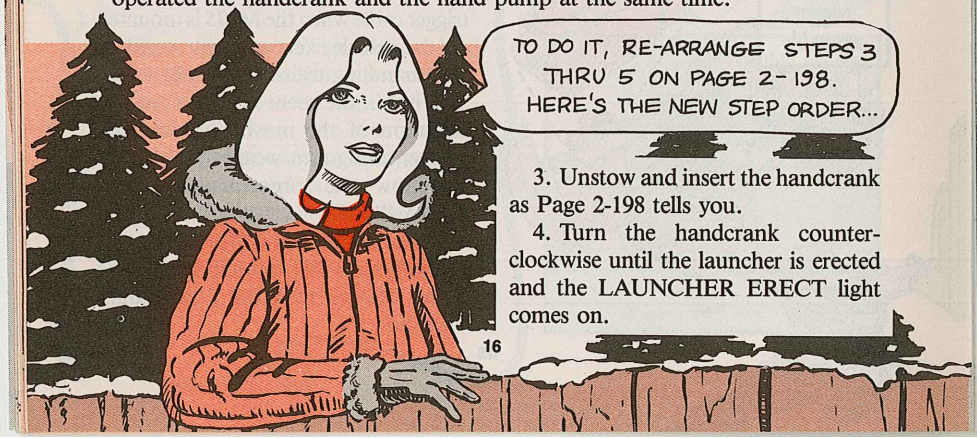


Want to save work and have more energy for maintenance when you erect your M901 ITV turret from stow with emergency power?

Use the hand pump last!

The headshed has juggled the steps on Page 2-198 of TM 9-2350-259-10 to allow full erection of the launcher with the handcrank. Then, you operate the hand pump until erection locks engage.

That switch keeps you from wearing yourself out, as happened when you operated the handcrank and the hand pump at the same time.

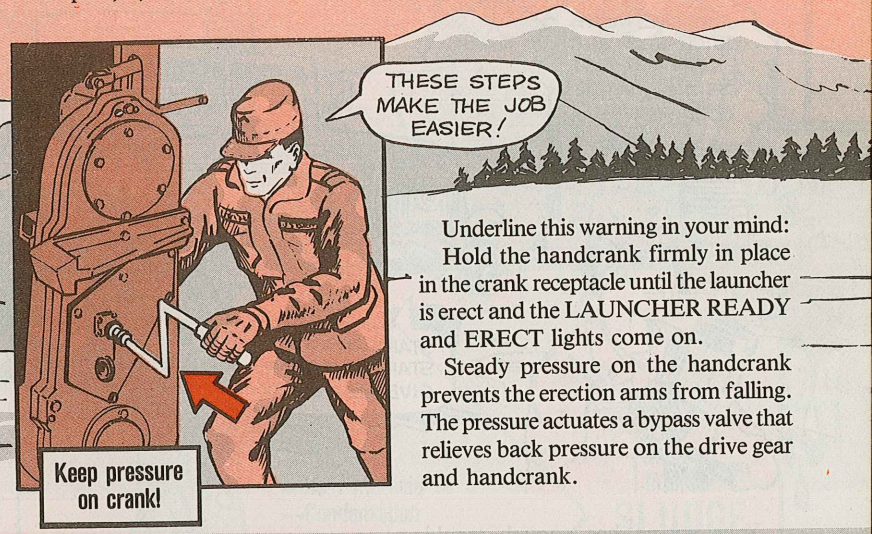


3. Unstow and insert the handcrank as Page 2-198 tells you.

4. Turn the handcrank counter-clockwise until the launcher is erected and the LAUNCHER ERECT light comes on.

5. Operate the hand pump until accumulator gage pressure is at least 1,400 PSI and the erection locks are fully engaged and READY light comes on.

Steps 1, 2, and 6 on Page 2-198 are unchanged.



Underline this warning in your mind:

Hold the handcrank firmly in place in the crank receptacle until the launcher is erect and the LAUNCHER READY and ERECT lights come on.

Steady pressure on the handcrank prevents the erection arms from falling. The pressure actuates a bypass valve that relieves back pressure on the drive gear and handcrank.

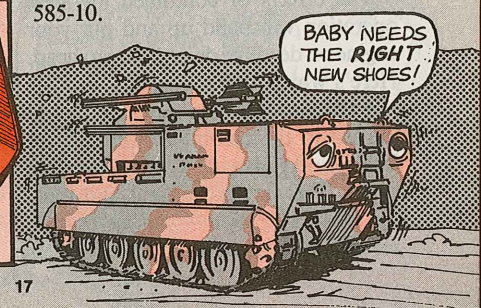
M730 Shoe Mix

TB 43-0001-39-6 (Jul 83) says you can now mix track shoes on both sides of your M730 Chaparral carrier. This also applies to other M113-series vehicles.

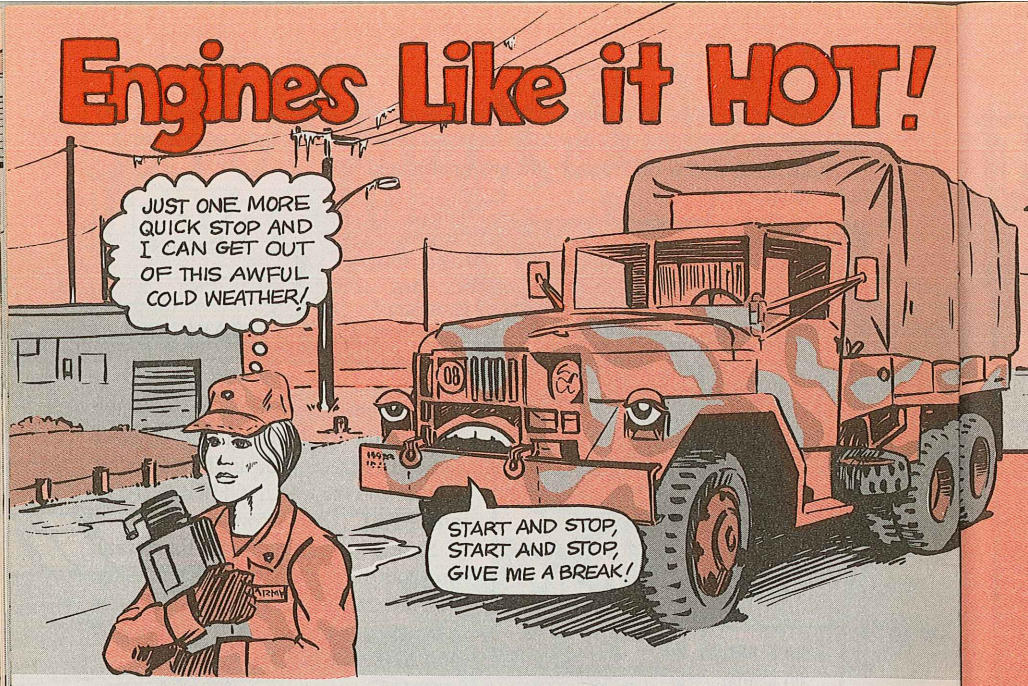
But...if you mix T130 and T130E1 track shoes on the same track side, you use T130E1 track pads *only*!

Pad mixing causes a bumpy ride, something you definitely can do without. Also, replacement pads should be about the same thickness as others on the track. That'll take some stress off the shoe pins.

The new word changes the procedure in section IX, Page 3-32, TM 9-1450-585-10.



Engines Like it HOT!



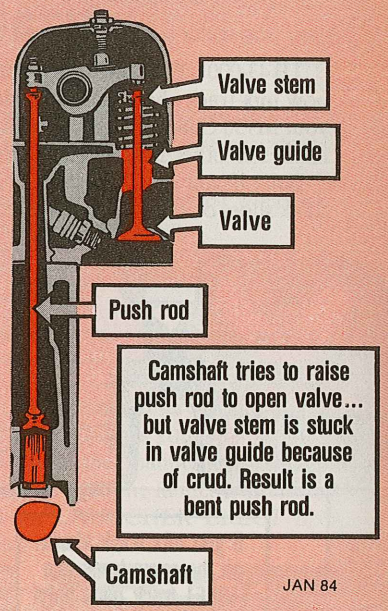
Your engine has enough trouble operating in cold weather without having to deal with bad driving habits.

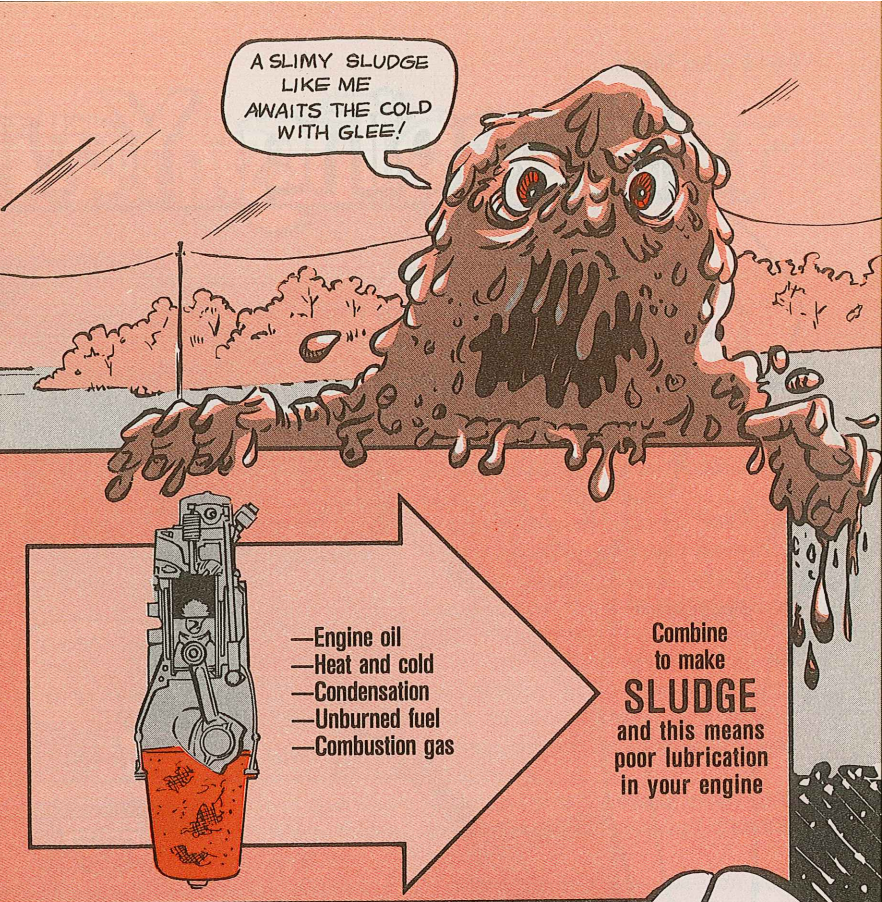
Like letting the engine run at low idle for a long time. Or worse, starting it up and shutting it down — over 'n' over again—before it has a chance to heat up.

Engines are at their best when hot—up to normal operating temperatures. They run smoother and last longer.

The effects of continued low-heat operation will build up and put your engine on deadline or in the scrap heap. Here's why:

• Fuel and oil are not completely burned in the combustion chambers, leaving soft carbon deposits on the valve stems. This carbon thickens and fouls up valve operation—causing burned valves and bent push rods.





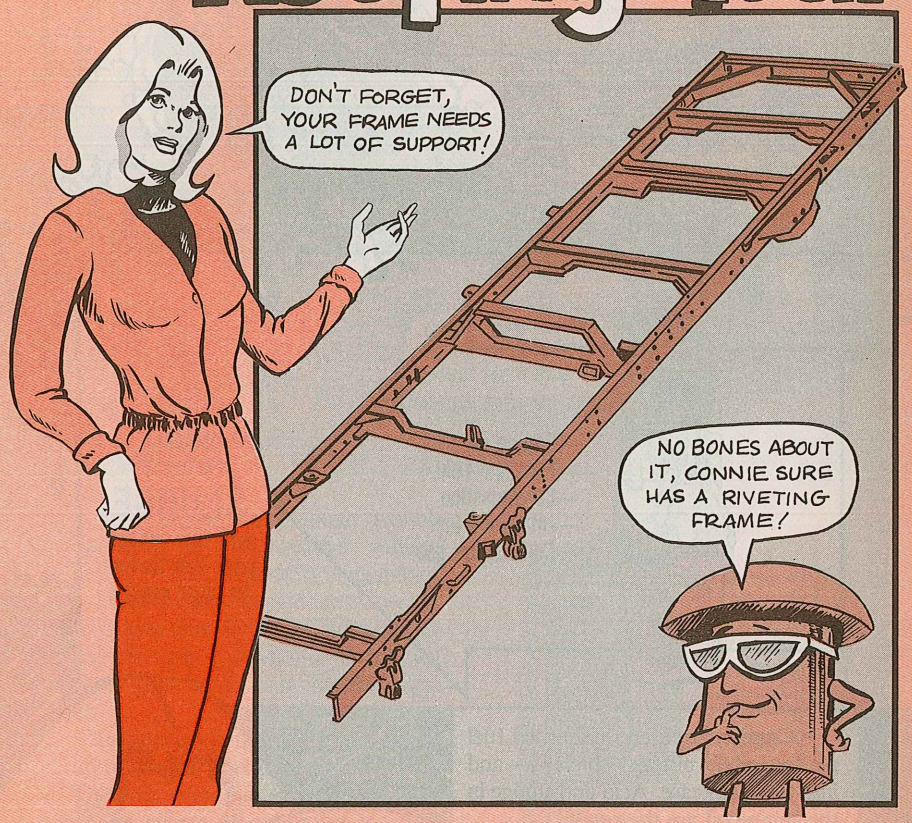
• Condensation and unburned fuel get around the pistons—blowby—and into the crankcase. Acid and sludge in the engine oil are the result.

• Condensation from normal engine "breathing" never gets boiled off. Instead, it builds up in the crankcase. More acid, more sludge.

• Engine oil breaks down. Poor lubrication burns up bearings.

• Sludge blocks lube passages. Oil can't get through to lube and cool. Heat and friction tear up your engine.

Keeping Your Frame Together

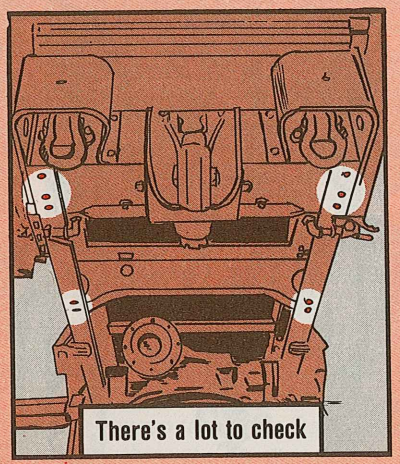


Take away your skeleton and you won't go far, right? You need that "frame" to hold everything together. It's what your body's built on.

Same goes for your truck frame. It holds everything together. It's what your truck's built on. Your truck won't go far with a bum frame!

