Issue 507

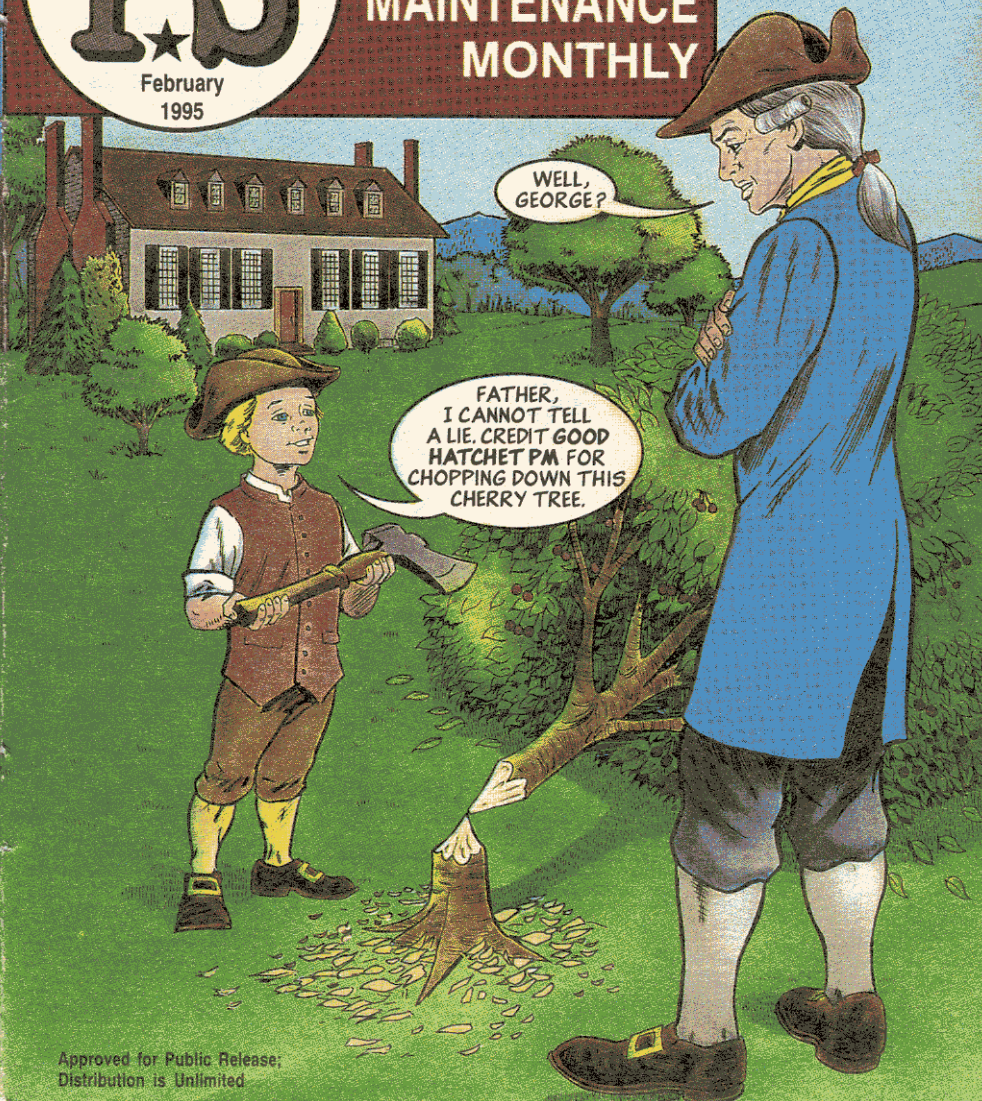
PS

THE PREVENTIVE MAINTENANCE MONTHLY

February 1995

TB 43-PS-507

Read this copy and pass it on!



Get Drivers to Ree-port

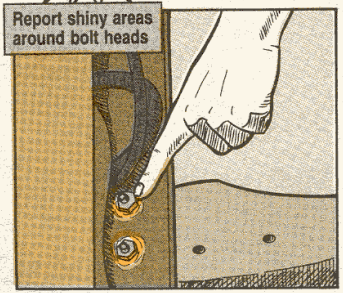
You can put wine in a bottle and ignore it for years. After a long wait, you get better wine.

Ignore a maintenance problem, and all you get is a bigger problem.

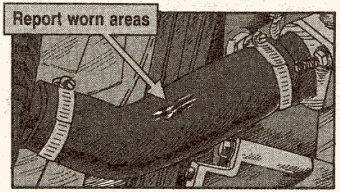
The solution? Teach your drivers to look for potential problems, and report the ones they find.

If they see and report a Class I or II leak, it can be fixed before it becomes a Class III leak and the vehicle becomes NMC.

If they spot shiny areas around a bolt head or nut—a good sign that it's loose—and report it, it can be tightened before something breaks and the vehicle is down.



If they routinely eyeball trouble spots like wiring, hoses, belts and tires for wear, and report problems, you've got a chance to do preventive maintenance before major maintenance is needed.



So, take the time to teach drivers and operators that the sooner they find and report a problem, the sooner they can solve it.

PS THE PREVENTIVE MAINTENANCE MONTHLY

TB 43-PS-507, 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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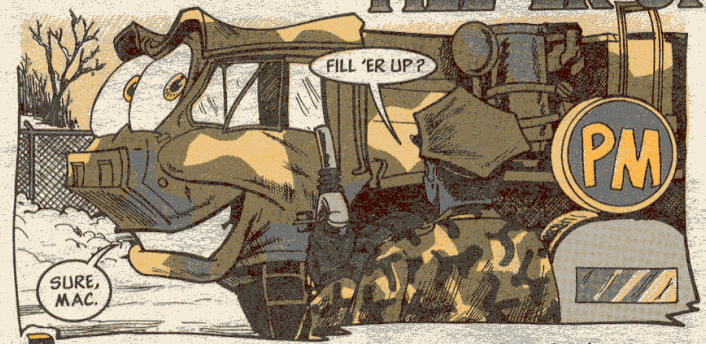
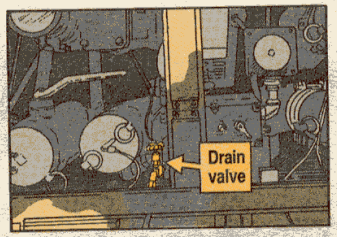
FILL 'ER UP WITH PM



Pumping fuel is an M978 tanker's business. Make it your business to keep your tanker on the job with this handful of PM tips:

Open V15 Valve

Always drain the V15 valve before you operate the tanker. That gets rid of water and other contaminants that have been filtered out of the fuel you've pumped.



Draining the valve keeps that gunk from going into the vehicles you fuel.

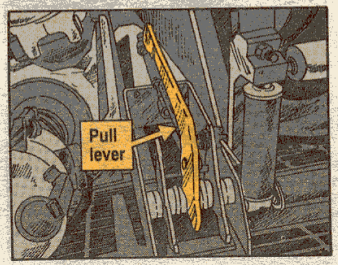
If nothing comes out when you open the valve, chances are the filter canisters are clogged up.

As soon as the tanker is empty, or when it's convenient to unload the fuel, have your mechanic disassemble and clean the valve. Instructions are on Page 23-2 of TM 9-2320-279-20-3.

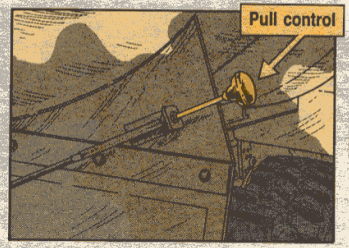
Exercise Shutoff System

You never know when you'll need the M978's emergency fuel shutoff system. Keep it ready all the time by exercising it now and then. It's easy:

1. Pull back on the MANUAL CONTROL EM VALVE lever. That opens the V1 emergency valve, letting you dispense fuel.



2. Pull out the EMERGENCY SHUTOFF control. That should throw the MANUAL CONTROL EM VALVE forward, closing the V1 valve. That stops fuel flow during a spill or fire.



If the lever didn't move, tell your mechanic. It needs adjustment, lube or replacement.

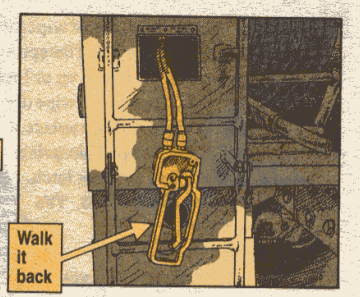
Make sure your mechanic oils the lever during lube services, too.

Keep Deadman Alive

After using the hand-actuated valve (HAV), or deadman control, walk it back to its reel. If you let it fly, the hard landings will damage the air hoses, creating leaks.

Likewise, never tie a knot in the air hoses to stop the HAV before it hits the vehicle. It's easier on the control, but harder on the air hose. Once again, you get leaky hoses, and even a small leak can keep the deadman from pumping fuel.

Whether the HAV makes it through the reel window on the fly or not, the jolt on the air lines can pull the hoses away from the control.

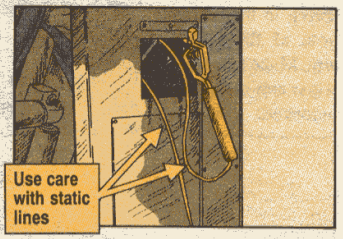


If it happens to you, here's a quick fix to stop, or head off, air leaks.

Cut a couple of inches from the damaged end of the hose. Put the hose back over its fitting. Then, use a screw-type hose clamp, NSN 4730-00-363-4102, to secure it.

Walk Static Cables, Too

The static ground cable needs careful handling, too.



Cables get stretched and broken when you let them fly back into the spool. Eventually, the recoil spring breaks. Then the cable can't rewind.

So, take it easy on the cable and spool. Walk it back to the vehicle.

Spring for Wiper Repair

Before you replace a windshield wiper arm on a HMMWV, mechanic, eyeball the spring.

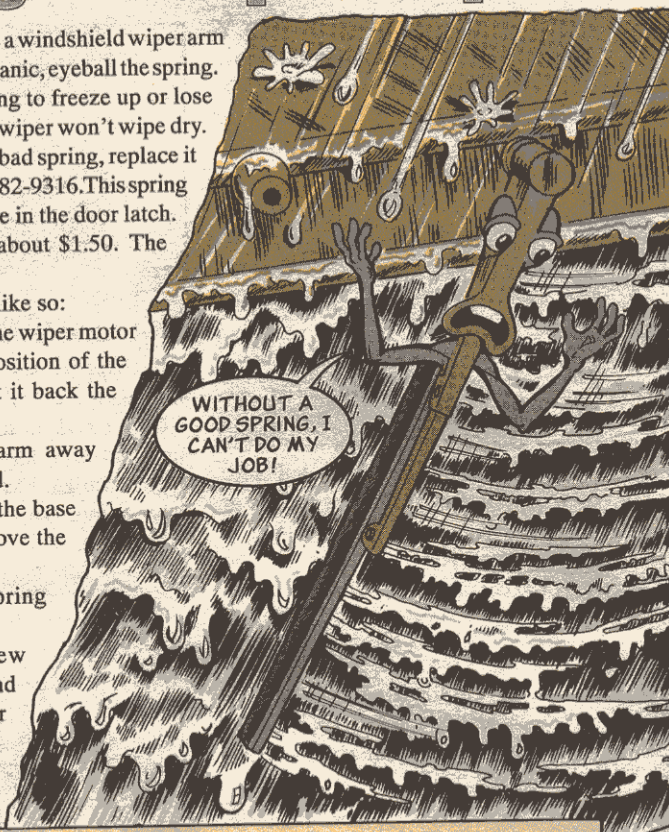
Rust causes a spring to freeze up or lose its tension. Then the wiper won't wipe dry.

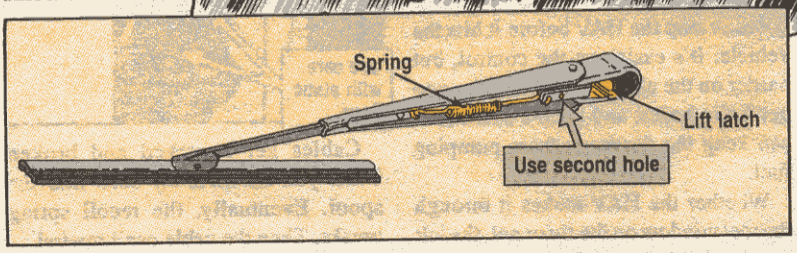
If the problem is a bad spring, replace it with NSN 5360-01-282-9316. This spring is the same as the one in the door latch.

The spring costs about $1.50. The whole arm is $7.50.

Replace a spring like so:

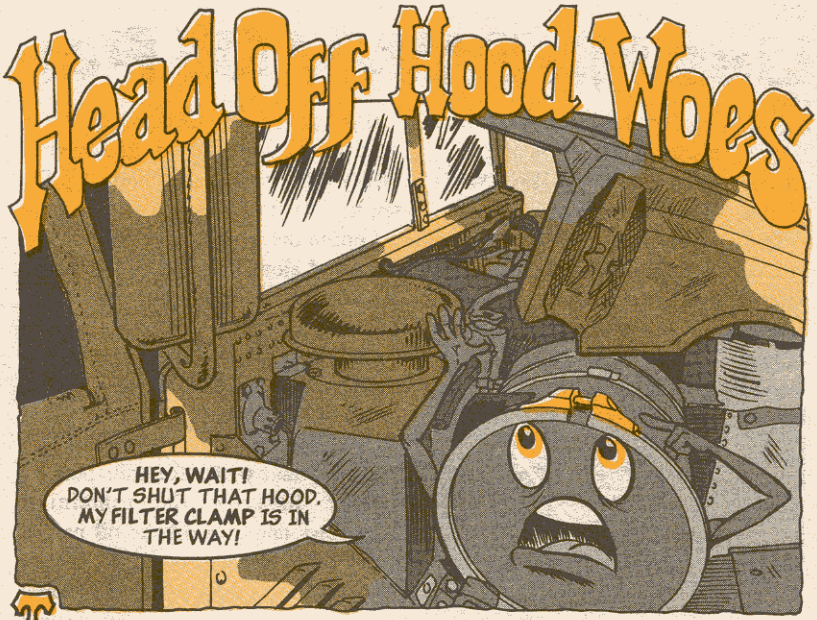
- First, turn OFF the wiper motor switch. Mark the position of the arm so you can put it back the same way.
- Lift the wiper arm away from the windshield.
- Lift the latch at the base of the arm and remove the arm.
- Remove the spring and toss it.
- Install the new spring in the second hole of the wiper arm. Make sure the wiper arm latch is unlocked.





- Mount the wiper arm about 60° to vertical, so you can get a total arm sweep of 120°.

Head Off Hood Woes



That HMMWV air filter clamp bolt can be a real crackup if it's tightened in place on top of the filter.

There's not enough clearance for the hood if the clamp's on top. When you close the hood it hits the bolt and cracks. It cracks some more as the bolt rubs against it.

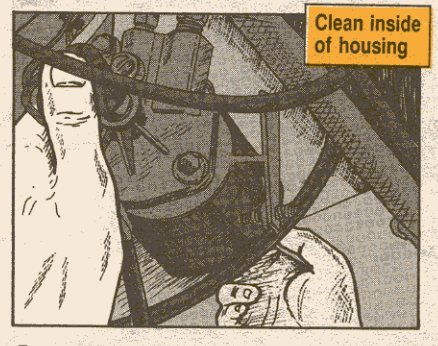
So, instead of tightening the bolt at high noon, tighten the bolt between 3 and 6 o'clock. It's easy to get to there, and safely away from the hood.

Clean Housing, Too

When you change a HMMWV's fuel filter, mechanic, clean the inside of the housing before you put in the new element.

A dirty housing undoes all the good done by a clean element. Fuel lines plug up and if the Humvee runs at all, it'll run rough.

