

Issue 493

PS

December
1993

THE PREVENTIVE MAINTENANCE MONTHLY

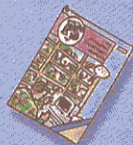
TB 43-PS-493

THERE'S NO PLACE LIKE HOME
FOR THE HOLIDAYS
GET THERE SAFELY



MAKE SAFE DRIVING
PART OF YOUR
HOLIDAY SPIRIT

Have You
Read
This Month's
P.S.
Magazine?



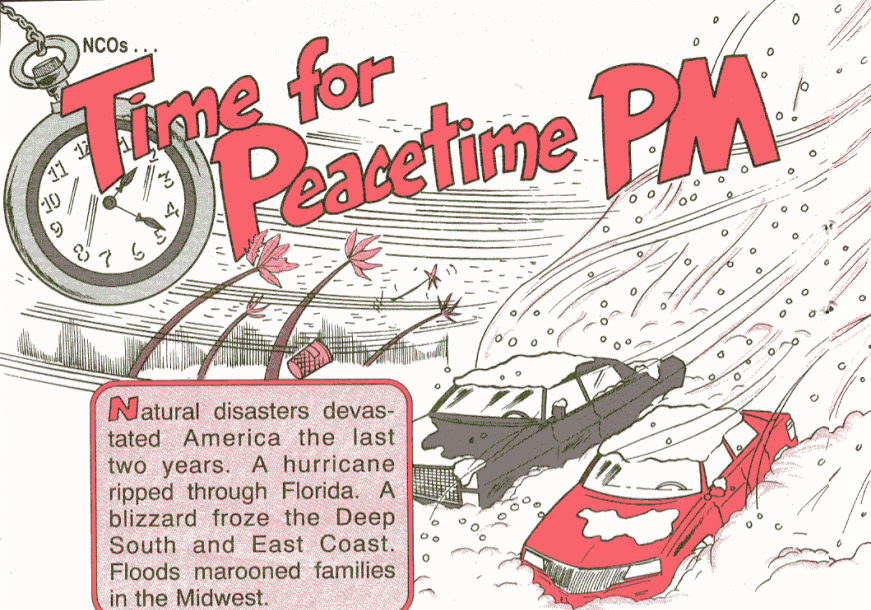
I'VE
GOT TO
FIND THAT
AR...TI...CLE
ZZZZzzz

WAKE UP!
THE ANNUAL INDEX
IS RIGHT HERE ON
PAGE 27!

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NCOs...

Time for Peacetime PM



Natural disasters devastated America the last two years. A hurricane ripped through Florida. A blizzard froze the Deep South and East Coast. Floods marooned families in the Midwest.

A common sight just before these disasters was packed supermarkets. People in panic sought to prepare enough to get them through the storm. And often they were disappointed by long lines and empty shelves.

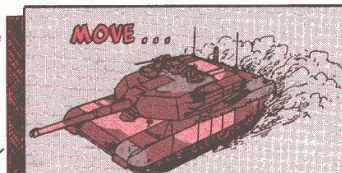
In the Army, our disasters are conflicts and wars. In peacetime, we forget history and live our lives as if another war won't happen.

But it does. And just like our civilian counterparts, we run to the military supermarket and hope we find well-maintained equipment, ready for a fight. We are always disappointed.



There is no time more critical for preventive maintenance than peacetime. Equipment must be ready at a moment's notice.

Is your equipment ready to...



WILL YOU BE ABLE TO SPIT IN THE EYE OF THE "STORM" AND TELL IT TO BRING ON ITS WORST? OR WILL YOU BE AT THE "SUPERMARKET" IN A PANIC?



TB 43-PS-493. 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.

ISSUE 493 DECEMBER 1993

GROUND MOBILITY

Peacetime PM	1	2 1/2, 5-Ton Trucks	55
Radiator Testing Kit	26	Tire Chains	55
HMMWV	52-53	6K RT Forklift	60
Spill-Ring Wheels	54	M9 ACE	69

LOGISTICS MANAGEMENT

ULLS	2-5	DAS-3 Computers	9
AN/MYQ-4 Computer	5	Floppy Disks	9
Priority Codes	6-7	SF 368, 364, 361	10-11
SB 38-101	8		

FIREPOWER

M113 FOV	42-43	TOW2 Missile	48
M2/M3 Bradley	44	LCSS	49
Coter Pins	44	M30 Mortar	50-51
M109A4/5 Howitzer	45	Recovery Operations	51
M1 Tank	46, 47	FOX NBC Vehicle	56-59

AIR MOBILITY

AH-64A	35-40	Airlift Rigging	41
B1 Maintenance Stand	41		

COMMUNICATIONS

SINCGARS	12-13	Antennas	18
RT-524	14-16	MSE	19
ANGRC-193	17		

TROOP SUPPORT

M22 Binoculars	19	Safety Signs	23
M8A1 Alarm	20-21	Welding Torches	24-25
M17 Decon	22	Antiseize Tape	26

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

MSG Half-Mast
The Preventive Maintenance Monthly
Bldg. 3325
Redstone Arsenal, AL 35898-7466

By Order of the Secretary of the Army:

GORDON R. SULLIVAN
General, United States Army Chief of Staff

Official:

Milton H. Hamilton
MILTON H. HAMILTON

Administrative Assistant to the Secretary of the Army

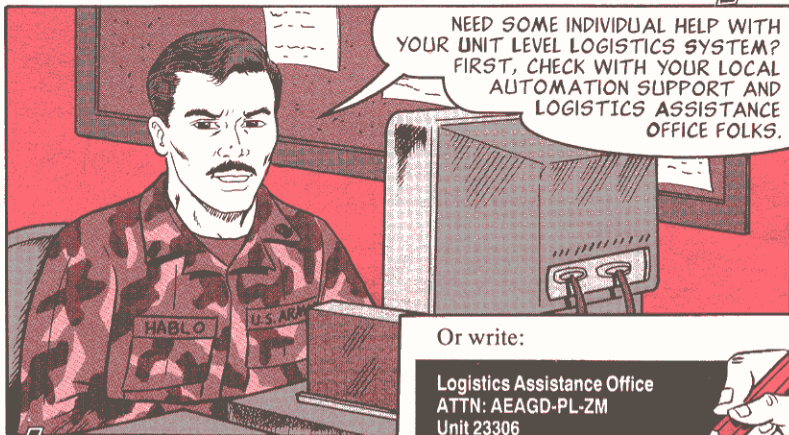
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ULLS...