The frame's not much more than 2 long steel beams with some steel crossmembers—all fastened together with welds, rivets and, in some places, bolts 'n' nuts. The frame's tough. It's got to be—to carry all of that weight and to take the strain of twisting as you travel over rough terrain.

With enough strain, tho, that tough steel gets tired—fatigued. Rivets stretch, loosen, break, fall out. Bolts 'n' nuts go pretty much the same way. The beams


There's a lot to check

and crossmembers crack at rivet and bolt holes. Welds crack. Where there's rust, the metal weakens quicker.

Complete frame failure can start with the weakening of just one connecting point—a loose rivet or bolt, a cracked weld. Strain is added to nearby rivets, bolts, and welds. It's a chain reaction—like a row of dominoes falling.

PMCS: Loose Rivet = NMC

It's no surprise then that your truck is rated not mission capable if only one rivet is loose—or one bolt is loose, or one weld is cracked. This'll be showing up in your -10 TM PMCS.

You've got to nip frame failure in the bud—before a broken rivet here, a loose bolt there and a cracked weld someplace else multiply and knock you out of your mission!

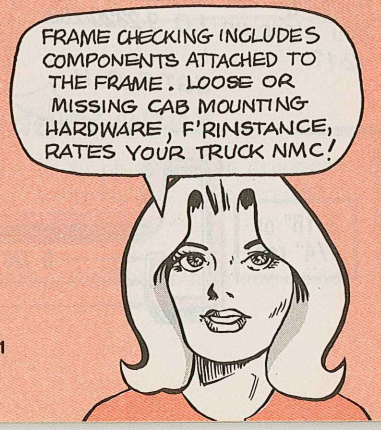
So you "get out and get under" to detect those weak points. You look. You test for looseness with your fingers. You'll probably need a flashlight to find all of those rivets, bolts and welds. Every one of 'em is important!

Check for space under the rivet head. The rivet head must be tight against the beam or crossmember. Cracks in the metal around the rivet mean trouble. Shiny metal around the rivet means the rivet's loose, allowing the rivet or the crossmember to shift. Shiny metal along edges of crossmembers is a sign of shifting between the crossmember and main beam.

Broken rivet? Missing rivet? Bolt loose, broken, or missing? Cracked weld?

Report 'em—every one—on your DA Form 2404.

Get 'em fixed.



2½-Ton Trucks...

How to Check Winch Lube

Dear Half-Mast,

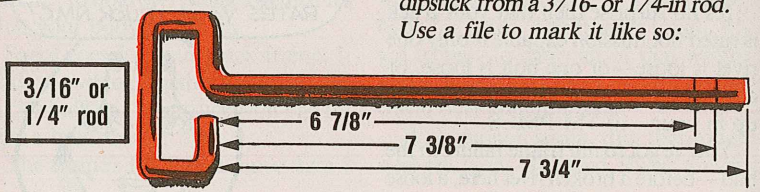
Instructions for checking the lubricant levels in my 2½-tonner's front winch end bearing frame and worm housings are confusing. Can you clear up LO 9-2320-209-12-1?

SGT R. G. H.

Dear Sergeant R. G. H.,

Sure can, Sarge. Let's talk about the end bearing frame housing first.

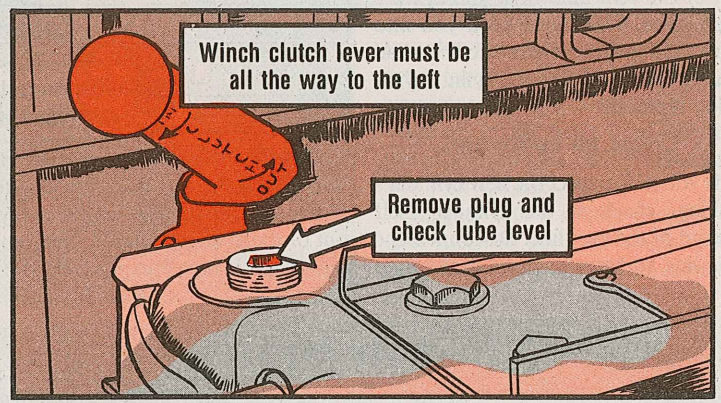
Note 6 of the LO says the right lubrication level is 6 7/8 inches below the filler plug. Make a dipstick from a 3/16- or 1/4-in rod. Use a file to mark it like so:



Notice that besides a FULL mark at 6 7/8 inches, there's a mark at 7 3/8 inches. This shows the lube level at about 1/4 pint below FULL, so you can add exactly that much to bring the level up to FULL.

Make sure the winch clutch lever is in the engaged position—all the way over to your left as you face the truck.

Remove the check plug from the top of the housing to check the lube level. Measure from the top and front of the hole. If it's low, add enough lube to bring the level up to the FULL mark.



Don't move the drag brake adjusting screw on the side of the housing—you can foul up the drag brake tension. Then there's nothing to keep the winch drum from over-running the cable when it's pulled out.

For the worm housing, fill to plug level, according to Note 7 of the LO. To check it, take out the check plug on the side of the housing. If lube runs out, the housing's full.

If not, remove the fill plug on top of the housing. Add lube until it runs out of the check hole.

Half-Mast

Brake Cylinder Lube?

Take a guess—what do you use to lube the air piston in your deuce-and-a-half's brake air/hydraulic cylinder (called "hydrovac" by some people)?

OHT? OHA? Neither of 'em?

The right answer is: Nothing at all!

Take a good look at LO 9-2320-209-12-1 (Apr 83). The air/hydraulic cylinder's not even mentioned. So don't lube it.

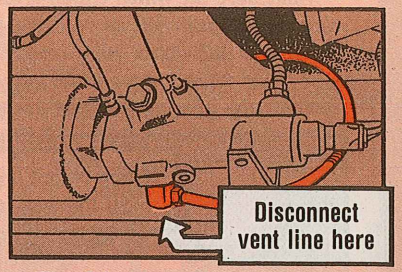
Blow Out Vent Line

When you replace an air/hydraulic brake cylinder because of a leaky seal, make sure you blow out the vent line with low pressure air—below 120 PSI.

If you don't, brake fluid left over from the bum cylinder will be pushed out of the vent line when you operate the brakes. This could trick you into thinking the new cylinder also has a bad seal. Some perfectly good cylinders are being replaced.

Check for Leaky Seal

If you still suspect the new cylinder's leaking, check at the cylinder itself instead of the vent line. Disconnect the vent line at the cylinder. If brake fluid is being exhausted, it'll show up when the tube's disconnected.



Careful, tho. Never operate the brakes while the vent line's disconnected. If you do, brake fluid will be sprayed out of the cylinder. And brake fluid in mist form is highly explosive!

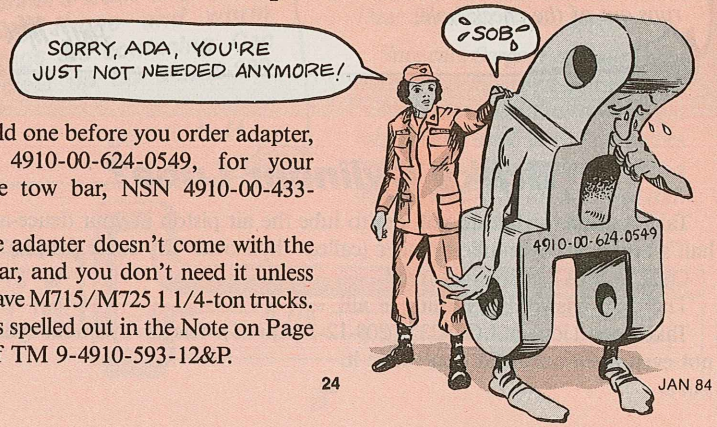
Data Plate Mystery

Searched everywhere but still can't find the data plates on your equipment? They could be buried under a coat of paint.

Data plates are often the only source for particular info on operating and servicing equipment.

So, a word to the wise. Before you paint your equipment, tape over the data/instruction plates.

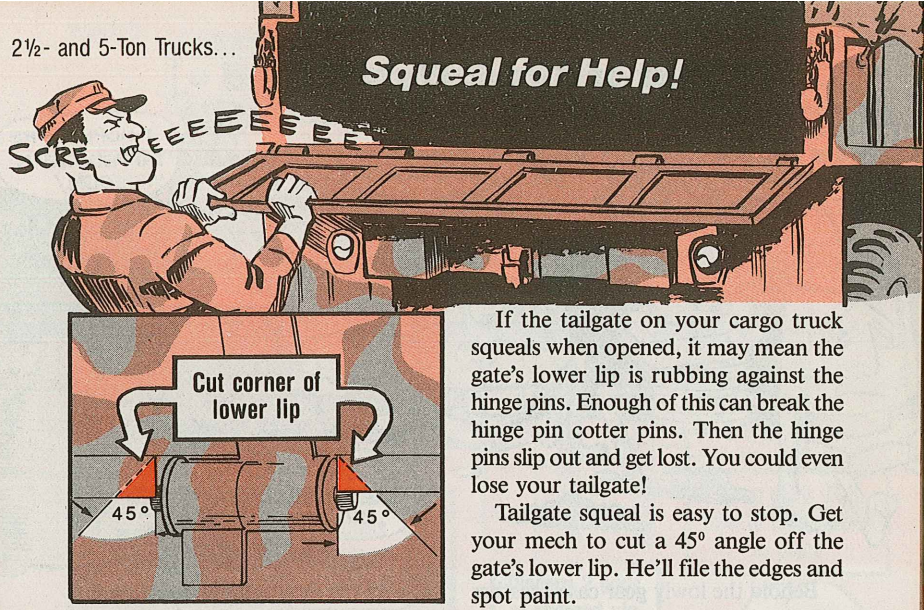
Tow Bar Adapter Not Needed



Hold one before you order adapter, NSN 4910-00-624-0549, for your vehicle tow bar, NSN 4910-00-433-7094.

The adapter doesn't come with the tow bar, and you don't need it unless you have M715/M725 1 1/4-ton trucks. That's spelled out in the Note on Page 2-1 of TM 9-4910-593-12&P.

Squeal for Help!



If the tailgate on your cargo truck squeals when opened, it may mean the gate's lower lip is rubbing against the hinge pins. Enough of this can break the hinge pin cotter pins. Then the hinge pins slip out and get lost. You could even lose your tailgate!

Tailgate squeal is easy to stop. Get your mech to cut a 45° angle off the gate's lower lip. He'll file the edges and spot paint.

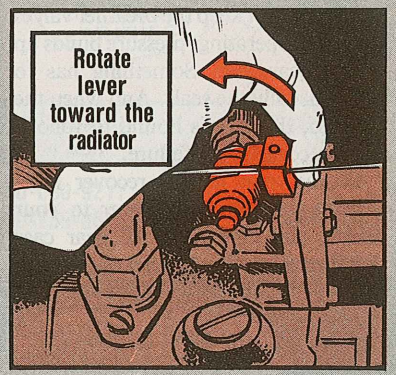
Remember the Fuel Valve

You don't often need to use the emergency engine control stop to shut down your engine—usually the ignition switch will do the job.

When you do use the control stop tho, you're stopped cold. Your engine won't start again until a mech resets the fuel valve—by hand. This is a mech's job because there's a need to find out why the regular shut-off didn't work.

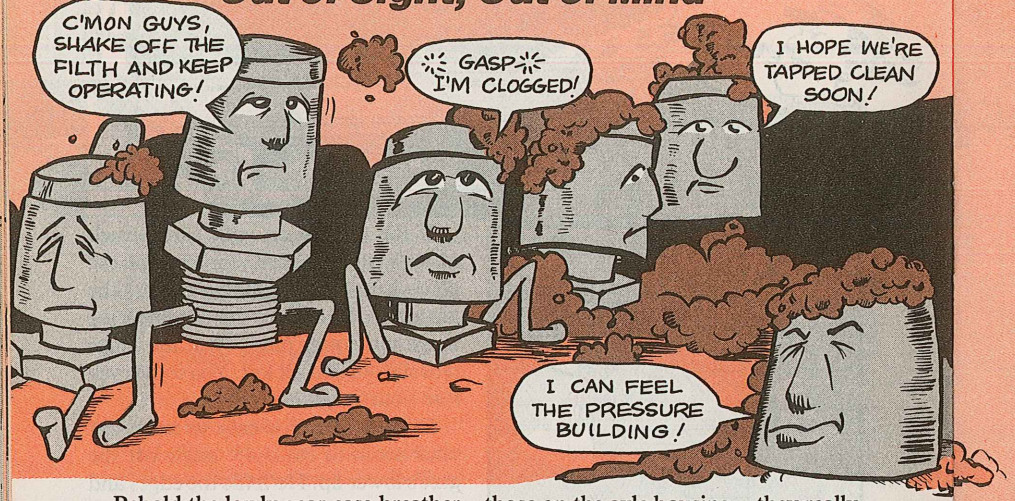
You mechs start off by making sure the emergency control stop is pushed back in.

Then you get under the hood and rotate the lever counterclockwise—



toward the radiator. This'll let the fuel flow again—and the engine can be restarted.

Out of Sight, Out of Mind



Behold the lowly gear case breather valve!

Buried in the inner recesses of your equipment...out of sight and out of mind...almost completely ignored by your TM and LO...but absolutely essential to the proper operation of your vehicle!

If you don't keep the breather valves clean and operating, pressure builds up in the gear case. Something has to give—usually the seals. And when the seals go, the lube is bound to follow. Result: component failure.

So, as soon as you recover from reading this PS, hustle over to your vehicle and check out all gear case breather valves. Pay special attention to those on the axle housing—they really get plastered with road dirt and mud.

Twist the cap to loosen any dirt stuck up inside. Tap the cap to knock dirt out. (Inside the cap is a spring, so the cap should bounce when you tap it.) If the cap won't turn or bounce, get a new breather valve.

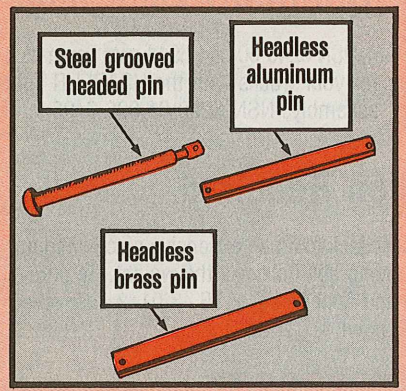
Pins are a Shear Delight

For protecting your winch, there's no substitute for a shear pin.

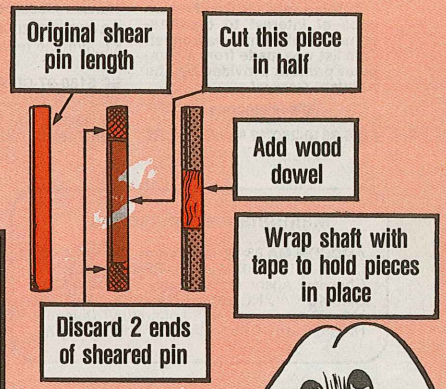
This little piece of metal is designed to break when the winch is overloaded—preventing damage to the winch and drive train.