When you clean the other metal parts with solvent, wipe the inside of the housing, too.

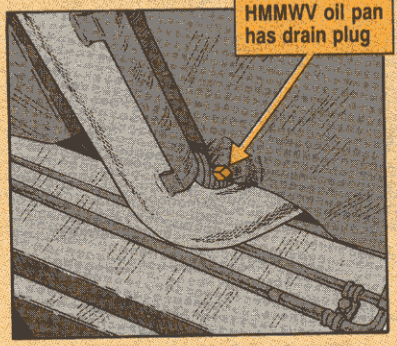


CUCV . . .

Use HMMWV Oil Pan

Changing the fluid and filter on a CUCV's transmission can be an easier, cleaner job if you install the HMMWV's oil pan, NSN 2520-01-212-7634.

That's because the HMMWV oil pan has a drain plug. Everything else is the same except the HMMWV pan holds five quarts of transmission fluid instead of four.



With the HMMWV oil pan, you can pull the drain plug and let out the fluid before you remove the pan to replace the filter.

If you have the original pan and don't want to create any more mess than necessary when changing the fluid and filter, here's what to do:

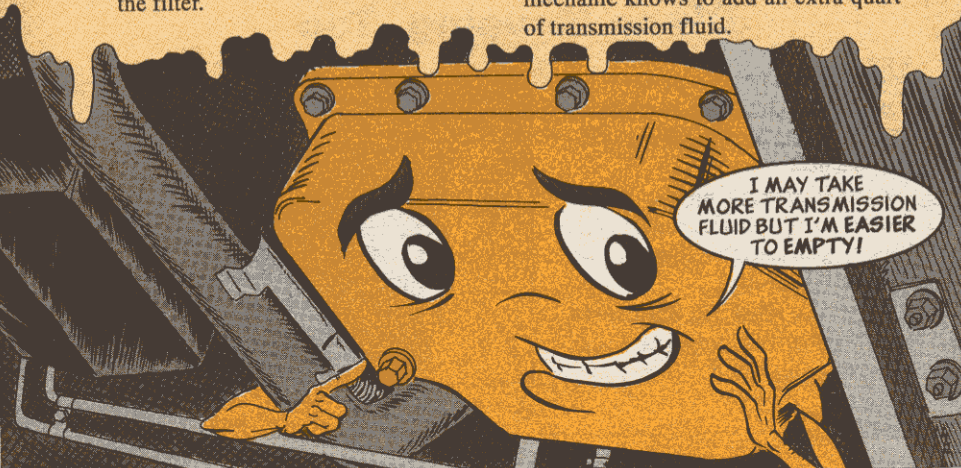
Loosen the first 10 capscrews in the front and along the sides—about four turns. Then remove the three back capscrews.

Pull the back end of the oil pan loose and let it down slowly, in case any fluid is still inside. (If you have the HMMWV oil pan, there will be very little oil left after you have pulled the drain plug.)

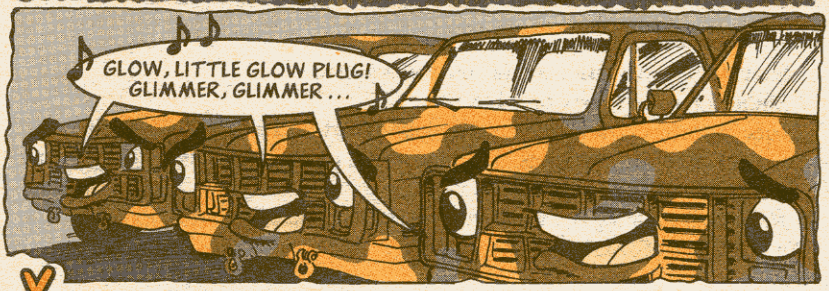
Then unscrew the remaining capscrews and take off the oil pan to change the filter.

Don't forget to wear goggles when you remove the oil pan. They protect your eyes in case something goes wrong and you get a face full of oil.

Get your CO's OK before switching to the HMMWV oil pan. And make a note on the CUCV's DD Form 314 or ULLS DA Form 5986-E so the next mechanic knows to add an extra quart of transmission fluid.



Save Plugs with Right Start

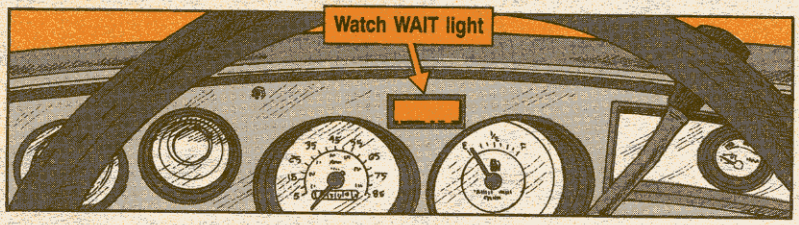


You've got to know about the glow, drivers, or your CUCV's glow plugs are doomed at the start.

Each time you cycle the ignition switch from OFF to RUN, your truck's glow plugs get a 10-15 second blast of electricity to preheat them. Once the WAIT light goes out, the plugs get 1-second electric shocks as needed to keep them hot.

Because of this, you need to make sure you start your CUCV the right way every time. Here's the way:

1. Wait for the WAIT light to go out before you try to start the vehicle. That way, the plugs are as hot as necessary to give you a quick start.



Note: Be careful not to turn on the ignition and then leave the vehicle to check running lights, etc. If you're gone too long, the glow plugs can overheat. That makes them swell and your friendly mechanic will have a hard time removing them.

2. Never hold the switch in START for more than 10-15 seconds. That way you won't damage the starter.

3. If your CUCV doesn't start, leave the switch in RUN and wait 10-15 seconds before trying another start. Do not try more than two restarts or leave the switch in RUN for more than two minutes. That way, the glow plugs don't overheat.

4. If you turn the ignition switch OFF, wait two minutes before trying to start the CUCV again. If you don't wait, the glow plug controller, thinking this is a new start, gives the plug a new pre-heat cycle. Since the plugs are already hot, they'll get even hotter, and burn out.

Be Your Own Inspector

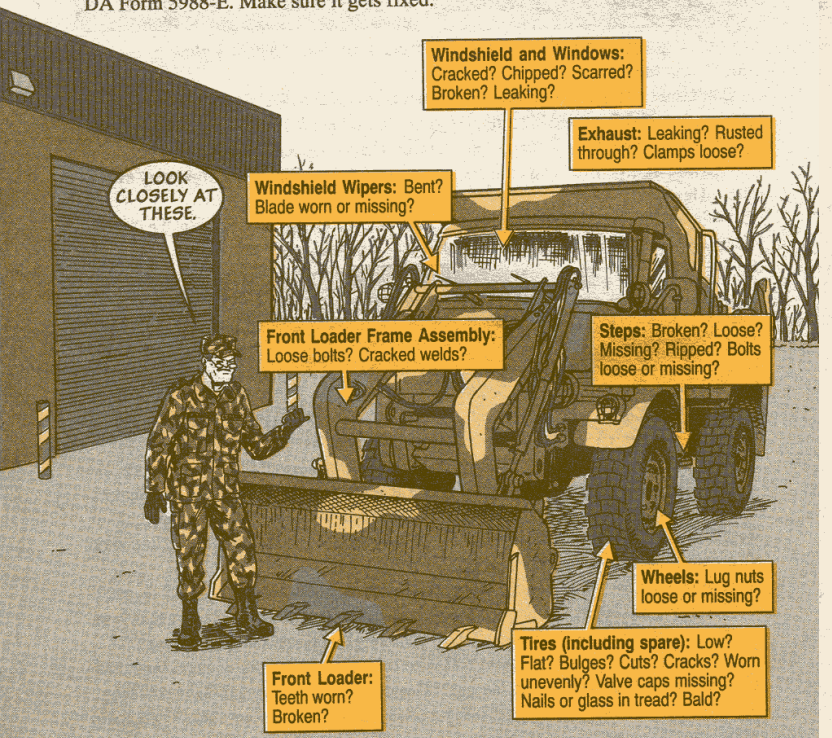
PM starts with you—the SEE operator.

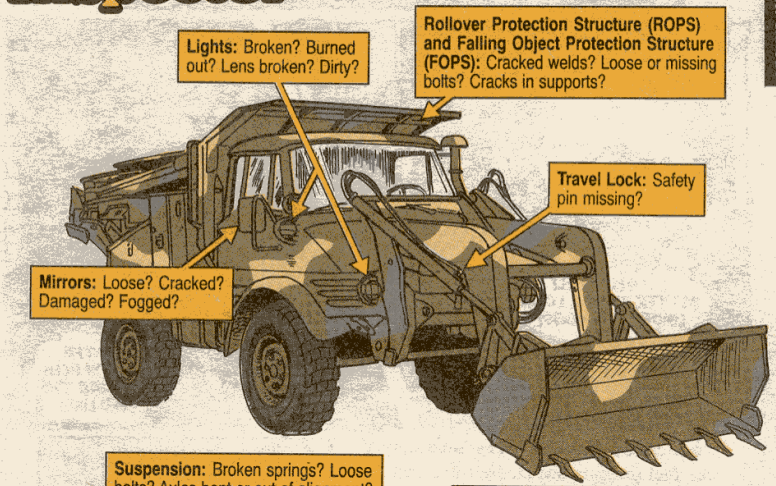
Start looking over that baby as you walk up to it.

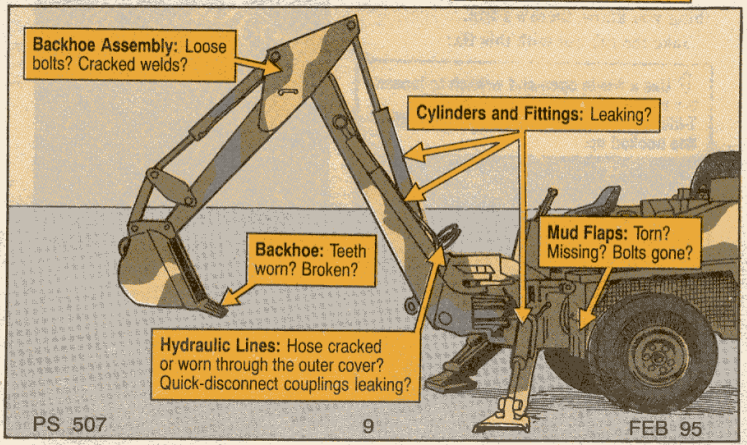
Sitting lop-sided? Look for a low tire.

Now just take a slow walk around it. Eyeball the top, sides and underneath. Look for dangling wires, wet spots, corrosion, worn or missing parts—anything that could spell trouble.

If you find anything you can't fix yourself, put it on a DA Form 2404 or ULLS DA Form 5988-E. Make sure it gets fixed.







SEE . . .

Rub Out Fuel Line Rub

Too close for comfort — That's the story of the fuel pressure switch feed line and the hood.

The line rubs against the SEE's hood. Then fuel leaks onto the hot engine. Next thing you know, there's a fire.

Take the rub out with this fix:

- Use a 9/16-in open-end wrench to loosen the two screw fittings that connect the T-fittings to the pressure switch. Leave the line hooked up.

- Move the pressure switch and fuel line about 45 degrees to your left.

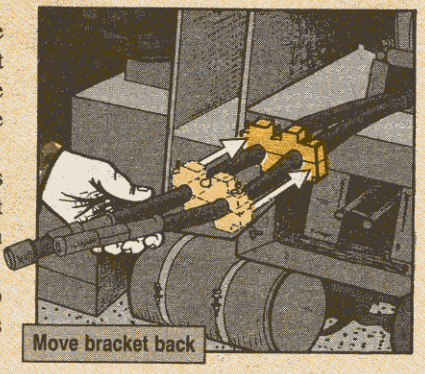
- Retighten the two screw fittings while holding the T-fitting in place.
- Start the engine and look for leaks. If you see any, fix 'em.
- If the fuel line is rubbed raw, replace it. Use NSN 4710-01-285-2761.

Helpful Hookup Hint

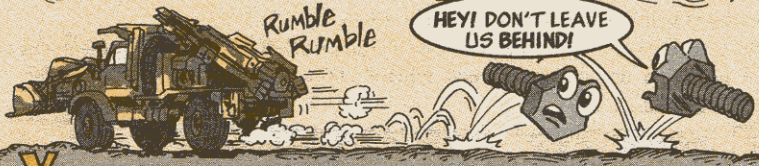
It's almost impossible to connect the two auxiliary hose quick-disconnect couplings on the SEE—unless the hose bracket is moved away from the hose couplings.

Do the job by loosening the nuts on the hose bracket. Move the bracket about four inches toward the reel, then tighten the nuts.

Now you've got enough free hose to couple the two auxiliary hose reel ends and to make tool hookup a breeze.

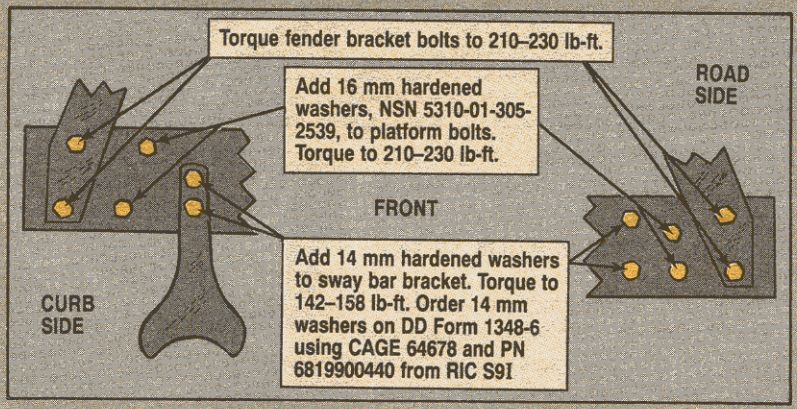


Loose Bolts Saw SEE



Vibration—it's a killer. Vibration causes the SEE's rear fender bracket and sway bar bolts to loosen. Loose bolts chew into the vehicle's frame.

Before loose bolts saw holes in your SEE's frame, do this:



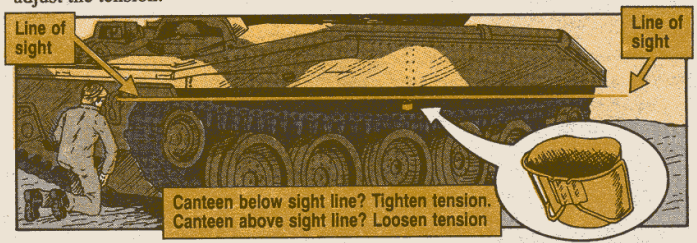
PM Recon

Your M551A1 recon vehicle has been around for a long, long time. And it still does the job if you do yours with regular PM.

You're already familiar with TM 9-2350-230-12, so scout ahead with these PM tips to keep your Sheridan mission-ready.

Track Adjustment—To make quick work of checking track tension, try this:

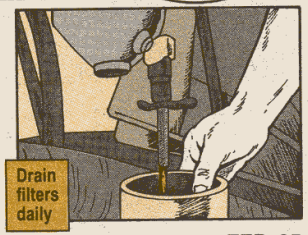
1. Get an object 3 1/2 inches tall (a canteen cup works well) and put it on the track directly above the No. 3 roadwheel.
2. Push the front mud flap back and sight along the track from the idler wheel to the sprocket. If the top of the object gets in the way of your line of sight, the track's too tight. Loosen the track by opening the pressure bleed plug. If the top of the object is just along the line of sight, track tension is OK.
3. If the top of the object is below the line of sight, tighten the track. If the track sag cannot be taken up, decrease track tension, remove one track shoe and re-adjust the tension.