Get Individual Help




If you still need assistance with a special problem, call the ULLS ground user support people at:



DSN 687-1051
commercial number (804) 734-1051
DDN Address:
BROYLESJ%LEE@LEAVN-EMH1.ARMY.MIL


If your problem is with ULLS S-4, call user support at:



DSN 687-0961
commercial (804) 734-0961
DDN Address:
BROYLESJ%LEE@LEAVN-EMH1.ARMY.MIL
FAX DSN 687-2974
commercial (804) 734-2974

Units from US Army Europe (USAREUR) can call the LAO on DSN 494-6050/7223, commercial 06332-86-6050/7223, or contact them on DDN: AEAGDMML16@ZWEIBRUCKEN-EMH2.ARMY.MIL

Or write:




Logistics Assistance Office
ATTN: AEAGD-PL-ZM
Unit 23306
APO AE 09052

Eighth US Army Command units can contact the IC-LOG (Information Center, Logistics) at Taegu on DSN 768-8208 or DDN:

EANC-GM-ICLOG@TAEGU-EMH1.ARMY.MIL

Or write:



HQs
19th SUPCOM
ATTN: EANC-GM-ICLOG
Unit 15015
APO AP 96218-0171

Army National Guard units operating ULLS/SAMS-1/2 can call

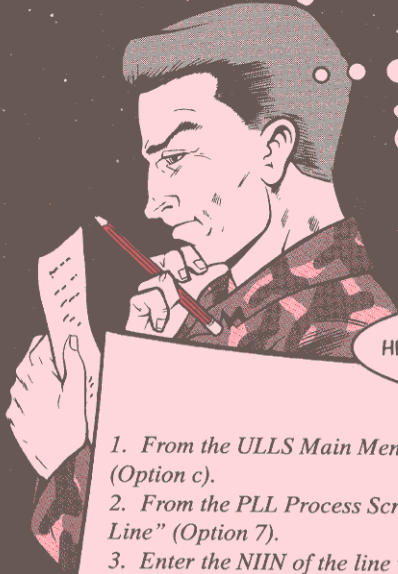
DSN 327-7450, commercial (703) 607-7450 or
DDN: WATKINSW@ARNGRC-EMH2.ARMY.MIL
RICHARDL@ARNGRC-EMH2.ARMY.MIL

Or write:



Army National Guard Readiness Center
ATTN: NGB-ARL
111 S. George Mason Drive
Arlington, VA 22204-1382

Manually Recorded Demands



DEAR PABLO,
HOW DO YOU RECORD
REPAIR PARTS THAT
WERE FOUND ON POST
OR WERE TRANSFERRED
FROM ANOTHER UNIT
ON THE ULLS?
SGT. W.F.

GOOD QUESTION, SERGEANT!
HERE'S HOW TO MANUALLY RECORD
THE DEMAND IN ULLS.

1. From the ULLS Main Menu, choose "PLL Management" (Option c).
2. From the PLL Process Screen, choose "Update a PLL Line" (Option 7).
3. Enter the NIIN of the line you want to update.
4. The next screen will let you update the PLL line. If you want to input a demand, move the cursor to the number of demands field and increase the number of demands and total quantity demanded.

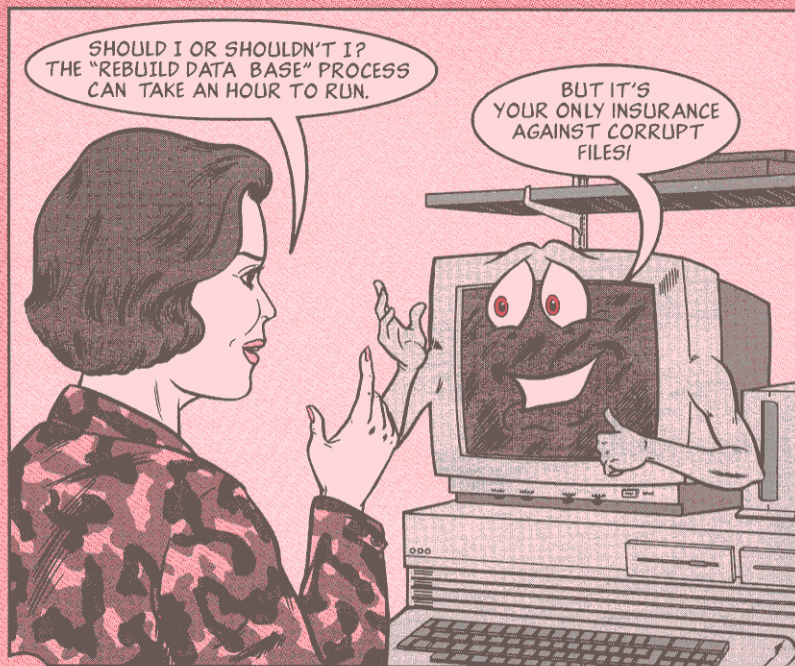
To make sure you actually loaded your demands against a PLL line, do this:

1. Get the ULLS Main Menu and choose "PLL Management" (Option c).
2. Select Option 7 (unit PLL record).
3. From the PLL Process screen, choose "PLL Inquiry" (Option 2).
4. Input the NIIN.
5. When asked if demand data will be required, type "Y". The demands against the NIIN you requested will appear on the screen.

Pablo



REBUILD DATA BASE



Some ULLS operators are confused as to when they should do a "Rebuild Data Base" process. This process rebuilds the data base index files.

Most operators don't run a rebuild because the process takes about an hour. However, that hour is insurance that your files aren't corrupt and will save time and frustration over lost files later on.

Some commanders require operators to do a rebuild once a week. Check your SOP for any unit requirement, but be sure to rebuild your data base when you:

- Run a restore option.
- Have data base problems. An example of this is when you get a version conflict error. When this error shows up on your screen, do a **ControlA** to get back to your DOS prompt. Reboot the system and log on again. Then do a rebuild.
- Have a power failure. When this happens, the corruption may only affect the files or related files that you were working in. First, do a rebuild.

Then, if you try the action again and it doesn't work, call your support folks.

ULLS...

Don't Ship Laptop

The ULLS End User's Manual tells you to use the "SHIP" command when you quit for the day. However, this only goes for the Zenith desktop computers, *not* for the Zenith SS-286 laptop computers.



Some hard drives lock up with repeated use of the "SHIP" command. The read-write heads of this laptop are automatically parked when you power down the system.

AN/MYQ-4 Computer...

Don't Gamble with Five-Card Chassis

There are two models of the AN/MYQ-4 automated data processing system — the plain model and the A model.

The five-card chassis used in these systems are not interchangeable. Even though they were assigned different part numbers, they were stocked under the same NSN. So guess who's got only a 50-50 chance of getting the right five-card chassis?

Not any more! Another NSN has been assigned.

The correct PNs and NSNs crossed to the computer model supported are listed below.

NSN	Part Number	DAS-3 Model	Style
5895-01-154-5834	BCAB006C-001	AN/MYQ-4A	Solid
5895-01-359-2785	BCAB006B-004	AN/MYQ-4	Louvered

On your supply request, put the part number in the Remarks block and advice code 2B in card columns 65 and 66. That way the supply people know not to substitute.

Supply ...

STOP PRIORITY

If you abuse high priority designators (PDs) on your supply requests, you could wind up waiting longer than expected for that item.



Using a high PD when it's not needed loads the supply system with more high priority requests than it can handle. Then you have to wait . . . and so does the unit that REALLY needs the item fast.

Selecting the right designator requires combining your unit's Force/Activity Designator (FAD) with the Urgency of Need Designator (UND).

Use your unit's assigned FAD. It's either a I, II, III, IV or V. Your unit's permanent orders that activated it include the assigned FAD.

Now pick the UND by carefully following the guidelines in Paras 2-2b(1), (2), (3) and 2-2d of DA Pam 710-2-1.