Anything else used in its place—like a rivet, pin, bolt or nail—can let an overload snap the winch line. That broken wire rope can whip around and slice you in half!

The most common shear pins are:



If you're on a winching operation and don't have a replacement for a broken pin, here's a fix for those aluminum and brass jobs:



Truck	Front Winch Shear Pin NSN	Rear Winch Shear Pin NSN
1¼-Ton TM-242-series	5315-00-080-9217	
2½-Ton TM-209-series	5315-00-736-8685	5315-01-044-8362
2½-Ton Mdls V17A, V18A, MTQ & M764	5315-00-736-8685	5315-00-252-5669
5-Ton TM-211,-260-series	5315-00-209-7979*	5315-00-282-2583
5-Ton TM-230-series	5315-00-880-5861	
10-Ton TM-206-series	5315-00-421-1676	5315-00-421-1676
10-Ton TM-233-series	5315-01-031-6212	

*Same for M748A1 & midships winch

PUBS

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.

Miscellaneous

LO 5-3810-290-12 Nov Crane, RT Hanson Model H-446A

SC 5180-97-CL-A02-HR Jun Tool kit, airframe repairer's; Army aircraft

SC 5180-97-CL-A07-HR Jun Tool kit, power plant, Army aircraft

TB 43-182 Jun Calibration, unit identification codes

Technical Manuals

TM 9-1290-262-24P Apr Aiming circle, M2 and M2A2 (microfiche)

TM 55-2305-001-24P Oct LACV-30

TM 55-2835-207-24P Sep Main propulsion engine, LACV-30

Maintenance Advisories

AMCCOM MA 83-12—Amendment to AMCCOM MA 83-8, 091920Z Aug 83, Reconfiguration of Chemical Agent Alarm Family, M8, M10-M18; DRSMC-MAO-NC 251925Z Aug 83. AMCCOM MA 83-13—Breathing Apparatus, Potential Hazard Alert; DRSMC-MAO-NC 291955Z Aug 83.

USAREUR Light Bulb

NSN 6240-00-044-6914 gets you a bulb for your trucks with the USAREUR light assembly, NSN 6220-01-096-3496.

Jack Inspection Required

When you use a 2-, 4- or 10-ton hydraulic jack to lift an expensive piece of equipment, you don't want to worry about it being able to carry the weight. Be sure—inspect the jack like it says in Para 4b (a) and Appendix E of TB 43-0142. Inspection turn up something wrong? Get it fixed—now!

AVIATION MESSAGES

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

UH-60A-83-09 SOF Maintenance, Repetitive inspection for stabilator amplifier 061500Z Oct 83

UH-60A-83-10 SOF Maintenance, Inspect and replace washer on collective bias tube assy 141900Z Oct 83

AH-1-83-11 SOF Maintenance, Transmission pylon bolt installed on certain AH-1S 220820Z Sep 83

MIM-UH-60A-MEA-83-15 UH-60A Main tires/landing gear subsystems 111500Z Oct 83

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

SMART! MESSAGES

SMART Msg #33—Equipment Improvement Report and Maintenance Digest for Tank-Automotive equipment to be published in 2nd Qtr of FY 84 will contain authority not to repair or replace external telephone on M60/M48-series tank, DALO-PLF 121435Z Oct 83.

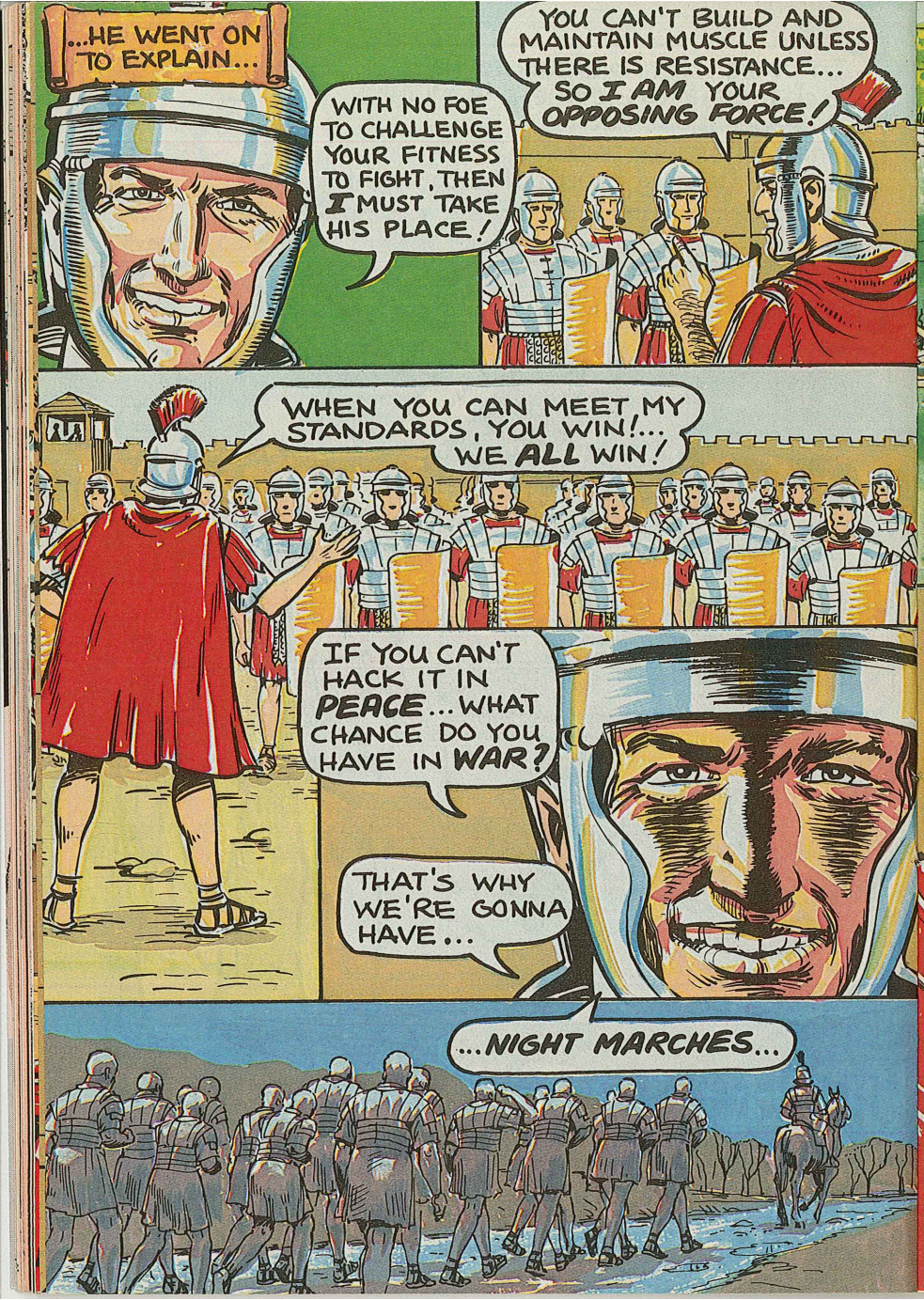
SMART Msg #34—Provides authority to discontinue the requirement for marking the in-service date on Military Standard Batteries, DALO-PLF 181944Z Oct 83.

NO STRAIN... NO GAIN

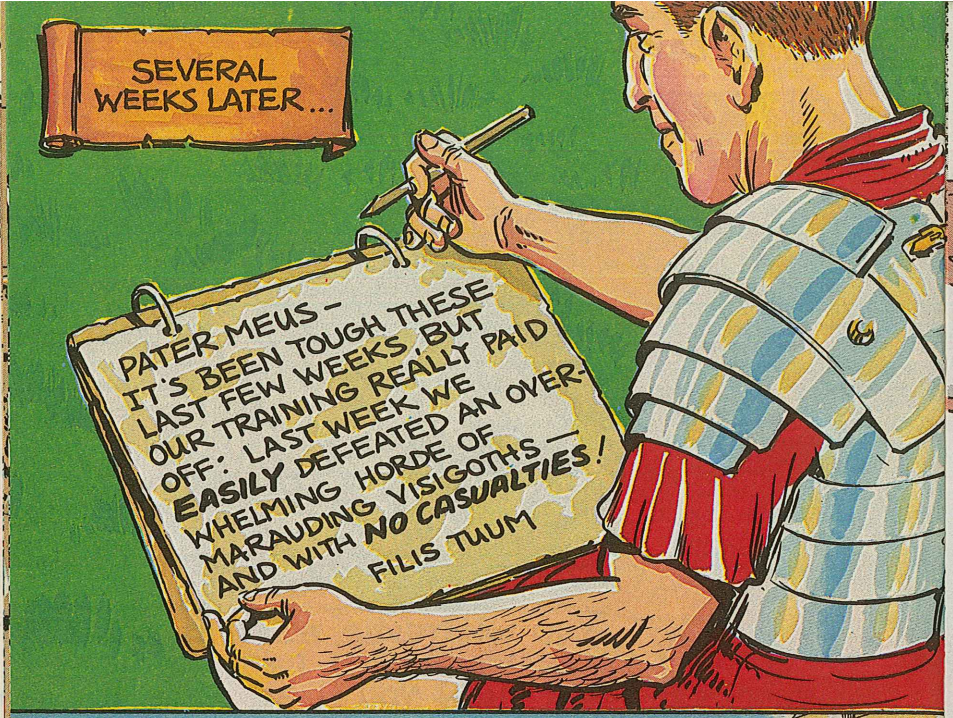

...HE INSPECTED EVERY UNIT AND WATCHED US GO THROUGH OUR DRILLS...
YES SIR... NOW THAT THINGS ARE QUIET HERE, WE ARE IMPROVING OUR SOCIAL SKILLS...
HUMM...
HUMMM...
IN THE ABSENCE OF AN IMMEDIATE THREAT, THERE'S TIME FOR INDIVIDUAL DEVELOPMENT!

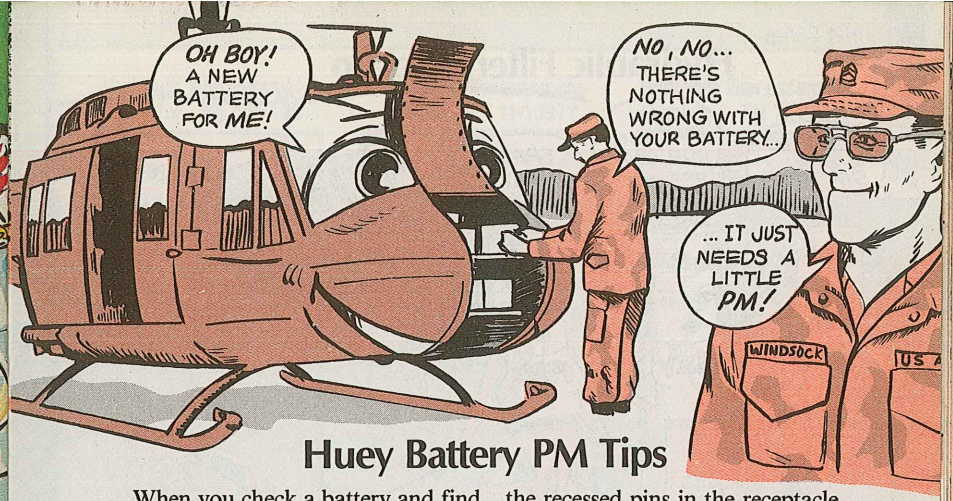

...THAT'S RIGHT, SIR, THIS LOCALE IS FILLED WITH MANY INTERESTING CULTURAL OPPORTUNITIES...
HUMM... SO I'VE NOTICED!
...AND SINCE WE HAVE NO REAL ENEMY...
NO ENEMY! YOU HAVE JUST MET THE ENEMY—AND HE IS ME!


In peace with no enemy to fight,
The challenge to alertness is slight;
A leader must set
The goals to be met
So that training contributes to might!
PSI
WE HAVE THE WORLD'S BEST EQUIPMENT ...Take c e o it


...HE WENT ON TO EXPLAIN...
WITH NO FOE TO CHALLENGE YOUR FITNESS TO FIGHT, THEN I MUST TAKE HIS PLACE!
YOU CAN'T BUILD AND MAINTAIN MUSCLE UNLESS THERE IS RESISTANCE... SO I AM YOUR OPPOSING FORCE!
WHEN YOU CAN MEET MY STANDARDS, YOU WIN!... WE ALL WIN!
IF YOU CAN'T HACK IT IN PEACE... WHAT CHANCE DO YOU HAVE IN WAR?
THAT'S WHY WE'RE GONNA HAVE...
...NIGHT MARCHES...


...BRIDGE LAYING!...
...CATAPULT TESTING!...
...AND WHATEVER ELSE IT TAKES! WHEN YOU'RE AS PREPARED AS I AM THEN YOU'LL BE ABLE TO FIGHT A BATTLE!
I'VE GOT TO GO NOW... THINGS ARE REALLY CRACKING AROUND HERE! FILIS TUUM





Huey Battery PM Tips

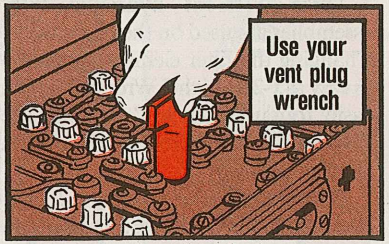
When you check a battery and find water or electrolyte on the cells, don't get in a hurry to exchange the battery. The wet stuff could just be condensation or spilled electrolyte. So, before you exchange the power package for a new $885 battery, pull your PM like it says in Para 4-6 of TM 11-6140-203-14-2.

Be sure the battery switch is OFF before you disconnect the battery cables. If you don't, the battery can end up with burned terminals.

Put the battery back in the aircraft and pull the electrical leakage test in Para 4-9. If the battery fails this test, follow the info in Para 4-11.

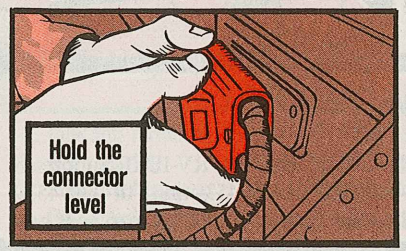
When connecting the battery cable, hold it level as you push it into the receptacle. Forcing it in at an angle strips the recessed pins in the receptacle.

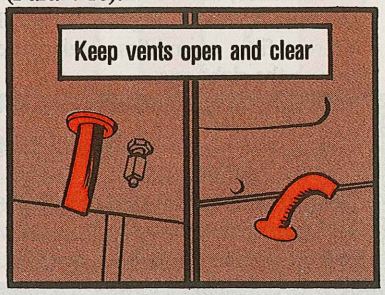
'Course, you always use the plastic vent plug wrench, NSN 5120-00-087-2969, to remove the filler caps for cleaning. If you use pliers, f'rinstance,



you can crack or break the caps.