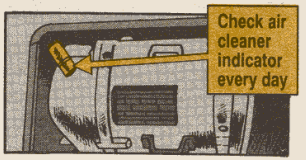
Fuel Filters—Draining the filters, both primary and secondary, is a daily before-operation job. But the drain cocks have a nasty habit of breaking, so turn 'em slow and easy.

Use a clear container to catch the fuel.

That way you can see when the water is all drained out. Then make sure you dispose of it in an approved hazardous waste container.



Air Cleaner Indicator—It takes only a few seconds each day to look at the air cleaner restriction indicator. If the indicator shows green, it's OK. Red means the filter element needs to be cleaned or replaced.

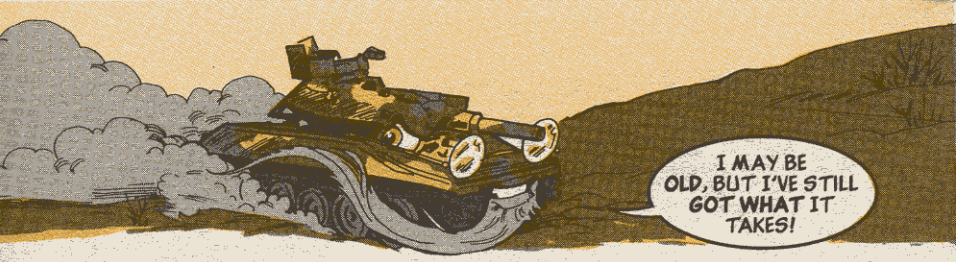


Air Cleaner—There are three ways to clean both the old and new style air cleaner elements:

1. Gently shake out the dust by tapping the filter element lightly with your hand.
2. Wash the element in soap and water or a good non-sudsing detergent. The filter element will need to be rinsed and dried thoroughly before it can be used again, though.
3. Use compressed air—not to exceed 30 PSI— to blow out dirt. Use a back-and-forth motion from the inside of the element.

Never bang the element against a hard object—like the front or rear deck of the vehicle. That will dent and ruin the element.

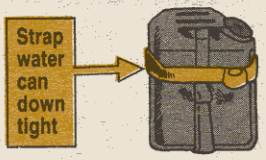
PS MORE



Engine Oil Fill—The engine's two oil fill covers have a bad habit of vibrating loose. If you lose one, oil gets thrown out of the engine. The engine heats up and may seize.

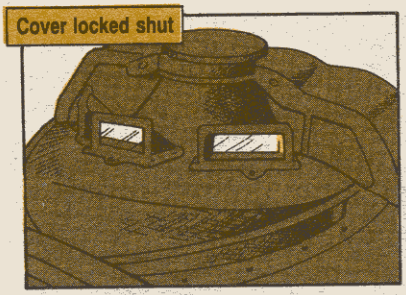
If you lose a cover, replace it right away with NSN 2590-00-758-9043.

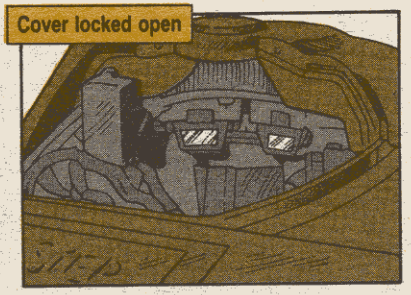
Water Can—Keep the straps tight on the 5-gal water can. Otherwise, vibration makes the bracket rub against the bottom of the can. Eventually, the only thing you'll have in your water can is a big hole.



Deck Doors—Make sure the battery and air cleaner doors are shut before traversing the turret. The bustle racks can crush a lid that's left in the upright position.

Hatch Cover—The driver's hatch cover is very heavy, so make sure it's locked open or closed before you move the vehicle. A loose hatch can be a real pain in the neck—especially if it's your neck that it hits.





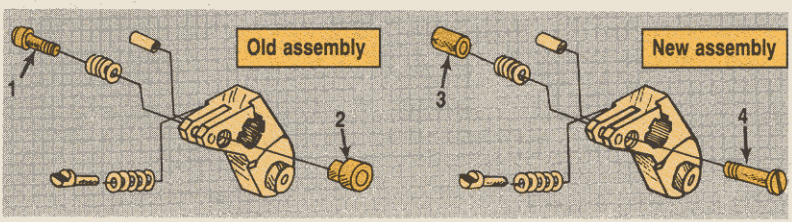
Hatch Handle—The driver's hatch handle is spring-loaded. When you release from either the left or right hatch locking latch, the spring snaps the handle with a lot of force—enough to break your jaw if it's in the way.

Cranking Out a Solution

Fig 93 of TM 9-2350-264-24P-2 is a little hazy on what to order if you need a new crank assembly for the breech on your M1A1 tank. That's because there are two DIFFERENT crank assemblies.

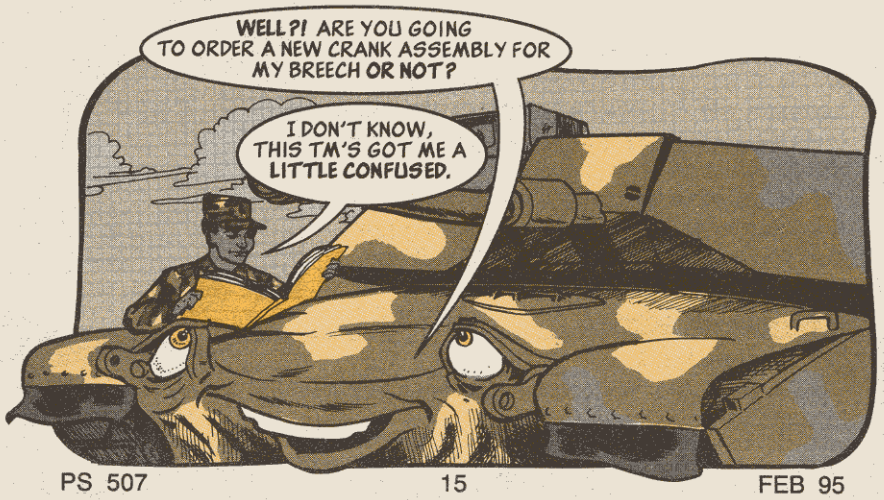
The old crank, NSN 1015-12-179-0159, which is listed in the TM, is no longer available. You'll need to order the new assembly, NSN 3040-01-336-3655, to get a complete new crank assembly.

Repair parts for both assemblies are the same with two exceptions: The old crank assembly uses machine bolt (No. 1), NSN 5306-01-164-0857, and knurled nut (No. 2), NSN 5310-12-143-2606.



The new crank assembly uses nut (No. 3), NSN 5310-01-336-3521, and machine screw (No. 4), NSN 5305-01-336-8241.

The new nut and screw can be used with the old assembly. Just flip the two, reversing their position on the crank body. Page 8-43 of TM 9-2350-264-20-2-4 (Ch 10) gives the complete scoop.



M1-Series Tank . . .

NO STEP HERE!

The loader's seat adjuster is not a boot rest or a step.

It may look like a rest or step, but it's just a seat adjuster.

But if a Big Foot uses it for a boot rest or step, the pin will break.

Help stamp out broken adjusters. Keep your Big Foot off the seat adjuster.

M2/M3, M2A1/M3A1 Bradleys . . .

Switch to Replacement Screw

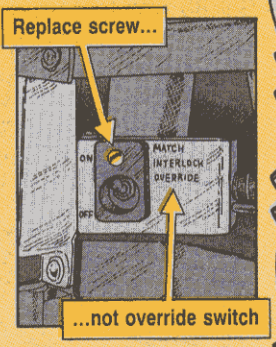
Dear Half-Mast,

We've got an expensive problem with the hatch override switch, NSN 5930-01-115-7334, on our Bradley.

The switch is OK, but the screw that holds on the switch guard breaks. When that happens, the TM tells us to replace the entire override switch. We end up paying more than $92 because of a bum screw.

It makes more sense to replace the screw instead of a perfectly good override switch. Can you give us an NSN for a replacement screw?

SSG M.C.K.



Dear Sergeant M.C.K.,

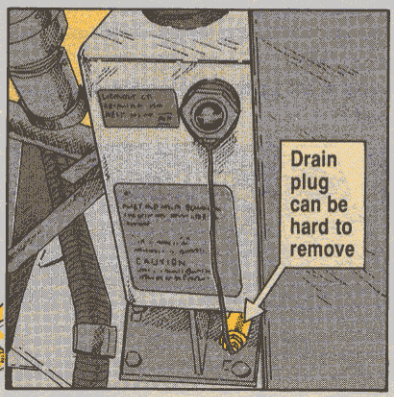
You bet. Use screw, NSN 5305-00-995-3440. That NSN gets you 100 screws for about $2.

Half-Mast

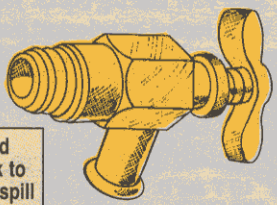
RAMP RESERVOIR DRAINING

Draining the ramp hydraulic reservoir in your M113-series carrier is a thankless job at best.

The plug is often tightened too much or rounded off from using the wrong tools. When you finally get the plug off, fluid spills out on your tools, your hands, the engine and the floor plates.



You can solve that problem and save yourself a big mess by replacing the plug with angled drain cock, NSN 4820-00-845-1096. Just attach a piece of AOAP tubing and drain the fluid into a can.



Use angled drain cock to prevent a spill

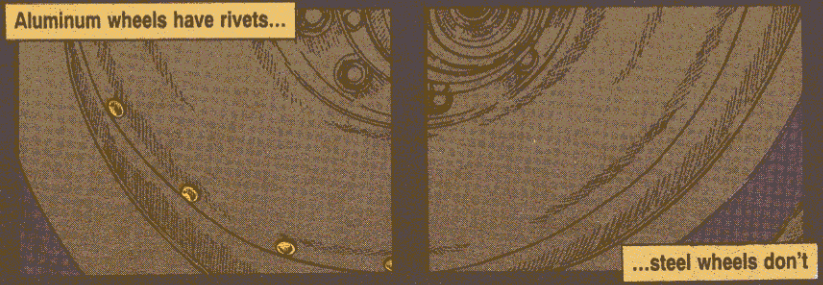
Make sure you dispose of the old hydraulic fluid in an approved hazardous waste container.

M109-Series SP Howitzers, M992-Series Ammo Carriers . . .

Mix 'n' Match Road Wheels

Mechanics, aluminum and steel road wheels can both be mixed on all M109 howitzers and M992 ammo carriers—as long as there are two of the same kind on each road arm.

Can't tell 'em apart? The aluminum wheels, NSN 2530-00-801-6702, have 18 small rivets equally spaced around the rim. There are no rivets on the steel wheels, NSN 2530-01-310-2237.



M198 Howitzer . . .

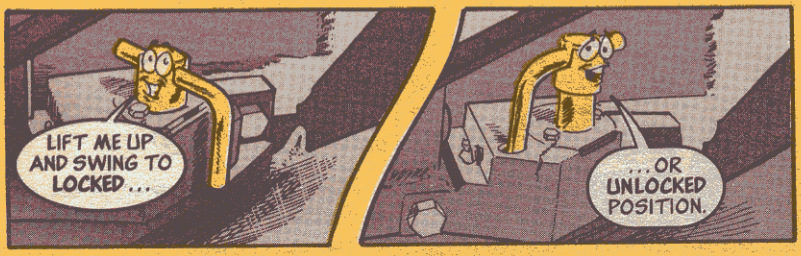
Take Time to $ave Money

You've heard the old saying, "Time is money." But did you know that just three seconds could mean more than a $15,000 loss?

That's about how much you'll lose if you forget to use the traverse lock on your M198 howitzer.

Forgetting to use the lock lets the top carriage move back and forth when the howitzer's being towed. Movement tears up the traversing angle drive unit and housing ($11,300) and the internal ring gear ($3,800).

Save your unit big bucks. Take a few seconds to lift up the locking pin and swing it to the locked or unlocked position as needed.



M58/M59 Aiming Post Lights . . .

Look for Leaks

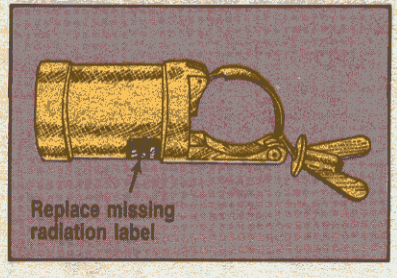
The PMCS tables in your mortar's -10 TM come up a bit short on what to look for when inspecting the M58/M59 aiming post lights.

The aiming post lights contain radioactive tritium. They're perfectly safe as long as the glass tubes are intact. But if a tube cracks or a light is opened, the hazardous tritium can come in contact with your skin.

Here's how to keep yourself safe and the aiming post lights on the job:

- Open the cover in a darkened area and look for illumination. If the aiming post light is dark, notify your unit's radiation protection officer (RPO). The lights have special handling and disposal instructions.

- Look for damaged or missing parts, including radiation instruction decals and data plates. NSN 9905-00-257-2746 gets a new instruction decal. You'll have to order a new light if the data plate is missing.



- Watch for evidence of tampering. The aiming post lights are factory sealed and should not be opened for any reason.

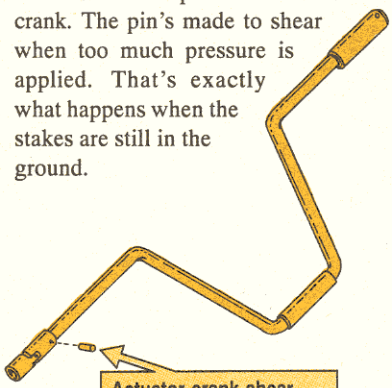
If you suspect you've come in contact with tritium, put the light in a plastic bag, NSN 8105-00-269-4662, and wash immediately with soap and water. Then, notify the RPO.

Blankity-Blank Cranky Crank

Damage is all you'll crank up if you try using the wheel actuator system to pull up the carriage stakes on your M102 towed howitzer.

The system has just one job – raising and lowering the wheels. So it should come as no surprise that something will break if you use it any other way.

If you're lucky, the only thing that'll break is the shear pin in the actuator crank. The pin's made to shear when too much pressure is applied. That's exactly what happens when the stakes are still in the ground.



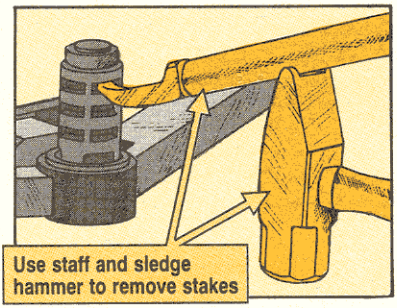
Actuator crank shear pin is supposed to break

Unfortunately, some operators don't use the right shear pin, NSN 5315-00-999-1573. They use just any old pin or bolt that'll fit.

When the shear pin fails to give, the light metal gears inside the actuator do. And that's some pretty expensive damage.

Make sure you've got the right shear pin in the hand crank. Then remove the stakes the right way, using the carriage staff and sledge hammer from your weapon's BII.