CODE ABUSE

FIND THE 2-DIGIT PRIORITY DESIGNATOR BY USING TABLE 2-1 OF DA PAM 710-2-1.

DA-PAM 710-2-1

Table 2-1
Priority Designator Table (Relating Force/Activity Designator to Urgency of Need)

	Urgency of need designators (UND)		
	A	B	C
I	01	04	11
II	02	05	12
III	03	06	13
IV	07	09	14
V	08	10	15

If you select a UND of A or B, your CO—or someone with written authority from the CO—has to review the PDs to certify their accuracy. Paragraph 2-3 of DA Pam 710-2-1 has the details. Be sure that same person initials column h of DA Form 2064 (Document Register for Supply Actions) or the ULLS Document Control Register listing for each request before it's sent to supply.

Supply . . .

Repair Parts, End Item Match-Up

When you turn in an end item, your stock of repair parts for that item should also be turned in. But how do you identify all parts unique to that end item?

Use SB 38-101 to tell if on-hand repair parts are only for the displaced end item or if they're also used on other equipment.

This supply bulletin comes either on microfiche or Compact Disc-Read-Only Memory (CD-ROM). Get your pubs clerk to order your initial copy of either version on DA Form 4569.

You need an IBM compatible personal computer and a CD-ROM drive, NSN 7025-01-272-5039 (non-audio) or 7025-01-340-9810 (audio), to use the compact disc.

To receive future changes to SB 38-101, get your pubs clerk to update your unit's pubs account. On DA Form 12-99, the clerk puts 12-34-E in the form number and either block number 4210 for the microfiche version or 4451 for the CD-ROM version.



Give Power Cables a Lift

Hooking up the main power cables on the DAS-3's AN/MYQ-4 and -4A trailers is heavy-duty work.

Not only do the cables weigh around 50 pounds each, but you'll also have to lift them over your head to attach them to the trailer.

Save muscle strain by attaching the cables to the end of the trailer using wire ties. NSN 5975-00-899-4606 will get you a package of 100. With most of the weight supported by the ties, the cables are much easier to connect.

The wire ties also take some of the strain off the connectors after the cables are hooked up.



Computers . . .

Disc NSNs

You say your computer manual recommends using only high quality double-sided floppy discs in your computer? Can't find NSNs for these discs?

Not to worry. GSA now stocks high quality double-sided floppy discs. The unit of issue is a box of 10.

NSN	Size (inches)	Density	Manufacturer
7045-01-347-5290	3 1/2	High	3M
323-6436	3 1/2	High	Syncom
347-5289	5 1/4	Double	Syncom
323-6435	5 1/4	High	Syncom



Remember that you should only use high quality double-sided, quad (high) density, 5 1/4-in floppy discs in your AN/TYQ-33 Tactical Army Combat Computer System (TACCS). Order these discs with NSN 7045-01-173-4574.

FILE THE RIGHT FORM

ALL THESE FORMS SEEM THE SAME TO ME.

THEY MAY SEEM THE SAME, BUT EACH FORM HAS A SPECIFIC JOB.



Many folks are confused about which Standard Form (SF) to use when they need to report a shipping or packaging error. Some people also don't know which form is used to make improvement suggestions or report initial item failure.

Here are the forms and when to file them:

SF 368

File an SF 368, Quality Deficiency Report, when:

- ❖ The item needs to be improved. This means quality, engineering or maintenance changes.
- ❖ The part is defective.
- ❖ The item does not work when it's installed, plugged in or turned on for the first time. This is an initial failure report. The maintenance repair code is D or L or the ARIL code is C, E, R or S on the AMDF.

Order a pad of 100 SF 368s with NSN 7540-00-133-5541.

Check out DA Pam 738-750 or 738-751 for more information on the SF 368.

SF 364

File an SF 364, Report of Discrepancy (ROD), when:

- ❖ The item is worth more than \$100, lost in transit and shipped by parcel post.
- ❖ You receive more or less than you ordered.
- ❖ You receive the wrong item or an unacceptable substitute.
- ❖ A duplicate shipment is received.
- ❖ You receive the item after you got an OK to cancel the requisition.
- ❖ Poor packaging caused damage to the item.
- ❖ The item's shelf life has expired.
- ❖ The NSN/PN on the package is different from the AMDF.

If the cost to correct the packaging discrepancy is less than \$50, the report is submitted as an Information Only ROD.

Order a pad of 100 SF 364s with NSN 7540-00-159-4442.

AR 735-11-2, Reporting of Item and Packaging Discrepancies, has more info on this form.

SF 361

File an SF 361, Transportation Discrepancy Report, when:

- ❖ The item is lost in transit (except for items shipped parcel post).
- ❖ You don't receive the item because of problems caused by the shipper.

Order a pad of 100 SF 361s with NSN 7540-00-965-2403.

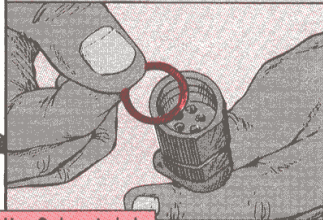
AR 55-38, Reporting of Transportation Discrepancies in Shipments, gives more information on SF 361.

Fill Up on



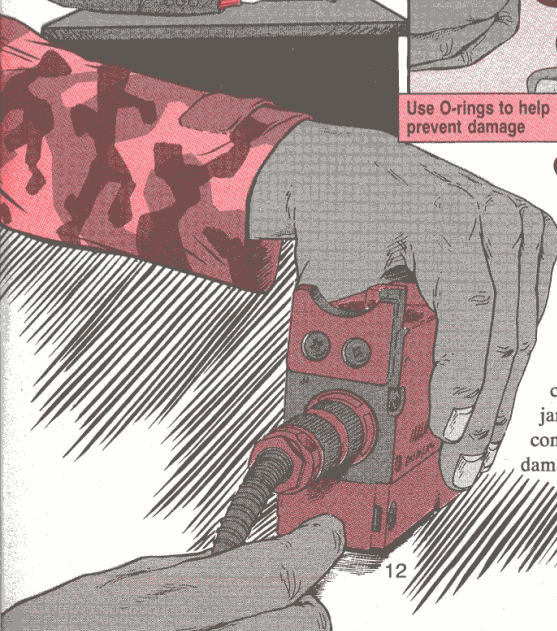
HERE ARE THREE CABLE PM TIPS FOR WHEN YOU USE A FILL DEVICE WITH YOUR SINGGARS RADIO.

1 Make sure the connectors have O-rings. These rubber rings give you a snug, waterproof connection. Use a light coat of silicone, NSN 6850-00-880-7616, on the ring to make hookups easier.



Use O-rings to help prevent damage

2 Match up the keys and keyways before you hook up the cable. Without these guides, connectors can go on wrong, damaging the connector or receptacle. Also, never jam or force cables onto connectors. This only damages the pins.