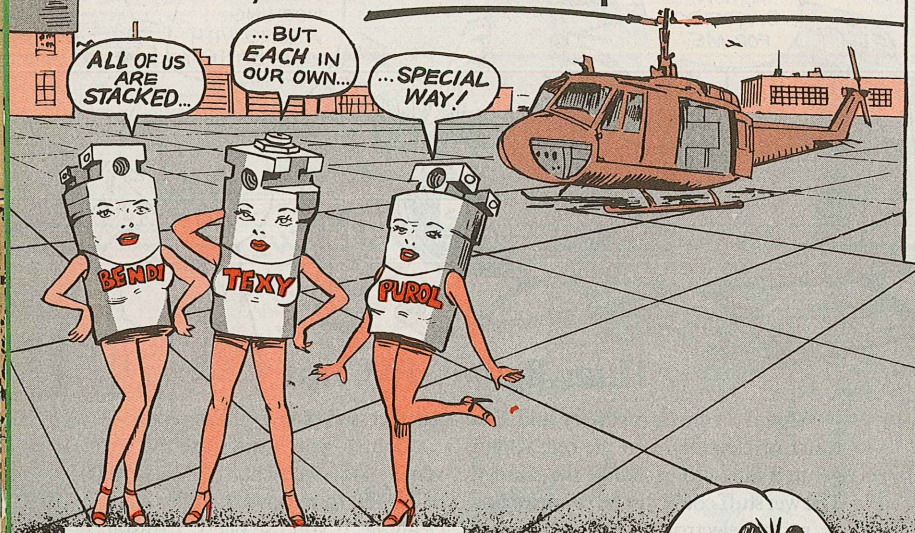
Keep the external vent lines open. Use low air pressure to keep 'em clear (Para 4-10).





UH-1 Series...

Hydraulic Filter Stackup



Three different hydraulic filter assemblies are used on the Huey flock. Changing the filter element should be as easy as 1-2-3. Right? Wrong! You can easily foul up when you're putting the filter assembly back together during an element change.

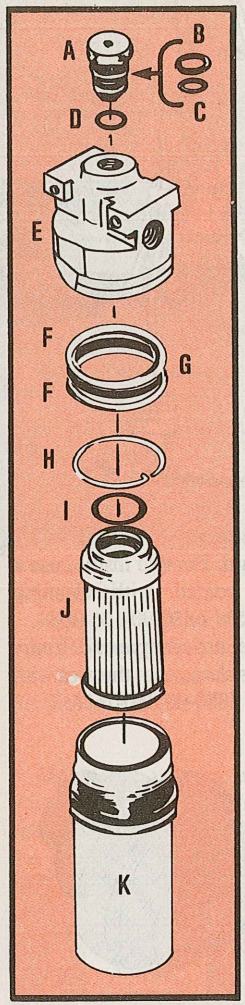
Doublecheck Para 7-48a (12) TM 55-1520-210-23-2 NOTE. It tells you when and how to get the right hydraulic filter assembly component stackup for armed or unarmed Hueys.

F'rinstance, the NOTE says to look real close at Sheet 2, Fig. 7-7 for the 3 different filter assemblies. Make sure you use the right one.

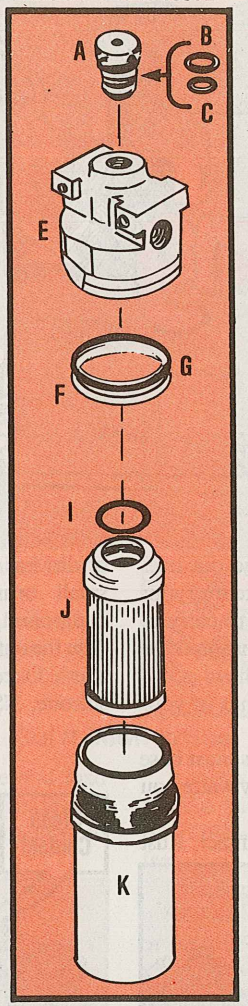
Mohawk NOTE

Cap assembly, NSN 1560-01-094-5768, used on the OV-1/RV-1D IR Suppressor B kit, has been replaced by 2 covers: NSN 1560-01-139-4538 and -01-139-4539. Save downtime. Order both parts at the same time when the old cap goes bad.

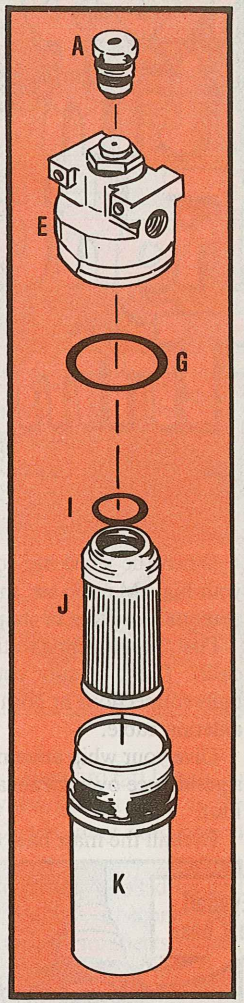
Hydraulic filter assembly- Bendix PN 056448



Hydraulic filter assembly- Textron PN 11-10972

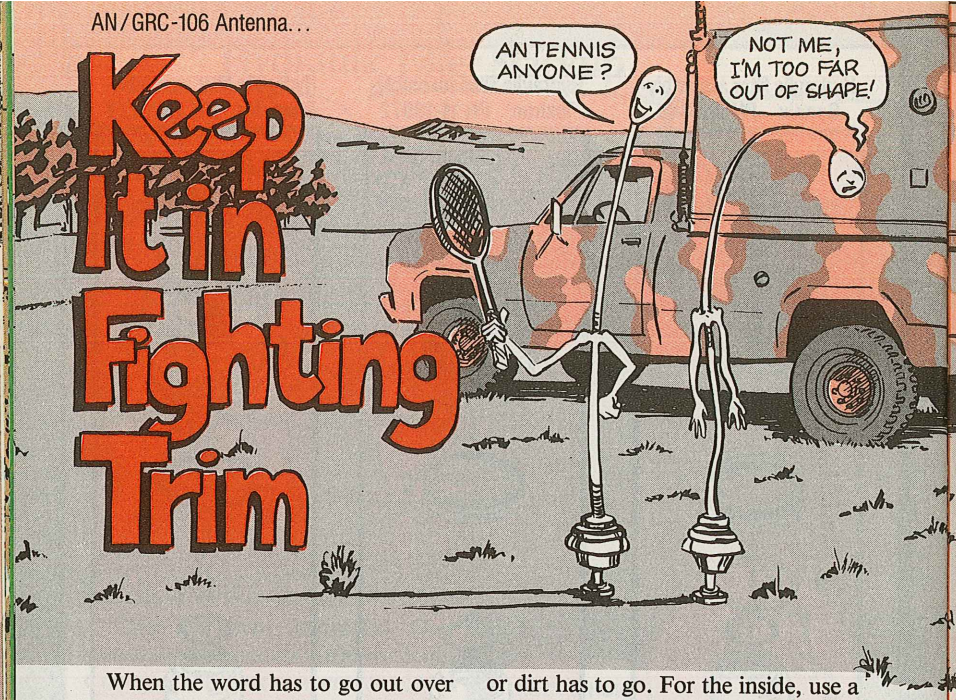


Hydraulic filter assembly- Purolater PN 7576727



A. Indicator Assembly
B. Back up ring
C. Preformed packing
D. Preformed Packing
E. Head Assembly
F. Back up ring
G. Preformed packing
H. Retainer
I. Preformed packing
J. Element Assembly
K. Bowl

Keep It in Fighting Trim



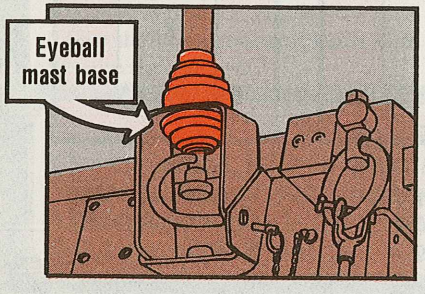
When the word has to go out over your big AM radio set, make sure your antenna system is in shape to carry it.

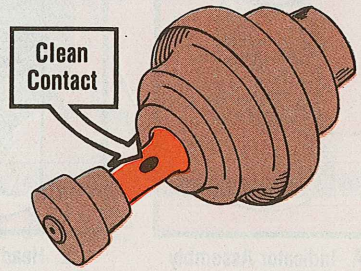
First, your antenna sections should be clean. Then, be sure you have good, tight connections at both ends of your antenna cable.

Give your whip antenna's mast base a good once-over. Drain any water you find.

Eyeball the mast base contact. Rust or dirt has to go. For the inside, use a small brush coated with cleaning compound, NSN 6850-00-105-3084.

On the outside, use sandpaper or a wire brush. Once it's clean, coat the area with silicone, NSN 6850-00-880-7616.





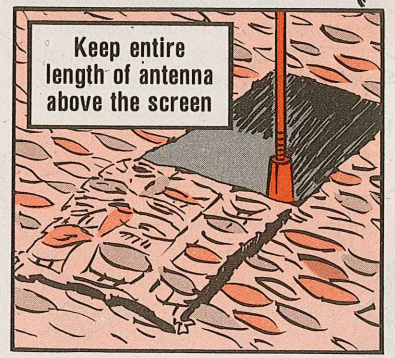
Before you do any contact cleaning, be sure the radio's off. You should also remove the mast base from its mount.

Give It Room

Keep your antenna at least 15 feet from any neighboring transmitter. If not, you risk mixed-up signals and receiver damage.

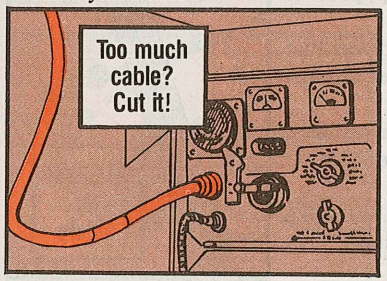
Using a radar-scattering screen to camouflage your operation? Keep the entire length of your antenna above the screen. Don't touch the whip with the screen, either.

A radar-scattering screen will reflect your RF energy and could damage your set. Not sure of your screening? Eyeball its ID tag.



Cut It Down to Size

Make sure you can tune and load your antenna at all frequencies by cutting the CX-10171 cable assembly to the size you need.



It comes in a standard 6-ft length. In a radio teletypewriter set such as the AN/GRC-142, you may need only 4 feet.

If that extra length is coiled up and tucked out of the way, it becomes part of the antenna. It then reflects power, keeping you from tuning in the 23-26 MHz range.

Before you cut the cable, tho, make sure it's long enough for the job. That means leaving enough to connect to the mast base with cable left over to keep bare wire from hitting metal.

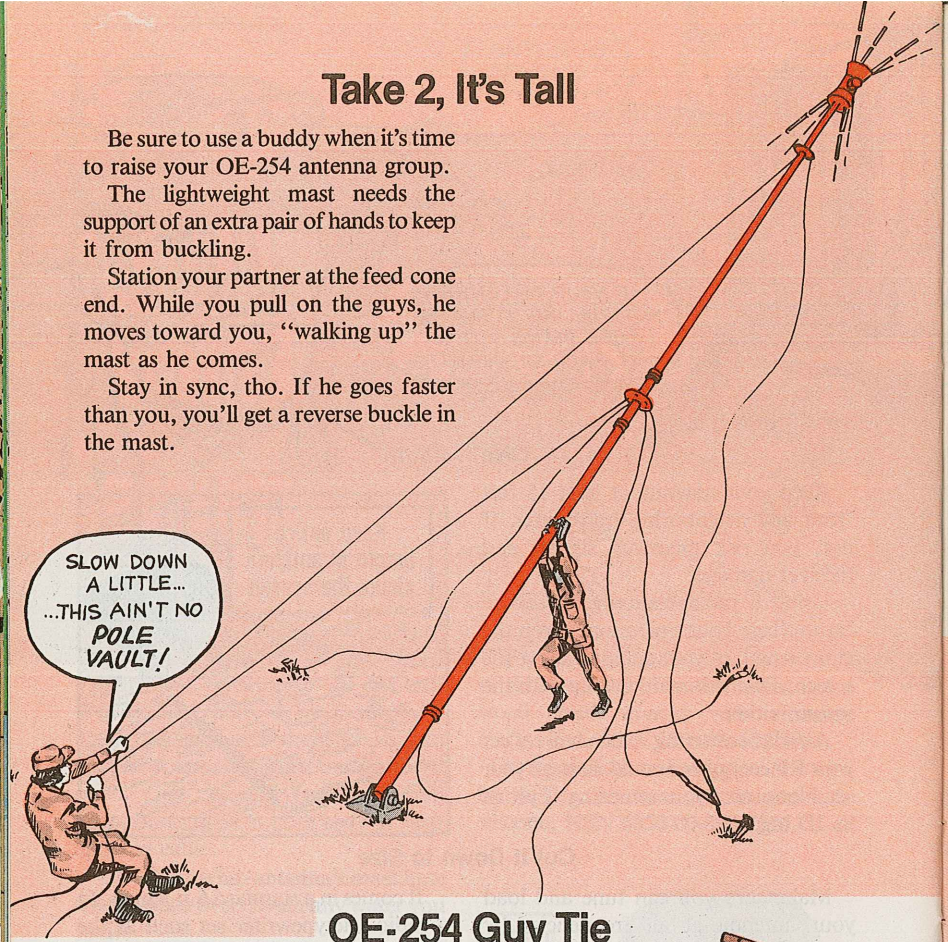
Take 2, It's Tall

Be sure to use a buddy when it's time to raise your OE-254 antenna group.

The lightweight mast needs the support of an extra pair of hands to keep it from buckling.

Station your partner at the feed cone end. While you pull on the guys, he moves toward you, "walking up" the mast as he comes.

Stay in sync, tho. If he goes faster than you, you'll get a reverse buckle in the mast.



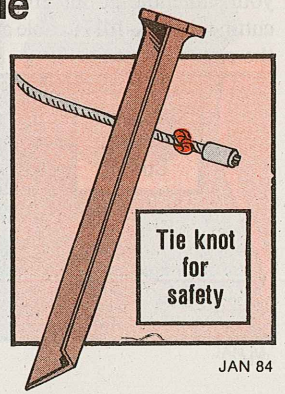
OE-254 Guy Tie

Next time you raise your antenna group, put a tie in the cable behind the stake assembly.

Some troops have found out the hard way that some cable crimps are bad. The cable pulled through the stake—and the mast fell.

Supply has solved the problem. Stake assemblies, NSN 5985-01-073-6103, received after June 83 should be OK.

Until you need new ones, use the tie. Just pull a length of cable through the eyelet and tie it off. Tests show this fix easily holds the mast.