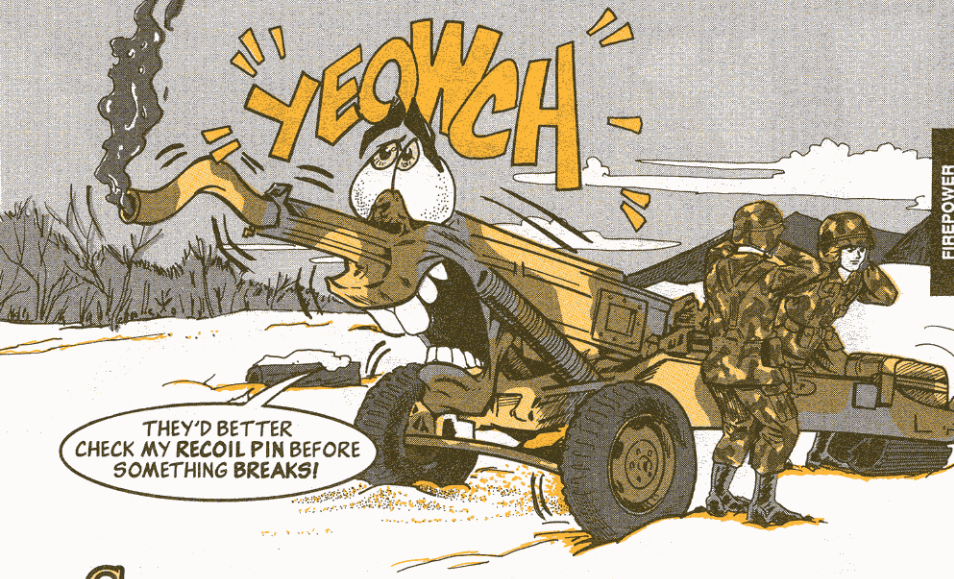
Just lay the staff across the slots in the sledge hammer and lever the stakes out of the ground.



Use staff and sledge hammer to remove stakes

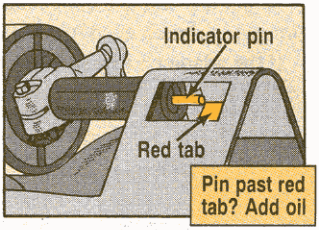
M102 Towed Howitzer . . .

Pin Down Recoil Problems



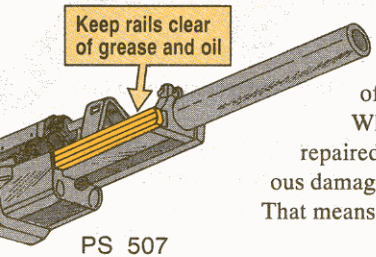
Crews, if your M102 slams into battery when you fire, you can probably pin the blame on a lack of hydraulic oil. Take a quick look at the recoil indicator pin to find out for sure.

If the rod extends more than 3/16 inch on the M37 recoil mechanism, add more oil. If the pin extends to the red tab on the M37A1 recoil mechanism, add more oil.



If the pin indicates the right oil level on either one, let your mechanic know about your trouble.

He may need to purge the recoil mechanism of air and check for the right nitrogen pressure inside.

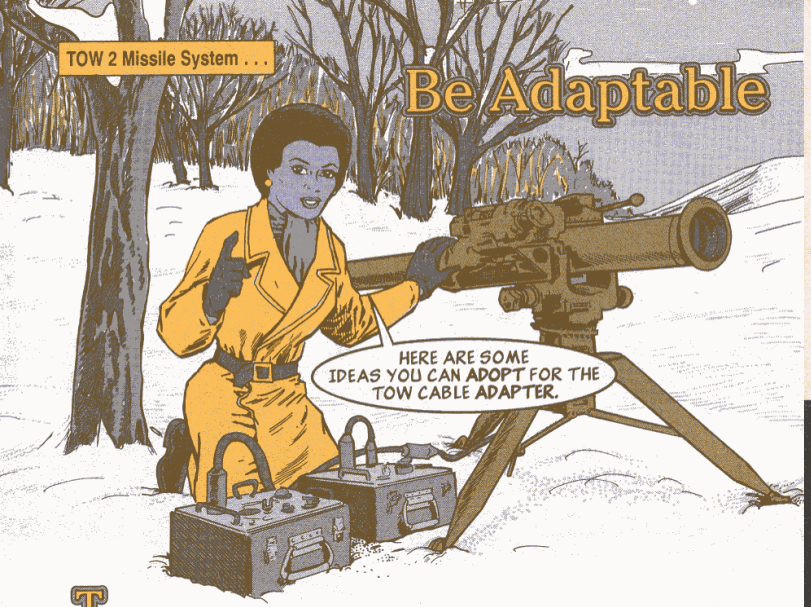


You also need to check to make sure there's no grease or oil on the recoil mechanism rails. Wipe off any you find with clean rags.

Whatever you do, don't fire the howitzer until it's repaired. Continued slamming into battery may cause serious damage to the howitzer. It could cause the cradle to crack. That means lots of NMC time and many dollars spent.

TOW 2 Missile System . . .

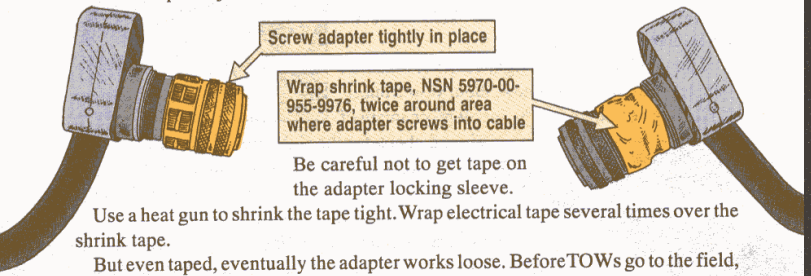
Be Adaptable



The adapter for the TOW's MGS cable is one of the greatest money savers the Army has produced. It costs less than $90, but it protects a cable connector that is worth much more...a connector that used to be ruined frequently.

To get the best use out of the adapter, NSN 5935-01-117-3304, there are a few things repairmen need to remember:

If the adapter's just screwed on, it will soon be screwed off and disappear.



Use a heat gun to shrink the tape tight. Wrap electrical tape several times over the shrink tape.

But even taped, eventually the adapter works loose. Before TOWs go to the field, feel the adapters for looseness. A loose adapter will cause a bad connection and faults during the self-test. Tighten loose adapters and re-tape them.

with PM

What's good for the cable connector is also good for the MGS connector. If the plastic in the MGS connector's banged around, the whole MGS interface board — a $2,000 item — is shot. Protect it with the adapter.

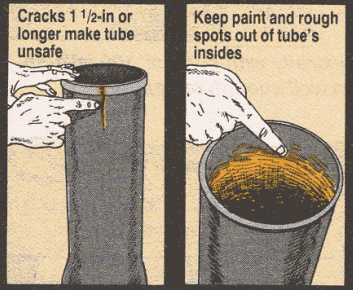
To keep the adapter on, put four drops of Loctite, NSN 8030-01-014-5869, on the adapter threads 90 degrees apart before you screw on the adapter.

The MGS lid can still be closed with the adapter installed.

Brush Up on Paint Points

Do not paint yourself into a corner when you paint TOW launch tubes, repairmen. If you forget these two points, painting hurts, not helps:

Look for cracks: Eyeball the entire launch tube for cracks before you paint. Paint covers up cracks that can make the tube unsafe for firing. If you spot cracks longer than 1 1/2 inches, forget about the tube. It's history.



No paint inside: Keep paint away from the inside of the tube. Paint makes the tube's insides bumpy. Those bumps affect a TOW's accuracy. After painting, feel the inside of the tube for bumps or rough spots. If you find any, sand them smooth with fine sandpaper.

Avenger Missile System . . .

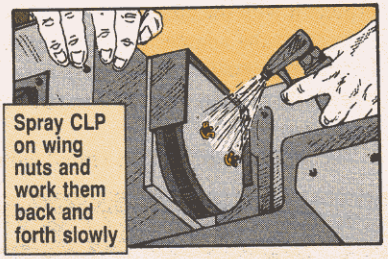
Cool Off Heater Problems

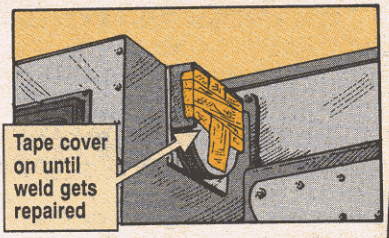
Dear Editor,

Avenger crews are supposed to check the filter for the turret heater. Unfortunately, the welds for the two wing nuts that hold on the filter cover break easily. And the heater has to go all the way to support just to repair the welds.

We've prevented most wing nut crackups with three rules:

- *Keep paint off the wing nuts. Paint freezes the nuts. If there's already paint on the nuts, sand it off.*
- *Spray CLP on the wing nuts before you turn them. CLP will help the nuts move easier.*
- *Slowly turn the nuts back and forth to work them loose. Do not force the nuts. If you feel resistance, spray more CLP on the nuts.*



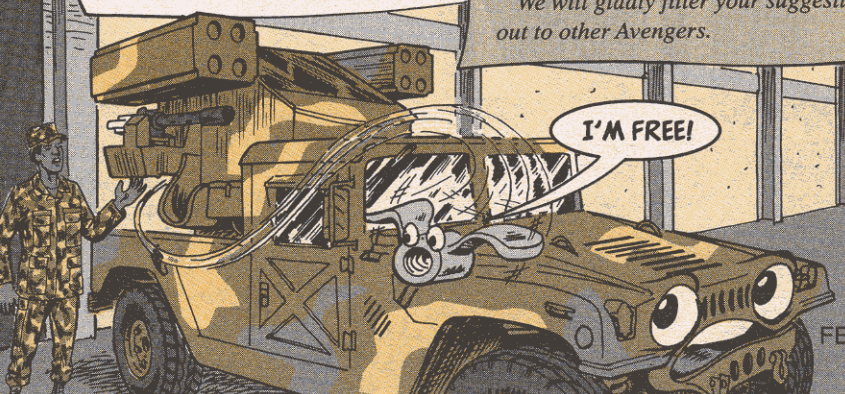


No matter how careful you are, eventually a wing nut weld will break. A good field fix until you can get the nuts welded is to tape on the filter cover horizontally and vertically with good ol' 100 mile-an-hour tape. That keeps the cover on well enough to operate.

SGT Gerald Stringer
SGT John Ford
SGT Daniel Dusablon
Ft Polk, LA

FROM THE DESK OF THE Editor

We will gladly filter your suggestion out to other Avengers.



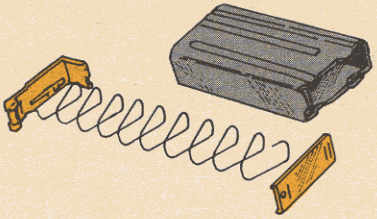
Subscribe to Magazine PM

Bullets are what an M16's all about. No bullets mean your rifle can't do its job, protecting you. And that's exactly what will happen if you let your subscription to magazine PM lapse. Do this magazine PM when you clean your rifle:

Eyeball all seven magazines for deep dents or corrosion that can make for hard feeding. Get banged-up or corroded magazines replaced.

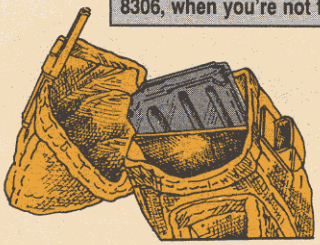
Take apart each magazine.

Wipe off dirt from spring and follower. Lightly lube spring



If the spring and follower come apart accidentally, the magazine must be replaced. Even if you can reattach them, the magazine can't be counted on to feed.

Protect magazine by keeping it in its bag, NSN 1005-00-193-8306, when you're not firing.



M16-Series Rifle . . .

Short Range Practice

If your unit can't find a range long enough for live firing of your M16s or you would like to fire on an indoor range, M862 short range training ammo may be the answer.

M862 ammo has a maximum effective range of 25 meters and a maximum range of 300 meters.

Order M862 ammo on DA Form 581 using NSN 1305-01-287-9659. See Chapter 11 of DA Pam 710-2-1 for ordering info. To use the ammo, you will need an M2 practice bolt, which allows proper functioning and prevents loading of normal ammo.

The bolt, NSN 1005-01-184-4041, comes with TM 9-6920-746-12&P, which explains how to use and maintain the bolt. The bolt is authorized by CTA 50-909.

M30 Mortar . . .

Training with Dummies

The easiest way to learn how to load an M30 mortar is with a dummy round. It lets a mortarman practice aligning the round's rotating bands with the tube's riflings.

XM961 dummy round, NSN 1315-01-317-5949, is exactly what you need. It even comes with a detachable rope so you can easily pull the dummy out of the mortar.

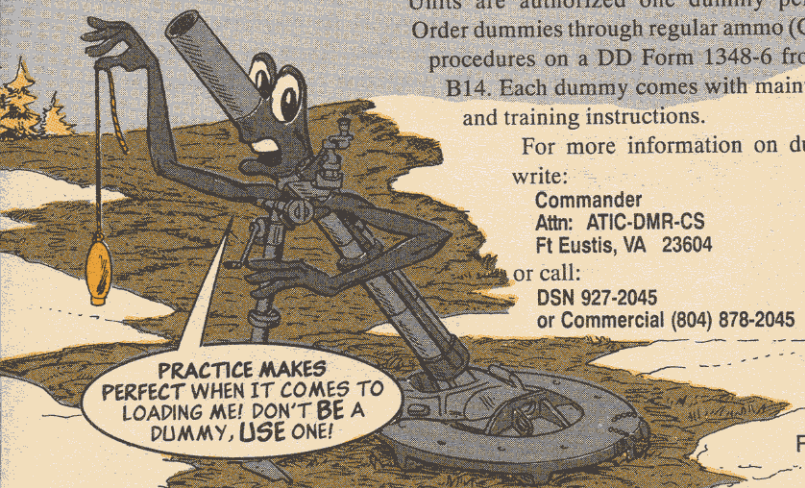
Units are authorized one dummy per M30. Order dummies through regular ammo (Class V) procedures on a DD Form 1348-6 from RIC B14. Each dummy comes with maintenance and training instructions.

For more information on dummies write:

Commander
Attn: ATIC-DMR-CS
Ft Eustis, VA 23604

or call:

DSN 927-2045
or Commercial (804) 878-2045



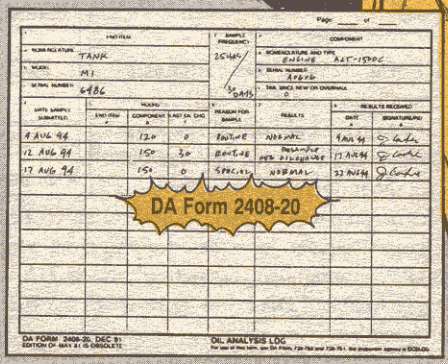
FORMS GET THE JOB DONE

If you're the unit Army Oil Analysis Program (AOAP) monitor, paperwork is an important part of your job.

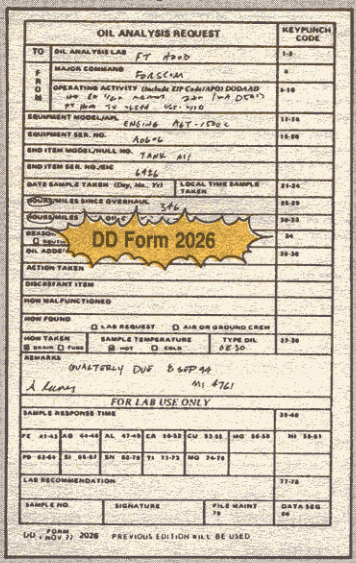
You get the most out of AOAP by sending in correctly completed forms.

