

Issue 404

PS

July
1986

THE PREVENTIVE MAINTENANCE MONTHLY

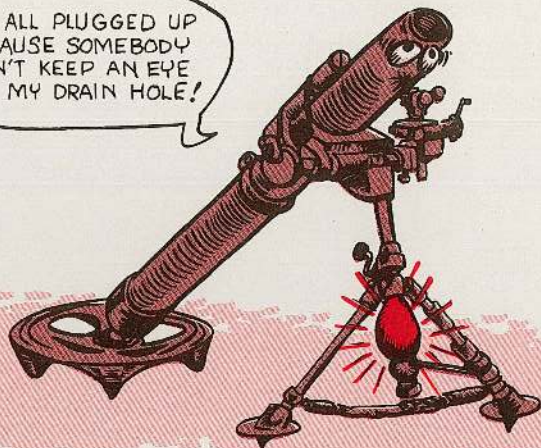


EFFECTIVE IMMEDIATELY
IN THIS OUTFIT,
PREVENTIVE MAINTENANCE
WILL TAKE PRECEDENCE OVER
ROMAN GAMES!

Birth of SOP
(See page 29)

DRAIN'S a MUST to STOP RUST

I'M ALL PLUGGED UP BECAUSE SOMEBODY DIDN'T KEEP AN EYE ON MY DRAIN HOLE!

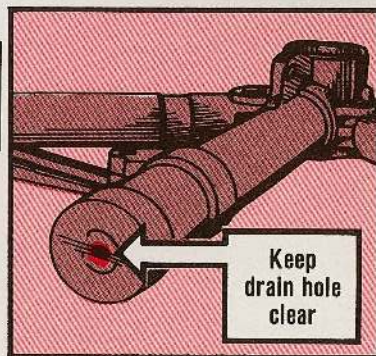
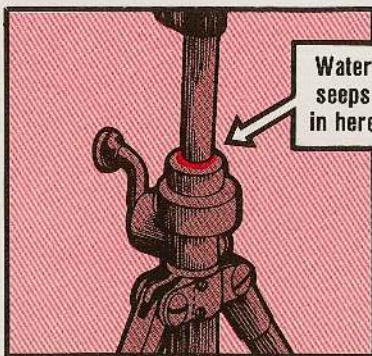


A plugged-up M29A1 mortar will soon rust... and be left in a bind.

Rust binds the elevating spindle, making it hard to move the M29A1 tube up and down.

Water seeps in the top housing cover of the M29A1's elevation housing. Unless the water has someplace to drain, it stays in the elevation housing and causes rust.

To prevent rust, keep the drain hole in the base cap of the elevation housing open. If the hole gets plugged and you can't clear it, your armorer must send the mortar to DS for cleaning.



JULY 86

No Dragging!

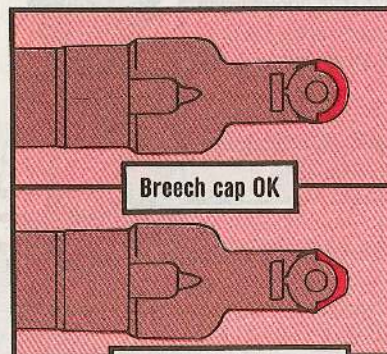


NEVER drag your Four-Deuce mortar's M30 cannon over a hard surface!

You'll flatten the metal of the breech cap. This can damage the bridge and baseplate assemblies during firing... set up breakage of other parts... and pose a safety hazard.

So, pick up your cannon or give it a ride to move it.

Armorsers, if you see flat spots on the breech cap, the cannon should be turned in and replaced.



JULY 86

Breech cap flattened?
Replace it!

PS THE PREVENTIVE MAINTENANCE MONTHLY

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

Within limits of availability, older issues may be obtained direct from Editor, PS Magazine, c/o US Army Materiel Readiness Support Activity, Lexington, KY 40511-5101.

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

MSG Half-Mast
PS Magazine
Lexington, KY
40511-5101

Use of funds for printing of this publication was approved by the Secretary of the Army on 19 February 1985 in accordance with the provisions of AR 310-1.

DISTRIBUTION: In accordance with requirements submitted on DA Form 125-R. Private subscriptions: Order from US Govt Printing Office, Supt of Documents, Washington, DC 20402. PS Magazine ISSN 0475-2953 is published monthly by the Department of the Army, Washington, DC. Second Class Postage is paid at the Lexington, KY post office and at additional mailing offices.

Postmaster: Send address changes to Cdr. US Army Pubs Ctr. 2600 Eastern Blvd, Baltimore, MD 21220-2896.

Plop, Plop, Plop... Sop, Sop, Sop!

LET'S
MOVE OUT!

NOT 'TILL WE'VE CHECKED
FOR WATER IN THE PLENUM BOX!

Take one box without a cover or a drain hole. Add a hard rain or several days of steady rain, or a heavy dose of water from a hose. What do you have?

Water in the air induction plenum box on M1 tanks, that's what. And you've got to get the water out of the box if you want to operate the tank.

Once the water gets pulled into the engine during the start procedure, the start is automatically aborted.



Water enters here ...



... and ends up here

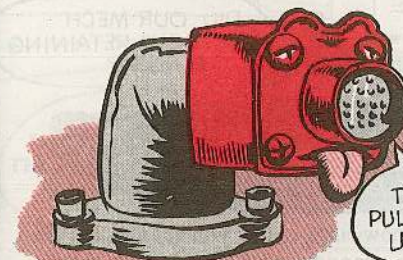
So, until the plenum box is modified with a "lip" kit to keep water out, here's what you can do to prevent turbine aborts.



- Make sure any cleanup efforts using water hoses don't cause more trouble. Keep the hoses away from the air inlet.
- If it's rained hard or for a long time, check the plenum box for standing water. Sop up all the water with rags.

WHEN THE MODIFICATION INFO IS AVAILABLE,
WE'LL LET YOU KNOW HOW TO GET IT AND HOW
TO USE IT!

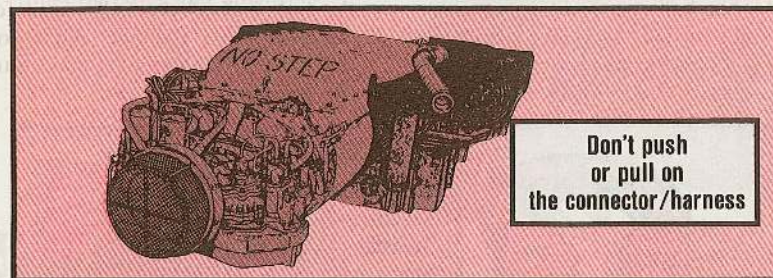
J33 Connector's No Handhold!



BREAKING UP'S NOT
HARD TO DO!

THIS PUSHING AND
PULLING IS TEARING
US APART INSIDE!

When you're pulling or replacing a pack, remember that the J33 electrical connector and 3W105 wiring harnesses are not handholds.



Don't push
or pull on
the connector/harness

You know—like for guiding the air inlet end of the pack as it comes out of or goes into the hull under the edge of the turret.

Pulling or pushing on the connector/harness assembly breaks pins inside the connection. That means shorts in the electromechanical fuel system. Your drivers will report the damage as low engine power or erratic RPM's.

So even though the connector/harness looks strong enough to take a push or pull, don't do it.

If the pack can't be removed or replaced without this extra help, something's not right. Check your sling, lift points and lift angle. Make changes as needed and save pack damage—and work for you.

Fuel Nozzle Cleaning

The fuel nozzle's always been a pain to keep operational. It carbons up quick and letting it soak forever takes lots of time. Some of you mechs have been trying ways other than the one in your -20 TM to clean nozzles.

But all the tricks you've tried (using oven cleaners, vinegar, doing unauthorized disassembly) have ruined nozzles, wrecked engines and caused fires.

So, go by what you're told in TM 9-2350-255-20-1-3-1. It may take some time to clean the nozzle, but it's the only way to go.

Use New Rings Only



There's a good reason Page 7-199 of TM 9-2350-255-20-2-3-3 tells you to use new retaining rings when installing the rigid connecting links for the ballistic shield doors.

If you try to get by with the old ones, they'll slip off under tension.

Prevent that disaster by using only

new rings. After you've installed the rings and put the assemblies together, test the doors.

If a new ring springs off, eyeball the link end of the bell crank for burrs or other damage. After you take care of the damage, make sure the ring gets a good seat.

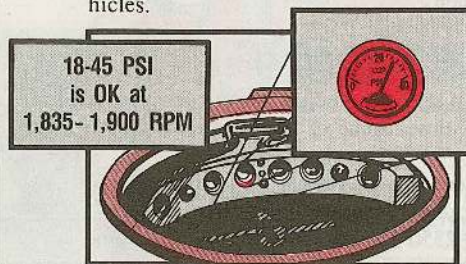


M110A2, M578 Combat Vehicles ...

Trans Oil Pressure Can Vary

Drivers, you now have a little more range in normal transmission oil pressure readings on M110A2 SP howitzers and M578 recovery vehicles.

Instead of 30 PSI at 1,800 RPM and above called out in your -10 TM's, a normal reading can be anywhere from 18-45 PSI between 1,835 and 1,900 RPM.



AS A MINIMUM, YOU SHOULD GET A READING OF 10 PSI AT 1000 RPM. IF YOU DON'T, SHUT DOWN AND REPORT IT IMMEDIATELY!



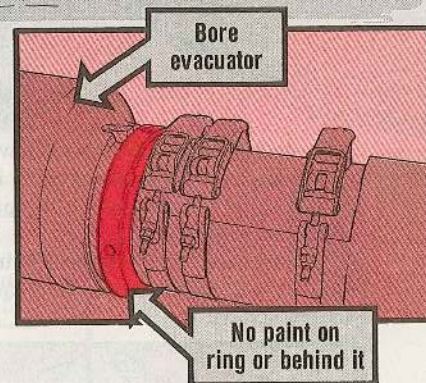
Paint With Care



Watch where you put that loaded paint brush when you paint the gun tubes on tanks and howitzers.

You'll make a whole heap of trouble for yourself if you get too close to the bore evacuator retainer ring.

A bunch of rings have had to be chiseled off because paint made it impossible to remove them any other way.

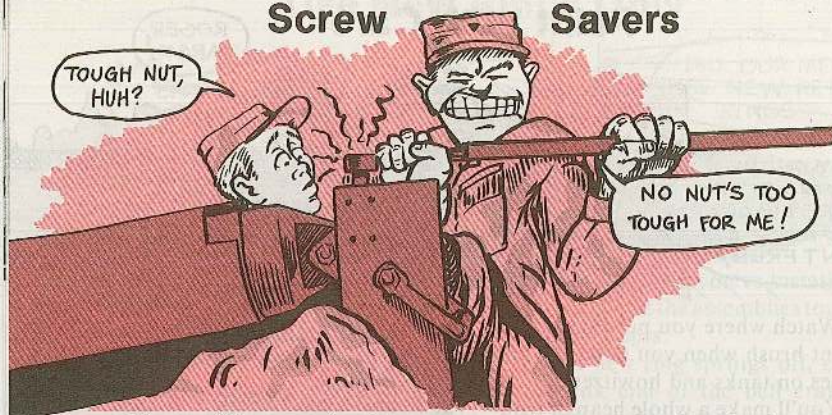


- Never paint the tube threads and the inside of the ring. Graphite grease (GG-1) does the job there.

- Never coat over paint until the buildup blocks the removal of the evacuator, seals or ring. Scrape off the old paint every time.

- Never paint the tube with the evacuator installed. Paint will find every crack or crevice. Remove the evacuator before painting. If you can install the evacuator easily after painting, you'll probably be able to remove it just as easily.

Screw Savers



The equilibrator adjusting screws have brass heads that easily crack if you force them, or round out if you turn them with a wrong tool.

Once the screws are ruined, your howitzer will be down until DS can get new screws.



Never force the screws. If one turns hard, either raise the cannon to its highest elevation to raise the equilibrator dial pointer, or lower it to the lowest elevation to lower the pointer. If a screw still won't budge, call your mech.

To turn the screws, use only the socket wrench handle, NSN 5120-00-236-7590, that comes as B11 for the M198. If you use any other tool, you can round out the socket head of the screws.

Keep screw threads clean. Dirt makes the screws hard to turn. More force means more wear and tear. A weekly lube with PL-S will also help keep the screws turning.



Your DS unit can stop screws from cracking with a steel collar. Details are on Page C-5 of AMCCOM Pam 750-10 (Aug 85). If you don't have a copy, your local AMCCOM Logistic Assistance Representative can get you one.



Stop Sling Slips

PSSST... LISTEN UP, BUB. IF YOU DON'T CHECK ME OUT BEFORE YOU HOOK ME UP, YOU COULD HAVE A BIG CRASH!



M109-series and M992 mechs, those powerpack lifting slings need your attention... now! They may be dangerous.

The wire ropes pull loose from the swage fittings. You can drop a heavy load.

So right now... before you use that sling again... look at those wire ropes where they go into the swage fittings.

If you see shiny spots on the rope near the swage fitting, the rope's slipping.



- Wire rope assembly (short), NSN 4010-01-108-5217
- Wire rope assembly (long), NSN 4010-01-108-5218
- Shackle, NSN 4030-00-149-5574
- Pin, NSN 5315-00-059-0187
- Washer, NSN 5310-00-809-8533

If you get a new sling from DS, make sure it's marked, showing it passed the load test and the date it passed.

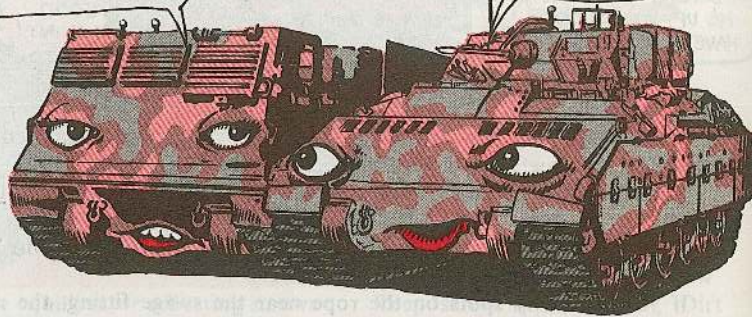
You'll find this info in TACOM SOU Msg AMSTA-MCC 031800Z Dec 85. If you don't have a copy, see your TACOM Logistic Assistance Representative.



Creepin' Again

I TELL YA, BRAD,
THIS STUCK PILOT VALVE
GIVES ME THE CREEPS!

RIGHT ON!
WHEN THE PROBLEMS
ACCELERATE, I
CAN'T STAY IN
ADJUSTMENT!



There are a couple more things you can do to eliminate the vehicle creeping described on Page 40 of PS 395.

Before doing a transmission cut-in adjustment, check the controller neutral and steer adjustment.

For the M2/M3, the word's on Page 6-555 through 6-568 of TM 9-2350-252-20-1-3.

For the MLRS, look to Pages 6-450 through 6-460 in TM 9-1450-646-20-3. If you've still got the problem, have your DS unit check for a stuck pilot valve. Then do the cut-in adjustment.

Also, the schedule adjustment procedure on Pages 6-465 through 6-467 of TM 9-1450-646-20-3 for the MLRS is wrong.