Give It an Elbow

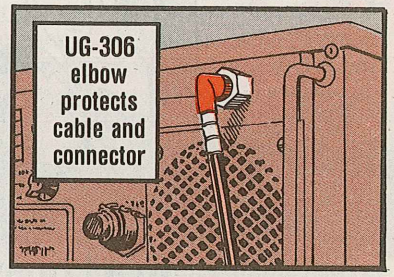
Having trouble getting a hand on your RC-292 antenna's UG-255 adapter connector? Try an elbow.

That adapter sits on the end of the antenna's RF cable. Once it's connected to the AN/VRC-12 series radio set, there's only a fraction of an inch left for a handhold. That makes for tough connections.

Some troops use pliers or turn the whole cable. This rough stuff can break the cable, connector or pin that mates with the radio's receptacle.

The straight UG-255 also lets the cable and connector extend past the radio set's panel guards. That lets a stray arm or leg or the strain of the 68-ft cable do the breaking.

You can head off these problems by adding an elbow shaped UG-306, NSN 5935-01-032-5404.



The elbow not only gives you more of a handhold for connecting and disconnecting; it also keeps the connector from extending past the panel guards.

Ring Up PM

Cable connections giving you a hard time? Check your O-rings.

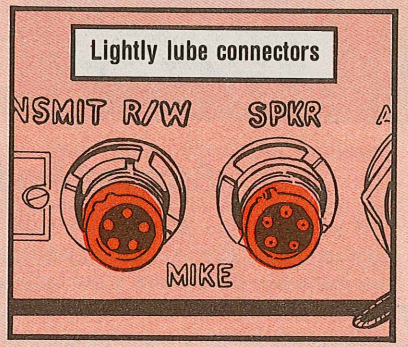
Smooth hookups get rough when that ring is missing. You won't get the good seal that commo needs without 'em, either.

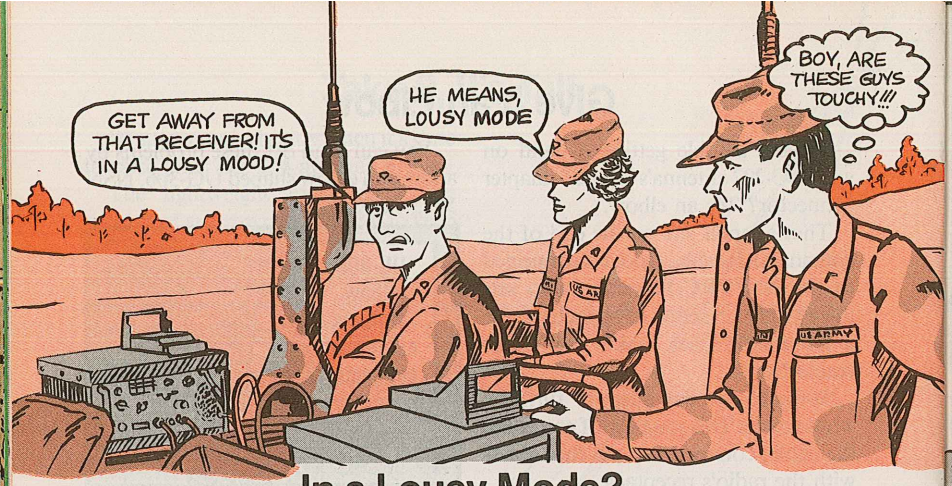
If your O-ring is missing, check your parts pub for a replacement. You can also keep a selection on hand. A kit of 300 comes your way with NSN 5330-00-966-8657.

'Course, even when the ring's on the job, connections may turn hard. A little moisture can help.

Not spit, tho. That invites corrosion or shorts. In colder weather, it can freeze.

Instead, add a **light** coat of silicone, NSN 6850-00-880-7616, to the rubber. A dab on the connector can help, too.





In a Lousy Mode?

Keeping your cap on—X-mode, that is—can head off troubleshooting woes and unnecessary downtime for your AN/VRC-12-series receiver-transmitters.

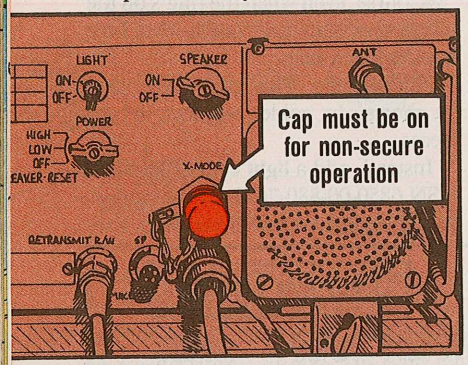
That cap has circuits your RT's need to operate when you're not using secure equipment. Leaving it off after you disconnect your secure gear's cable leaves your set silent.

On the other hand, before you can send secure traffic, your RT has to be set for X-mode operation. Here's a quick way to tell if it is!

Switch on your RT. Turn the light switch ON, and put the squelch to OLD ON. Remove the X-mode cap. If the call lamp lights, you're in business.

No light could just mean a bad lamp, of course. So, now use your ears. Turn off the RT. Replace the X-mode cap. Set squelch to NEW OFF, and turn on the RT. You should hear a rushing sound.

Remove the cap and the rushing should stop. If it does, you're in X-mode. If it doesn't, have your set adjusted.



Survival Radio Survival

If you need your AN/PRC-90 radio set in cold temps, give your battery a fighting chance. Keep it warm by putting the radio inside your clothing. 'Course, you make sure the antenna is out in the open. Just run it through a convenient opening in your suit.

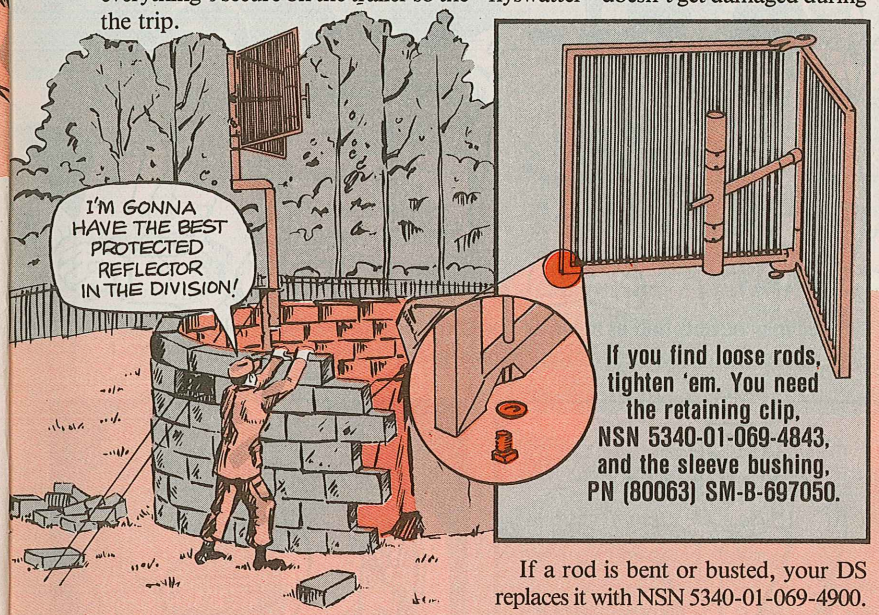
That body heat will extend your battery's life significantly. Maybe yours, too.

Protect Your Reflector

You just can't be too careful in protecting the rods in an AS-2150 antenna reflector. Your extra effort pays off in big dividends.

Bent, busted, loose or touching rods mean weak or distorted signals from your AN/GRC-103 radio set.

Use care when you bring the reflector down from the mast. Then handle it carefully on the ground and when you pack it away on its trailer. Be sure everything's secure on the trailer so the "flyswatter" doesn't get damaged during the trip.



If a rod is bent or busted, your DS replaces it with NSN 5340-01-069-4900.

To Prevent Gap Zap...

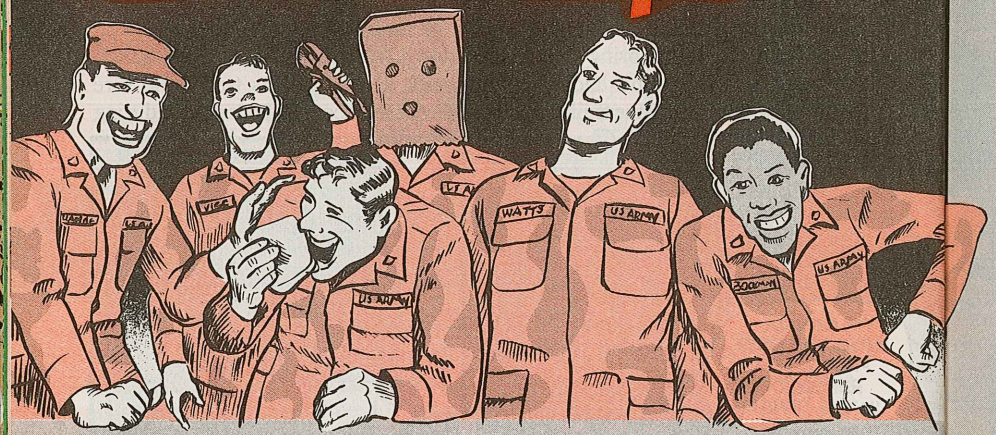
Turn Off the Power!

Before you install or remove a piece of commo gear—like radios, modems, inverters or teletypewriters—be sure the power is OFF.

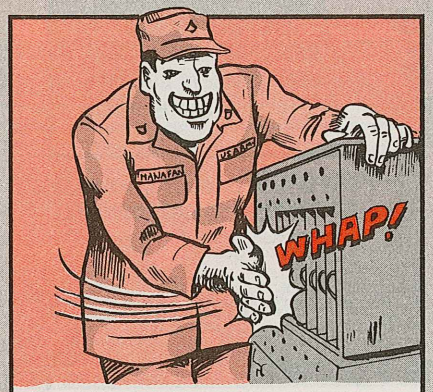
That means the switch on the gear itself, and the power to the connector the equipment will use.

With the power on, arcing is likely. That surge of electricity can burn the pins or, worse, ruin circuits inside the equipment.

Card Sharps ?



They may be only half as mean as The Dirty Dozen, but these "Slightly Soiled Six" put a big hurt on your multichannel gear's printed circuit cards.



Heavy Hands Hanafan

Scoffs at those who carefully slide cards into their slot and wait to feel the pins mesh before seating.

"A quick slap gets it," he says. What it gets is mashed and mangled pins—and a trip to support.

Vise Grip Vinnie

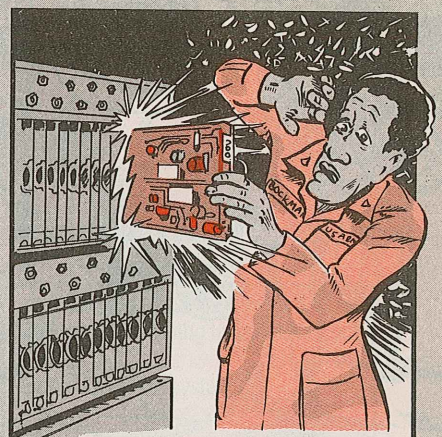
Believes you can fix anything with his favorite tool. Even the bent pins on a circuit card.

Sorry, Vinnie, only a needlenose pliers will straighten a bent pin. 'Course, you can't repair all cards, but give it a try before you turn 'em in.

30-Weight Willie

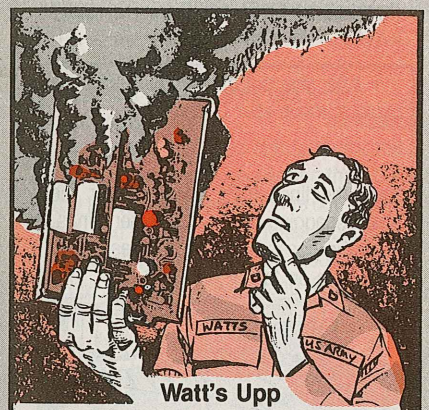
Greasy kid's stuff? He's loaded. Handles cards with oily fingers, too. The cards not only pick up the electricity from his fingers, but dirt and dust with the oily fingerprints he leaves.

Convincing him that cards should be held only around the edges is a lost cause.



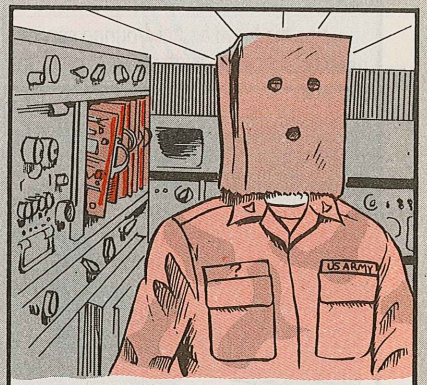
Switched-On Bockman

Forgets to turn off power to his gear before seating new cards. That turns 'em into old cards fast.



Watt's Upp

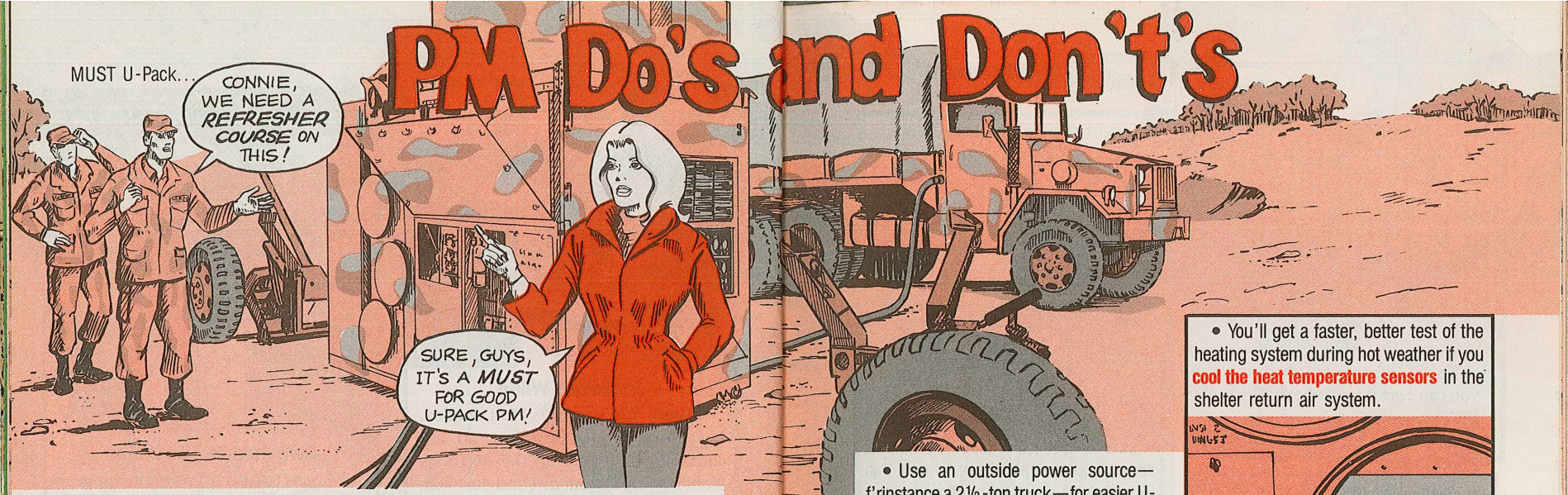
The kind of guy who forgets to bring his power source up to speed before turning on equipment. That sudden spike can blow a card.