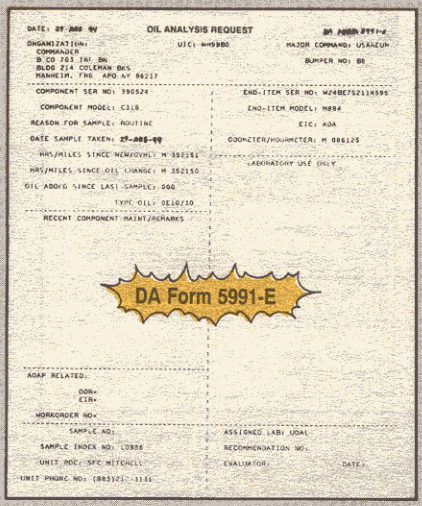
Here are the forms you need:

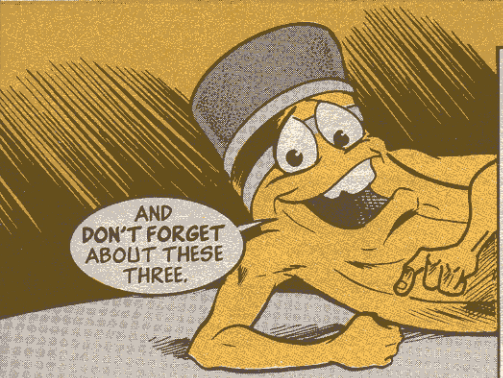
- DA Form 2408-20, Oil Analysis Log—kept at the unit to record AOAP oil samples taken and lab results of those samples.
- DD Form 2026 (manual) or ULLS-generated DA Form 5991-E, Oil Analysis Request—used by the TAMMS or ULLS clerk to send an oil sample to the AOAP lab.

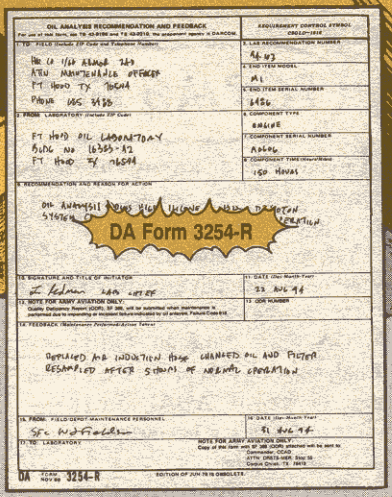


If the oil sample is normal, the lab will stamp the form with the date the sample was processed, "Results -NORMAL" and return it to the unit.



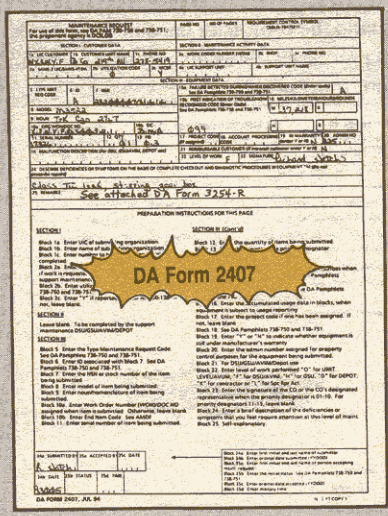






DA Form 3254-R, Oil Analysis Recommendation and Feedback—used by the lab to report abnormal findings and suggest what work the unit can do to correct the problem.

When you prepare a DA Form 2407 or an ULLS-generated DA Form 5990-E, Maintenance Request, to request support from a higher level of maintenance for an AOAP-recommended evaluation, attach DA Form 3254-R to the request. Enter "See Attached DA Form 3254-R" in the REMARKS block of the maintenance request.



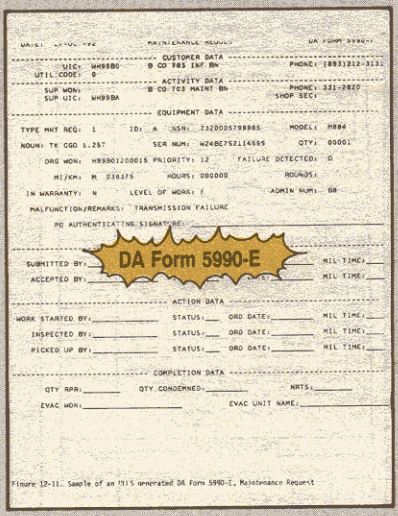
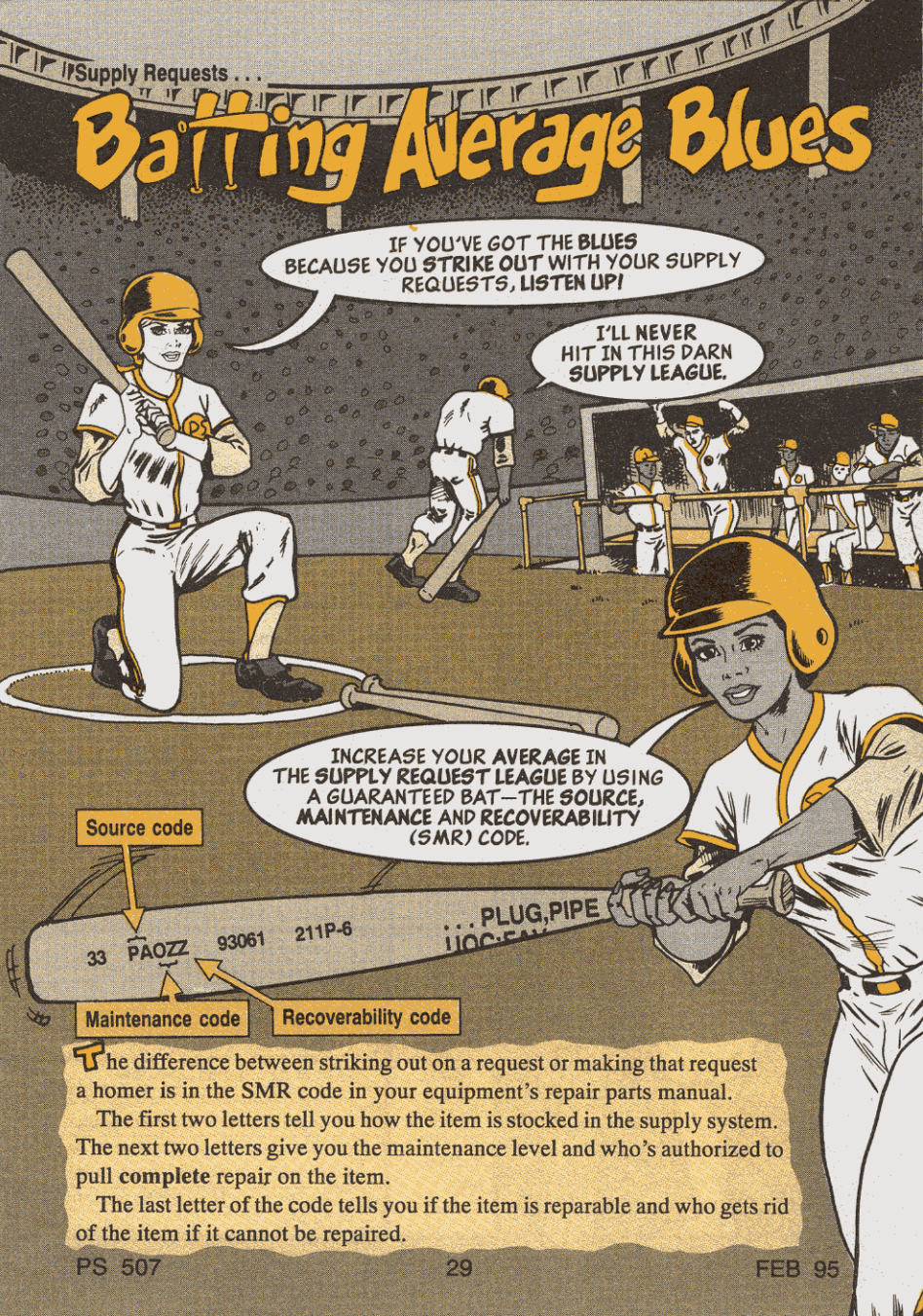


Figure 12-11. Sample of an MIS generated DA Form 5990-E, Maintenance Request

After the equipment is repaired, complete DA Form 3254-R and send it back to the AOAP lab along with a copy of the completed maintenance request. This lets the lab know what repairs you made on the equipment.

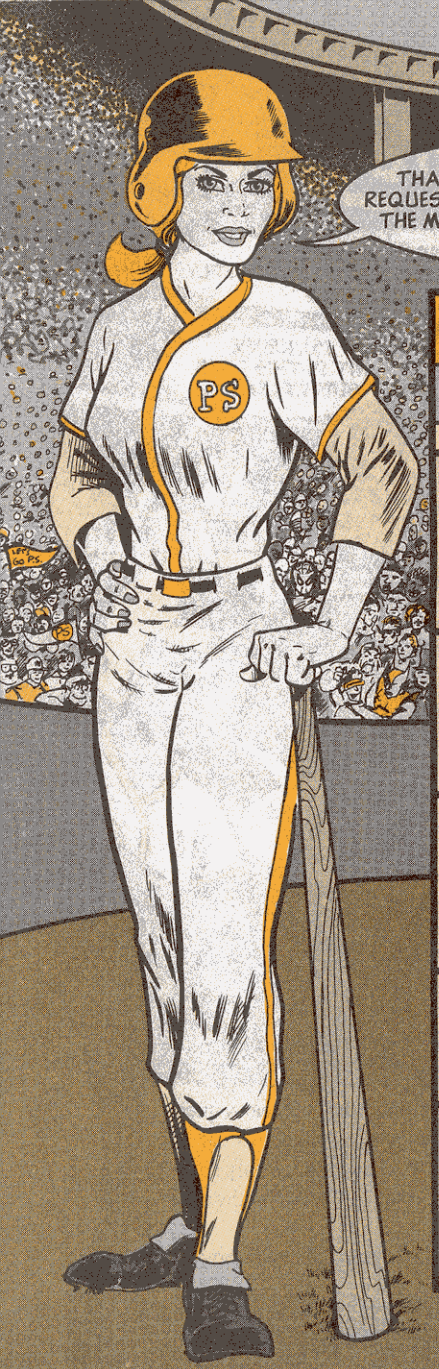
Batting Average Blues



The difference between striking out on a request or making that request a homer is in the SMR code in your equipment's repair parts manual.

The first two letters tell you how the item is stocked in the supply system. The next two letters give you the maintenance level and who's authorized to pull **complete** repair on the item.

The last letter of the code tells you if the item is reparable and who gets rid of the item if it cannot be repaired.



SOURCE

1st Position — Means of Ordering the Item

1st Position	2d Position	
P Stocked Item - Regular Supply	A, B, C, D, E, F, G	Request the item using the NSN. Maintenance level indicated in the third position of the SMR code is authorized this item.
K Stocked in Kit	D, F, B	Item cannot be ordered individually because it's part of a kit. Maintenance level indicated in the third position of the SMR code is authorized this item.
M Item not Stocked. Fabricate or Manufacture	O	Made at unit/AVUM level.
	F	Made at DS/AVIM level.
	H	Made at GS level.
	L	Made at Specialized Repair Activity (SRA) level.
	D	Made at depot level.
A Item not Stocked. Assemble	O	Assembled at unit/AVUM level.
	F	Assembled at DS/AVIM level.
	H	Assembled at GS level.
	L	Assembled at SRA level.
	D	Assembled at depot level.
X Item not Stocked. Special Info Needed	A	Order next higher assembly.
	B	If not available from salvage, order it using the CAGE and part number.
	C	Order using drawing, diagram, or instruction sheet identified by part number.
	D	Not Stocked. If no NSN, order by CAGE and PN.

MAINTENANCE

3d Position — USE: Lowest level authorized to remove or replace.

C	Crew or operator within unit or aviation maintenance (AVUM)
O	Unit or aviation unit level can remove, replace and use the item.
F	Direct support or aviation intermediate level (AVIM) can remove, replace and use the item.
H	General support level can remove, replace and use the item.
L	Specialized repair activity can remove, replace and use the item.
D	Depot level can remove, replace and use the item.

4th Position — REPAIR: Lowest level with capability to perform complete repair.

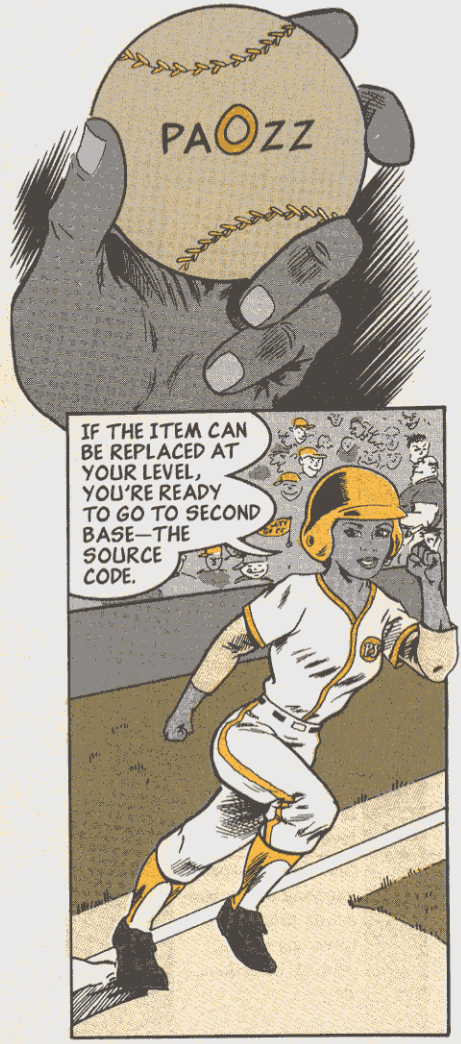
O	Unit/AVUM level.
F	DS/AVIM level.
H	GS level.
L	Specialized repair activity level.
D	Depot level.
Z	Nonreparable. No repair is authorized.
B	No repair is authorized. However, the item may be reconditioned at the user level.

RECOVERABILITY

5th Position — DISPOSITION: When unserviceable or uneconomically reparable, condemn and dispose.

Z	Nonreparable.
O	Reparable item. Dispose of at unit/AVUM level.
F	Reparable item. Dispose of at DS/AVIM level.
H	Reparable item. Dispose of at GS level.
D	Reparable item. Dispose of at Depot level.
L	Reparable item. Dispose of at SRA level or at depot level.
A	Item requires special handling or condemnation procedures (precious metal content, hazardous, etc.)

First, look at your maintenance code. The third letter tells you who removes, replaces and uses the item. Unit level maintenance is identified with an **O** or **C**. If it's anything else, you cannot order the item.

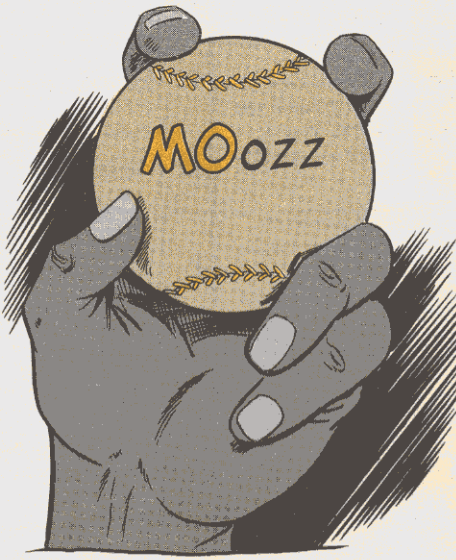


Source codes that start with **P** mean that you can order the item through regular supply channels.

Items with a **K** as the first letter of the source code are part of a kit.

Forget about ordering those parts individually. They're not stocked—except in a kit. To get those items, you must order the entire kit.

If the item starts with an **M** source code, it must be fabricated or manufactured. Look at the second letter of the source code to find out who makes it. You make it if the code is **MO**.



Source codes starting with an **A** mean the item is stocked in pieces and must be assembled. The second letter of the source code says who puts the item together.

An **X** as the first letter of the source code means you pay special attention in ordering that item. **X** items are not stocked.

Order the next higher assembly if your item has an **XA** source code.

If your item has an **XB** source code, check with your cann point folks before you order it.


SMACK
PS
PAY ATTENTION TO SMR CODES AND YOUR BATTING AVERAGE IS BOUND TO IMPROVE.

Send 'em by Electronic Mail

Submit your Product Quality Deficiency Reports (PQDRs) and Equipment Improvement Reports (EIRs) by electronic mail.