You should get between 2,350 and 2,450 RPM at 15-20 MPH with the accelerator floored. You don't need to go at top speed to make the check and you don't need to get 2,400-2,500 RPM.

Broken Weld Is OK

When is a broken weld not a problem?

When it's the floor support weld at the hull just below the bilge pump access cover on your Bradley.

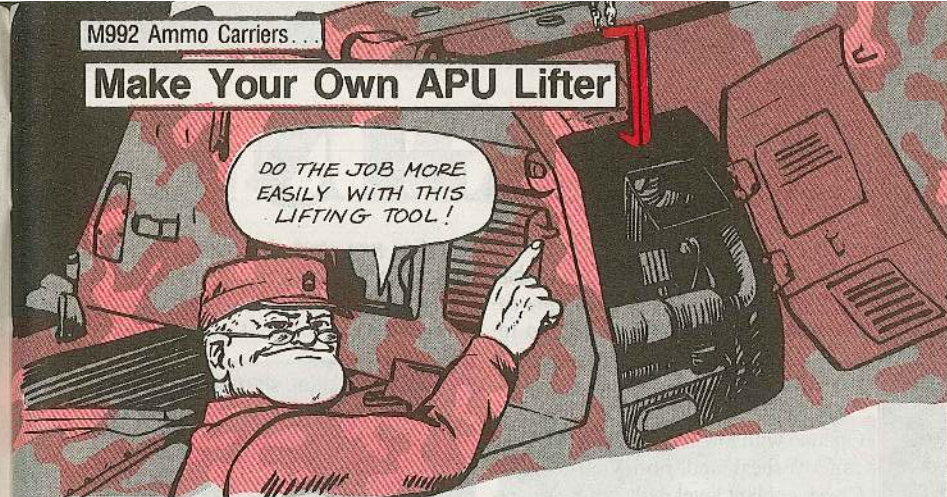
The headshed now says the floor support does not need to be welded. In fact, on new production vehicles the support is not welded to the hull.

So, if you find a broken weld at the rear floor support, pay it no mind. It won't hurt a thing.



Make Your Own APU Lifter

DO THE JOB MORE
EASILY WITH THIS
LIFTING TOOL!



The procedure in TM 9-2350-267-20 for removing the auxiliary power unit can damage your equipment.

The APU won't tend to swing outward, and the sling won't rub against the carrier hull if you use the tool.

Instructions for making the tool are in TB 43-0001-39-1 (Jan 86).

M60-Series Tanks...

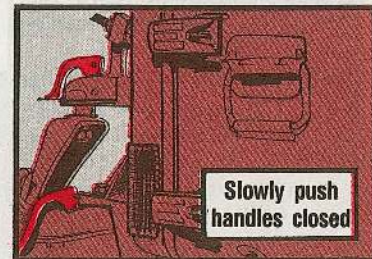
Lock in Your AN/VSS-3A

Before you bear down on your searchlight mount assembly's latching handles, be sure the ball socket seats squarely on the ball studs.

A heavy hand coupled with a poorly seated ball socket leads to broken handles. That means a trip to support because the handles aren't stocked separately. The entire coupler assembly must be replaced.

Best bet for trouble-free hookup is to seat the ball and stud carefully. Then slowly push the handle closed.

Replace missing ball studs with NSN 5307-00-845-5729. Lockwashers are NSN 5310-00-584-7888 and nuts are NSN 5310-00-763-8901.



ENGINE INSURANCE

More M113A1/M113A2 FOV engines are ruined by overheating than by anything else. Do these simple little things right and you've got an insurance policy against engine overheating.

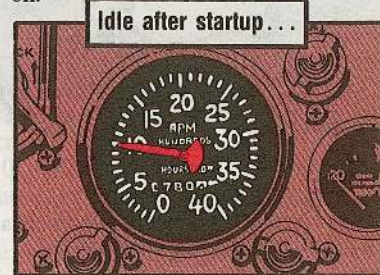
CORRECT COOLANT LEVEL—Operate with low coolant levels and you can overheat and ruin your engine. Check coolant level daily before operation. Be sure coolant is at the bottom of the radiator filler neck (for the M113A1 family) or within 1/2 inch of the auxiliary tank filler neck (for the M113A2 family). Keep the level up at all times.



If you have to add more than 2 quarts of coolant at one time, have your mechanic give the system a complete inspection for leaks.

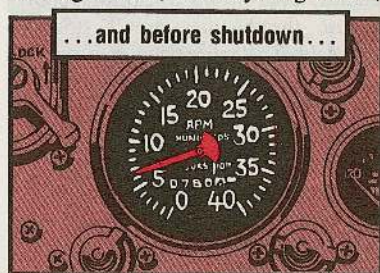
ENGINE WARMUP—This is often neglected, but your engine will last longer if you always warm it up before you move out. Oil drains out of bearings when the engine is at rest. You need to give the oil time to circulate before you move your carrier.

After you start the engine, set the hand throttle and run the engine at 800-1,000 RPM for at least 3-5 minutes to warm up the coolant and the engine oil.

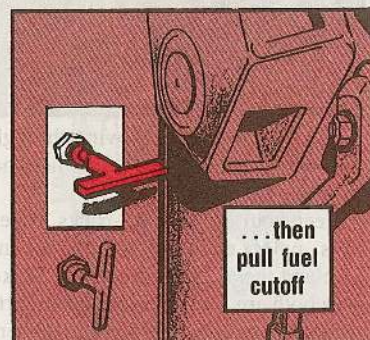


(Note: Normal idle of 650-700 RPM is too low. It will cause carbon to build up around the valves and in the cylinders.) In cold weather it takes longer to warm up your coolant.

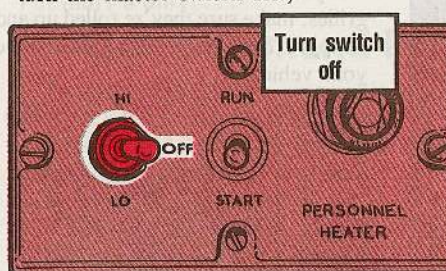
ENGINE SHUTDOWN—Before you shut off the engine, run it in neutral at about 1,000 RPM for 2 minutes or so. At the end of the 2 minutes, set the engine back to idle (650-700 RPM) and check the instrument panel for normal readings. Then, if everything is OK,



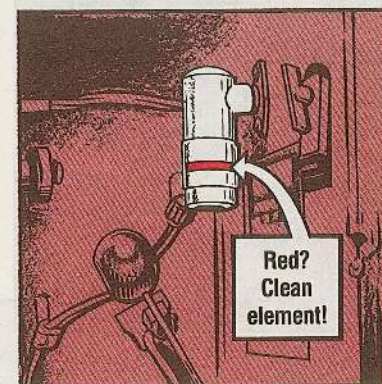
pull the fuel cut-off all the way out. The engine will stop a few seconds later when it has used all the fuel in its injectors and fuel lines.



Then turn off all electrical equipment that's been running. If the personnel heater is on, turn it off using the heater switch. Turning the master switch off will **not** turn off the heater. The only way to turn the heater off is with the heater switch. When everything else is off, turn off the master switch. (Note: Always shut the engine off before you turn the master switch off.)

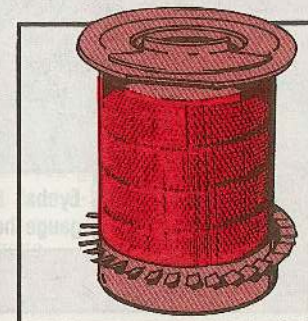


AIR CLEANER—Your engine will lose power and heat up if the air cleaner element is choked with dirt. If your carrier has an air cleaner restriction indicator and it shows only red in the window, clean the element. If your vehi-



cle has no indicator, open the container latches and check the filter often.

Clean the element when and how your TM says.

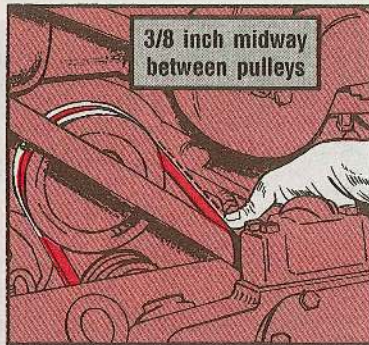


Your Connections Count!

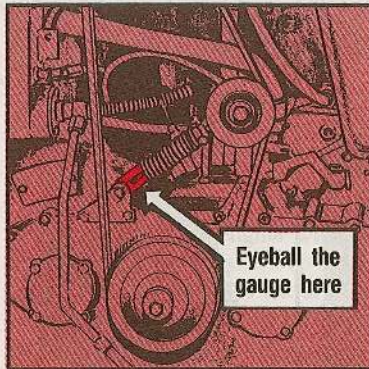
V-BELT CHECKS—The V-belts for the fan drive and the coolant pump are involved in engine overheating.

When the belts get too loose, the fan and the coolant pump are not operated fast enough to keep the engine from overheating.

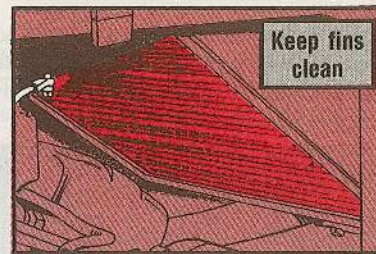
Check the coolant pump belt by pushing in on it halfway between the pulleys. If you can push it more than 3/8 inch, get your mechanic to adjust it.



Check the fan drive belt at the idler. If the adjuster rod is not between the operating range marks, tell your mechanic.

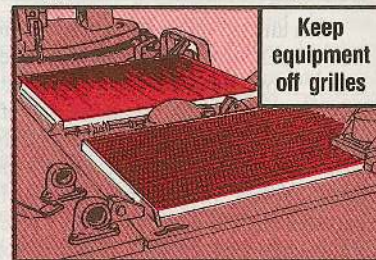


RADIATOR FINS—Your radiator will not do a good job of transferring heat from the coolant to the atmosphere if its fins are clogged with dirt, oil, leaves, grass, twigs, etc. Anything that

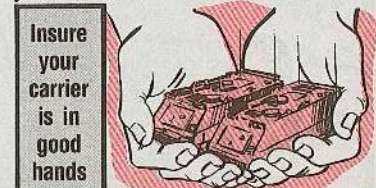


restricts the air from moving through the radiator keeps the coolant hot and overheats the engine.

Keep your equipment—picks, water cans, poles, etc.—off both the air intake and the air exhaust grilles. Make sure both are clean and free from dirt, twigs, leaves and other foreign matter.



If you use protective covers over the grilles, make sure they're rolled up and strapped in place before you operate your vehicle.



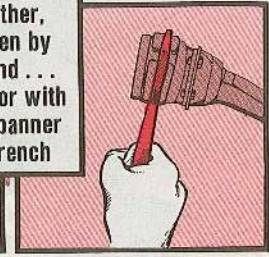
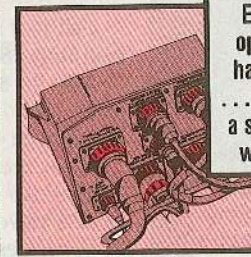
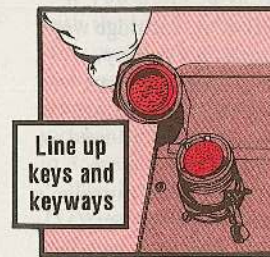
Without good electrical connections, your ability to move, shoot and communicate is drastically reduced.

To head off some nasty surprises:

—**ALWAYS LINE UP** the key and keyway so that the connector pins and sockets fit together right. Bent or broken pins and shorted connections can stop you in your tracks.

—**ALWAYS LOOSEN AND TIGHTEN** the connectors with a spanner wrench or by hand. You can damage the connectors by using a screwdriver and hammer to knock them loose.

Good connections will carry you a long way. But poor connections get you nowhere, fast!



For M577's Only! ...

New Command Post Power Cable

There's a new 50-ft power cable assembly available for M577A1 and M577A2 command posts. NSN 2590-00-363-7102 gets the cable with end connectors and the adapters to mate the cable to non-NATO power receptacles. The cable is completely repairable with these parts:

- Adapter connector—NSN 5935-00-322-8959
- Wiring harness—NSN 2590-00-392-9193
- Cable end connector—NSN 5935-00-567-0128

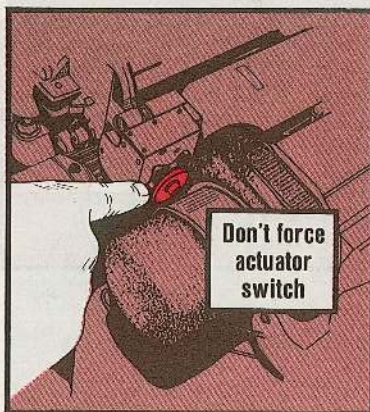
Be Cool With Coolant Cartridges

I CAN'T SEE AND
I USED A FRESH
CARTRIDGE!!

HEY, LOOK,
AN ORANGE CAP,
HMMMM...

Never force the actuator switch on your Dragon and TOW night sights when you install a coolant cartridge. Forcing the switch can damage the actuator ball bearings and the cartridge's needle valve.

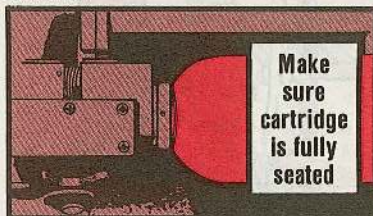
If you feel resistance when you push the actuator switch toward LOCK, stop. The cartridge's not in right.



If the actuator switch turns hard, rotate the cartridge slightly and try the switch again.

Rotate the cartridge again...and again...until the switch locks easily

with the cartridge fully seated in the actuator.



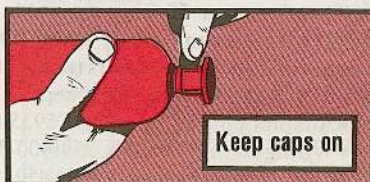
Call your mech if the cartridge won't seat fully. Something's screwy.

Save the orange caps that come with cartridges...and use them. Whenever a cartridge is waiting to be used or refilled, keep the orange cap on.

The cap protects the cartridge's needle valve and keeps dirt out.

Cartridges are under very high pressure.

A dirty valve will shoot dirt into the actuator, contaminating the night sight.



HOW 'BOUT
THIS NEW
LOCKING
HANDLE?

YOU SURE
MAKE ME FEEL
SECURE!

Locking Up Clamp Problems

Like a sturdy mousetrap after it springs, the "mousetrap" locking clamp (NSN 5340-01-104-7700) latches onto a TOW tripod or pedestal and won't let go.

You can't nudge it, budge it or snag it loose—and that's the beauty of the little beast. You don't have to worry about its coming loose and dumping valuable missile parts.

If you don't have the new clamp with the locking handle, report it to your mech, who will get DS to install one for you. If the locking handle breaks, get it replaced ASAP. Every moment you waste puts your TOW in danger of a tumble.

The locking handle keeps your TOW in a trap...and it couldn't be more secure.



No Charge Needed

The TOW Vehicle Power Conditioner (TVPC) gets its power directly from the battery of the vehicle your TOW is mounted on. That's all the power help the TVPC needs.

Operators, never charge the TVPC on the TOW battery charger. The TVPC doesn't need recharging. Besides, you'll damage both the TVPC and the battery charger.

If your TVPC isn't up to snuff, turn it in to your mech. It's not your job to fix it.