"John Smith"

You may never know who he is, but you'll suffer anyway. He's the guy who forgets to replace the card cell cover. Cards jiggle loose and lose contact. No cover also lets in commo killers like dirt and dust.

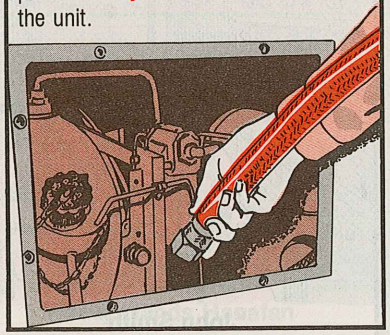
PM Do's and Don't's



Keeping your Medical Unit, Self-contained, Transportable hospital unit in good shape calls for good operator PM on the utility package.

Here're some tips that'll help keep the U-pack off deadline:

• **Use the bleed air hose** during service periods **to dry out each compartment** in the unit.

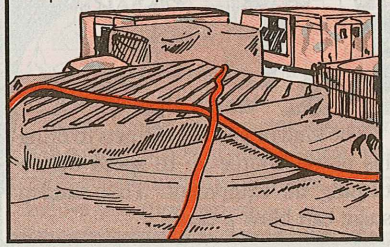


• Run your U-pack 1 to 2 hours during each service period to keep down condensation in the combustion compartment.

• Never be in a hurry to put the waterproof cover on after shutdown. The gas turbine engine exhaust will melt the cover every time.

• Replace the tiedown hardware for the cover with NSN 5340-00-764-2334 (bracket) and NSN 5320-00-721-9062 (rivets).

• After you put on the cover and get ready to move your U-pack, **criss-cross the brake connecting and electrical hoses and run 'em thru the hoist rings**. This'll keep the lines from hanging over the sides, snagging on trees and other things. Tape the hoses together if necessary to keep 'em on top of the unit.



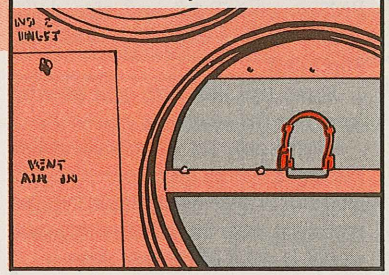
• Use an outside power source—f'rinstance a 2½-ton truck—for easier U-pack starts. Saves your batteries, too. 'Course, you keep your batteries up-to-starting power like it says in your dash 12 manuals.

• Keep a sharp eye on your AiResearch model U-pack's fuel supply. You never, n-e-v-e-r want to let the pack run out of fuel. An empty day tank makes the fuel clusters a disaster area quick-like.

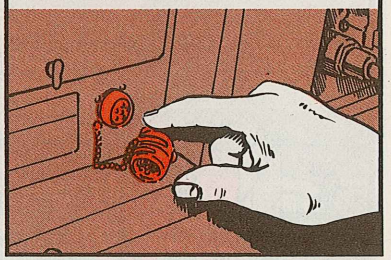
If you see the **NO FUEL** indicator lamp light up, it's too late to check the fuel supply. There's no warning that your day tank's empty. When you're out, you're out, and the fuel cluster takes a beating. (Your Libby and Amertech models have a low-fuel cutoff switch and light in the fuel supply tank.)

• The original turbine engine air inlet venturi plastic screens have a bad habit of crumbling. Get 'em off quick—and ask your DSU to make a screen of 1/8-in wire mesh or hardware cloth to cover the venturi. Do not use the NSN in TM 5-6115-590-20P for Item 8, Fig 193.

• You'll get a faster, better test of the heating system during hot weather if you **cool the heat temperature sensors** in the shelter return air system.

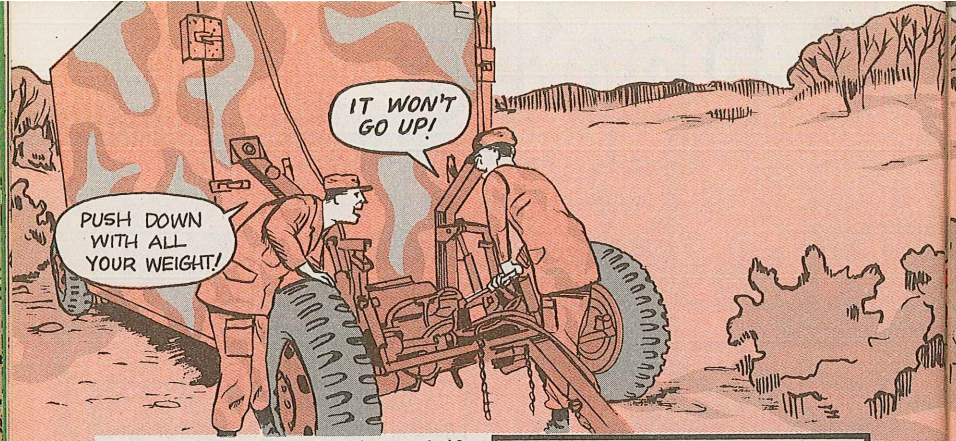


• **Be sure the shorting plug is installed** in the remote temperature sensing connector. If it's missing, your unit will cool but not heat.



• Lifting your U-pack with a fork lift? Use fork extensions to be sure the forks go all the way thru the base. 'Course, you need a forklift with over 5,000-lb capacity.

PS MORE

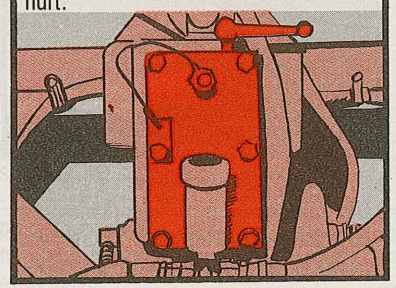


Your U-pack won't help much if you can't get it to the field. This's why PM on your front and rear dolly trailers TM 9-2330-275-14&P—is important.

These tips will help you get the 'pack on the road.

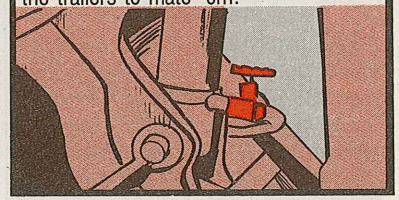
• If the dolly set stops while you're lowering it to hook onto the U-pack, it's probably because the hydraulic cylinder is sticking. Help the dolly by using your weight to get it all the way down.

• Or, you could have moisture in the hydraulic pump, 'specially on cool days when condensation forms. Drain the contaminated oil and refill. **Water also gets into the pump if the filler plug is not screwed in tight.** An extra twist on the filler plug each time you move the dolly won't hurt.



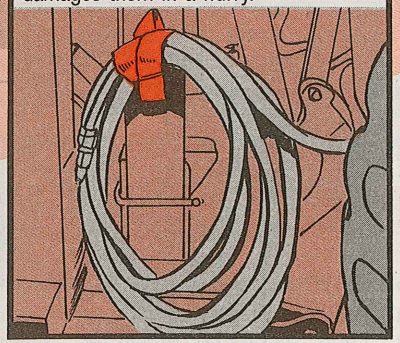
• **Take it easy when you bleed the hydraulic bleed valve.** Heavy-handed mechanics break off the valve easy. For this bleed valve job you loosen 2 nuts: A jam nut and a needle valve nut. Never grab just any size wrench from the tool box. Use a 7/16-in open-end wrench and save some downtime and heartburn.

• When you replace the cylinder, be sure you put it on right. **The cutoff valve and hydraulic ram face toward the center of the dolly.** No Murphy here, or you'll break off the valve when you maneuver the trailers to mate 'em.

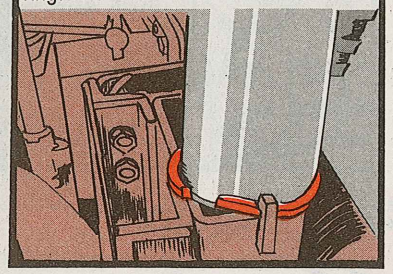


• Moving the dolly set around the motor pool or out in the boonies? **Be sure the air and electrical lines are coiled and strapped down** out of the way.

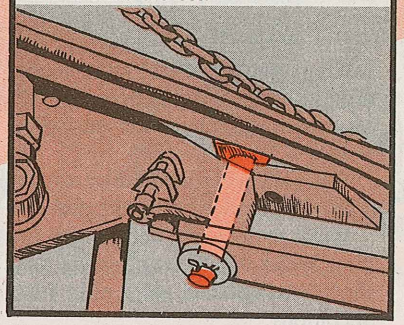
Dragging 'em around on the ground or rolling over 'em with the trailer wheels damages them in a hurry.



• **Be careful putting the telescoping bar on the rear axle assembly.** A slam-bang deal will break off the aluminum retaining ring.

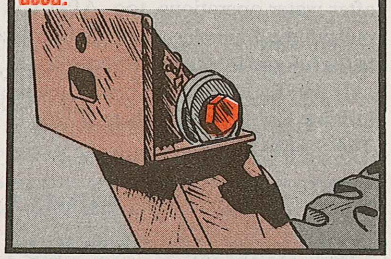


• **Keep an eagle eye on the drawbar locking pin.** If you lose it, you won't be able to raise the set.



• Be extra careful when you back up a loaded dolly with the towing vehicle: you could break the locking pin and drawbar. The CAUTION note on the inside front cover of TM 9-2330-275-14&P has the word on how to back up the dolly set.

Be sure **to keep the mounting bolts finger-tight when the dolly is not being used.**

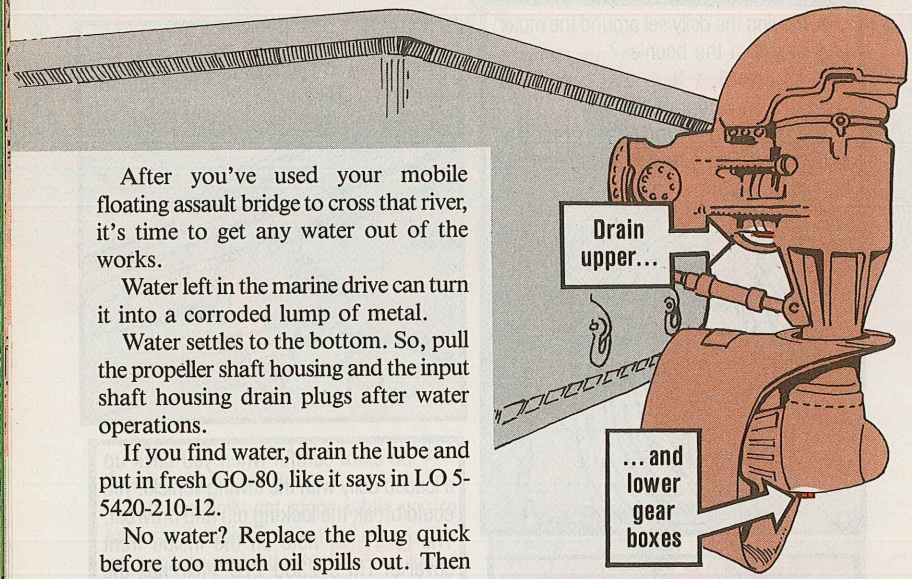


You can use either of 2 turbine engine lubricating oils in the U-packs—NSN 9150-00-782-2627 or NSN 9150-00-985-7099. Just don't mix 'em.

Two tools will be added to the accessory components lists in all U-pack-12 manuals at their next revisions. In the meantime, you can get 'em by using Appendix A, CTA 50-970 as your authority for: Ground rod slide hammer, NSN 5120-01-013-1676; and open-end adjustable wrench, NSN 5120-00-264-3796.

Use the wrench for hooking/unhooking fuel lines, and the hammer to pull up ground rods.

Water, Water Everywhere



After you've used your mobile floating assault bridge to cross that river, it's time to get any water out of the works.

Water left in the marine drive can turn it into a corroded lump of metal.

Water settles to the bottom. So, pull the propeller shaft housing and the input shaft housing drain plugs after water operations.

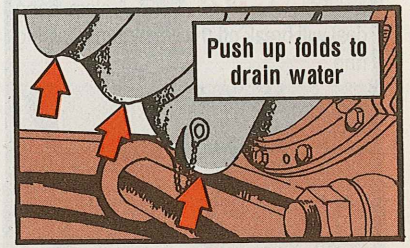
If you find water, drain the lube and put in fresh GO-80, like it says in LO 5-5420-210-12.

No water? Replace the plug quick before too much oil spills out. Then check the oil level.

Boot Drain

Be sure to check the U-joint boots after water operations, too. After you pull out the drain plug, push up the folds in the boot to let out any trapped water.

If you find water in a boot, lube the U-joint like it says in Para 2-226c of TM 5-5420-210-20.



No Terminal Cover Required

Dear Half-Mast,

What's the NSN for the plastic terminal cover on the MEP-016A 3-KW generator? I can't find it in TM 5-6115-271-24P.

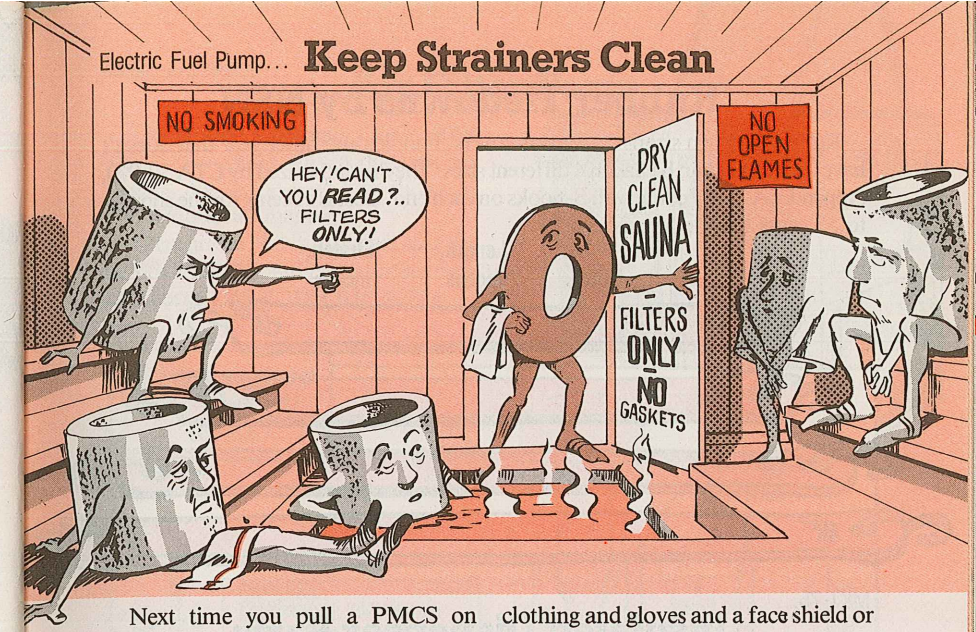
SGT M. S.