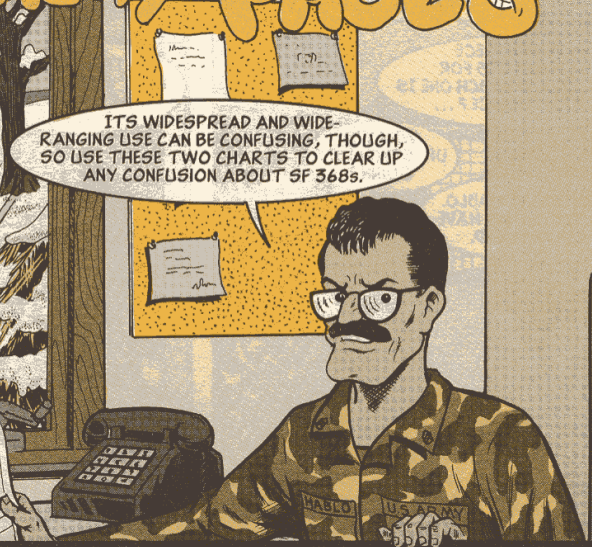
When you send the reports electronically, the appropriate office gets them quicker. That means the response time is cut almost in half, especially on Category I defects.

So-o-o-o, next time you have a PQDR or EIR to send, send it by electronic mail using these addresses:

Command	E-Mail Address
ATCOM (Air)	khudson@st-louis-emh7.army.mil
ATCOM (Troop)	khudson@st-louis-emh7.army.mil
CECOM	amsel-cfo@monmouth-emh2.army.mil
CECOM CSLA	selcl-cs@monmouth-emh2.army.mil
MICOM	cfo@redstone-emh2.army.mil
TACOM (Armament)	rtadavich@ria-emh1.army.mil
TACOM (Tank-automotive)	tacomdrs@tacom-emh1.army.mil

If you have any questions concerning electronic mail, check with your local electronic mail systems administrator or Logistics Assistance Office.

The Form with Many FACES



Fill Out An SF 368 To:

- Report conditions dangerous to operators/crews, other equipment or your mission.
- Ask for disposition instructions to get credit, replacement items or to repair defective items.
- Halt repeat shipments of defective items and get corrective action.
- Pass on ideas to improve equipment.
- Suggest ways to make maintenance on equipment easier or better.
- Report an item that does not work right or last as long as it should because of bad design or materials.
- Report items that do not meet the size, material, hardness, finish, or performance standards of a specification.
- Give notice of low-quality workmanship.
- Explain a dangerous situation caused by missing or bad information. (Report comments/changes to technical manuals on DA Form 2028.)
- Report problems that keep you from using or maintaining your equipment.
- Expose repeated problems that take a lot of your time with no solution available.
- Verify problems the equipment's manager asked you to report.
- Report corrosion problems in or on parts, components, assemblies, weapon systems, and equipment.
- Report initial failure on SFDLR (Stock Funded Depot Level Reparable) items.

Do Not Fill Out An SF 368 On:

- Items purchased locally. Use local procedures for these items.
- Security assistance items sent to foreign governments. See AR 12-12.
- Medical materiel. See DLAR 4155.28 for help.
- Subsistence items. See AR 30-16 and AR 40-660.
- Packaging, preservation, packing, or marking problems. Report these on SF 364, Report of Discrepancy. AR 735-11-2 covers those.
- Shipping errors such as overages, shortages, wrong item shipped, or expired shelf life items. Those are reported on SF 364, Report of Discrepancy. See AR 735-11-2.
- Transportation errors such as shortages, losses, or damages during transportation. Report these on SF 361, Transportation Discrepancy Report. See AR 55-38 on how to fill out these forms.
- Ammunition and explosives malfunctions. See AR 75-1.
- Warranty claim actions (WCAs). WCAs are submitted on DA Form 2407.

KEEP TABS ON SERVICES

Metal tabs come 100 per package, and can be used whether you keep your 314s in a drawer, file or KARDEX file. Just clip them over the date of the next service.

Get the metal clip-on tabs with these NSNs:

Green	7510-00-285-5809
Yellow	7510-00-263-8843
Red	7510-00-263-8841

Embossing tape comes in 1/2-in by 12-ft rolls. Cut tabs in 3/16-in pieces for sliding in and out of the KARDEX plastic over the date block. Do not remove the adhesive from the back of the tape.

Order the tape with these NSNs:

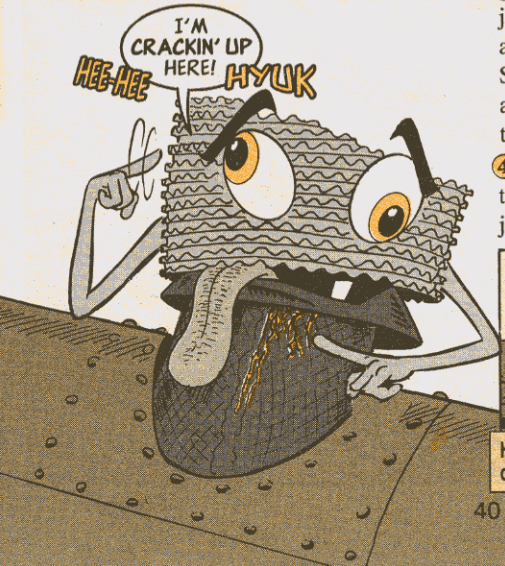
Green	7510-00-849-1138
Yellow	7510-00-846-0133
Red	7510-00-849-1139

FIGHTING THE CRACKED STACK

It's a losing battle trying to keep the insulation jacket on your Kiowa's IR stack from cracking. It's a good bet that most of your 58s have a welded or glued spot where the jacket has split. . . and that spot is probably splitting again. Here are four things you can do to stop stack cracks:

1. Never cover a hot stack. Let the stack have a chance to cool off before covering it.

Stack must cool before being covered



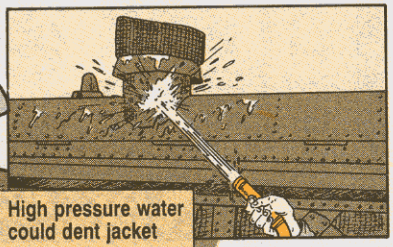
2. Never cover the stack by reaching up from the ground. In order to get a good fit, you'll stress the stack. Step up on the aircraft and cover it from above. That lets you adjust the cover without any pressure on the stack.

Don't remove or install cover from ground...

3. Never remove the cover from the ground. You'll jerk the cover and the stack. Step up on the aircraft and lift the cover off.

...always step up to jacket

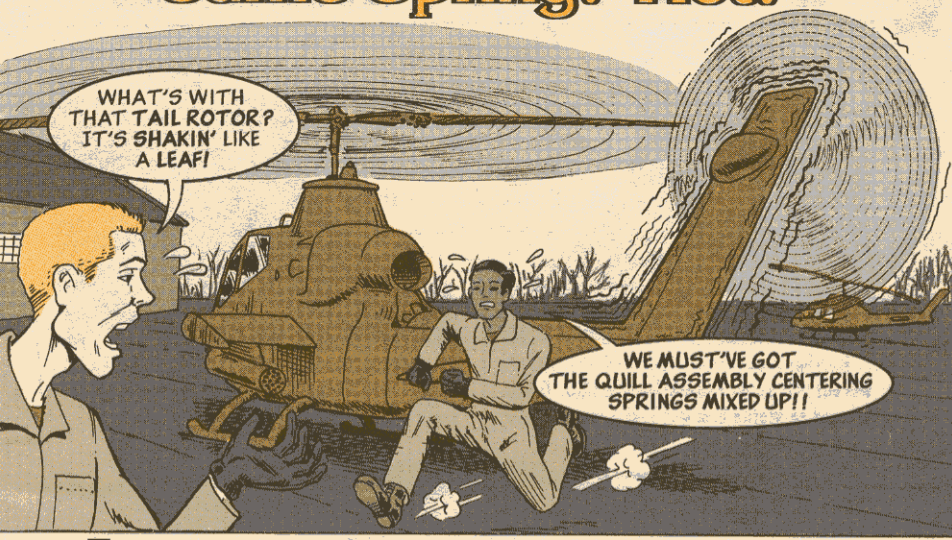
4. Never spray high pressure water on the stack. High pressure will dent the jacket and cause cracks.



High pressure water could dent jacket

AH-1P, E, F...

Same Spring? Not!



Just looking at Fig 89 of TM 55-1520-236-23P-1 might have you swearing that the input and output centering springs on the 42-degree gearbox quill assembly are the same.

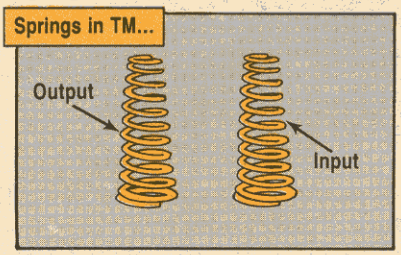
Mix 'em, though, and you'll be doing a different kind of swearing.

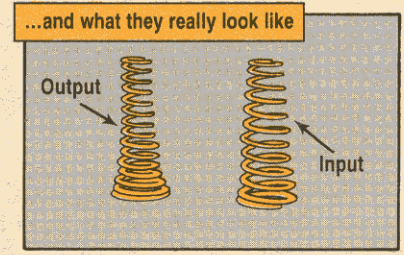
The input spring, Item 3, NSN 5360-00-701-5659, is a 90-lb weakling compared to 250-lb strong man—the output spring.

The output spring, Item 28, NSN 5360-01-092-9031, is stronger and has a tighter coil. It's also concave from one end to the other.

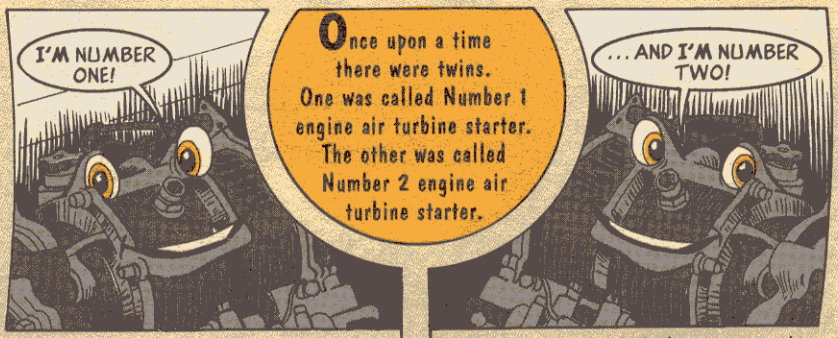
Mix these two springs and you could vibrate your drive shaft into a collapse.

So be sure to label the springs or use some other means to readily identify each spring when you're ready to install them.



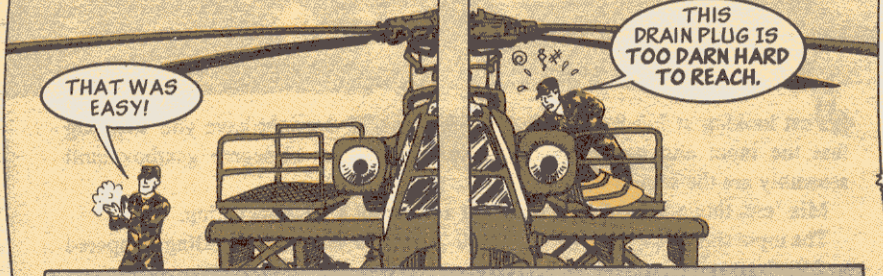


A TALE OF TWO STARTERS

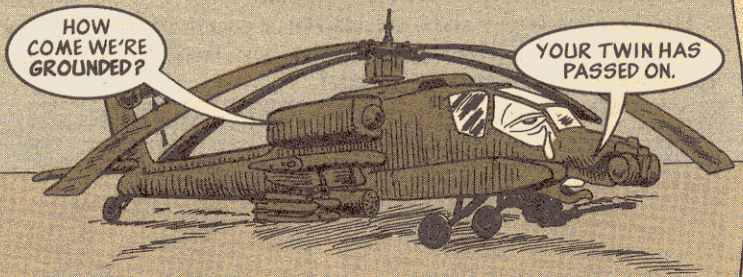


Number 2 was well-liked. And why not? He was out in the open and easily accessible. Draining and servicing him was just a minor chore.

Number 1 was not liked. He was crammed in next to the firewall. Draining and servicing him was a major job.



The favored twin was pampered. The other was neglected. The pampered twin survived. The neglected twin died. That death grounded an aircraft.



The moral of the story? If you want your aircraft to live happily ever after, drain and service the Number 1 engine air starter on schedule and by the book.

AH-64A . . .

Stop the Intrusion!

A short in your Apache's flight control system — like in a stabilator actuator — can bring your big bird down for a hard landing.

The actuators are prime candidates for shorts. Water flows down the actuator piston with the actuator. Moisture causes corrosion and rust that attack wiring and lead to shorted or grounded actuators.

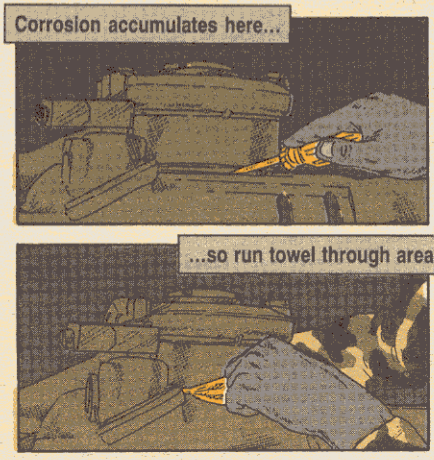
When you're pulling PM on the stabilator assembly, make sure you check the interior of the actuators for corrosion, water damage or signs of water intrusion.

Replace the actuator if there are signs that water is being trapped in the housing.

Before you install a new actuator, seal the area between the two halves and around the bolt heads and nuts with a small bead of sealant, NSN 8030-00-723-5343. Coat the piston with water displacing compound, NSN 8030-00-938-1947.

CH-47 . . .

Hinge Pin Seal Save



Your granny will tell you that it's the nooks and crannies that gather dirt and dust.

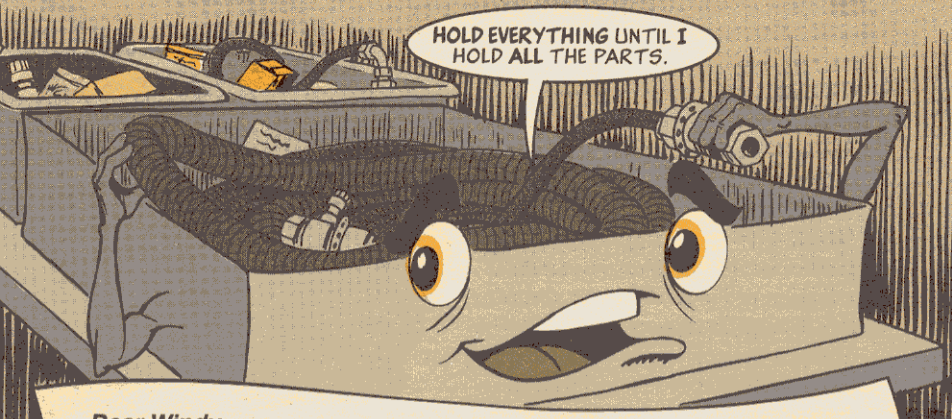
One of those crannies on the Chinook is between the pitch housing lugs and the vertical hinge pin seal. This area is a crud vacation spot.

So, daily, run a cleaning cloth, NSN 8305-00-753-2967, between the lugs and the seals.

Weekly, add some P-D-680 Type II, NSN 6850-00-285-8011, to the cloth.

Send that crud packing and you'll save seals and wear on the hinge pin.