The BOOT



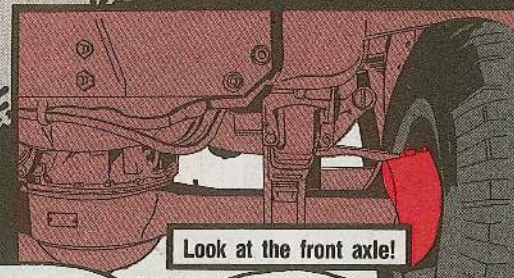
STEERING KNUCKLE BOOTS ARE CHECKED DURING PMCS, BUT A LOT OF DRIVERS DON'T KNOW WHAT TO LOOK FOR!

SO, A LOT OF BOOTS ARE NOT BEING REPLACED WHEN THEY'RE CRACKED OR TORN!

SCOOP

BOOTS KEEP DIRT OUT OF THE GREASE THAT LUBES THE STEERING KNUCKLES. DIRT WILL TEAR UP KNUCKLE BEARINGS. SO, DRIVERS, SLIDE UNDER OLD DEUCEY AND TAKE A CLOSE LOOK AT THE FRONT AXLE.

ARE THE BOOTS TORN OR LEAKING? CLAMPS DAMAGED? IF SO, REPORT IT! ALL OK? CHECK OUT THE BREATHER VALVE ON THE AXLE HOUSING. GIVE IT A TWIST. IT SHOULD MOVE EASILY. NOW TAP IT. IT SHOULD SPRING UP AND DOWN.



Look at the front axle!

IF A VALVE DOESN'T MOVE, IT'S PROBABLY CLOGGED WITH DIRT. A CLOGGED BREATHER VALVE LETS HEAT AND PRESSURE BUILD UP INSIDE THE AXLE HOUSING. SOON YOU'VE GOT BLOWN SEALS. OIL WILL SEEP INTO THE BOOTS!

Boot torn or leaking grease?



TAP TAP!

Give it a twist and a tap

ADJUST the

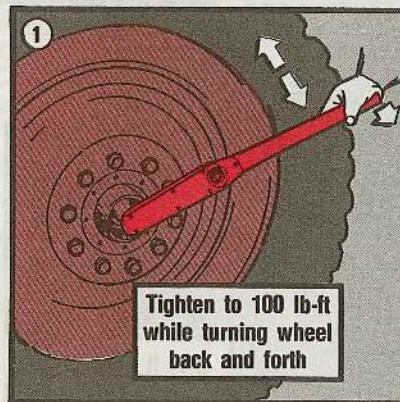


...WE'VE BEEN USING THE WRONG ADJUSTMENT. THOSE BEARINGS ARE PROBABLY BAD!

If you mechs follow the wheel bearing adjustment procedures in Para 10-13 of TM 9-2320-273-20, you could over- or undertighten the inner nuts. This will lead to bearing that wear out before their time.

New Procedures to correct the TM show up in Para 3-32 of TB 43-0001-39-6 (Jul 85), but they're not complete either.

Here's what you need to know:



If you're installing new bearings and cups, always replace them as a set. Torque the inner nut to 100 lb-ft while rotating the wheel back and forth. This seats the bearing and cups.

Then—without turning the wheel—back off the nut till it's loose. Retighten to 50 lb-ft.

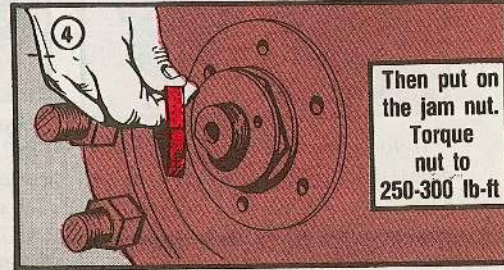
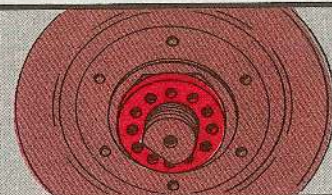
If you've just repacked the old bearings, torque the inner nut to 50 lb-ft while rotating the wheel.

In either case, back off the nut $\frac{1}{4}$ turn.

ADJUSTMENT



The locking goes on next with one hole over the guide pin on the nut. If the hole won't line up, tighten the nut until it will.

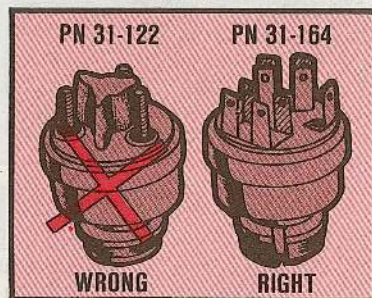


Ignition Switch Snafu



M915 mechs, there's a supply snafu when it comes to ordering ignition switch, NSN 2920-01-092-9134. You may get one that won't work on your truck.

The switch you need, PN 31-164, comes with the spade lugs to connect to the wiring harness.



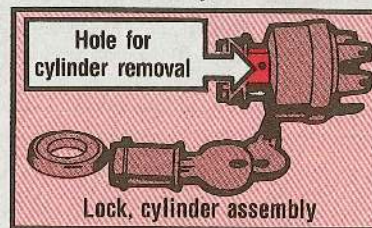
If you get a switch with threaded poles, it's the wrong switch. It won't work.

Send in an SF 364 Report of Discrepancy.

You don't need a whole new switch to replace only the lock cylinder.

The cylinder comes under NSN 2540-01-155-3601 and includes two keys.

To replace a lock cylinder, take out the switch assembly. Push a small punch in the hole on the side of the switch assembly and tip the switch down so the lock cylinder slides out.



Push the replacement cylinder in until it clicks. Then put the switch assembly back in the truck.

Use nut, NSN 5310-01-179-4254, to hold the switch assembly in the dash.

Don't Cross the Spark!



There's some confusion about how to hook up the ignition coil on the M151-series truck.

The right way gives you a good, hot spark... but the wrong way gives you a weak one... and poor performance.

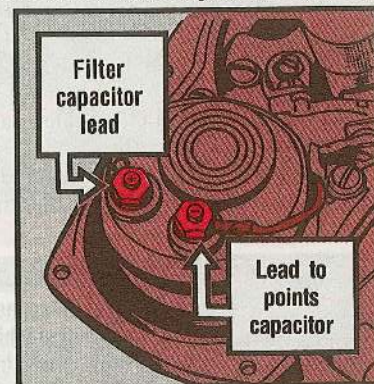
The confusion comes because there're two different capacitors used in a point-type ignition system.

One capacitor—the filter capacitor—is between the primary cable connector and the coil. Its lead goes to the “+” terminal on the coil.

The other capacitor—condensor—is mounted next to the points. The lead from that capacitor goes to the points.

Another wire goes from there to the “-” terminal on the coil.

If you reverse the hookups to the coil, you get about 20 percent less voltage to the plugs.



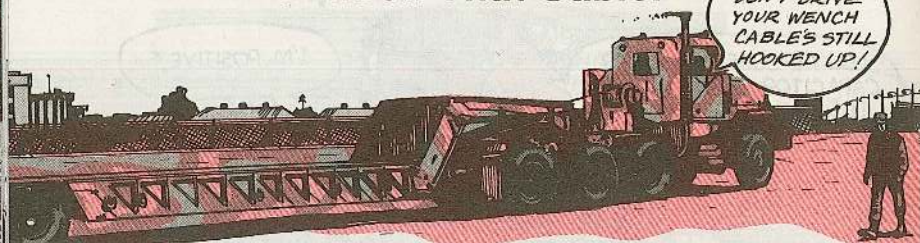
THAT MEANS LESS POWER AND FUEL EFFICIENCY FROM THE ENGINE AND A SHORTENED LIFE FOR THE PLUGS!



M151-Series Bow Straps

Don't order the complete bow assembly for your M151-series truck if all you need are the tie-down straps. Your support can make straps using webbing, NSN 8305-00-267-3009, and buckles, NSN 5340-00-057-6956. Both are listed in TM 9-2320-218-34P.

Unhook That Cable!



So, you've winched the gooseneck of the M870 semitrailer into place on the M920 tractor. The kingpin is locked in the fifth wheel and you're ready to make that short haul.

You think there's no need to disconnect the winch cable from the trailer. After all, you'll just have to reconnect it in a few minutes to unhook from the trailer.

No harm done, right?

Wrong!

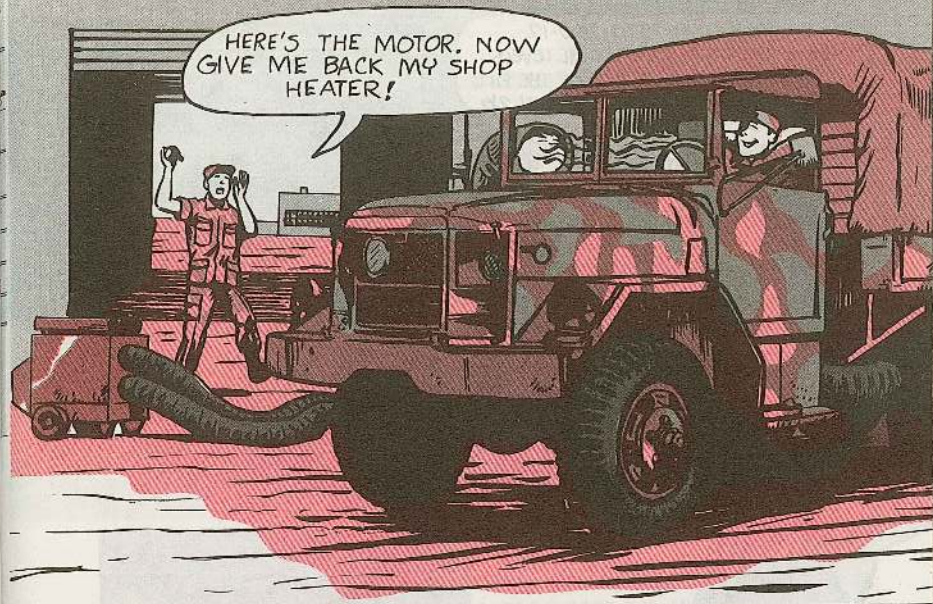
If you make a turn with the cable attached, you'll pull the cable tighter on the drum and crush the cable.

If you make a sharp turn, the extended cable will rub and wear.

If the load shifts causing the trailer to flip, that attached cable could take the M920 and you over, too.



Personnel Heater Parts



Dear Half-Mast,

We need the fan motor for the hot water personnel heater assembly used on 2½-ton trucks and other tactical vehicles. We can get the assembly, NSN 2540-00-020-8591, but can't find the motor in TM 9-2320-209-20P.

SGT O. M. S.

Dear Sergeant O. M. S.,

The fan motor is NSN 6105-00-512-9225. You can find this and other organization-level parts listed in TM 9-2320-209-34P, beginning in Figure 332. Check the -34P at your DS shop.

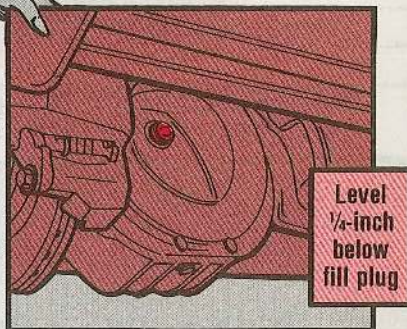
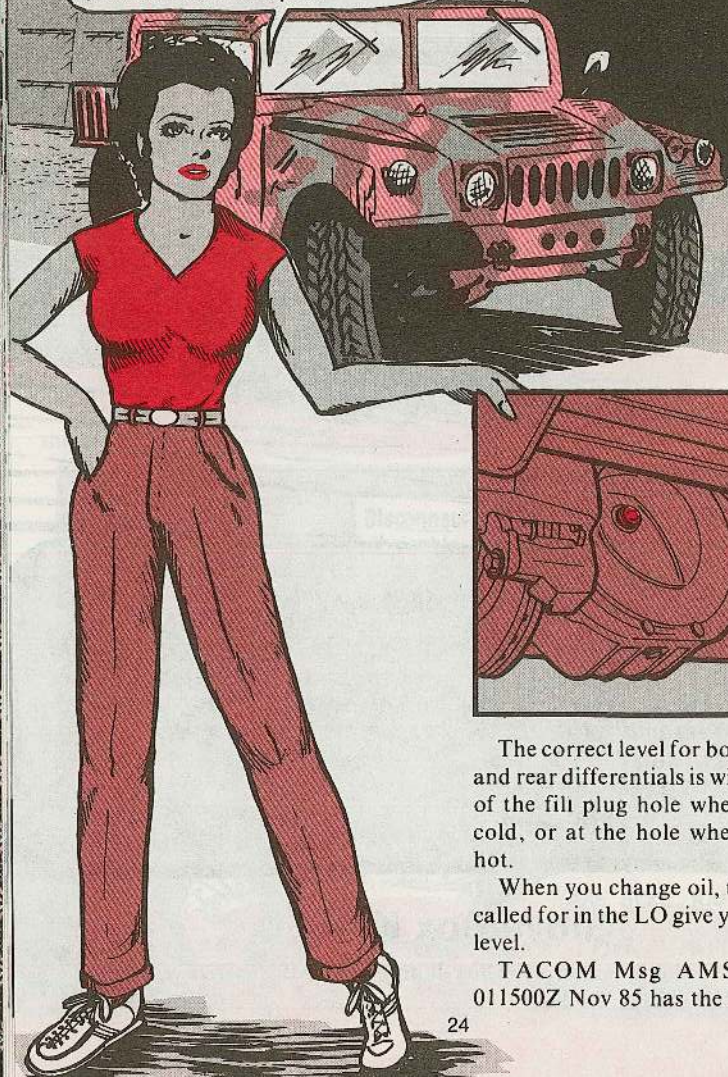
Half-Mast

Glove Box Knob

If you need a knob for the glove box door on your M915-series vehicle, get it with NSN 5340-01-160-5934.

Lube Level Change

NOTE 10 IN LO 9-2320-280-12 IS WRONG ON DIFFERENTIAL OIL LEVELS. IT'S NOT WITHIN 2 INCHES OF THE FILL PLUG HOLE FOR FRONT AND WITHIN 2½ INCHES FOR THE REAR.



Level
¼-inch
below
fill plug

The correct level for both the front and rear differentials is within ¼ inch of the fill plug hole when the oil is cold, or at the hole when the oil is hot.

When you change oil, the 2 quarts called for in the LO give you the right level.

TACOM Msg AMSTA-MTA 011500Z Nov 85 has the word.

Power Cable Update

POWER CABLES FOR SHOP AND SUPPLY VANS ARE HARD TO FIND. SOME TMS LIST 'EM, BUT MOST DON'T. THERE ARE TWO 2-CONDUCTOR CABLES THAT WILL FIT MOST VANS.



If you need a 25-ft cable, use NSN 4910-00-395-1994. It's listed in SC 4910-95-CL-A01. When updated, TM 9-2320-209-10-1 will also list the cable in AAL.

NSN 6150-00-104-4572 gets a 50-ft cable. It's called out in the BII section of TM 9-2330-227-14&P, but the NSN there is wrong.

You can get replacement connectors for both cables. NSN 5935-00-306-2032 gets the 2-pin male connector. Order the two-conductor female connector on DD Form 1348-6 using part number AL 2605 FRC and FSCM 70726. RIC is S9E.