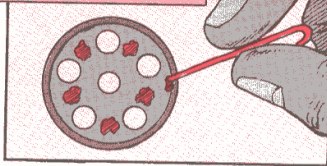
Fill Cable PM

3 Look for a nylon insert, NSN 5935-01-253-3262, in the female audio connector. If there's no insert, use these steps to prevent damage to the connector:

If the plastic at the base of the contact pins is dirty, clean it with a disposable applicator, NSN 6515-01-234-6838, and isopropyl alcohol, NSN 6810-00-753-4993.

After the plastic is dry, put a straightened paper clip into the bottle of adhesive. Get a 0.5-oz bottle of adhesive with NSN 8040-01-281-2729 or ten 1.0-oz bottles with NSN 8040-00-142-9193.

Place a drop of adhesive between each contact pin

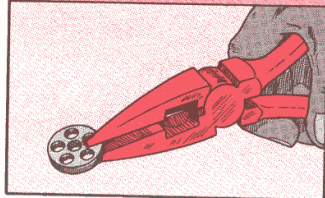


When you take the paper clip out of the bottle, a drop of adhesive will remain on the paper clip. Make sure no adhesive gets on the pins.

WEAR SAFETY GLASSES AND BE EXTRA CAREFUL WHEN USING THIS ADHESIVE.



Pick up the nylon insert with needle-nose pliers—not your fingers



Place it over the pins with the smooth side up. Be sure the tops of the pins are showing through the holes in the insert. Hold the insert in place for about 15 seconds.

Let the adhesive cure two hours before mating the connector.

To make sure the modified connector is working, clear all data from the modified MX-10579/VRC or MX-18290/VRC ECCM fill device.

Install another ECCM device that's loaded on the modified fill device's P1 connector and load the modified ECCM fill device.

If the modified ECCM fill device accepts the load, it's good to go. If it doesn't, clean the pins with acetone, NSN 6810-01-209-0693, and retest.

Test the W4 cable by setting the AN/PSM-45 multimeter on the lowest resistance. Check resistance from connector pin to connector pin like this: A to A, B to B, C to C, D to D, E to E and F to F. If resistance is less than 100 ohms, the cable's good to go. If resistance is more than 100 ohms, clean the pins with acetone and retest.

AN RT CALL FOR HELP

I'M AN RT-524. I CAN'T DO MY OWN PM TO STAY IN SHAPE, BUT IF I COULD, HERE'S WHAT I'D DO:

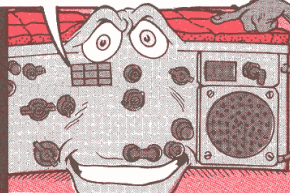
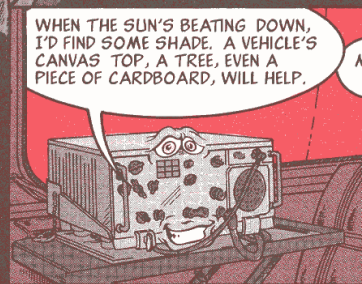


I'D CLEAN UP MY ACT. DIRT AND DUST INSIDE ME HOLD HEAT AND KEEP AIR FROM CIRCULATING, SO I'D REMOVE MY SIDE AND REAR PANELS AND BRUSH AWAY DIRT FROM MY TRANSISTORS AND VANES.

I'D LOOK AT MY BLOWER. DIRT CAN CLOG IT SO THAT IT WON'T TURN. I'D CLEAN IT WITH SOMETHING SMALL LIKE A TOOTHBRUSH. IF I'M TRAVELING IN DUSTY AREAS I'D CLEAN UP AT LEAST ONCE A WEEK. THEN, AFTER CLEANING, I'D PUT MY PANELS BACK ON. THEY HELP MY FAN DIRECT AIR WHERE IT'S NEEDED TO COOL ME DOWN.

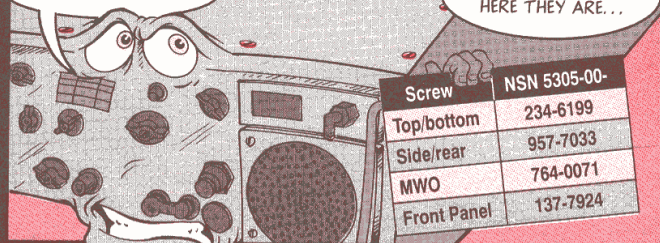
WHEN THE SUN'S BEATING DOWN, I'D FIND SOME SHADE. A VEHICLE'S CANVAS TOP, A TREE, EVEN A PIECE OF CARDBOARD, WILL HELP.

I'D PUT SOME DAMP RAGS OR SPONGES ON MY TOP COVER. MOISTURE'S NO PROBLEM AS LONG AS I'M BUTTONED UP TIGHT.



SPEAKING OF BUTTONING UP, I'D MAKE SURE MY PANELS ARE SCREWED ON TIGHT. MISSING SCREWS LET MOISTURE AND DIRT GET INSIDE ME.

I NEED FOUR DIFFERENT SCREWS. HERE THEY ARE...

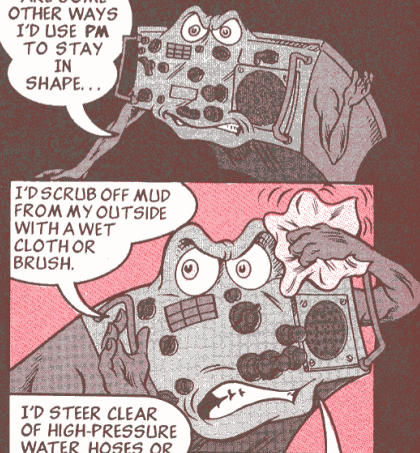
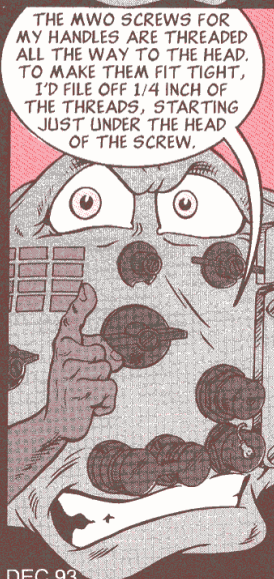


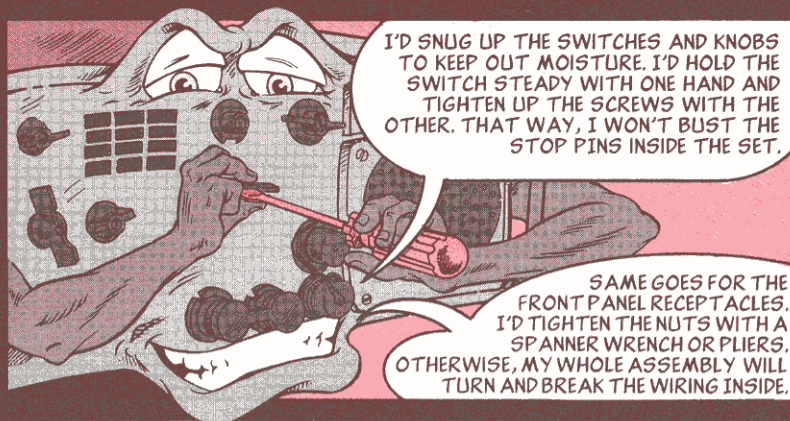
THE MWO SCREWS FOR MY HANDLES ARE THREADED ALL THE WAY TO THE HEAD, TO MAKE THEM FIT TIGHT, I'D FILE OFF 1/4 INCH OF THE THREADS, STARTING JUST UNDER THE HEAD OF THE SCREW.