BOX THE PARTS



Dear Windy,

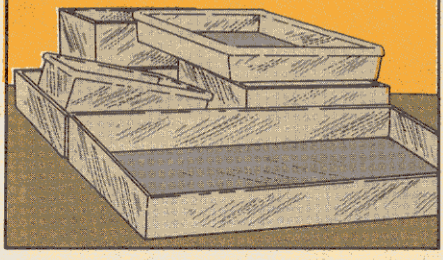
To keep helicopter parts separate for different jobs and to prevent losing them, we use plastic boxes in several sizes.

These containers are cheap and easy to get.

With these bins, we can easily separate the parts and keep track of them.

Since we started doing this, we've had no more small parts fall through the cracks!

Plastic storage boxes



Jaime Provencio
Ft Bliss, TX

Dear Mr. Provencio,

Now that's a good way to contain the problem of small parts FOD.

There are two of these plastic storage boxes, NSN 8115-00-761-8912 (six equal compartments), and 8115-00-663-0212 (16 compartments), available from GSA.

Windy

Bags, Tags and Tape

Keeping small hardware and personal items in your pocket as you're crawling around an aircraft is tough. Bag those small items in a 4 x 4 plastic bag, NSN 8105-00-837-7753.

If you're finding it tough to stick labels and tags to textured surfaces, stick the tags to lead-foil tape, NSN 7510-00-664-0001, first.

If it gets so you can't see the limitation marks on your instrument gauges, use semitransparent color tape: NSN 7510-00-550-7125 for yellow; NSN 7510-00-550-7126 for red; and NSN 7510-00-550-7129 for green.

Aircraft Refueling . . .

Nozzle News

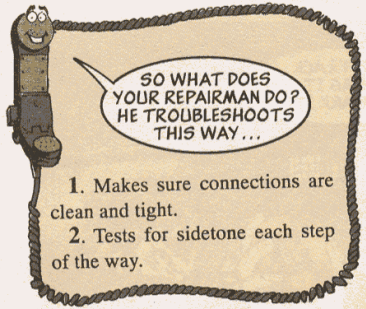
Good news for you aircraft refuelers. Now you can get a universal, closed circuit refueling nozzle. It comes with NSN 4930-01-363-6449.

The nozzle is used to refuel the AH-64, UH-60, UH-1, AH-1 and OH-58.

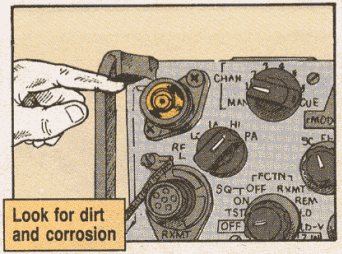
Continue to use the old nozzle, NSN 4930-01-194-2625, for refueling Apaches and Black Hawks until the supply is exhausted.

The Right Connections

Operators, your SINCGARS receiver-transmitter (RT) is powered up and receiving voice communication. Suddenly the H-250 handset goes dead. You press the push-to-talk button and speak, listening for sidetone. But you don't hear sidetone.



When you're checking for tight connections, look for dirt and corrosion on connectors and contacts.

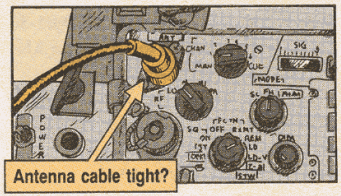


Also look for bent, missing, or broken pins or contacts.

Troubleshoot the antenna, the handset and the W4 cable in that order.

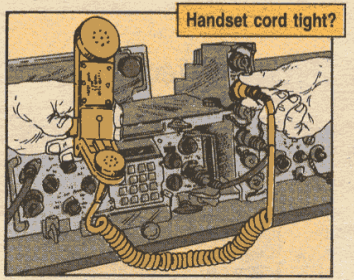
Antenna

If you have a manpack, make sure the antenna's connected tight. If you have a vehicular radio, make sure the antenna cable is connected tight. Then test for sidetone by pressing the push-to-talk button and speaking into the handset.



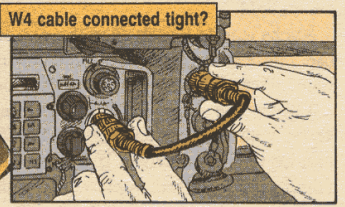
H-250 Handset

Make sure the H-250 handset cord is tightly connected to the AUD/DATA connector on the AM-7239 amplifier-adapter. Test for sidetone.



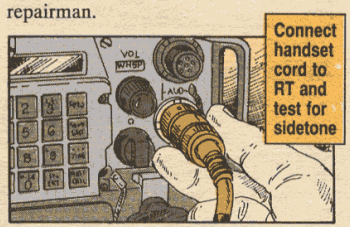
W4 Cable

▷ Look at the W4 cable, NSN 5995-01-310-0335, between the DATA connector on the amplifier-adapter and the AUD/DATA connector on the RT. Make sure the connection is tight. Test for sidetone.



▷ If the W4 cable connections are good, but you still can't hear sidetone, disconnect the W4 cable from the RT. Connect the handset cord to the AUD/DATA connector on the RT. Test for sidetone.

▷ If you hear sidetone, the problem is not with the handset or the RT. You can't fix the problem. Contact your repairman.



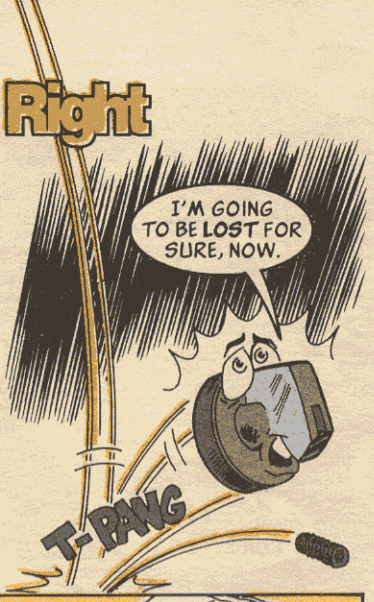
SINCGARS . . .

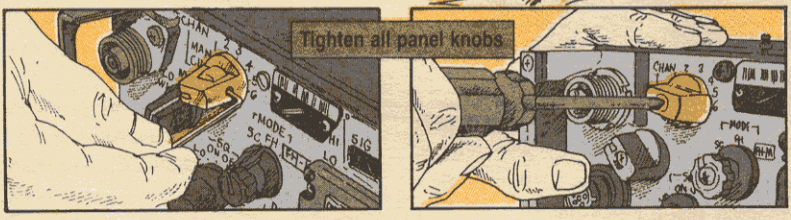
Tight Is Right

Next time you pull PMCS on the receiver-transmitter of your SINCGARS radio, make sure the front panel knobs are on tight.

Knobs tend to loosen up with everyday use. Loose knobs make for difficult operations. Worse yet, they fall off and get lost.

Tighten the fasteners on loose panel knobs with the key set in your TK-101 tool kit or a screwdriver. If a fastener is missing or damaged, replace the entire knob. See TM 11-5820-890-20P for replacement parts. The fasteners alone are not available in the system.





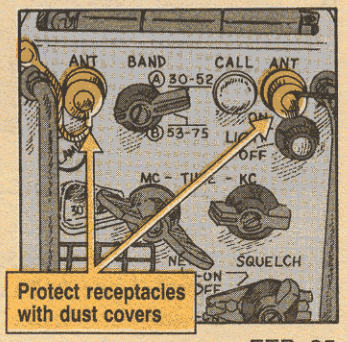
AN/VRC-12-Series Radios . . .

Double the Protection

The R-442/VRC and R-442A/VRC receivers of your AN/VRC-12-series radio each have two antenna receptacles. That's twice the opportunity for dust, dirt, moisture and corrosion to foul receptacles and silence your commo.

It's easier to protect receptacles than to clean them or replace them. Protection means putting those little metal dust covers on the ANT receptacles whenever they're not being used.

If you have dust covers, use 'em. If you don't, get them with NSN 5935-00-978-4357.

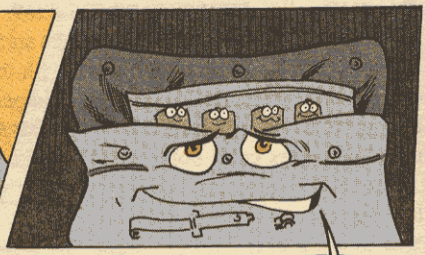


Clip-on Case for Batteries

Dear MSG Half-Mast,

When my unit goes to the field, there are always a few of our TA-312 telephones that don't have extra batteries. It's rough hunting for batteries in the middle of the night.

To solve this, we take one of the cases for an M16 rifle cleaning kit, put four "D" cell batteries in a self-sealing bag, and put the bag in the cleaning case.

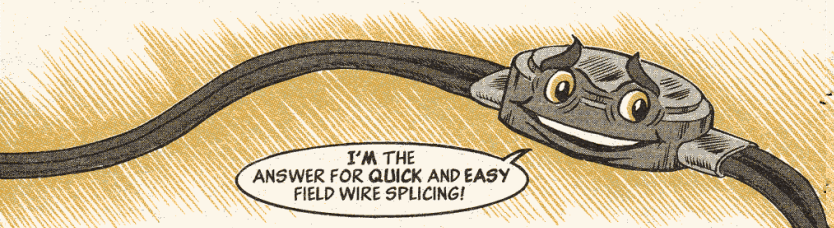


Then we clip the battery case to the TA-312 case.

Now we always have batteries and can locate them even in the dark.

SFC Billy Britt
ALARNG

U1R is the Splice of Life

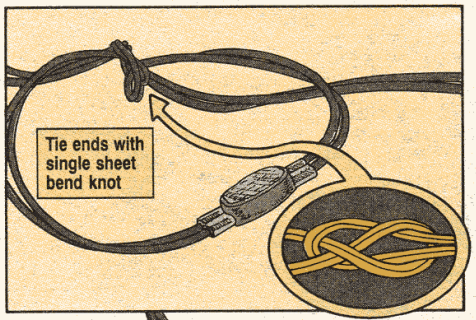


The U1R splice, NSN 5940-00-935-8262, is a quick, easy way to splice WF-16, WD-1 and WD-1A field wire. But make sure you use the right crimper for the job.

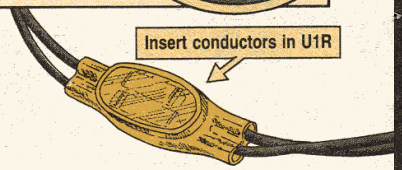
The plain E9 crimper won't work with the U1R splice because its jaws won't open wide enough. You need the E9B crimper. Order it on a DD Form 1348-6, using CAGE 76381 and PN E9B from GSA. Put a 2B in card columns 65-66. That way the supply folks know not to substitute the plain model.

Now that you've got the right crimper, here's how to get a neat field splice:

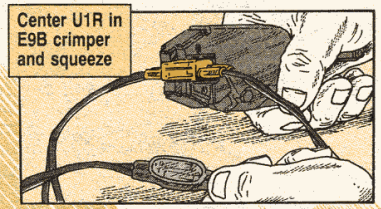
- Cut off the damaged wire and tie the two ends of the wire with a single sheet bend knot. This puts the strain on the line, not the splice. Leave 6 inches of insulated wire on each end to take the splice.



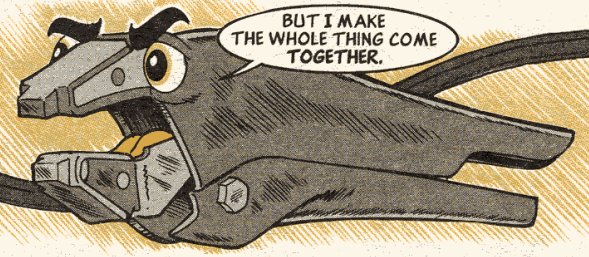
- Split each pair of conductors and insert them into the U1R. Make sure the conductors go through the metal prongs and all the way to the center of the U1R.



- Center the U1R in the E9B crimper. Press the E9B firmly until the red top part of the U1R is even with the clear bottom part.



- No tape is needed because the insulating grease in the splice protects against electrical leakage and corrosion. The insulating grease also makes the splice waterproof.
- Check out Chapter 6 of TC 24-20 for more information on splicing field wire.



RL-172/G . . .

Put Reeling Machine on HMMWV

Dear Half-Mast,
I want to attach the RL-172/G reeling machine to the bed of my HMMWV. Is there a kit that will do the job?
SGT J.P.F.

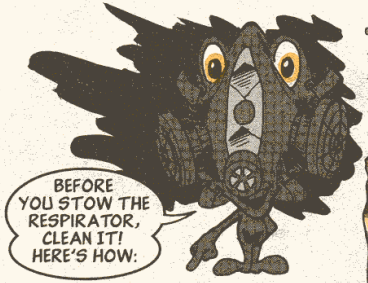
Dear Sergeant J.P.F.,
No. There is no installation kit for putting your RL-172/G in the bed of your truck. However, the reeling maching can be attached to the tailgate of your truck with an MK-2612/VRC installation kit, NSN 5820-01-310-2549.

Half-Mast

MAINTAIN YOUR RESPIRATOR

Your respirator cannot protect you from harmful vapors or paint mist if you don't maintain it.

After each use, look it all over real good for cracks, holes, nicks and cuts. Work the buckles and feel the rubber for flexibility. If you find any problems, report them.



☞ Remove the cartridges, headbands, speaking diaphragms, and valves from the rubber facepiece.

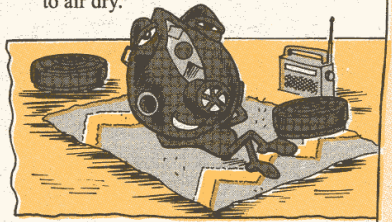
☞ Put all the pieces—except the cartridges and prefilters—in a warm solution of gentle detergent and water. Lightly scrub the mask and parts with a soft, clean brush.

☞ Rinse all items thoroughly with clean water.

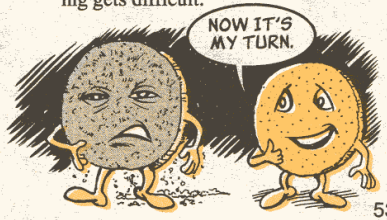
☞ Disinfect by soaking the respirator and parts in a solution of about one ounce of calcium hypochlorite (bleach), NSN 6850-00-270-6225, to four gallons of water. Let it soak a couple of minutes.

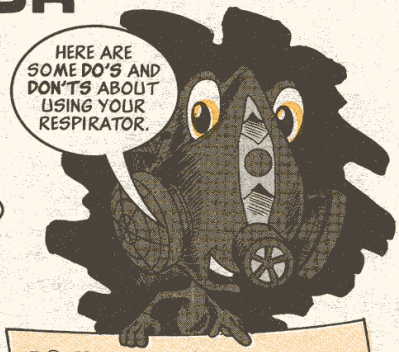
☞ Rinse all the items again in clean water.

☞ Place the parts on a clean surface to air dry.



☞ Replace the prefilter when breathing gets difficult.





D☺: Use your respirator only in well-ventilated areas where plenty of oxygen is available.

D☹N'T: Use respirator around toxic contaminants.

D☺: Leave the area immediately if breathing becomes difficult, you get dizzy, your skin burns or itches, your eyes hurt, or you taste or smell the paint.

D☹N'T: Alter or modify your respirator.