M871/M872A1 Rubber Bumper

Rubber bumper, NSN 5340-01-112-6396, replaces Item 7 of Figure E-17 in TM 9-2330-359-14&P. The NSN is also for Item 20 of Figure E20 in TM 9-2330-358-14&P.

M870 Mud Flaps

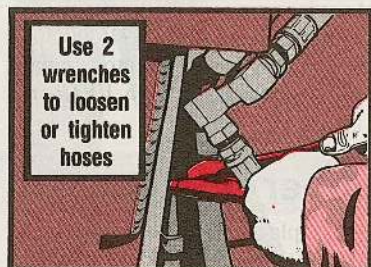
Use NSN 2540-01-187-6526 to get the mud flaps for the M870 semitrailer. They're Item 6, usable on code T01, of Fig 24 in TM 5-2330-360-14&P.

Rubber and Steel Don't Mix



Lift cylinder hydraulic hoses can rub against the lines to the bucket clam cylinders.

Then, when the steel lines wear thru the outer rubber cover and the inner steel braid is exposed, moisture can get in and rust the wires. This weakens the hoses and they can burst under load.



Loosen the connection on the upper hose for each of the forward lift cylinders, using 1 1/4-in and 1 3/16-in open end wrenches



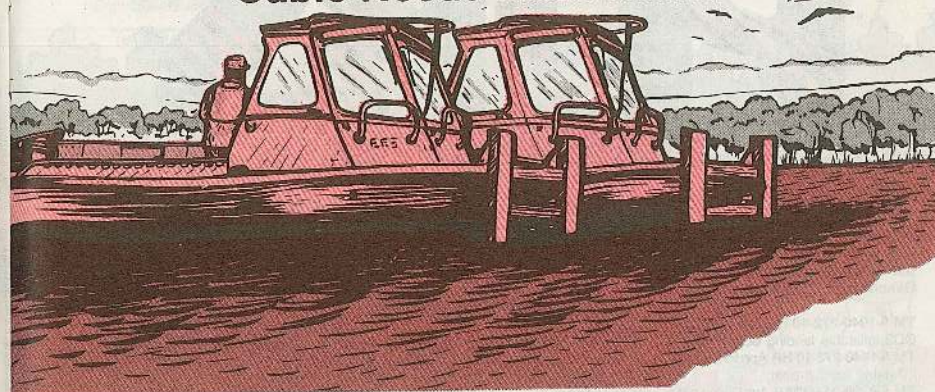
Twist the hoses so they're an inch away from the steel lines.

Have a buddy hold each hose in that position while you re-tighten the connection.

Shiny spots on steel lines need a dab of paint!

Replace any hose worn thru the outer cover.

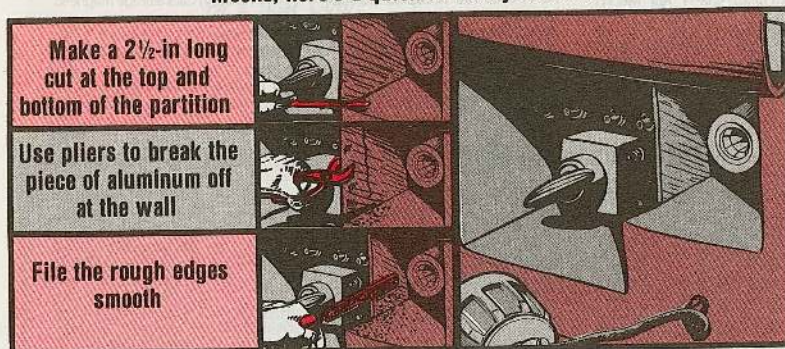
Cable Needs More Room



You can't get a NATO slave cable to make a tight connection with the receptacle on a twin-jet bridge erection boat.

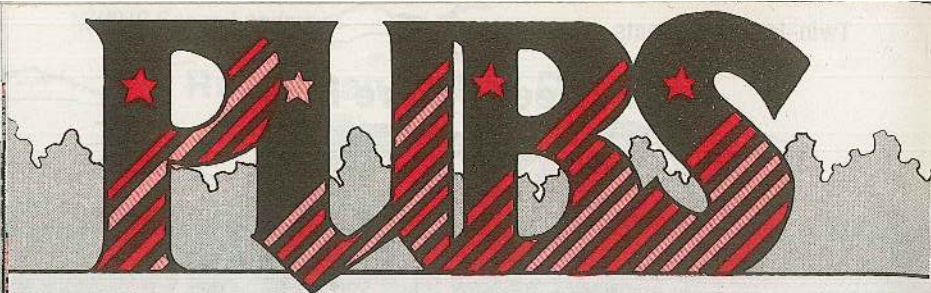
That's because the cable connector hits the partition between the receptacle and the master battery switch. Which means you could be left up a creek with no way to get a slave start.

Mechs, here's a quick and easy solution:



TPU ON-OFF Switch Cable

Use NSN 6150-01-191-9732 to get the remote ON-OFF switch cable for the electric pump assembly, NSN 4320-01-047-1927, on your electric motor driven tank and pump unit. It's shown on Page 1-5 of TM 5-4930-230-13.



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

TM 5-1940-272-10-HR Apr 7-person CO2 inflatable landing boat
 TM 5-1940-273-10-HR Apr 15-person inflatable assault boat
 TM 5-4220-211-12&P Apr Diving set
 TM 5-4310-376-24P Mar Air compressor
 TM 5-4310-379-12&P May Diving compressor
 TM 5-4610-229-10 Apr Water purification unit
 TM 9-1425-450-24P Jun TOW 2
 TM 9-2320-289-10-HR Jun CUCV
 TM 9-2350-257-10-HR Apr M60A1 tank
 TM 9-2350-257-20P-1 Apr M60A1 tank
 TM 9-2350-264-20-1-2-3 Dec 85 M1A1 tank
 TM 9-2350-264-20-1-3-1 Dec 85 M1A1 tank

TM 9-2350-267-20P Jan M992 ammo carrier
 TM 9-4935-470-24P Apr TOW shop equipment
 TM 9-4935-473-24P Mar TOW test set
 TM 9-4935-1585-24P Feb Chaparral shop equipment
 TM 9-5855-286-24P Dec 85 Test set, boresight collimator, TS-3784/TAS
 TM 9-5855-884-24 Mar Battery power conditioner
 TM 9-5855-885-24 Nov 85 Collimator, boresight, SU-93/TAS
 TM 10-3530-205-24P Jan Clothing repair shop
 TM 10-7360-205-23P Field kitchen
 TM 11-1510-209-20 Jan 77 Electronic equipment configuration for U-21A and U-21G utility aircraft
 TM 11-5450-200-23P Dec 85 AB-218/U towers
 TM 11-5805-700-12 Sep 85 MD-1024 modem
 TM 11-5820-863-23P-1 Feb 85 AN/FRC-171(V) series radio sets
 TM 11-5820-884-13 Jan R-2093/TRQ-35(V) radio receiver
 TM 11-5820-938-12 Feb AN/TRQ-37

TM 11-5865-251-24P Oct 85 CV-3835/TSQ-105(V) digital to digital converter
 TM 11-5865-252-24P Oct 85 ID-2343/TSQ-105 (V) status indicator
 TM 11-8565-253-24P Oct 85 ID-2341/TSQ-105(V) command word indicator and C-11361/TSQ-105(V) direction finder test control
 TM 11-5820-517-20P Jun AT-903/G antenna assembly
 TM 11-5820-917-13 Aug 85 R-2081 radio receiver
 TM 11-5820-918-13 Jan T-1373 radio transmitter
 TM 11-5830-340-12 Jan AN/VIC-1 intercommunication set
 TM 11-5985-366-24P-1 Jun OA-9052(V)/G mast group
 TM 11-5985-366-24P-2 Jun OA-9053(V)/G mast group
 TM 11-5895-860-20P Nov 85 RD-491/TYC-39(V) data storage magnetic disk
 TM 11-5895-1084-14-2 Feb RP-270/U automatic data processing (ADP) printer
 TM 11-5895-1124-24P Jun CV-3655/G frequency electronic converter

Maintenance & Safety-of-Use Messages

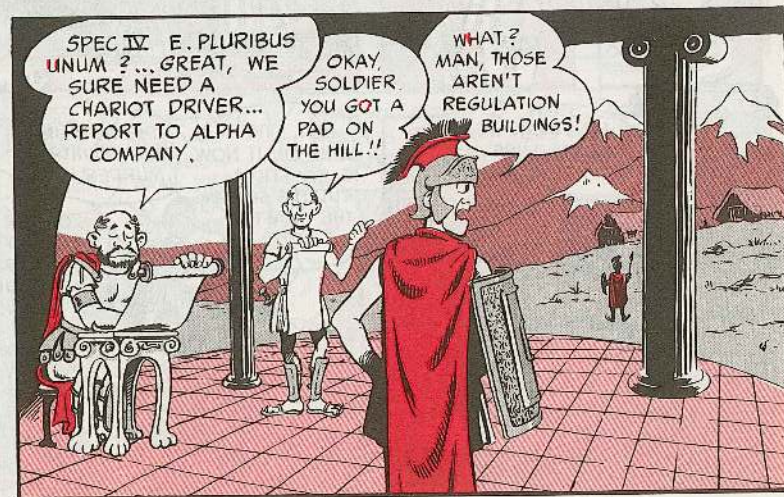
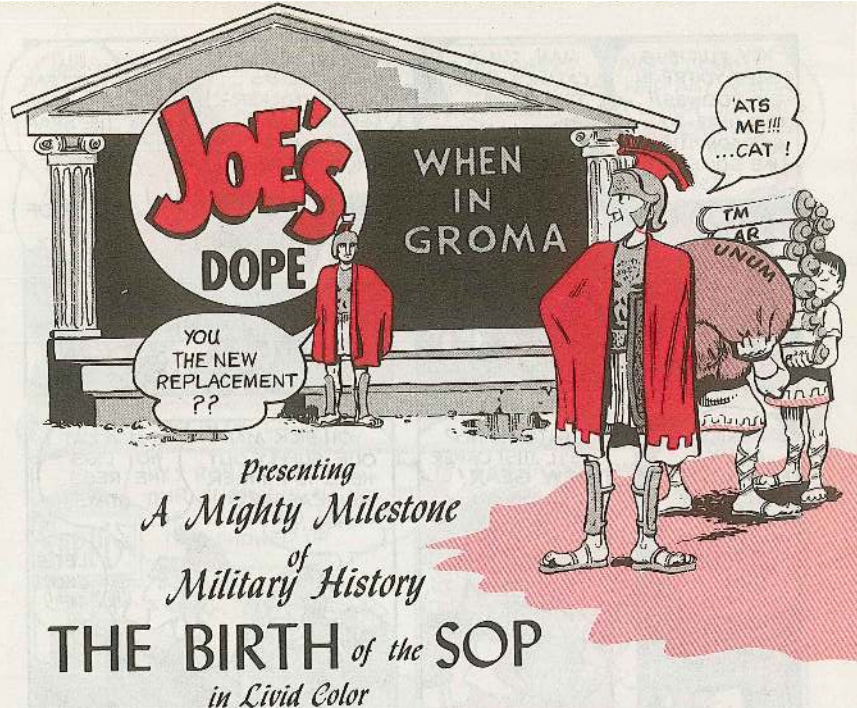
MICOM SIL 1-86—Supply information letter, AMSMIL-CMM Mar 86.
 CECOM SOU—PP-6148 and PP-2953 power supplies, AMSEL-SF-MS 181200Z Apr 86.
 TACOM SOU—CUCV, AMSTA-MTA 231400Z Apr 86.
 TACOM 86-17—M9 Ace armored combat earthover, NSN 2350-00-608-7100, AMSTA-MVC 161900Z Apr 86.
 TACOM 86-18—CUCV, Model 1009, AMSTA-MTA 111330Z Apr 86.
 TACOM 86-19—CUCV, Model 1009, follow-up, AMSTA-MTA 181245Z Apr 86.
 TACOM 86-21—M992 FAASV, AMSTA-MCC 221730Z Apr 86.
 TACOM 86-24—XM501E3 HAWK missile loader, AMSTA-MCB 302300Z Apr 86.

AMCCOM SOU—M1/IPM1 loaders guard, AMSMC-MAL 281600Z Mar 86.
 AMCCOM SOU—Bradley fighting vehicle system, M2/M3, AMSMC-MA 221400Z Apr 86.
 AMCCOM 86-8—M229 refill kit for M8 CAA, AMSMC-MAR-C 251910Z Apr 86.
 AMCCOM 86-9—M17A1/M17A2 protective masks, AMSMC-MAR-C 021655Z May 86.
 AMCCOM 86-10—Luxfer USA Ltd. SCBA cylinders, DOT-E 7235 4500 and CTC/DOT-E 7235 4500, AMSMC-MAR-C 061640Z May 86.
 AMCCOM 86-11—M8A1 chemical agent alarm, AMSMC-MAR-C 071420Z May 86.

AMCCOM 86-12—M6A2 protective hood, AMSMC-MAR-C 091825Z May 86.
 AMCCOM 86-13—Chemical-biological protective masks, AMSMC-MAR-C 091535Z May 86.
 Your Direct Support or Logistic Assistance Office (LAO) can provide you with more information.

SMART Message

SMART Msg #70—Requires all UH-Series tailboom assemblies shipped from Corpus Christi Army Depot to be painted with primer only, DALO-PLR 221433Z Apr 86.





HEY, PLURIBUS
BABY, YOU'RE IN
THE BOONIES!!
OUT HERE WE
GOT CONDITIONS
LIKE SOMETHING
ELSE!

MAN, I'M A
CAT WOT DIGS
THE REGS.

WHERE'LL
I PUT
THIS?



OKAY, LINE UP
THEM SHIELDS
AND FOOTLOCKER-
CENTER AND
TWO INCHES
FROM THE PAD!

BUT
THAT LEAK,
IT'LL RUIN
THE GEAR.
LET'S
MOVE IT
OVER A
COUPLE OF
INCHES.



SORRY!
ARMY
REGULATIONS
DON'T SAY
ANYTHING
ABOUT WHAT
TO DO ABOUT
THAT!



...IF IT'S RUINED
WE'LL JUST ORDER
NEW GEAR!



YOU SICK MAN?
OUR SUPPLY OUT
HERE IS THINNER
THAN CAESAR'S
HAIR...

I'M A CAT
WOT DIGS
THE REGS.
IT STAYS!

LET'S
CHOW
UP!



Next
day

ER... THINK WE
OUGHTA LUBE OUR
VEHICLE, PLURIBUS?

HMM...
NOT
ACCORD-
ING TO THE LO.



BUT... THE
LUBE ON IT NOW
IS SO FULLA
CRUD IT'S GRINDING
THE SHAFTS
DOWN...

THE DUST IN
THIS COUNTRY IS
MURDER!!

...ORDER
NEW SHAFTS.
THE REGS
SAY LUBE
MONTHLY
AND THAT'S
THAT!!



HEY, PLURIBUS... THINK
WE SHOULD REMOVE
THEM WHEEL SPIKES.
THEY'RE USELESS OUT
HERE ON BORDER
PATROL!

BESIDES, THEY GET
KNOCKED OFF IN THE
NARROW PASSES...
SUPPLY IS: RUN OTTA THEM
- AND DEPOT SAYS THE
OUTFIT IN THE VALLEY
NEEDS 'EM WORSE'N
US...