Dear Sergeant M. S.,

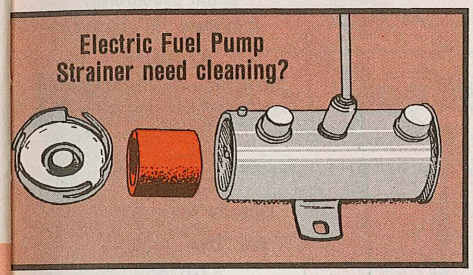
Forget the terminal cover. The headshed decided it's not needed. If your cover's damaged, remove it and replace the screws.

Half-Mast

Keep Strainers Clean



Next time you pull a PMCS on equipment that has an electric fuel pump, NSN 2910-00-930-9367, don't forget to check the filter element. Your TM may not remind you.



On some equipment—generators, f'rinstance—clogged strainers have stopped the engine...or caused it to run rough. Finding the cause could blow your troubleshooting mind if you're not on top of that filter.

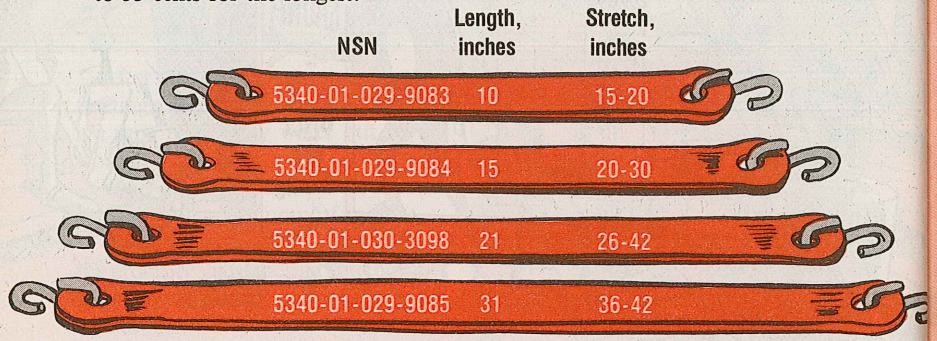
Wash a dirty strainer in drycleaning solvent—P-D-680—and dry it thoroughly. Be sure to wear solvent-resistant clothing and gloves and a face shield or goggles. Avoid getting solvent on your skin or breathing the vapor. If you get any on your skin, wash the area with soap and water. In a poorly ventilated area, check with the medics to make sure you use the right respirator. Not all of 'em will protect you from the fumes.

If the strainer's damaged, replace it. You get one—made of wire mesh, ceramic or nylon—with NSN 2910-00-893-6402. They're interchangeable.

Also, look at the cover gasket while you've got the pump cover off..

Rubber Tiedowns by NSN

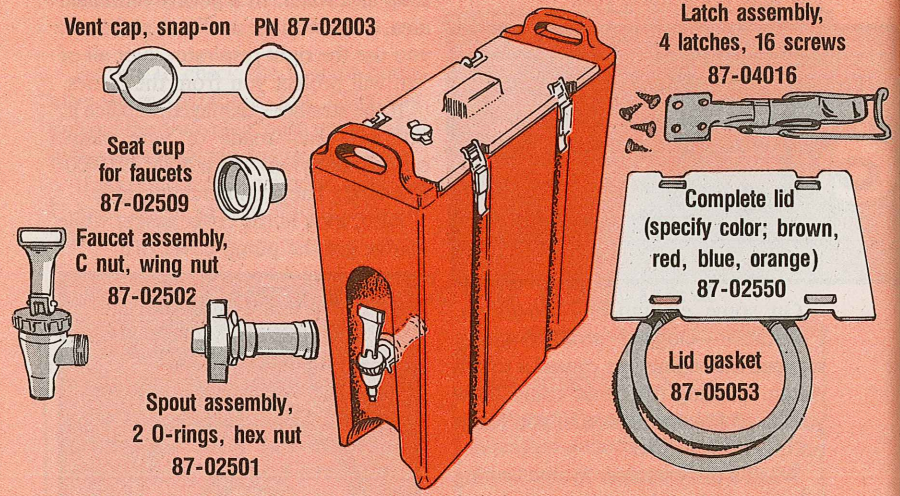
Rubber tiedown straps for canvas covers, bundles and other gear that doesn't have issue straps can be had in 4 different sizes. They're authorized by CTA 50-970, Appendix A. They come with S-hooks on each end. Cost is 41 cents for the shortest to 53 cents for the longest.



MKT-75...

Insulated Dispenser Parts

Here're the repair parts for the 5-gal liquid insulated dispenser, NSN 7320-01-093-7371, in your MKT-75 Mobile Field Kitchen.



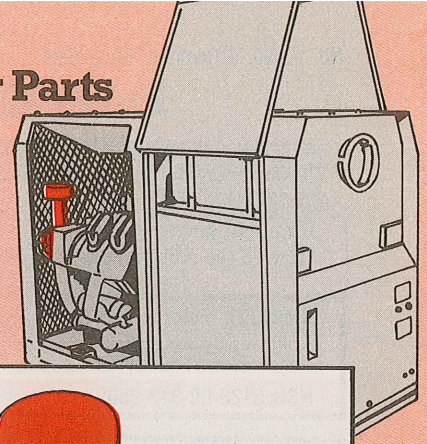
Use FSCM 21669, RIC S9G, and DD Form 1348-6 for all these items. Jot 'em down in TM 10-7360-206-23P.

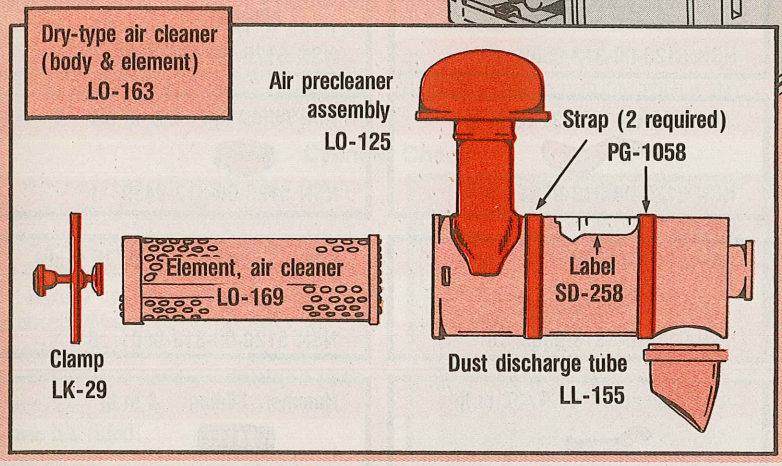
Hobart Arc Welder...

Air Filter Parts

The Hobart Company GCC-300W arc welder comes with a dry-type air cleaner, not the oil-bath type shown in the commercial manual.

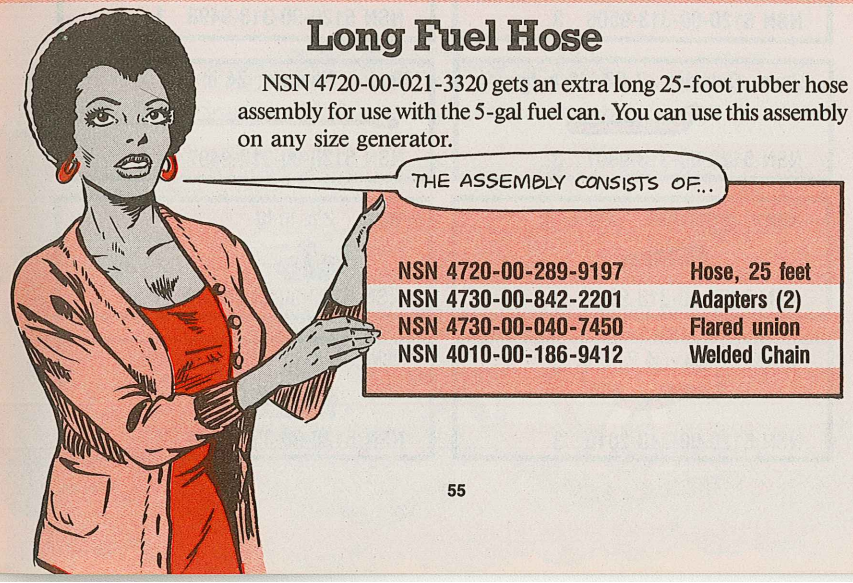
There are no NSN's assigned, so order by FSCM 66289 and part number on a DD Form 1348-6. The RIC is B14.





Long Fuel Hose

NSN 4720-00-021-3320 gets an extra long 25-foot rubber hose assembly for use with the 5-gal fuel can. You can use this assembly on any size generator.



Puller Kit Breakdown

Ever try to match NSN's with components of the mechanical puller kit, NSN 5120-00-313-9496, in your organizational shop sets—SC 4910-95-CL-A72 and -A74?

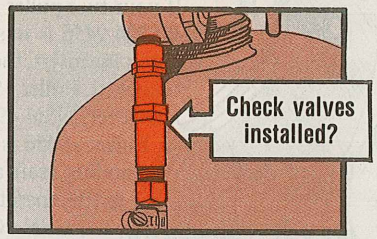
It's a real guessing game!

Here're the components, their NSN's and how many of each:

Cross Arm Puller: 6 in lg  NSN 5120-00-313-9502 1	Jaws, Reversible: 3½ in lg  NSN 5120-00-357-6278 3
Jaws, Inside: 3 13/16 in lg  NSN 5120-00-313-9504 3	Nut, Adjusting: 2½ in dia  NSN 5120-00-313-9499 1
Jaws, Inside: 4 9/16 in lg  NSN 5120-00-313-9505 3	Pin: 1 11/32 in lg; 5/16 in dia  NSN 5120-00-313-9501 3
Jaws, Outside: 4 19/32 in lg  NSN 5120-00-313-9506 3	Hammer, Sliding: 4 in lg  NSN 5120-00-313-9498 1
Jaws, Outside: 7 23/32 in lg  NSN 5120-00-313-9507 3	Rod: T-handle; 24 in lg  NSN 5120-00-313-9497 1
Jaws, Reversible: 3½ in lg  NSN 5120-00-313-9508 1	Yoke: 2½ in lg  NSN 5120-00-313-9500 1
Jaws, Single: 4 7/8 in lg  NSN 5120-00-340-2010 3	Yoke, 2-way: 2½ in lg  NSN 5120-00-357-9244 1

Welding Safety

Is your welding torch set an accident waiting to happen? It could be if you don't have check valves installed, or if your oxygen cylinder is overdue for inspection.



Check valves let gas flow only one way. If you get a flashback, the valve keeps the flame out of the regulator.

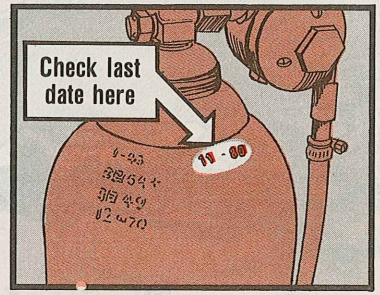
You get 2 valves with your torch set. The oxygen check valve, NSN 4820-00-828-7190, has right-hand threads. The acetylene valve, NSN 4820-00-828-7192, has left-hand threads—and is marked with a groove cut in the wrenching surface.

Cylinder Check

Your oxygen cylinder is due a pressure check every 5 years. You can tell if your cylinder is due by checking the last date stamped on the neck of the cylinder.

If your cylinder is due, send it in for a check. Write "due pressure check" on the DA Form 2407..

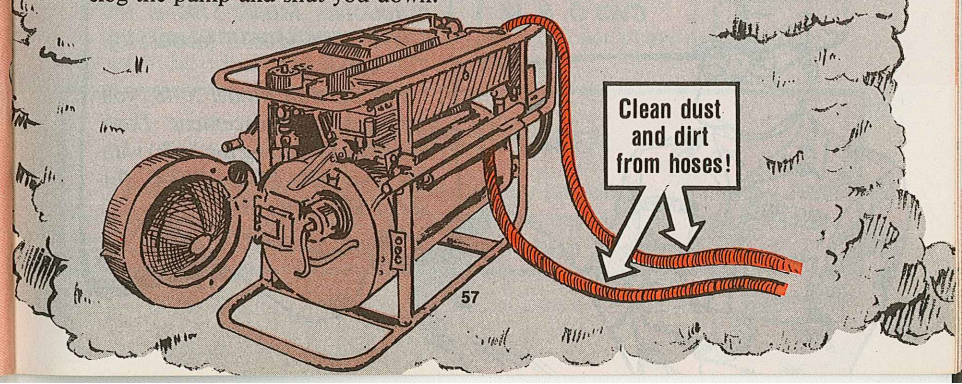
You don't have to do this for the acetylene cylinder. It's checked every time it's filled.



M3A3 Clean-Up

When you clean your M3A3 smoke generator, remember the exhaust and inlet hoses.

Dirt builds up on the hoses and can be drawn into the pump assembly. This'll clog the pump and shut you down.



Fuse Puller Shock Hazard

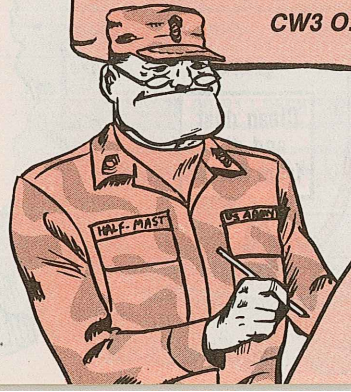
If your fuse puller NSN 5120-00-224-9453 or NSN 5120-00-224-9456 is missing a jaw insert, get rid of it. Without the insert, the pullers can slip and you can get shocked. Puller -9453 is part of the diesel electric tool set, NSN 4940-00-219-8882. Puller -9456 is used on utility landing craft and is listed in the operator equipment kit, NSN 2090-01-064-8020, used with other watercraft.

Timing Light Lamp

Dear Half-Mast,

How can I order replacement lamps for timing light, NSN 4910-00-937-5724?

CW3 O. R. W.