HERE ARE SOME OTHER WAYS I'D USE PM TO STAY IN SHAPE...

I'D SCRUB OFF MUD FROM MY OUTSIDE WITH A WET CLOTH OR BRUSH.

I'D STEER CLEAR OF HIGH-PRESSURE WATER HOSES OR STEAM CLEANERS, BECAUSE NO MATTER HOW TIGHT MY PANEL SEAL IS, WATER WILL GET INSIDE ME.

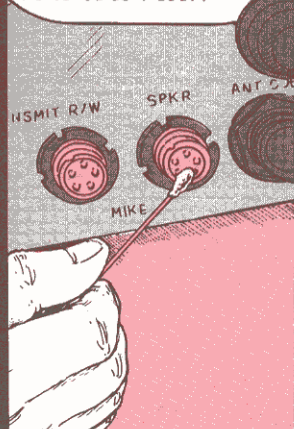




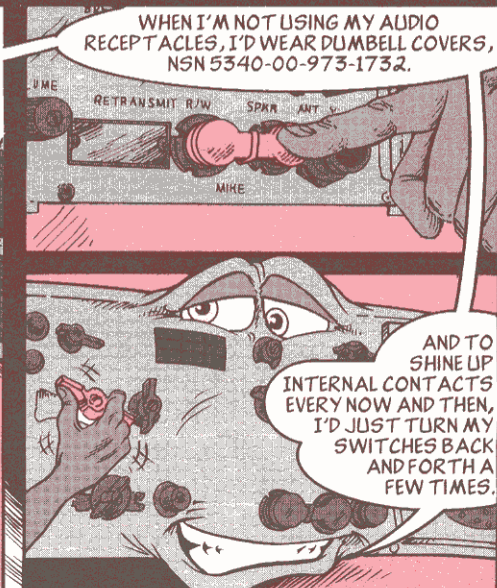
I'D SNUG UP THE SWITCHES AND KNOBS TO KEEP OUT MOISTURE. I'D HOLD THE SWITCH STEADY WITH ONE HAND AND TIGHTEN UP THE SCREWS WITH THE OTHER. THAT WAY, I WON'T BUST THE STOP PINS INSIDE THE SET.

SAME GOES FOR THE FRONT PANEL RECEPTACLES. I'D TIGHTEN THE NUTS WITH A SPANNER WRENCH OR PLIERS. OTHERWISE, MY WHOLE ASSEMBLY WILL TURN AND BREAK THE WIRING INSIDE.

I'D CLEAN UP THE CONTACT PINS IN MY AUDIO RECEPTACLES WITH ISOPROPYL ALCOHOL, NSN 6810-00-753-4993, AND A FOAM SWAB, NSN 7045-01-154-1317.



WHEN I'M NOT USING MY AUDIO RECEPTACLES, I'D WEAR DUMBBELL COVERS, NSN 5340-00-973-1732.



AND TO SHINE UP INTERNAL CONTACTS EVERY NOW AND THEN, I'D JUST TURN MY SWITCHES BACK AND FORTH A FEW TIMES.

THAT'S WHAT I'D DO TO STAY IN SHAPE!



(PS) END

Lower Power Saves Radio

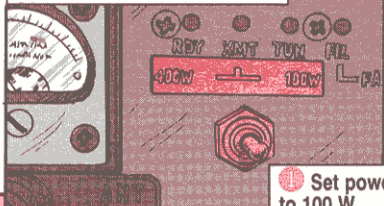
Operators, be careful where you set the power amplifier's 400W-100W switch before selecting the frequency for your AN/GRC-193 radio. You may get more power than you bargained for.

Four hundred watts of RF power could burn out the rotary switch contacts in the power amplifier once you press the push-to-talk switch and the amplifier starts automatically tuning.

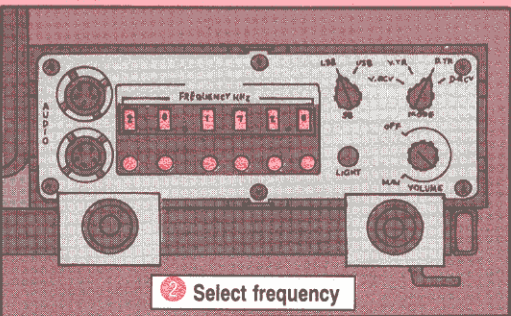
So, set the power amplifier switch to 100 watts before you select the frequency. After the amplifier has finished tuning, the TUN and XMT lamps go out and RDY stays on. Then, if you need extra power, set the amplifier to 400 watts.

WHAT THE...

Here's how to tune your radio without burning it up . . .

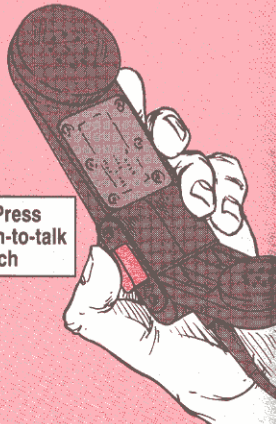


1 Set power to 100 W



2 Select frequency

3 Press push-to-talk switch



Antennas . . .

Safety Always Counts

No matter if you're raising or lowering an OE-254 antenna or an AN/TRQ-32(V) mast assembly, you must be safety conscious at all times. Accidents around antennas kill soldiers. Follow the procedures in your TM and these safety tips to prevent accidents:

- Always wear safety goggles, NSN 4240-00-052-3776, helmet and gloves when erecting or lowering antennas.
- Put tip caps, NSN 5985-00-930-7223, on all antenna elements. Keep the caps in place by wrapping the tips with electrical insulation tape, NSN 5970-00-816-6056.

In a pinch, you can tape other items, such as tennis balls or rubber tubing, onto the antenna elements.

If antenna tips are not used, be sure to warn personnel that exposed elements are in the area.

- Never erect any antenna beyond its maximum site height listed in the TM.
- Never use any substitute items, such as camouflage poles, for the antenna parts.
- Never erect antennas too close to an overhead electric power line.



SAFETY IS
THE KEY WHEN
ERECTING OR
LOWERING
ANTENNAS.

CLEAN AND CLEAR!

To send a clear fax over your AN/UXC-7 facsimile, you must keep the scan-optic lens clean.

The operator's PMCS in TM 11-5815-615-10 says to brush dust from the lens every day. What it doesn't say is that the lens needs regular cleaning with a swab dipped in denatured alcohol, NSN 6810-00-753-4993. Alcohol cleaning gets rid of dirt, dust, oil, grease and fingerprints—stuff that can make your fax copies unreadable.

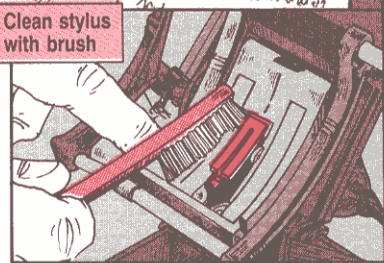
It's also a good idea to clean the stylus area daily with a small bristle brush, NSN 7510-00-550-8446.