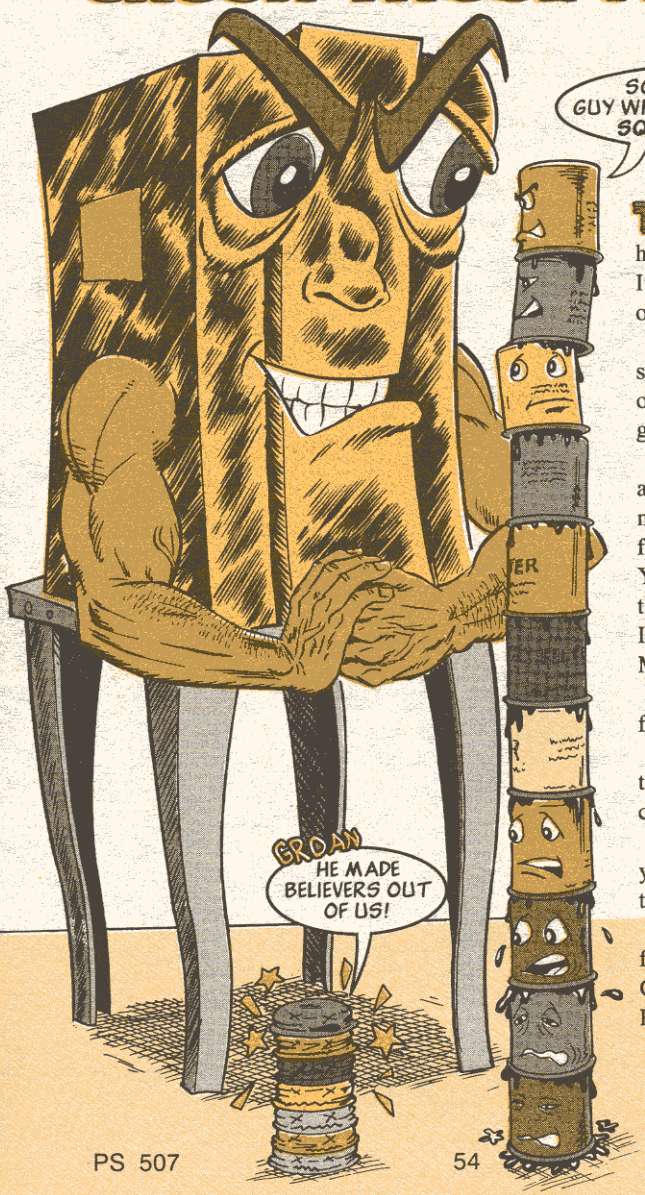
D☺: Make sure your mask is properly fit-tested. This means that your mask was selected, tested and fitted to YOU!

D☹N'T: Use respirator as a replacement for your individual protective mask and vice versa.

D☺: Make sure you use only respirators certified by NIOSH (National Institute for Occupational Safety and Health). These respirators will have a TC number on the respirator or the package.

D☹N'T: Mix parts from different manufacturers' respirators.

CRUSH THOSE FILTERS



The EPA and DOD handwriting is on the wall: It's illegal to toss used oil filters into a landfill.

It's easy to understand since one quart of used oil can pollute 250,000 gallons of water.

Jump on the recycle, anti-pollution bandwagon now by ordering an oil filter press or crusher. You'll find them listed in the GSA New Item Introductory Schedule, March 1994, on Page 51.

These presses crush oil filters flat.

The oil crushed out of the filter drains into the crusher's waste oil tank.

Then put that oil into your used oil holding tank.

In some areas, the filters can be recycled. Check with your local EPA office.

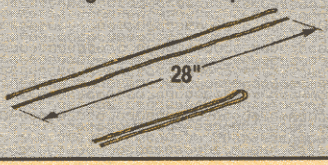
Kevlar Helmet . . .

TIE THE BAND DOWN

Hey Soldiers, those reflective "cat's eyes" on the back of your helmet band ID you as a friend or foe. If you lose your band, you can lose your friendly ID, and maybe your helmet cover, too.

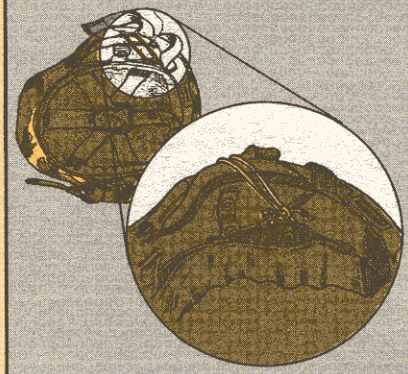
To keep your band on your helmet, tie it down like this:

STEP 1: Cut two pieces of 550 cord (gutted), NSN 4020-00-014-6699, 28 inches long and fold each piece in half

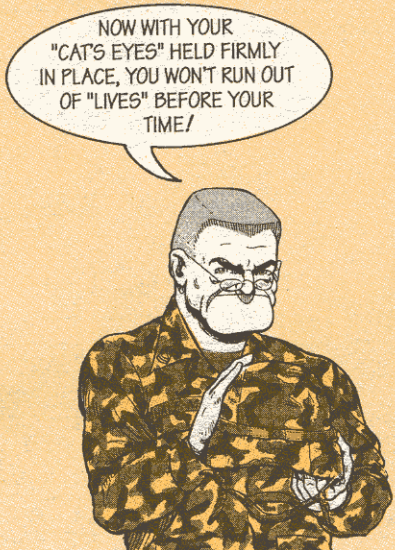


STEP 2: Pass the folded end of each piece behind the helmet band and put the free ends through the loop and under the helmet cover

STEP 3: Fasten the free ends of each piece to the helmet's suspension band with a square knot



STEP 4: Cut and sear the free ends of each piece with a lighter or match



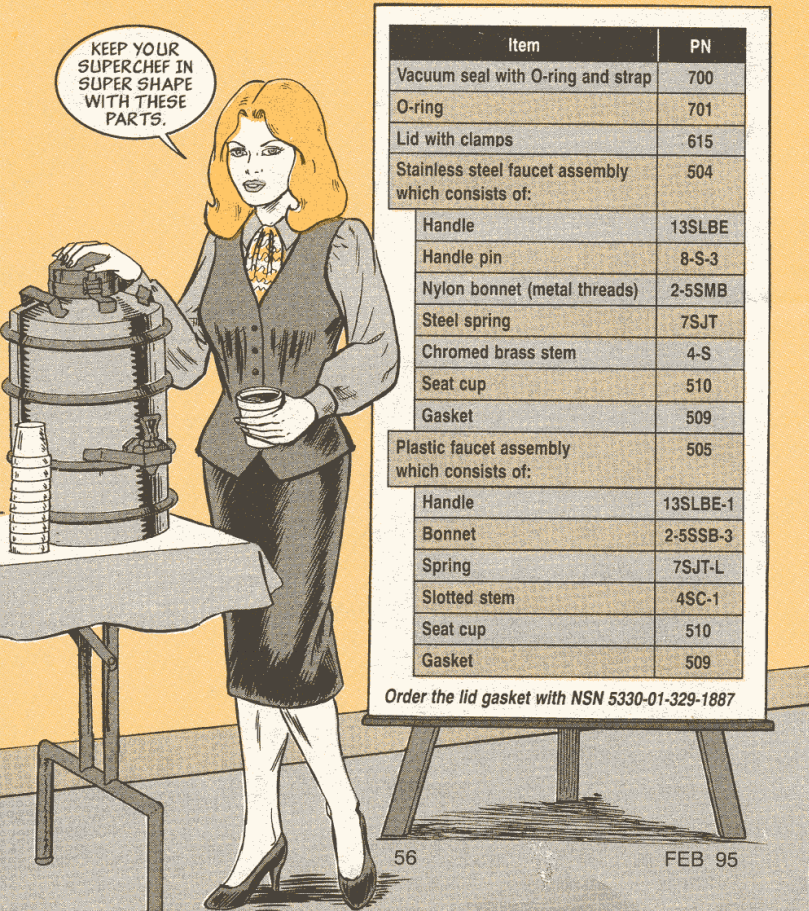
Uncap Vacuum Jug Parts

The Superchef jug made by the American Production Company is repairable. However, you won't find the repair parts listed in any TM.

Order the repair parts for the 2-, 3-, 5-, and 10-gal jugs from GSA on a DD Form 1348-6 using CAGE 02707 and these part numbers:

Item	PN
Vacuum seal with O-ring and strap	700
O-ring	701
Lid with clamps	615
Stainless steel faucet assembly which consists of:	504
Handle	13SLBE
Handle pin	8-S-3
Nylon bonnet (metal threads)	2-5SMB
Steel spring	7SJT
Chromed brass stem	4-S
Seat cup	510
Gasket	509
Plastic faucet assembly which consists of:	505
Handle	13SLBE-1
Bonnet	2-5SSB-3
Spring	7SJT-L
Slotted stem	4SC-1
Seat cup	510
Gasket	509

Order the lid gasket with NSN 5330-01-329-1887



Item	NSN
Faucet assembly	4510-00-961-7571
Faucet bonnet	7330-00-051-1493
Faucet stem	7330-00-051-1494
Faucet spring	7330-00-051-1492*
Faucet washer	7330-00-051-1497*
Faucet tube	7330-00-051-1499
Faucet handle pin	7330-00-051-1496
Handle	7330-00-965-4685
Air vent closure	7330-00-051-1501*
Seat cup	7330-00-051-1495
Cover (3 & 5-gal)	7330-00-051-1498
Cover (10-gal)	7330-01-071-7680
Cover gasket (3 & 5-gal)	7330-00-051-1502
Cover gasket (10-gal)	7330-01-071-7679

**Local purchase item*

Tire Servicing Tool Kit

Use NSN 5180-01-355-2166 to get the tire servicing tool kit that's in the No. 1 Common tool set. The NSN in SC 4910-95-A74 (Sep 94) is wrong.

Bolt Cutter Jaws

Here are the NSNs for jaws for your bolt cutters:

Cutter NSN 5110-00-	Jaw NSN 5110-01-
596-9162	378-4608
224-7057	380-5088
224-7055	380-5089
596-9156	380-5091
596-9155	380-5095
224-7053	380-6448
224-7056	381-0790
188-2524	381-0808
595-8267	380-5087

IMMERSION HEATER PM

It's hard to get excited about cleanup, especially pots and pans. Your M67 immersion heater makes the job easier by supplying the hot water if you take care of the M67.

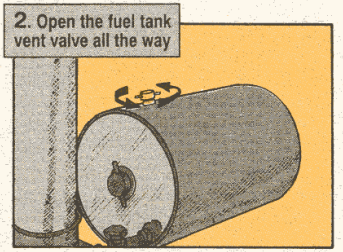
Keep your heater heating by heeding the word in TM 5-4540-202-12&P and these tips:

Safety First

- Make sure you have the right number of smokestack sections. Four of them give just the right amount of draft to keep the fire going.
- Never fire up the heater if it's not in water. Water soaks up the heat so the heater won't get too hot to handle.
- Always wear heat-resistant gloves, NSN 8415-01-092-3910, when you light the heater. They'll save your hands from flareups. Keep your face back, too, so the flames won't charbroil you.
- Never let fuel drip into the heater before you've preheated the flue and are ready to light the burner. Otherwise, the heater could light with a bang.

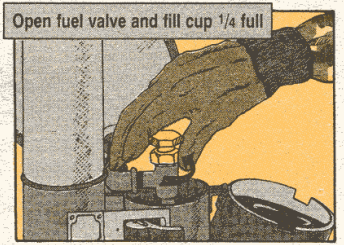
Preheat the Flue

How you preheat and light the flue is important. Use these procedures to get the right amount of air flowing before you light the burner:



3. Swing the igniter cup so that it's directly below the drip valve in the burner chamber. Make sure there's a wick in the cup and the retainer spring is working.

4. Open the valve and fill the cup about 1/4 full of fuel—or until the wick is completely soaked. Then, shut off the flow of fuel.



In cold weather, you might need more fuel in the cup. Be sure the cup doesn't run over.

5. Light the fuel in the cup and move the cup back into the flue chamber to preheat it. Let it burn there for one or two minutes. Give it a couple more minutes in cold weather.

Light It Up

After you preheat the flue, switch the lighter cup back to the burner compartment so that the edge is below the fuel valve. Open the valve again — this time enough to give you a trickle of fuel. Flames from the cup will ignite the fuel.

Once the burner is lit, move the cup back to the flue compartment — it'll burn itself out. Now, adjust the fuel flow so that the flames on the burner are just short of smoking.

Make sure the burning fuel hits the burner plate. If it doesn't, you need to adjust the heater or the can so it does.

Temporary Storage

Storing the heater can be the beginning of its end if you store it unprotected.

- Clean off any grease or moisture.
- Scrape off loose paint with a wire brush, scouring pad or extra fine sandpaper.
- Spot paint the parts that are supposed to be painted. The TM tells you which ones. Order a 5-gal can of primer with NSN 8010-00-161-7275 or a gallon can with NSN 8010-00-292-1127. A gallon of olive drab paint comes with NSN 8010-00-297-0586.
- Clean unpainted parts, like the heater body, the hanger, the hanger screws, and the outside of the fuel tank with solvent, NSN 6850-00-664-5685. Let the solvent dry, then coat the items with corrosion preventive compound, NSN 8030-00-251-5048.
- Protect the inside of the fuel tank with lubricating oil. NSN 9150-00-111-3199 gets a 5-gal can. Pour about eight ounces of oil into the empty tank. Put the cap on and gently swish it around to give the whole tank a good coat. Pour off any excess oil in an approved waste container.
- Clean the smokestack sections, then put a coat of lube oil on them.
- Wrap the burner in grease-proof barrier paper, NSN 8135-00-224-8885.

Remember to flush out the lube oil with a little clean fuel before you use the tank again. The oil will smoke if you leave it to burn off with the first tank of fuel.

HAZMAT Substitutes

A catalog that lists the NSNs for more than 300 environmentally safe substitute products is now available. If you didn't receive this catalog during initial distribution, call the Defense General Supply Center at 1-800-352-2852 or DSN 695-6054. Request a copy of the Environmentally Preferred Products Catalog.

UPDATE 14 Available

Great news! Maintenance Management UPDATE 14 has been published. If you haven't received a copy, ask your pubs clerk to order it on DA Form 4569 using "UPDATE 3-14" as the publication number and "BKL" as the unit of issue. To get future revisions and changes, make sure it's added to DA Form 12-09-E, Block 2561.

HMMWV Access Cover NSN

NSN 5340-01-311-1633 gets a two-piece torque converter access cover for HMMWVs. It replaces the one-piece cover in the -20P TM and saves mechanics about 1 1/2 hours of labor when they have to replace the starter.

Stud Nut Wrench

Get the 1 1/2-in wheel stud nut wrench for all 5-ton trucks with NSN 5120-00-316-9217. NSNs in the M939- and M809-series -10 TMs are wrong.

Get Free Excess Equipment

A lot of excess equipment coming back from Europe is available for reissue to units in CONUS. If you need Class II or Class VII non-rolling stock, such as tentage, tool kits and installation kits, you can get it shipped to you free from the RETROEUR facility at Bluegrass Station, KY. For more information on these items, call your MACOM:

MACOM	Phone No.
FORSCOM	DSN 572-4583
INSCOM	DSN 235-6238
NGB	DSN 327-7478
TRADOC	DSN 680-5143
USASOC	DSN 236-4533
USAR	Comm 404-629-8026

Scraper Sight Glass

There is no NSN for the round sight glass on the 621B Scraper's transmission differential. Order it on DD Form 1348-6 from S9I using CAGE 11083, PN 5T5211. The gasket for the sight glass is NSN 5330-01-307-1805.

Supply Price Reduction

Now you can get selected Class II, IV and IX items at a fraction of the AMDF cost. To find out which items have reduced prices, call the FORSCOM redistribution center at DSN 572-4583/4405 or commercial (404) 752-4583/4405. Or fax your questions to DSN 572-4412 or commercial (404) 752-4412.

Distribution: To be distributed in accordance with DA Form 12-34-E, Block 0312, for TB-43-Series

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

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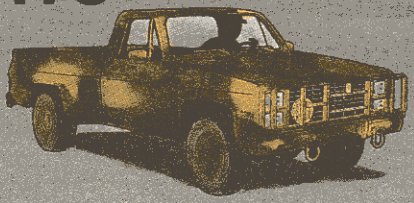

GO
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THAT SAVES GLOW PLUGS