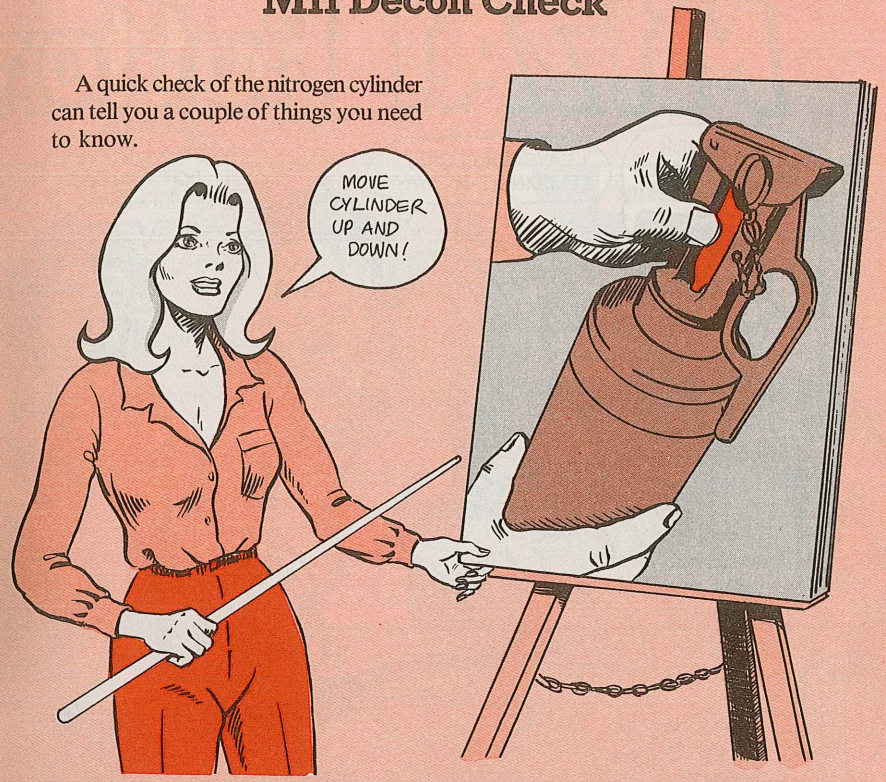
Dear Mr. O. R. W.,

The replacement lamp for the Autotronics Model 5106 is PN 5106-L1, FSCM 06315 (about $10). The RIC is S9C.

For the Sun Model X-48, you can get a replacement flash assembly (including the bulb) with PN 2440-006, FSCM 82386, for about $61. Same RIC.

M11 Decon Check

A quick check of the nitrogen cylinder can tell you a couple of things you need to know.



- If you hear a slight metallic banging, the cylinder's preformed packing (O-ring), NSN 5330-00-804-7767, is missing. That means the cylinder gas will leak, so ask your NBC NCO to replace the O-ring.
- If the cylinder moves more than 1/8-inch up or down, it almost surely is empty. Get it replaced.

By using the up and down movement check, you don't have to break the seal to see if the cylinder's full or the O-ring's in place.

Module Return

If you have any M43 chemical agent detector unit electronics modules, NSN 6665-00-400-5098, that are faulty or that have been replaced, turn 'em in to support. The modules are in short supply. Automatic return is required.

M17A1 Button-Up!

Filter Pouch Flaps

Buttoning the filter pouch flaps on M17A1 protective masks isn't easy... especially with new masks.

You might say it's caused a flap for soldiers many times...and there are a lot of ripped and useless flaps to prove it.

But, if you go by the book, buttoning up can be easier. As Page 3-10 of TM 3-4240-279-10 shows you, button the short, outer button first.

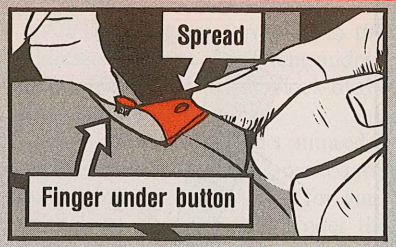
Some tips:

Stick a finger under the button.

Stretch the flap hole slightly with your other hand...and side-slip the hole over the button.

If that fails, dab some spit on the button and on the hole. Stretch and slip the hole over the button.

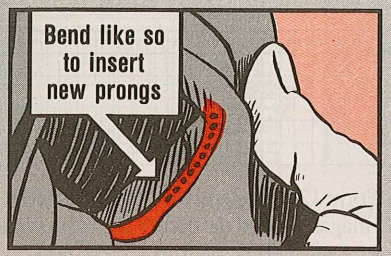
Do the same thing with the longer button.



Optical Inserts

If you use optical inserts, getting the prongs to stay in can be a problem... in more ways than one.

If the prongs slip out, you could have a vision problem. Also, you just might stick yourself in the eye.



A good way to keep them in as you install them in the insert supports is to bend the mask so that the insert holes are on the crease of the bend.

Insert one side all the way in the holes ...and then do the same bend-and-insert bit with the other side.

If they still slip out, burr up the prongs with a file and try again. Go easy with the file. You want to roughen the prongs, not eliminate them.

Patience is the password.

M13A2 Filter Sets

M13A2 filter sets, NSN 4240-00-165-5026, are the only filters now being issued for the M17-series protective masks. M13 or M13A1 filters on hand can be used by TRADOC training activities or turned in as excess. Turn them in as soon as you receive your M13A2 replacements. Request them now.

M1 Waterproof Bags

If the M1 waterproof bag for your M17-series protective mask is ripped or leaky, your mask is not mission capable. Check the bag for cracks, tears, holes and brittleness like PMCS Table 2-1, Page 2-42.2, TM 3-4240-279-10 tells you.

Different Forms–Different Uses

USAAGPC REQUISITION CODE SHEET

	ACCOUNT NUMBER	BLANK	SUB-ACCT NO	BLANK	TYPE REQ	BLANK	PUBLICATION OR FORM CATEGORY AND NUMBER	BLANK	CHANGES
1	E07123		A				AR 18-1		AL
2	E07123		A				DA POSTER 5-28A		00
3	E07123		A				CIR 600-21-3		00
4									
5									

SEE CODING SAMPLES ON REVERSE

	QUANTITY REQUIRED	BLANK	UNIT OF ISSUE (UI)	BLANK	ZIP CODE OR APO NUMBER	BLANK
1	1		EA		20314	
2	100		EA		20314	
3	10		EA		20314	
4						
5						
6						

DA FORM 4569, 1 AUG 77

EDITION OF 1 NOV 76 IS OBSOLETE.

What's the difference between the DA Form 12-Series and the DA Form 4569? Well, one's like subscribing to your favorite magazine, and the other's like requesting back issues of that magazine.

When you submit your unit's requirements for a pub on a DA 12-series form, you're getting on initial distribution. You automatically get all new and revised editions of that pub and its changes—as they come out.

Existing publications—back issues—must be requested on a DA Form 4569, USAAGPC Requisition Code Sheet. These pubs have already been distributed.

Even though you told the pubs center what pubs your unit needed when you opened an account or sent in a DA 12-series form, you won't receive those pubs until the current editions are changed or revised. To get the current edition, you need to request it on a DA Form 4569.

Initial Distribution

To fill out the DA 12-series forms, figure out what pubs and how many copies of each your unit needs. Check with your administrative, training, supply and equipment maintenance people to find out their needs. In turn, they should check:

- **The MTOE/TDA**
- **Property book**
- **Hand receipts**
- **Training schedules**
- **Regulations covering your operations**

When you get all your DA 12-series forms together, have them reviewed by your publications officer and unit commander. Then send them to the Baltimore Publications Center:

Commander
USAAGPC
2800 Eastern Blvd.
Baltimore, MD 21220

All DA 12-series forms go to this address. If there's a different address preprinted in the heading block of the form, ignore it.

So your unit won't get unneeded publications, make sure you request only pubs that are intended for your unit's level of command. Under the maintenance levels block, enter the quantity you need under "Operator & Crew" or "Organizational." Under Class of Distribution, enter the quantity you need under:

- **Distribution A—pubs for company-level units**
- **Distribution B—pubs for Battalion--Brigade-, Regiment-or Group-level units**

But, if your unit's mission requires you to have a pub written for a higher level, you can still request it. Just attach a justification to the DA 12-series form.

Resupply of Pubs

The DA Form 4569 is used for resupply to:

- **Replace lost or worn-out publications**
- **Get pubs your unit doesn't normally get through initial distribution**
- **Get current editions of pubs**

Always send your DA Form 4569 to the Baltimore Publications Center. If your unit has access to both a telecommunications center (TCC) and a keypunch facility, send the form via the automated digital network (AUTODIN) using a DD Form 1392, Data Message Form. This is the fastest way to get your request in.

If your unit has access to a TCC, but not to a keypunch facility, send your DA Form 4569 via AUTODIN using a DD Form 173, Joint Message Form.

If you don't have access to a TCC, mail in the DA Form 4569 along with a cover sheet.

Microfiche Reader Rundown

Microfiche pubs are packed with good info to help keep your equipment in first-class shape.

But all the microfiche in the world won't do you a bit of good without a microfiche reader.

Here's the list of various readers, TM's and replacement lamps:

VIEWERS/PRINTERS

Make and Model	NSN	TM	Lamp NSN/FSCM and PN
*Minnesota Mining & Mfg Co. 390 (ADM) "480 Data Printer"	6730-00-044-3242	TM-DGSC-6730-5	6240-00-476-1228
Bell & Howell RP 550 Spacemaster	6730-00-116-1620 Viewers	TM-DGSC-6730-7	6240-00-409-8295

VIEWERS

Make and Model	NSN	TM	Lamp NSN/FSCM and PN
Washington Scientific Ind. 1114D	6730-00-116-1618	TM-DGSC-6730-3	6240-00-449-6003
Micro Design 1200	6730-00-116-1618	TM-DGSC-6730-6	6240-00-409-8295
Micro Design 990	6730-00-116-1618	TM-DGSC-6730-9	53027 00542800
Northwest Microfilm Inc. Northwest 14	6730-00-116-1618	TM-DGSC-6730-10	55426 5542
*Electro-Optical Mechanisms Inc. 416	6730-00-074-2729	TM-DGSC-6730-4	6240-00-409-8295
*Micro Design 200	6730-00-074-2729	None	6240-00-409-8295
*Washington Scientific Ind. Mini-Cat 1114	6730-00-074-2729	TM-DGSC-6730-2	6240-00-449-6003
*Wollensak 414-1	6730-00-074-2729	None	6240-00-102-9648
Bell & Howell "Commuter" Model	6730-01-080-7932	None	6240-01-016-4447
Bell & Howell "Commuter" Model with Battery Pack	6730-01-080-7933	None	6240-01-016-4447

*Viewer no longer stocked; lamp can be ordered.

Order the 2 non-NSN items on a DD Form 1348-6. The RIC is S9G. CTA 50-909 is your authorization to get the viewers and viewer/readers.

For the TM's, write:

Commander
DGSC
ATTN: DGSC-SDA
Richmond, VA 23297

AMDF Hotline

Got a question about a fishy-looking unit price in the Army Master Data File fiche? You can reel in the answer by calling the Management Information Research Assistance Center (MIRAC) hotline at the USA DARCOM Catalog Data Activity.

Dial AUTOVON 977-7431 or commercial (717) 782-7431 and give your name, rank, unit, AUTOVON number, the NSN and current unit price of the item. Then tell what you think the price should be, and why. Give the month and year of the microfiche you used.

The hotline number operates 24 hours a day. If you get a recording, just give the info to the machine.

Someone at MIRAC will get back to you with a pat on the back for your sharp eye or an explanation of the price.

You can also question unit prices by filling out and sending in the card that comes with the AMDF. Or just write to:

USA DARCOM Catalog Data Activity
ATTN: DRXCA-DL
New Cumberland Army Depot
New Cumberland, PA 17070

TTS Mount Leaks

If your M60A3 tank has a water leak around the Tank Thermal Sight (TTS) mount, there's a fix available thru your local AMCCOM logistic assistance representative. He's got the info and wants to help you. If you don't know who your representative is, call your local DARCOM Logistic Assistance Office. They'll give you his name and phone number.

Binder for PS

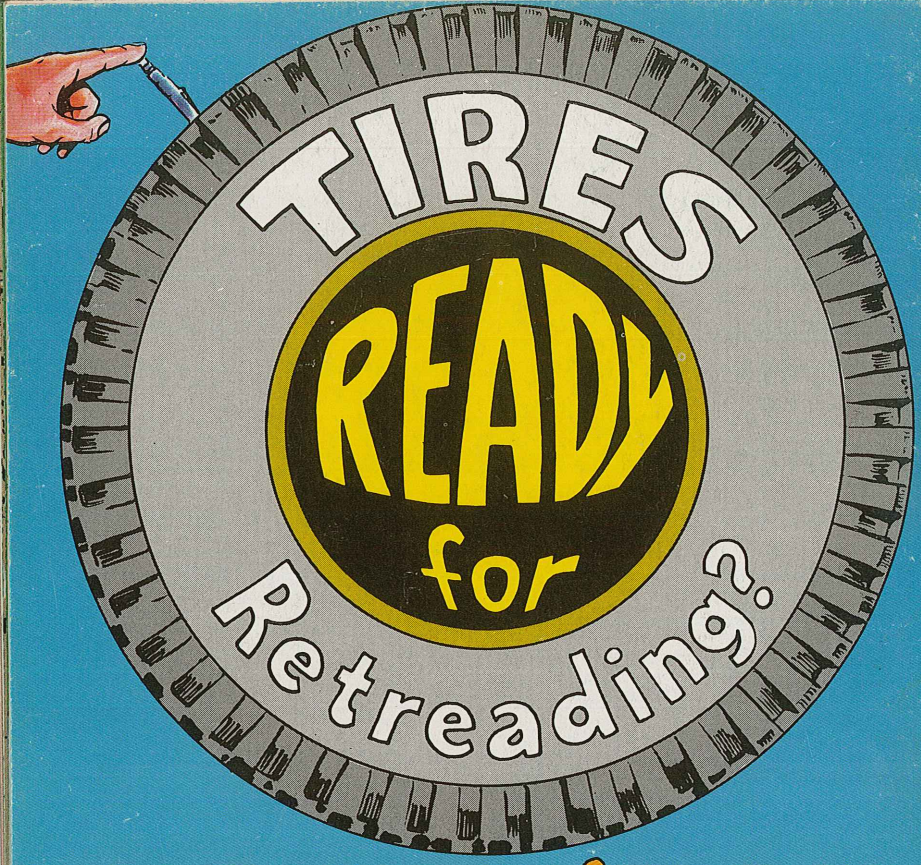
NSN 7510-00-187-6486 brings a 3-ring looseleaf binder that'll hold several copies of PS Magazine. You'll need to punch holes in the magazines. The binder's listed in the GSA Catalog.

NBC Warning Decals

NBC warning decals for vehicles and other equipment using gas/particulate filters are now available with NSN 7690-01-114-3702. The decal includes handling cautions for filters exposed to NBC agents. Place it on or near each gas particulate filter unit housing.

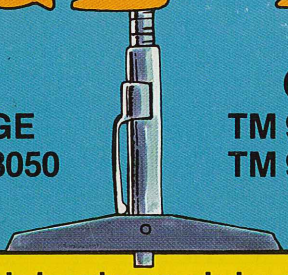
☆ U.S. GOVERNMENT PRINTING OFFICE: 1984—759-008/2

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



GAGE 'EM!

Use:
TIRE DEPTH GAGE
NSN 5210-00-019-3050



Check:
TM 9-2610-201-14
TM 9-2610-200-20

This handy gage is in your No. 1 and No. 2 Common tool sets.