NO... I CAN'T
FIND ANY REGULA-
TION THAT SAYS
WE CAN REMOVE
'EM... ORDER A
NEW SET!



HOLY ROMAN EMPIRE!...
OUR SUPPLY IS ALL HONKED
UP SINCE THIS AR-HAPPY
TYPE SHOWED UP...



I GOTTA DO SOMETHING
OR WE'LL BE OUTTA
REPLACEMENT PARTS
BY NEXT WEEK!

HOW
ABOUT
ASKIN'
THAT
CUTE
ORACLE?



...SO,
THAT'S
OUR
PROBLEM!

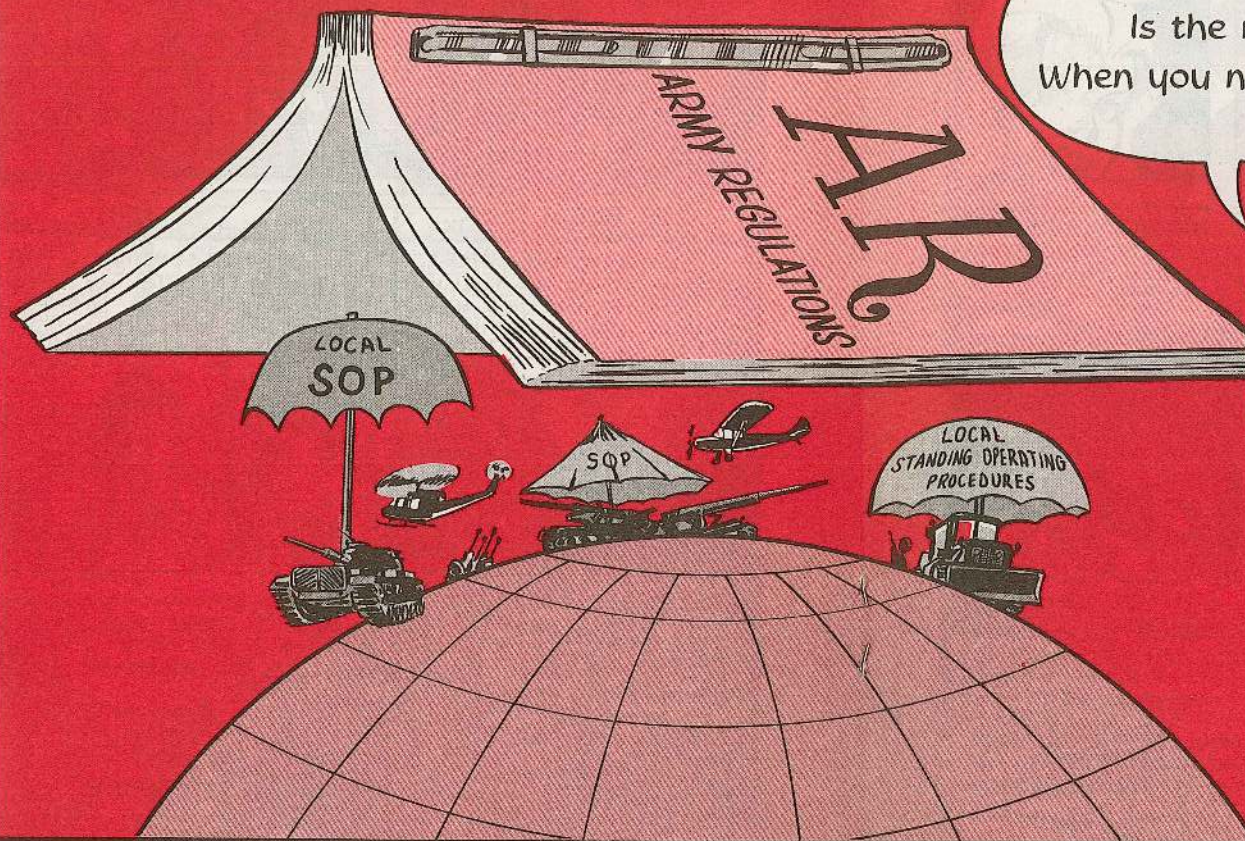
YEAH, THERE
JUST AIN'T
ENOUGH
ARMY REGS
TO COVER
EVERYTHING.

WHAT YOU BOYS
NEED IS A LOCAL
SOP...

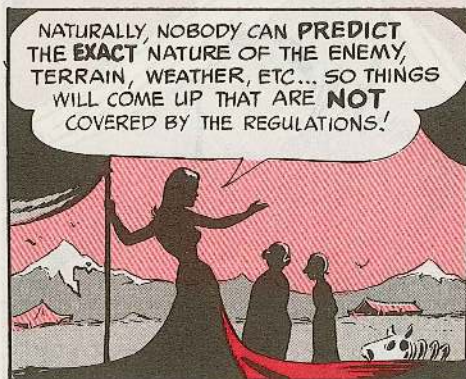
HERE... POST
THIS PIN-UP
AND I'LL EXPLAIN.

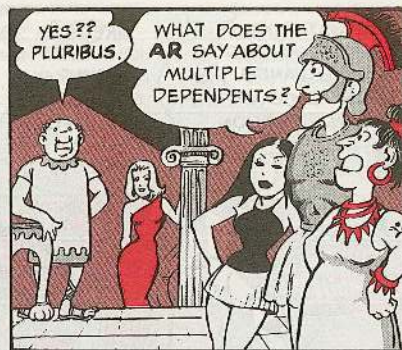
Joe's Dope Sheet

AR's must be broad in their scope —
They don't try to give all the dope.
Your command SOP
Is the rulebook to see
When you need more info to cope.



WE HAVE THE WORLD'S BEST EQUIPMENT ... *Take care of it*



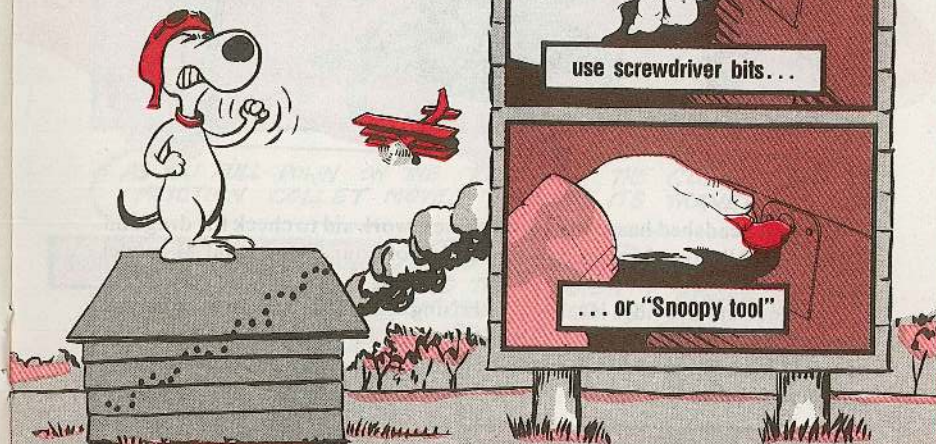


Loose Dzuz?

Tightening a dzuz with an ordinary screwdriver really does a number on the fastener's concave slot.

Avoid the work of replacing mangled dzuz fasteners by using the right tool—either screwdriver bit, NSN 5120-00-321-4508, or cowl fastener key, NSN 5120-00-604-5007.

The bit is part of your general mechanic's aircraft tool kit. The cowl fastener key—also known as a "Snoopy Tool"—is authorized by Appendix A of CTA 50-970.



AVIATION MESSAGES

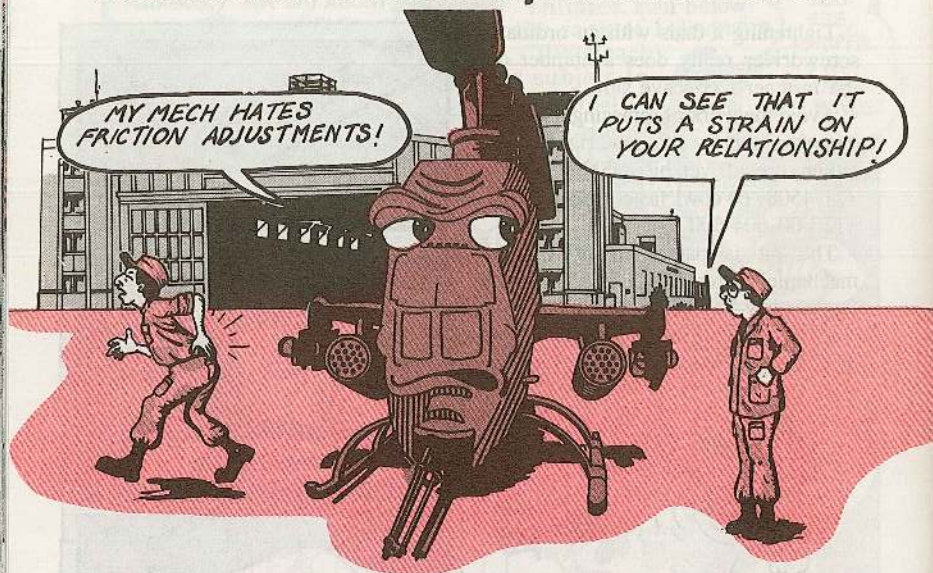
CAT 1 EIR Phone
AUTOVON 693-2086
(24 hours)

If your unit has not received a message you have an interest in, check with your higher headquarters.
CH-54-86-02, SOF, Technical, One-time inspection of CH-54B link assembly, upper, P/N 85104-11036 series, 032330Z Mar 86.
CH-54B-86-03, SOF, Technical, Inspection of primary servo pressure

switches on all CH-54B, 271400Z Mar 86.
UH-1-86-03 and AH-1-86-01, SOF, Maintenance Mandatory, One-time inspection of T53-L-13B series engines, 092300Z Mar 86.
UH-1-86-04 and AH-1-86-02, SOF, Maintenance Mandatory, Revision to message concerning one-time inspection of T53-L-13B series en-

gines, 150030Z Mar 86.
UH-60A-86-05, SOF, Emergency, Immediate grounding of UH-60/ EH-60 series aircraft, 122200Z Mar 86.
MIM-UH-60A-86-ME-03, Inlet particle separator blower for T-700 engines, 181800Z Mar 86.

Tool Makes Friction Adjustments Easier



The bird headshed has come up with a new work aid to check the drag and adjust the collective friction collet assembly of your Cobras and M-model Hueys.

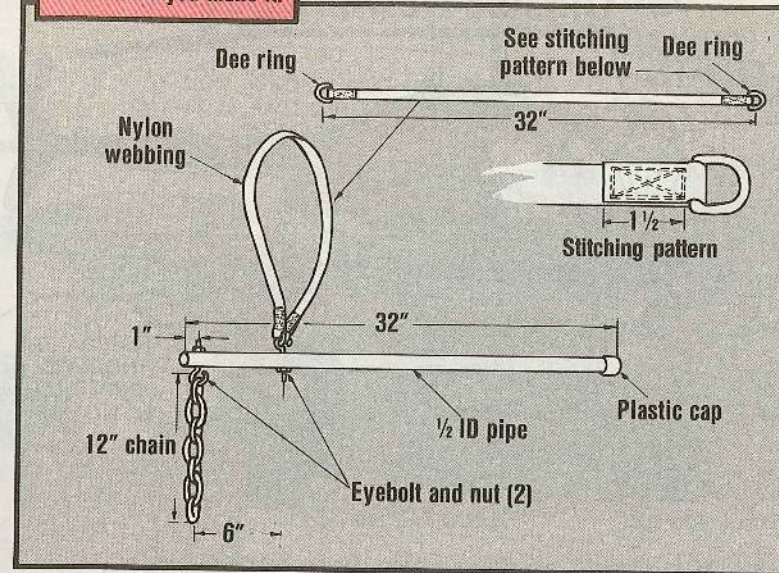
The work aid provides leverage for raising the collective levers while you measure the force needed to raise them. Without leverage, putting the required load of 125 to 135 lb-in on the force gage can test your strength and strain your back.

Here's what you need to make the tool:

ITEM	NSN	QUANTITY
Nylon webbing	8305-01-062-7050	1 yd
D-ring	5365-00-663-3009	2 ea
Eyebolt with/nut	5306-00-255-5989	2 ea
Welded chain	4010-01-133-1217*	12 in
1/2-in ID pipe	4710-01-025-1265*	32 in
Cap	5340-01-187-8957	1 ea
Thread	8310-00-264-6146*	As required

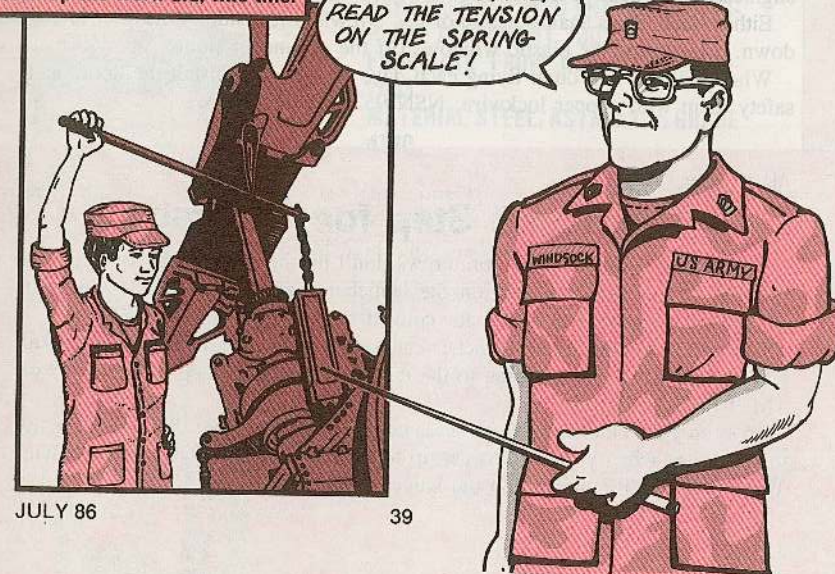
*Not on AMDF. Order on DD Form 1348-6.

Here's how you make it:



AS YOU PULL DOWN ON THE TOOL AND THE COLLECTIVE FRICTION COLLET MOVES THROUGH ITS TRAVEL...

Hook up the work aid, like this:



Outside Down Is Out!

YEE-OOWW!
WHO LAID THAT
DOOR DOWN LIKE
THAT?



BETCHA THE
WINDOW'S ALL
SCRATCHED UP
NOW!

It's OK to take off your Kiowa's doors for hot-weather flying.

But it's not OK to lay 'em down with the outside of the door against the ground or hanger floor. Windows will get so scratched you can hardly see through them.

Doors and windows are slightly curved. When they're placed face down, the slightest nudge start 'em spinning.

Either stand doors against a wall or lay 'em with the inside of the door facing down. That keeps the plastic windows off the ground or floor.

When the bird's through flying each day, be sure to reinstall the doors and safety them with copper lockwire, NSN 9525-01-047-6455.