Follow these cleaning tips along with your daily PMCS.

Clean lens with denatured alcohol



Clean stylus with brush

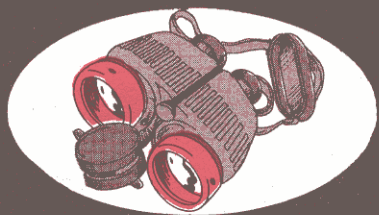


SOMEBODY ON THE OTHER END NEEDS TO HAVE THEIR OPTICS CLEANED!

M22 Binoculars . . .

Lens Protection

On the M22 binoculars, you can now order the rubber armor piece that surrounds the objective lens. Use NSN 5365-01-348-7037.



Powerful Purging

I JUST PURGED YOU, BUT YOU'RE STILL CLOGGED UP.

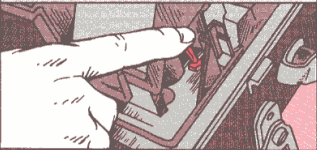


GAG... COUGH...

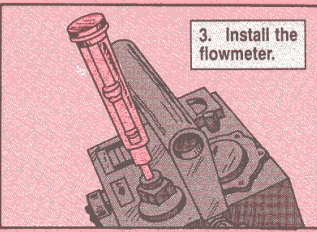
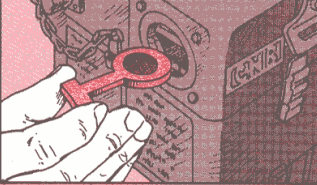
EXHAUST AND DUST DID ME IN! I NEED POWERFUL PURGING.

Engine exhaust and sand can really contaminate the M8A1's detector cell. Sometimes contamination is so bad that normal purging can't clear the cell and you can't reset your M8A1. But there is hope with this powerful purging:

1. Open the case, flip the pump switch to ON (switch points in) and close the case.



2. Make sure the air filter is clean. Change it if necessary.

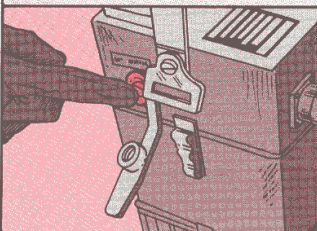


3. Install the flowmeter.

4. Turn on the M8A1 and turn down the volume.

Purging

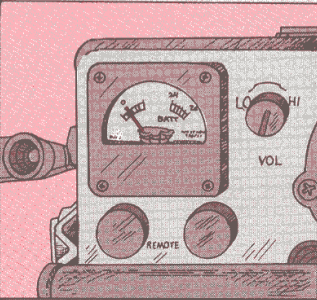
5. Run the M8A1 for a few minutes. If the needle does not go toward the green area of the detector meter, put on disposable gloves and shut off the air outlet valve with your finger.



Keep your finger there until the needle goes toward green, but no longer than 30 seconds at a time. Push the Battery Test and Reset Button (BTRB) to reset the detector. Keep plugging the valve until the alarm stops.

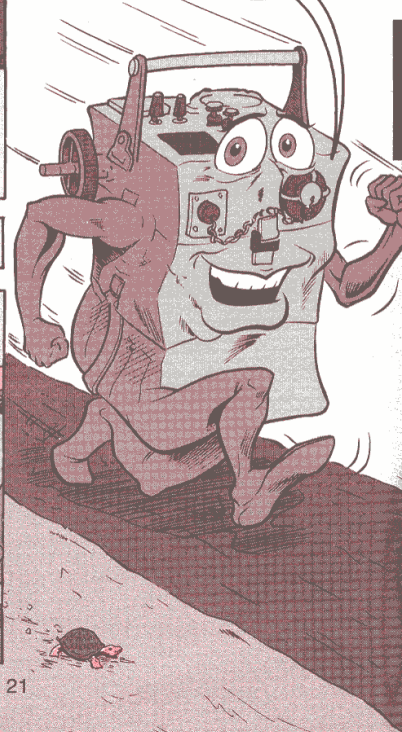
6. After the alarm stops, open the case and flip the pump switch to OFF.

7. Close the case, turn on the detector, press the BTRB, and let your M8A1 run until the needle goes to green.



8. Repeat this procedure if necessary. If you still get NO GO, your NBC NCO needs to send the alarm to direct support. They can use the gas particulate filter in the M140 test set to purge the alarm.

HELP PREVENT PURGING PROBLEMS BY RUNNING ME WEEKLY.

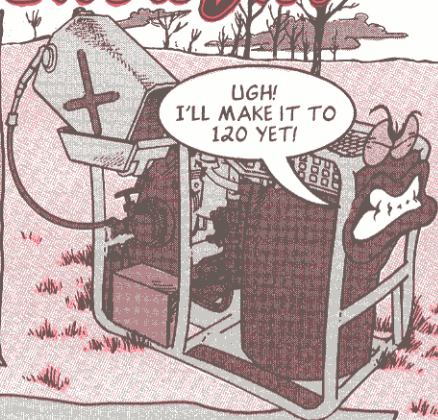


Not Hot Enough!

Dear Half-Mast,

When we operate the M17 decon in the INJECTOR mode, we turn the burner fuel valve clockwise all the way like the TM says. We think we should get a water temperature of 120° C and water pressure of 70 PSI. But we don't get close to that. Is something wrong?

SGT J. T.



Dear Sergeant J. T.,

No, nothing's wrong. While your M17 is in the INJECTOR mode, the siphon injector nozzle pours out water so fast that the burner can't heat the water above 40 to 65° C, and water pressure can't build up more than 40 to 60 PSI.

Half-Mast

Off to a Good Start

Dear Editor,

Give it a rest is often the solution to hard-starting M17 burners.

TM 3-4230-228-10 says to hit the RESET button no more than three times if the burner won't start. If that doesn't do the trick, you're supposed to troubleshoot.

We've found that if you turn off the M17 for five minutes and then reset the function selector switch, the burner fires up.

If that doesn't work, try up to two more times, with 5-minute intervals, then troubleshoot.

SGT Douglas Teel
Ft McClellan, AL

FROM THE DESK OF THE *Editor*



A brief rest is often helpful for all of us — even M17s. Thanks.

Safety Signs



THE SAFETY OFFICER SURE IS GETTING AN EARFUL!

HE SHOULD'VE CHECKED OUT THIS LIST OF SAFETY SIGNS FOR OUR MAINTENANCE AREA!

Legend	Size (inches)	NSN 9905-
Caution Hearing Protection Required	10 x 14	01-100-8205
Caution Hearing Protection Required in this Area	10 x 14	01-031-1247
Caution High Noise Area Wear Ear Plugs	10 x 14	01-122-1140
Caution Eye Protection Required	10 x 14	01-100-8203
Caution Do Not Operate Without Eye Protection	10 x 14	01-100-8204
Caution Wear Goggles When Using This Machine*	7 x 10	00-956-6324
Caution Highly Flammable*	10 x 14	01-054-0428
Caution Highly Flammable*	7 x 10	01-054-0427
Caution Watch Your Step*	10 x 14	01-054-0450

*Order from GSA on DD Form 1348-6. Put in the Remarks block that the NSN's not on the AMDF.