AH-1 Series

One Small Step for Accuracy

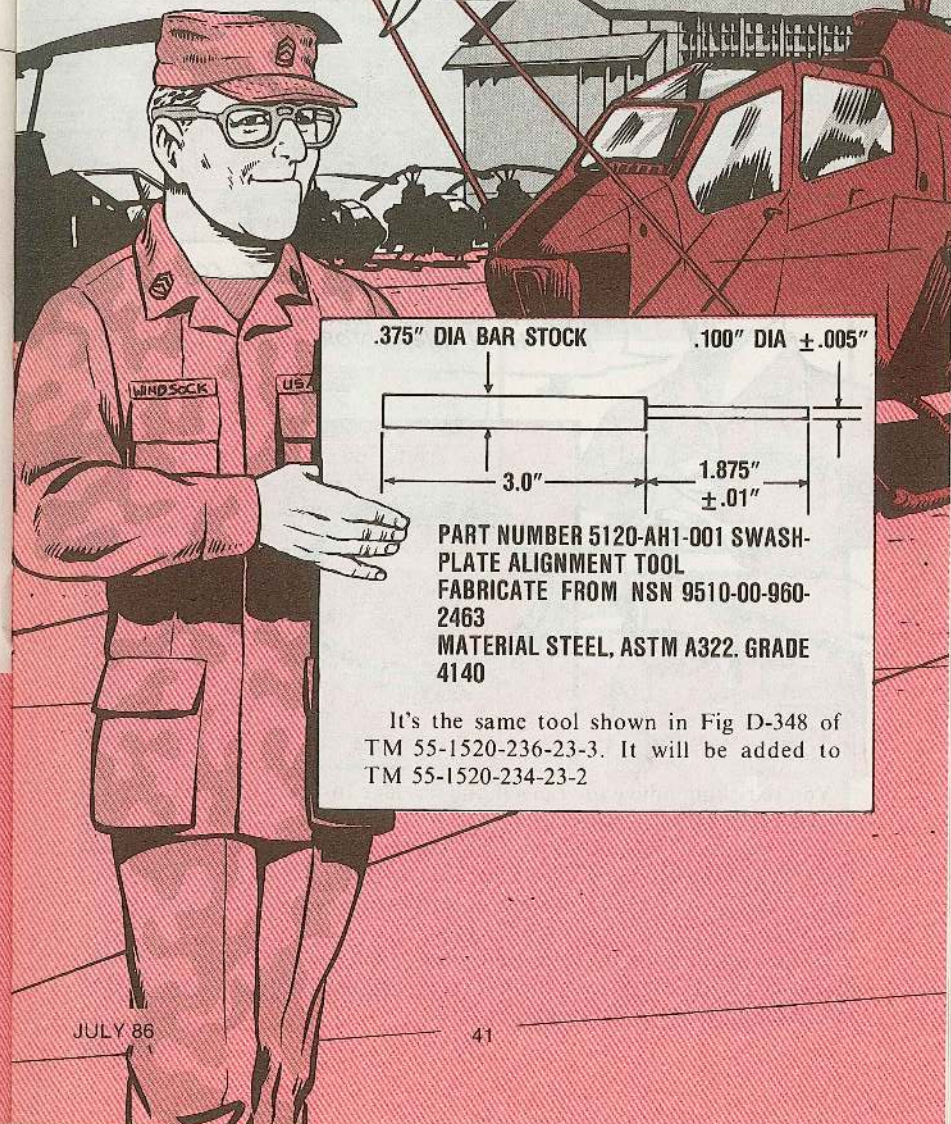
No wonder some of you Cobra crews don't hit the target with your 2.75-in rockets. Every time you step on the launchers climbing up and down your aircraft, you sacrifice accuracy for convenience.

Too much weight on the launcher can knock it out of kilter. Then it has to be boresighted again according to the technical manuals listed in Table 3-8 of TM 9-1055-460-13&P.

So keep your clodhoppers off the launchers. Step up from the skids directly to the wings when you need to get up top. Likewise, when you climb down. That "NO STEP" painted on the launcher says it all.

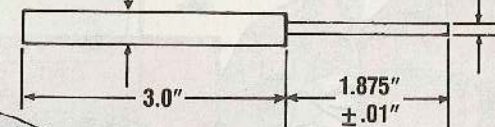
Swashplate Alignment Tool

IF YOU NEED AN ALIGNMENT TOOL
TO PURGE AND LUBRICATE YOUR MODERNIZED
COBRA'S SWASHPLATE, HERE'S HOW TO
MAKE IT:



.375" DIA BAR STOCK

.100" DIA $\pm .005$ "



**PART NUMBER 5120-AH1-001 SWASH-
PLATE ALIGNMENT TOOL**
**FABRICATE FROM NSN 9510-00-960-
2463**
**MATERIAL STEEL, ASTM A322, GRADE
4140**

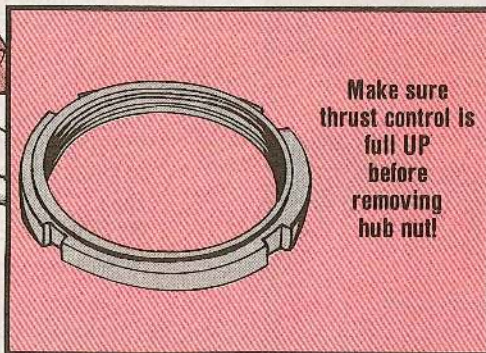
It's the same tool shown in Fig D-348 of
TM 55-1520-236-23-3. It will be added to
TM 55-1520-234-23-2

Full UP on Thrust Control

WELL, TIME TO REMOVE THE RETAINING NUT.

HOLD ONE, LET'S MAKE SURE THE THRUST CONTROL IS FULL UP!

YOUR CHINOOK'S THRUST CONTROL MUST BE RAISED TO FULL UP IF YOU HAVE TO REMOVE THE HUB RETAINING NUT WITH THE ROTOR BLADES INSTALLED!



Make sure thrust control is full UP before removing hub nut!

You're risking injury to yourself and damage to your equipment if you ignore the warnings spelled out in para 5-11 of TM 55-1520-227-23-2.

With the thrust control full DOWN, the blades put a lot of force on the head. When the retaining nut's removed, the rotor head can pop up real quick like. The hub, shaft and controls can be damaged and you could suffer a serious head injury if you're in the way.

Be sure you tie down the rotor blades, too, when you remove the head with blades installed. That'll keep them from swinging uncontrolled and maybe injuring somebody or damaging the bird.

Stop Stabilator Injuries

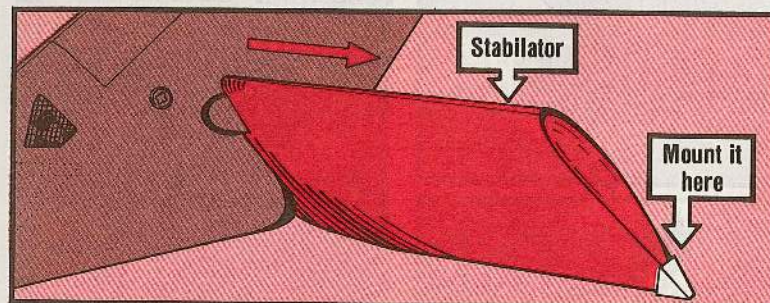
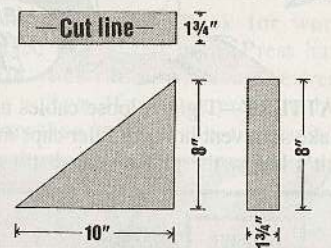
CAREFUL BACK THERE!

O-OUCH!!



Dear Editor,

To eliminate the hazard caused by sharp edges of the Black Hawk stabilator, when a bird is inside the maintenance hangar, we cap the edges with Styrofoam, like so:
SSG Roy L. Hanusch
Fort Bragg, NC



(Editor's Note: If you can't find Styrofoam 1 1/4-in thick, try gluing two pieces of 1-in thick Styrofoam together before trimming it. NSN 8135-00-892-3920 gets a 35 x 35 x 1-inch sheet of polystyrene plastic, and NSN 8040-00-159-4884 gets a quart of general purpose adhesive. Be sure to remove the protective caps when your bird leaves the hangar or they could blow off on the flight line, and cause FOD.)

PM keeps it PURRRIN'

THIS GPU DOESN'T HAVE ENOUGH JUICE TO CHECK OUT THE AVIONICS.

I WONDER WHAT'S WRONG WITH IT?

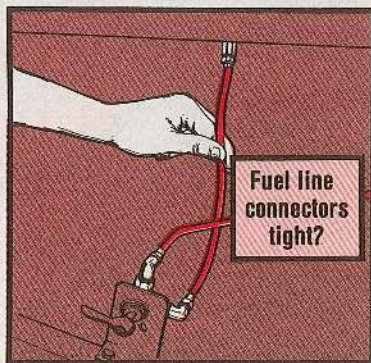
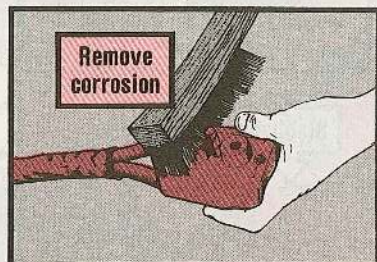
IF YOU DEPEND ON THAT GPU TO DELIVER THE POWER FOR CRANKING A BIRD AND CHECKING OUT ITS AVIONICS, YOU CAN'T IGNORE BASIC OPERATOR MAINTENANCE.

HERE'RE SOME THINGS YOU NEED TO DO AT LEAST ONCE A WEEK:

BATTERY—Tighten loose cables and tie-down bolts. Remove any corrosion. Make sure vent holes in filler caps are open. Eyeball the fluid level in each cell. If it's below the plates, add distilled water until it's $\frac{3}{8}$ -inch above the plates.

NSN 6810-00-682-6867 gets a gallon of distilled water.

FUEL TANK—Check for leaks. Fill with MOGAS, not AVGAS or JP-4.



FUEL LINES—Look for leaks. Tighten any loose connections.

WHEN'S THE LAST TIME YOU CHECKED THE BATTERY OR CABLES?

FUEL STRAINER—Remove and clean the screen and bowl.

AIR CLEANER—Check the oil in the cleaner bowl. If it's dirty, clean the bowl and replace the oil with new crankcase oil. Inspect and clean the lower screen and center tube.



CRANKCASE—Add oil as needed to keep the level at or near the FULL mark on the dipstick.

TIRES—Make sure tire pressure does not exceed the maximum PSI listed on the sidewalls.



CONTROL BOX ASSEMBLY—Inspect for worn or frayed wiring and loose mounts or connections.



DRIVE BELTS—Look for worn, frayed or cracked belts. Press hard with your thumb midway between the pulleys. If you can press the belt more than half-an-inch, tighten it.



ELECTRICAL CONNECTIONS—Tighten any loose connections on the back of the control box.

CYLINDER FINS—Clean with a cloth or compressed air, but use caution when using air pressure.



Give your GPU's a regular dose of PM and they'll give you the juice you need **when you need it.**

Beware of the Hand Crank

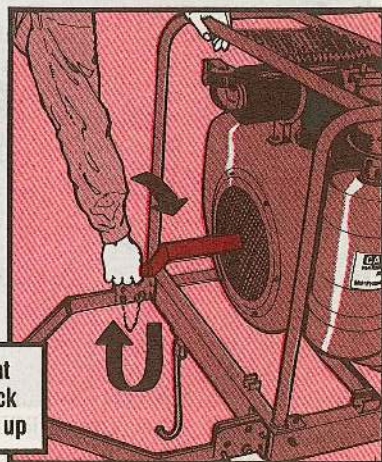


BE VERY CAREFUL, BIRD MECHS, WHEN YOU HAVE TO CRANK A GROUND POWER UNIT BY HAND. THE CRANK CAN CLOBBER YOU!



Here're three things you can do to keep from getting clobbered by a runaway crank handle:

- Make sure the end of the crankshaft and the handle socket are not all gummed up with dirt and crud that could keep the handle from slipping off easy.
- Put a little dab of lube oil on the end of the crankshaft to help the handle slip on and off easy.
- Always put the handle on near 6 o'clock and pull up to start the GPU. That gets your head and shoulders out of the way in case the engine starts and you can't get the handle off quickly. If you



Start at 6 o'clock and pull up

Keep the Flap Back, Jack



GLAD TO SEE YOU GUYS. WE'VE HAD NO COMMUNICATION SINCE OUR RADIO WENT ON THE BLINK!

IT'S NOT YOUR RADIO'S FAULT! YOUR CAMOUFLAGE NET IS A BIT TOO EFFECTIVE!

Using a radar scattering camouflage screen to hide your AN/GRC-106 radio set?

Keep at least 8 inches between any part of the screen and your radio's whip antenna. Metal in the screen can knock out the radio's amplifier.

Use plastic straps, NSN 1080-01-022-8633, to tie back the flap



YOU DON'T HAVE TO BE A SURGEON TO DO THIS OPERATION!

So cut a flap in the screen. Tie the flap back with plastic straps, NSN 1080-01-022-8633, in your screen's repair kit.

If the flap's not tied back, wind can blow it against the whip while the radio is transmitting. That can do thousands of dollars damage to an AM-3349 amplifier.

Also, keep the screen's aluminum support poles 4 feet from the antenna.

To get the best distance from your whip, keep the entire length of the radiating surface (down to the sheath) above the screen. Otherwise, the screen metal will stop or distort your signal.

RING DOWN

THE CARD KILLER

A LOT OF TYPE II CARDS ARE BITING THE DUST, KILLED BY A SHORT BURST OF 20 HZ RINGDOWN SIGNAL!

I'VE LOST ANOTHER ONE!

Phones you can use with Type II cards are:

DTMF Mode

DP Mode

TA-838 in 2W/CB

TA-236

TA-938

TA-312/TA-955 in CB

BEFORE YOU WIRE YOUR SB-3614, MAKE A MENTAL CHECK OF THESE DON'TS:

This deadly charge can come from several sources, all of which you—the operator—can control.

A field phone's ring generator kicks out up to 90 volts every time.

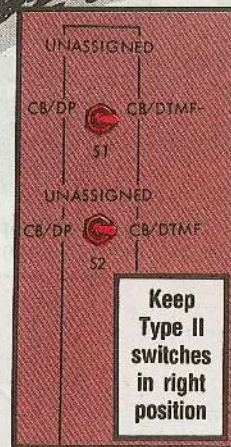
If you use a TA-1, TA-43 or TA-312 telephone, hook it to a Type I card.

You can use the TA-312 with Type II cards set in the DTMF mode only if the phone has a TA-955 tone-signalling adapter. Remember to keep the phone's crank covered at all times.

TA-312 Telephone with TA-955



Keep crank covered



DON'T wire Type II cards together for loopback tests.

DON'T use the Type II cards to wire two switchboards together.

DON'T connect Type I cards to Type II cards.

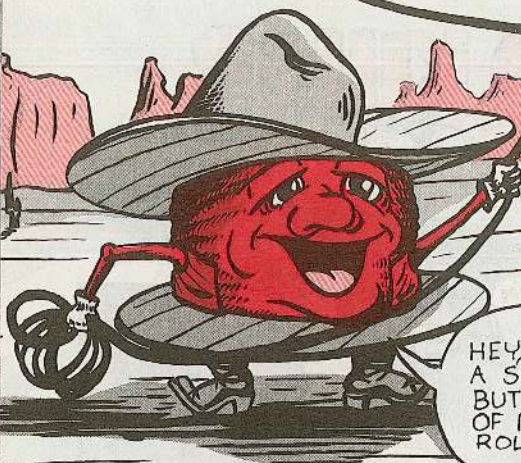
DON'T connect commercial dial central offices or long local loops to the Type II card.