Get a black-on-yellow noise caution plate for your machines with NSN 9905-00-198-2728. The sign is 2.13 x 4.6 inches and has an adhesive backing.

Check out AR 385-30, Safety Color Code Markings and Signs, for more information on which type and color signs and symbols to use in dangerous areas.

Give Your Torch These Tips

You generally won't find replacement tips for your welding torch set listed in an SC or a TM, but you can usually get parts.

Torch sets are part of many common shop sets, as well as basic issue items of 5-ton wreckers and recovery vehicles. They are bought from many manufacturers and may be assigned the same NSN. However, parts are not interchangeable between sets from different makers.

There are separate NSNs assigned to some older torch sets. Match the NSN or manufacturer's model number of your torch to the ones in these tables. Then order the parts you need.

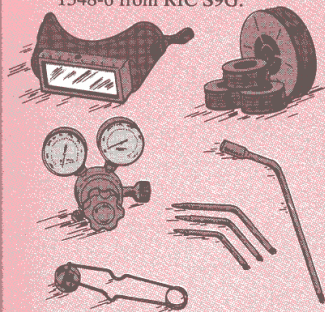
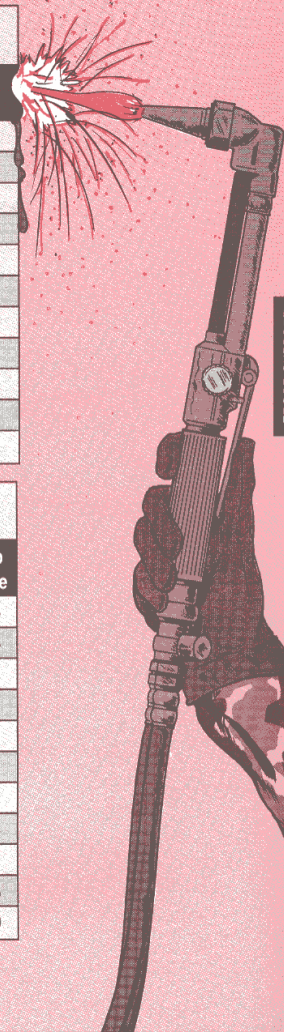
If your torch isn't listed, order the parts you need using the manufacturer's CAGE and part numbers on a DD Form 1348-6 from RIC S9G.

Torch set, NSN 3433-01-075-2134 Smith Welding & Equip Model BIG98-510			
NSN 3433-	Item	Mfg PN	Tip Size
00-018-8151	Torch, welding	MW5	—
01-074-8112	Torch, cutting	MC509	—
00-688-9784	Tip, cutting	MC12-1	1
00-484-2772	Tip, cutting	MC12-2	2
00-484-2771	Tip, cutting	MC12-4	4
00-017-2190	Tip, welding	MW203	3
00-017-2191	Tip, welding	MW204	4
00-017-2192	Tip, welding	MW205	5
01-085-9343	Tip, welding	MW209	9
01-074-8242	Tip, welding	MW211	11
01-074-8243	Tip, welding	MW212	12

Torch set, NSN 3433-01-075-2135 Dockson Corp Model 5			
NSN 3433-	Item	Mfg PN	Tip Size
01-075-2135	Torch, welding	Model 5	—
01-074-8239	Tip, cutting	C-1	1
01-074-8240	Tip, cutting	C-2	2
00-378-4344	Tip, cutting	C-4	4
01-075-2145	Tip, welding	E-3	3
01-075-2146	Tip, welding	E-4	4
01-075-2147	Tip, welding	E-5	5
01-075-2148	Tip, welding	E-9	9
01-075-2149	Tip, welding	E-11	11
01-075-2150	Tip, welding	E-12	12

Torch set, NSN 3433-01-070-9838 Uniweld Products, Inc Model KL-79			
NSN 3433-01	Item	Mfg PN	Tip Size
070-9833	Handle, welding torch	WH-79	—
070-9834	Cutting attachment	CA-79	—
070-9867	Tip, cutting	6290A-0	0
070-9868	Tip, cutting	6290A-2	2
070-9869	Tip, cutting	6290A-4	4
070-9875	Tip, welding	79-1	1
070-9871	Tip, welding	79-4	4
070-9870	Tip, welding	79-6	6
070-9872	Tip, welding	79-7	7
070-9873	Tip, welding	79-9	9
070-9874	Tip, welding	79-10	10

Torch set, NSN 3433-01-093-8012 S.S. Co Model BSM			
NSN 3433-	Item	Mfg PN	Tip Size
01-092-9051	Torch, welding	BS	—
00-273-2552	Torch, cutting	BMC	—
01-092-9052	Tip, cutting	10C-2-54	2
01-092-9053	Tip, cutting	MC-3-50	3
01-092-9054	Tip, cutting	MC-1-60	1
01-092-9055	Tip, welding	WT1-68	1
01-092-9056	Tip, welding	WT2-62	2
01-092-9057	Tip, welding	WT4-54	4
01-092-9058	Tip, welding	WT6-50	6
01-092-9059	Tip, welding	WT8-44	8
01-092-9060	Tip, welding	WT9-40	9



Antiseize Tape . . .

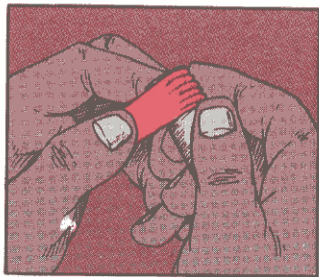
Make the Seal Work

USING ANTISEIZE TAPE ON PIPE JOINTS TO KEEP 'EM FROM LEAKING MAKES YOU A LEAK-FREE MECHANIC—IF YOU DO IT RIGHT!

START BY CLEANING THE THREADS.



THEN START AT THE PIPE END AND WRAP IN THE DIRECTION OF THE THREADS. USE TWO TURNS AND OVERLAP ABOUT HALF A WRAP.



Keep the tape clean . . . in your tool box and when you put it on. Dirty or oily tape means a leaky connection.

Never use antiseize tape on flare or compression fittings.

Here's the tape you need:

Pipe size	Tape width	NSN 8030-00-889-
1/8 to 3/8 in.	1/4 in.	3534
1/2 in. and up	1/2 in.	3535

Another sure fire way to seal fittings is to use pipe dope.

For hydraulic lines, use hydraulic sealer. NSN 8030-00-339-0310 gets a 10cc tube and NSN 8030-01-054-0740 gets a 50cc tube.

Radiator Testing Kit . . .

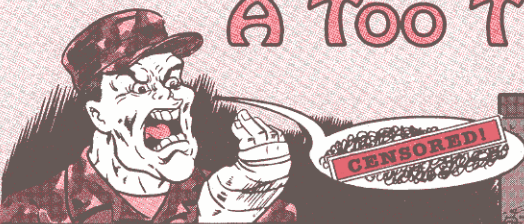
Need to Adapt

ST255 and SVT262 radiator testing kits work great for testing the cooling system on your vehicle—unless your vehicle happens to be a truck 2½ tons or larger. Then the kit's tester head won't fit on the neck of the radiator.