ANY OF THESE DON'TS WILL SEND A 20-Hz, 90-VOLT RING THROUGH THE TYPE II CARD, PUTTING IT—AND YOU—OUT OF BUSINESS!



REEL

ROUNDUP



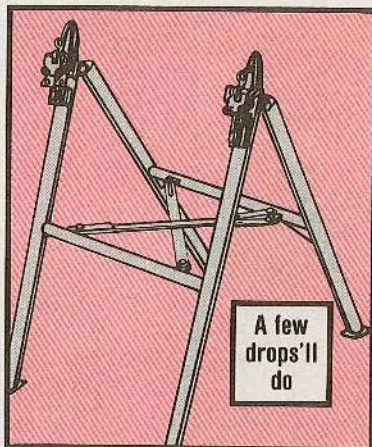
HEY, PODNER! YOUR RL-31 IS A SIMPLE LOOKIN' CRITTER, BUT IT NEEDS YOUR BRAND OF MAINTENANCE TO KEEP ROLLING DOWN THE DUSTY TRAIL!

First, lasso a 6½-pound can of grease with NSN 9150-00-190-0905.

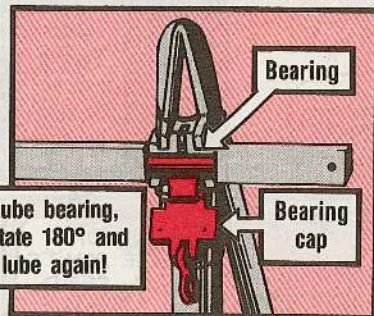
Your maintenance saddlebag should also hold a can of oil, NSN 9150-00-231-6689.

Apply a few drops to the frame, bearing latch and bearing cap hinges.

Cross brace pin catches and the crank handle catch also need a couple of drops.



A few drops'll do



Lube bearing, rotate 180° and lube again!

Bearing

Bearing cap

Open the bearing caps and lubricate the axle shaft bearings.



Keep it lubed

If your reel has a divided axle, keep it lubricated.

Wipe off the extra grease. It can get on the brake and make your reel harder to stop than a stampede.

Wipe off the excess oil and check the tightness of all bolts and screws.

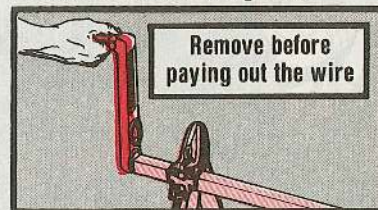
Check TM 11-362, Reel Units (RL-31, B, C, D, E), for the oil and grease intervals.

Your trusty horse in this reel story is the crank. It takes horse sense to keep it turning.

Make sure you have a good fit to the axle. Too much play makes your work harder. Too much wear will deadline the reel.

MAKE SURE YOUR REEL WEARS A WHITE HAT BY KEEPING IT CLEAN. A LINT-FREE CLOTH AND CLEANING COMPOUND, NSN 6850-00-597-9765, WILL DO THE JOB!

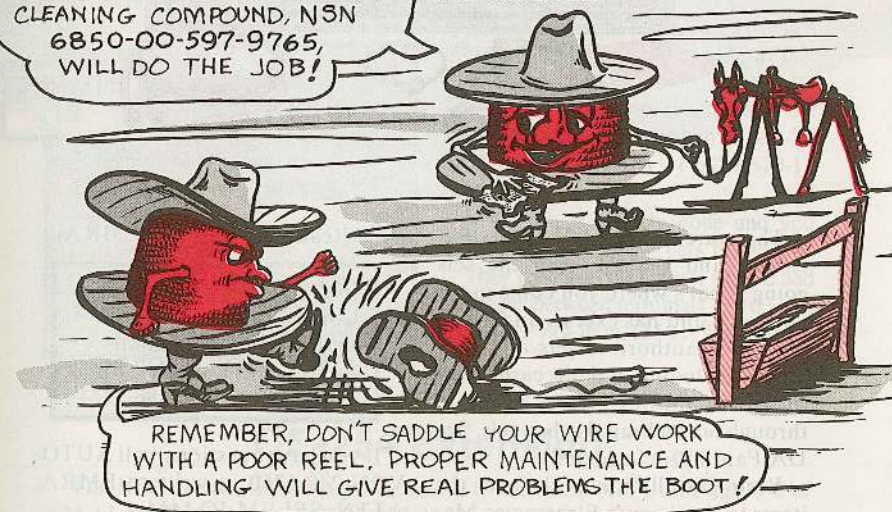
Always remove the crank before paying out the wire. If you don't, it becomes a freewheeling club.



Remove before paying out the wire

When reeling in, take it slow and easy.

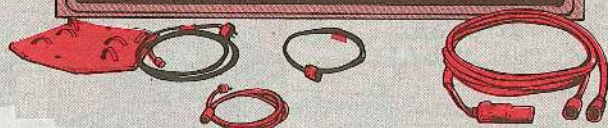
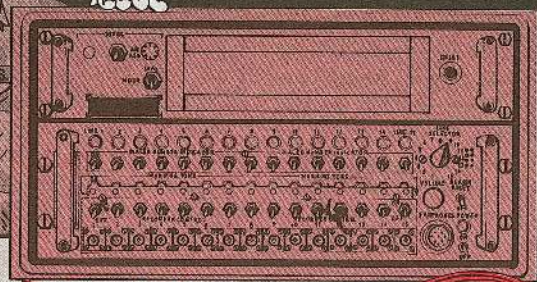
Keep your head up and away from the crank. That prevents lost teeth and headaches.



REMEMBER, DON'T SADDLE YOUR WIRE WORK WITH A POOR REEL. PROPER MAINTENANCE AND HANDLING WILL GIVE REAL PROBLEMS THE BOOT!

Wanted: AN/GTA-19's

UNCLE SAM NEEDS YOUR EXCESS OR UNSERVICEABLE TELEPHONE MONITORING SET PARTS!



There are no new AN/GTA-19's. Repair and rebuild keep the sets going. That's where you come in.

If your unit has excess, unserviceable or unauthorized sets or repair parts (including circuit cards and relay assemblies), turn them in through normal supply channels. See DA Pam 710-4 for details.

Your installation will send the items to the Army's Electronics Ma-

teriel Readiness Activity (EMRA):

Commander
USA EMRA
Vint Hill Farms Station
ATTN: W80S05 M/F Stock
Warrenton, VA 22186-5141

If you have questions, call AUTO-VON 249-6760 or write to EMRA, ATTN: SELEM-IC-MM.

AN/ARC-131 Radio Set . . .

Is Secure Too Secure?



IF YOU GET NO COMMO WHEN YOUR C-7088 RADIO SET CONTROL IS IN TONE SQUELCH - OR IF TONE IS COVERED BY METAL TAB - LET YOUR MAINTENANCE SHOP KNOW



Of course, you first want to make sure your ground station is in NEW

SQUELCH when you try to talk to them.

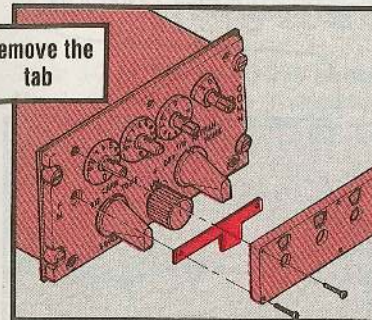
Until the C-7088's SQUELCH switch is modified, you won't be able to talk in TONE.

Your AVUM shop can remove the tab. They follow the word on Page 3-29 of the radio pub, TM 11-5820-670-12 (May 85).

If the tab is already gone and you still can't talk, AVIM gets the job.

They go inside the control set and add a jumper between terminals E9103 and E9104 per FO-16 in TM 11-5820-670-30.

Remove the tab



OE-254 Extension

The NSN for the insulating extension, Illustration No. 1 on Page B-2 of TM 11-5985-357-13, is 5985-01-072-4342, not -4362 as listed.

Seal with ANTI-

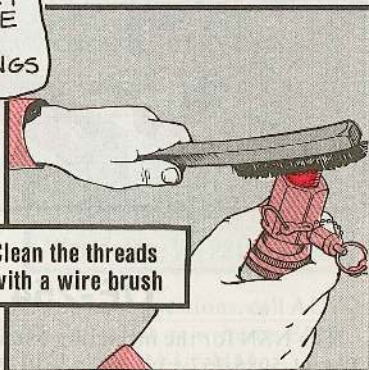


AN AOAP SAMPLING VALVE CAN DO MORE HARM THAN GOOD — IF IT'S LEAKING!

TO STOP LEAKS, USE THE SEALING COMPOUND LISTED IN TM 9-2300-422-23 & P!

SFC LINCOLN M. WINN
21ST SUPCOM, APO
NEW YORK, HAS A SMART
IDEA TO USE ANTI-SEIZE
TAPE TO WRAP THE
THREADS OF VALVE FITTINGS
LIKE SO:

- Clean the threads with a wire brush



SEIZE Tape



- Start two threads from the end of the fitting and wrap in the direction of the threads



- Use no more than 2 turns of tape. Overlap the first turn halfway with the second

USE 1/4-IN WIDE ANTI-SEIZE TAPE, NSN 8030-00-889-3534, FOR PIPES FROM 1/8 TO 3/8 INCH. USE 1/2-IN TAPE, NSN 8030-00-889-3535, FOR PIPES 1/2 INCH AND UP!



Refueling Info Wrong

Table 3-2 of TM 5-6115-271-14 has some misleading refueling info. Here's the point to keep in mind:

Table 3-2. OPERATOR/CREW PREVENTIVE MAINTENANCE CHECKS AND SERVICES					
INTERVAL			B-BEFORE OPERATION D-DURING OPERATION		A-AFTER OPERATION
ITEM NO.	B	D	A	PROCEDURES ITEM TO BE CHECKED FOR AND HAVE REPAIRED OR ADJUSTED AS NECESSARY	EQUIPMENT IS NOT READY/ AVAILABLE IF:
				Never service or fuel generator set when in operation.	Go With This...
				After operation, assure that tank is full to prevent moisture condensation.	
				Fill tank as required during operation. After operation, assure that tank is full to prevent moisture condensation.	Not This!

New End Item Code

So what's the new three-digit code on the Army Master Data File (AMDF)?

The End Item Code (EIC) was added to the Jul 86 AMDF to identify major end items. It appears between the nomenclature and the line item number.

ARMY MASTER DATA FILE										EFFECTIVE DATE		NOMENCLATURE		LIN		P/PAIR	
ROW	COL	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
NSN	NSN	NSN	NSN	NSN	NSN	NSN	NSN	NSN	NSN	NSN	NSN	NSN	NSN	NSN	NSN	NSN	NSN
2213-01-107-7135	202	A	E	E	25,000-00	01	01	01	01	01	01	01	01	01	01	01	01

EIC will be the standard Army code to identify end items. Changes to AR 710-2, DA Pams 710-2-1 and -2 and user manuals for all the computer systems will enter an EIC on each DA Form 2765-1 request for issue. The code replaces the Weapon/Equipment System Designator Code (W/ESDC) in card columns 55-56 of the DA Form 2765-1. Instead the EIC will go in card columns 54-56.

YOU'LL BE SEEING THE EIC AROUND A LOT. KEEP YOUR EYES OPEN FOR MORE INFO.



Get the Whole 9 Yards

There's one place you can find a list of all the pubs that apply to a piece of equipment.

It's the "LIN TO PUBLICATION CROSS REFERENCE INDEX" in Section 12 of DA Pam 310-1, Consolidated Index of Army Pubs and Forms.

You'll need to know the Line Item Number (LIN) to find the pubs. You can get that from your unit's Property Book. Then look up the LIN on the fiche for TM's, TB's, LO's, SC's and MWO's on your gear. Also listed are the publications that specifically cover components of your end-item. This "PUBS ON COMPONENTS" listing identifies the pub, its date, changes in force, and the NSN and nomenclature of the component.

CROSS-REFERENCE INDEX BY SB700-20 LINE ITEM NUMBER										PAGE 1728	
LIN	NSN	GENERIC NOMENCLATURE		NSN NOMENCLATURE							
Q45779 RADIO SET AN/VRC-12											
5820-00-223-7412 RADIO SET AN/VRC-12											
BASIC PUBS											
TM	11-5820-401-10-1			DATE	CHS IN FORCE	DA LC					
				FEB 81		1 MAY 83					
TM	11-5820-401-10-1-HR			JAN 79							
TM	11-5820-401-10-2			NOV 82							
TM	11-5820-401-10-2-HR			JAN 79							
TM	11-5820-401-20-1			JAN 84							
TM	11-5820-401-20-2			JAN 84							
TM	11-5820-401-20-3			JAN 83							
PUBS ON COMPONENTS											
MWO	11-5885-202-10-1			DATE	CHS IN FORCE	DA LC	COMPONENT NSN	NOMENCLATURE			
				DEC 82			5885-00-385-9024	ANTENNA AS-1729/VRC			
TM	11-5820-401-10-4			OCT 83			5820-00-223-0223	REC-TRANS RT-246/VRC			

Get Pubs for Tool Gear



Do you need tech pubs for commercial-machine tools and shop equipment in these Federal Supply Classes?

- 3411 — Boring machines
- 3413 — Drilling machines
- 3415 — Grinding machines
- 3416 — Lathes
- 3417 — Milling machines
- 3419 — Miscellaneous machine tools
- 3426 — Metal finishing equipment
- 3431 — Electric arc welding equipment
- 3470 — Machine shop sets and kits
- 4910 — Motor vehicle maintenance
- 4940 — Miscellaneous maintenance shop equipment

Check DA Pam 310-1 for TM 9-series. The pub you want may be listed. Look in the title for your equipment's model number. If it's listed, order the TM through normal distribution channels.

If it's not listed, write a letter. . . include the equipment nomenclature, manufacturer's name, model number and NSN and LIN, if possible.

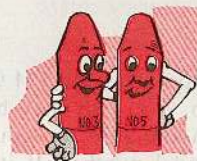


Commander
US Army Armament, Munitions
and Chemical Command
ATTN: AMSMC-MAS
Rock Island, IL 61299-6000

NBC Marker NSN's



Replacement parts are now available for your NBC marking set, NSN 9905-12-124-5955.



IN ADDITION TO THE TWO RED CRAYONS YOU GOT PREVIOUSLY WITH NSN 7510-12-120-9355, YOU CAN NOW ORDER:

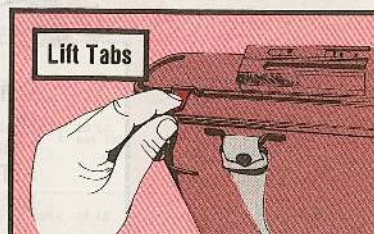
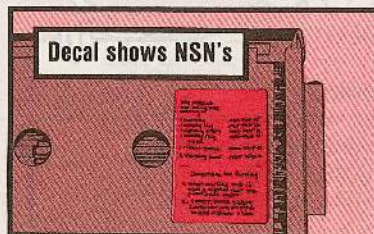
Part	NSN
Ribbon, Yellow. (13 per NSN)	8315-12-132-2577
Rods (Stakes) (48 per NSN)	9905-12-133-0113
Flags: Bio	9905-12-132-2578
Atom	9905-12-132-2579
Gas	9905-12-132-2580
(20 per NSN)	



NSN's are shown on a decal under the ribbon compartment of your set. Parts under those NSN's were not stocked originally.

For access to the decal NSN's (and for permanent reference), lift the tabs on the sides of your set. Remove the sides and lift out the ribbon roller.

The decal's on the chassis... below the roller.



All Screwed Up?

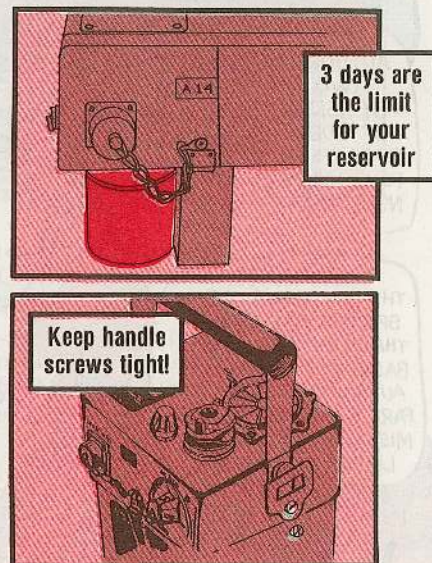


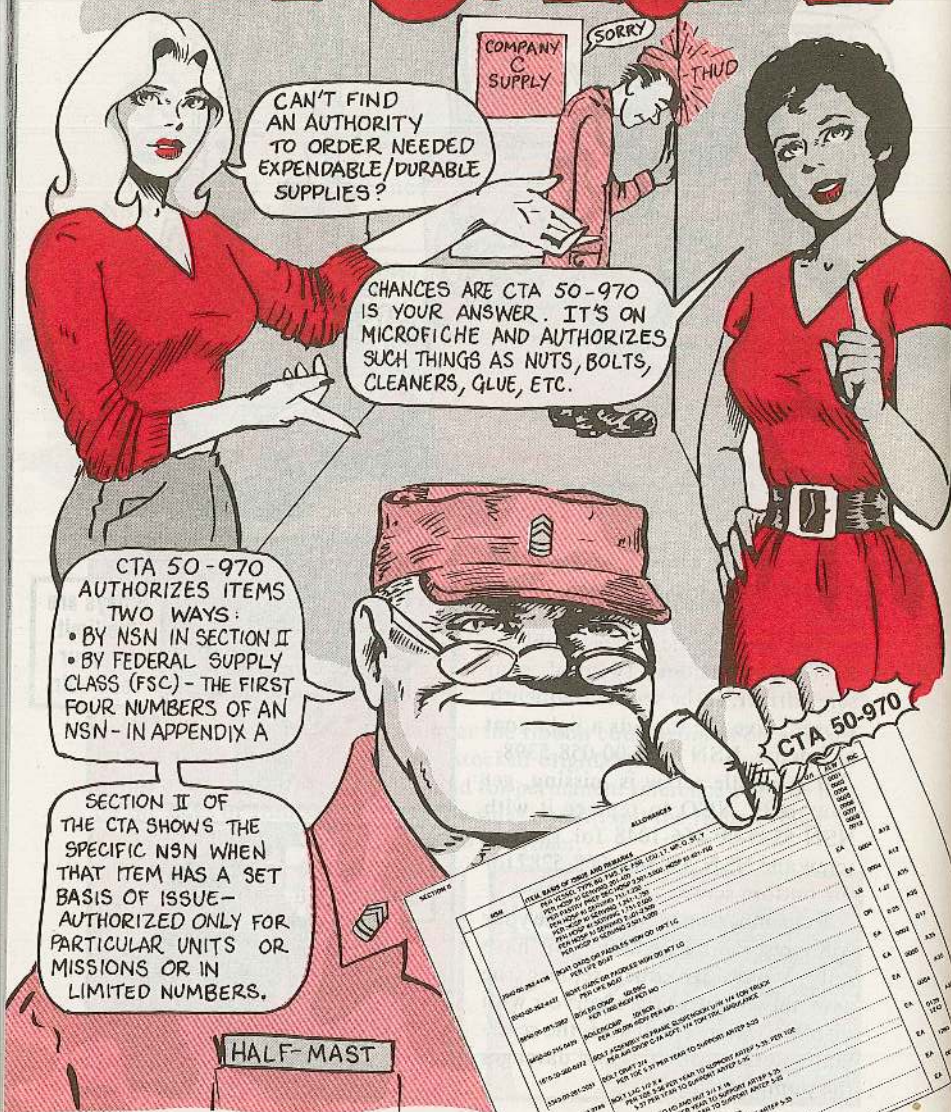
The handle screws on your M8 alarm have a bad habit of coming loose.

You can handle screw problems with an occasional twist of your screwdriver. If the screws frequently loosen, give the threads a light coat of Loctite, NSN 8030-00-058-5398.

If a handle screw is missing, get your NBC NCO to replace it with NSN 5305-00-456-1048 for the top screw and NSN 5305-00-068-5287 for the bottom screw.

Remember, once you activate your M8's reservoir assembly, you have only 3 days to either replace the assembly or purge the reservoir with distilled water. Otherwise, the reservoir solution solidifies and damages the pump motor.





CAN'T FIND
AN AUTHORITY
TO ORDER NEEDED
EXPENDABLE/DURABLE
SUPPLIES?

CHANCES ARE CTA 50-970
IS YOUR ANSWER. IT'S ON
MICROFICHE AND AUTHORIZES
SUCH THINGS AS NUTS, BOLTS,
CLEANERS, GLUE, ETC.

CTA 50-970
AUTHORIZES ITEMS
TWO WAYS:
• BY NSN IN SECTION II
• BY FEDERAL SUPPLY
CLASS (FSC) - THE FIRST
FOUR NUMBERS OF AN
NSN - IN APPENDIX A

SECTION II OF THE CTA SHOWS THE SPECIFIC NSN WHEN THAT ITEM HAS A SET BASIS OF ISSUE—AUTHORIZED ONLY FOR PARTICULAR UNITS OR MISSIONS OR IN LIMITED NUMBERS.

HALF-MAST

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SUPPLY SOURCE

OTHER EXPENDABLE OR DURABLE ITEMS
ARE AUTHORIZED BY APPENDIX A OF
THE CTA BASED ON THE FSC AND
A FOOTNOTE. THESE ITEMS ARE
AUTHORIZED AS REQUIRED.

LOOK UP THE FSC FOR THE ITEM YOU NEED. MATCH THE NUMBER BESIDE THE FSC WITH A FOOTNOTE!

CTA 50-970

APPENDIX A

APPENDIX A

FEDERAL SUPPLY CLASSES WITH AUTHORIZATION REMARKS

THIS APPENDIX PROVIDES GUIDANCE PERTAINING TO AUTHORIZATION OF EXPENDABLE/DURABLE ITEMS IN INSTANCES WHERE IT IS IMPRACTICAL TO COMPILE MEANINGFUL BASES OF ISSUE. WHEN THE APPENDIX IS USED AS AUTHORITY TO REQUISITION EXPENDABLE COMPONENTS, THAT WHEN ASSEMBLED ARE A NONEXPENDABLE END ITEM, PROCEDURES PROVIDED IN AR 710-2 WILL BE USED TO ESTABLISH THE REQUIRED PROPERTY BOOK ACCOUNTABILITY.

FSC NOTE	FSC NOTE	FSC NOTE	FSC NOTE	FSC NOTE	FSC NOTE	FSC NOTE	FSC NOTE	FSC NOTE	FSC NOTE	FSC NOTE
1005	1 265	1 630	2 130	2 590	2 590	2 3412	2 3412	2 3412	2 3412	2 3412
1010	2 120	1 630	2 193	2 520	2 520	2 4113	2 4113	2 4113	2 4113	2 4113
1015	2 270	1 630	2 193	2 590	2 590	2 2440	2 2440	2 2447	2 2452	2 3605
1020	1 265	2 160	1 1845	2 7010	2 7010	2 2445	2 3415	2 3415	2 3415	2 3610
1025	1 265	1 630	1 1845	2 7010	2 7010	2 2445	2 3415	2 3415	2 3415	2 3610
1030	1 290	1 1680	2 1955	2 6300	2 6300	2 2900	2 3417	2 3417	2 3450	2 3620
1035	2 120	1 710	2 1980	2 2640	2 2640	2 0995	2 3418	2 3418	2 3455	2 3625
1040	2 120	2 070	2 2020	2 2640	2 2640	2 0910	2 3418	2 3418	2 3455	2 3630
1045	2 1425	2 1730	2 2030	2 2640	2 2640	2 3020	2 3418	2 3418	2 3455	2 3635
1050	2 1427	2 1740	2 2030	2 2815	2 3030	2 3030	2 3424	2 3424	2 3465	2 3665
1055	2 1427	2 1740	2 2040	2 1700	2 2020	2 3030	2 3426	2 3426	2 3465	2 3670
1060	2 1427	2 1740	2 2040	2 2020	2 2020	2 3110	2 3426	2 3426	2 3465	2 3675
1065	2 1440	2 1740	2 2040	2 2020	2 2020	2 3110	2 3426	2 3426	2 3465	2 3680
1070	2 1440	2 1740	2 2040	2 2020	2 2020	2 3110	2 3426	2 3426	2 3465	2 3685
1075	2 1440	2 1740	2 2040	2 2020	2 2020	2 3110	2 3426	2 3426	2 3465	2 3690
1080	1 1450	2 1830	2 2040	2 2020	2 2020	2 3120	2 3432	2 3432	2 3510	2 3695
1085	1 1450	2 1830	2 2040	2 2020	2 2020	2 3120	2 3432	2 3432	2 3510	2 3700
1090	2 1510	2 1840	2 2040	2 2020	2 2020	2 3130	2 3433	2 3433	2 3510	2 3705

Do you see a "1" next to the FSC? Go on to the Section II. If you find your NSN in Section II, look at the Basis of Issue and Remarks for that item.

Sometimes you're limited to a certain number or the type of unit that can order the item. If your outfit or needs don't jibe with the Basis of Issue, you'll need command OK to put it on order.

Usually there's no problem order-
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ing the NSN's in Section II. Just put CTA 50-970 on your request under Pub Data and forward it.

But, there's a possibility that you might not find your NSN in Section II. That means a little more book work.

Go to the Army Master Data File (AMDF). (For FSC's with footnote 2, go straight to the AMDF. You won't find those NSN's in Section II of the CTA.)

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[illegible]

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I GUESS IT'S
NEVER TOO LATE

THESE
ARE UNDER
AR 840-10.

130 Graders...

Unsafe Windshields

Your 130G grader may hold a shattering experience in store for you if the front windshield is made of tempered glass rather than laminated safety glass. Tempered glass can shatter.

Check the windshield **now!** You'll find the word **tempered** or **laminated** in one of the four corners of the glass.

If you find **tempered** glass, write or call the US Army Tank-Automotive Command. They'll provide a replacement windshield free of charge. They need the vehicle serial number, your complete address, phone number and a point of contact. Write to:

**US Army Tank-Automotive Command
ATTN: AMSTA-MVB**

Warren, MI 48397-5000

or call:

AUTOVON 786-7349

FTS 973-7349

COMM (313) 574-7349

New LAO

Add this new Logistic Assistance Office number to your list in PS 398:

5th US Army, Ft Sam Houston, TX

AUTOVON 471-3627/6891

COMM (512) 221-3627/6891

Would You Stake Your Life ^{right now} on

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JULY 86

Light Fix Revisited

Forget about drilling holes in the cab lights on the Caterpillar 130G grader like it says on Page 27 of PS 402.

The headshed decided it doesn't want holes drilled after all. Instead, replace the rubber rings, PN 9M5870, that seal the lens to the body—then the grommet, PN 2M5280, at the electrical connection. Make a drip loop in the wire to the light, too.

If you've drilled a hole, seal it up with a dab of silicone sealer, 8040-00-880-7332.

Taillight Lens PN

Get the red taillight lens for your Caterpillar 130G-series grader with FSCM 11083, PN 7D8714. It's not listed in TM 5-3805-261-14&P-4. Order the lens on a DD Form 1348-6 from S9C.

CUCV/HMMWV AOAP

CUCV's and HMMWV's are not under the Army Oil Analysis Program. That's spelled out in USAMRSA Msg AMXMD-MO 311215Z Mar 86. Go with the time intervals in LO 9-2320-280-12 and LO 9-2320-289-12.

MPL's Change

It's time to change some stock numbers on the Mandatory Parts Lists (MPL's) provided by the Materiel Readiness Support Activity for CUCV's, M2's and M3's.

Change the V-belt NSN on CUCV models—M1008, M1008A1, M1009 and M1010—to NSN 3030-01-148-2792.

Change the M1010's alternator/generator to NSN 6115-01-131-4932.

The M2's and M3's track shoes change to NSN 2530-01-102-4728.

MRSA Msg AMXMD-SE 061645Z May 86 lists the CUCV's MPL changes, and the Bradley's MPL change is in MRSA Msg AMXMD-SE 071430Z May 86.

Vulcan Lube Lowdown

Hold one before using CLP to lube or clean the cannon on your M167A1/M163A1 Vulcan. AMCCOM Msg AMSMC-MAG 261630Z Feb 86 says CLP is no longer authorized for the Vulcan. Use Rifle Bore Cleaner (RBC) for cleaning. NSN 6850-00-224-6663 brings one gallon. Use LAW for lubing. NSN 9150-00-292-9689 brings 1 quart.

the Condition of Your Equipment?

JULY 86

Handle Damage

Go with what your M60-series tank TM says about ammo tube and rack handle damage. It takes more than 3 damaged tubes or handles to make your tank NMC—not 3 or more as in PS 397.

New M256 Trainer Kit

A new M256 chemical detector training kit is now available. NBC NCO's can order a box of 36 training sampler-detectors with NSN 6665-01-112-1644. The M256 trainer will be in the next revision of CTA 50-970.

PN Change

The part number listed in TM 5-3895-349-14&P for the K300 Bomag Compactor battery has been changed to FSCM 09605, PN 77053211. Order on a DD Form 1348-6.

M809-Series Truck Tire Pressure

Gremlins got to the story on Page 43 of PS 403 giving tire pressures for M813A1 5-ton trucks. The correct tire pressures—80-PSI front, and 50-PSI rear—are listed in Table 1-4 of TM 9-2320-260-10.

TORQUE CONVERSIONS!

USING THE WRONG
TORQUE CAN BE A
WRENCHING EXPERIENCE!

Lb-ft to Newton-meter (multiply by 1.356)

10	13.56
15	20.34
20	27.12
25	33.90
30	40.68
35	47.46
40	54.24
45	61.02
50	67.80
60	81.36
70	94.92
80	108.48
90	122.04
100	135.60
150	203.40
200	271.20
250	339.00
300	406.80
350	474.60
400	542.40
450	610.20
500	678.00
550	745.80
600	813.60

Newton-meter to Lb-ft (multiply by 0.738)

10	7.38
15	11.07
20	14.76
25	18.45
30	22.14
35	25.83
40	29.52
45	33.21
50	36.90
60	44.28
70	51.66
80	59.04
90	66.42
100	73.80
150	110.70
200	147.60
250	184.50
300	221.40
350	258.30
400	295.20
450	332.10
500	369.00
550	405.90
600	442.80