You need the A450A truck adapter kit to use with the radiator tester. The adapter fits the radiators of big trucks. It costs about \$30.

Order the A450A truck adapter kit on a DD Form 1348-6 from RIC S9C using the part number and CAGE 55719.

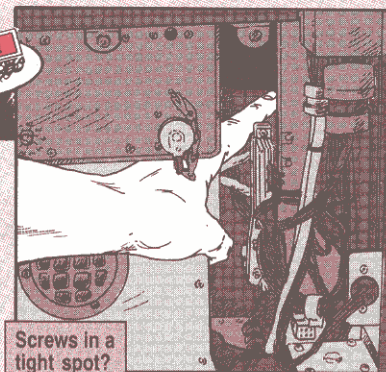
A Too Tight Tool



Mechanics with busted knuckles know that removing parts in a tight place can be a real pain in the hand.

Take, for instance, removing the fuel boost pump from the canister. Getting those four mounting screws loose with the called-for Allen wrench can have you swearing a blue streak.

Next time you tackle that job, or similar jobs with socket-head screws in tight places, borrow a tool from your armament repairman. The tool is a socket-head screw key. There are five sizes listed in SC 5180-95-CL-B09, the Aircraft Armament Repairman's Tool Set. They're listed under NSNs 5120-00-832-6214, -6215, -6216, -6217 and -6218.



You'll also find them listed in the GSA catalog.

332 ALLEN WRENCHES

Has a fixed blade that is not adjustable or replace-able. With a $\frac{3}{8}$ " female drive insert in butt end of handle. GGG-K-275.

Has a $5\frac{1}{2}$ " -long shaft and a $\frac{1}{2}$ "-long bit and measures $10\frac{1}{2}$ " long overall.

$\frac{5}{64}$ " key size ... 5120-00-832-6217
EA \$8.04

TIGHTENING/FASTENING

$\frac{3}{32}$ " key size 5120-00-832-6215
EA \$7.83

$\frac{7}{64}$ " key size 5120-00-832-6218
EA \$5.70

$\frac{5}{32}$ " key size 5120-00-832-6216
EA \$7.50

$\frac{3}{16}$ " key size 5120-00-832-6214
EA \$8.47

When you find a spot where this tool works well, write it in under the tools required list for that job in your TM.

This will make sure the next repairman thanks you instead of cursing the job.

Make a Battery

Overflow Pan

UH - OH, MY BATTERY'S OVERFLOWING AGAIN!

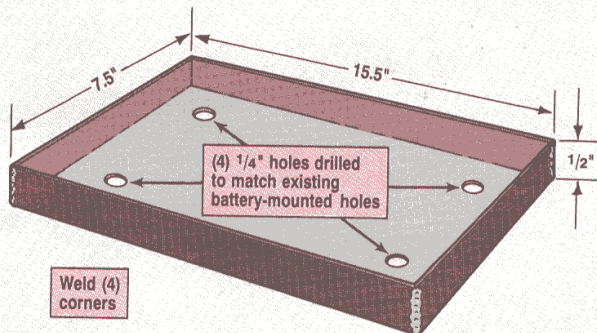
IF YOUR APACHE STILL HAS THE SHORT, BB564 BATTERY, AND NOT THE TALLER BB664 BATTERY, THEN HOT WEATHER MEANS ELECTROLYTE OVERFLOW.

CATCH THE OVERFLOW AND PREVENT FLOOR CORROSION WITH A PAN MADE FROM THESE MATERIALS.

ITEM	NSN
Stainless steel	9515-00-804-6284
Welding rod	3439-00-995-9724
Felt	8305-00-663-9838
Boric acid	6810-00-264-6535
Grommet (4)	5325-00-174-5317

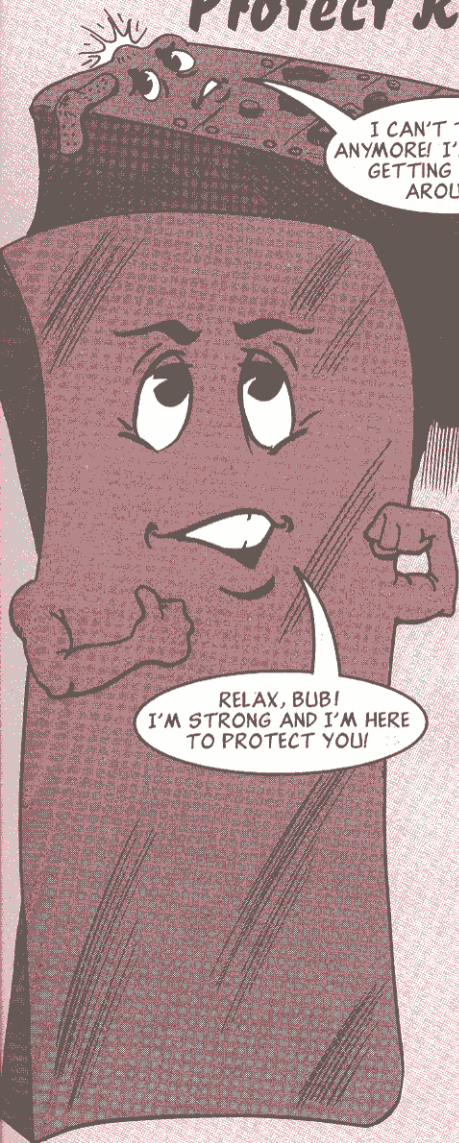
MAKE THE PAN AND INSTALL IT LIKE THIS.

1. Cut the steel to 16.5-in x 8.5- in.
2. Cut out a 1/2-in x 1/2-in section from each corner.
3. Fold the sides and ends up to make the pan and weld all four corners.



4. Remove the battery like it says in Para 9-5-22 of TM 55-1520-238-23 and make sure the mounting area is corrosion free.
 5. Drill four 1/4-in holes in the pan to match the existing battery mount holes.
 6. Cut the felt 15.5-in x 7.5-in and make holes that align with the pan and battery mount.
 7. Saturate the felt with a 3-percent boric acid/water solution and put it in the pan.
 8. Mount the pan using the four grommets and reinstall the battery.
- Every 50 days, remove the pan and clean it and the felt with warm, soapy water. Then saturate the felt with 3-percent boric acid solution, remount the pan and reinstall the battery.

Protect Radio Console



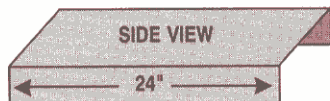
I CAN'T TAKE IT ANYMORE! I'M ALWAYS GETTING BANGED AROUND!

RELAX, BUB!
I'M STRONG AND I'M HERE
TO PROTECT YOU!

It's hard to keep from banging up your Apache's radio console when you take out those heavy, bulky crew seats or do other maintenance inside the cockpit.

So get your sheet metal shop to make you a couple of handy console covers from aluminum sheet.

Give the shop these dimensions:



Be sure to smooth all edges with a file before you use the cover. And paint it red so you won't forget to remove it when you're through working.

Make sure the cover does not rest on any knobs, dials, or switches when you install it.

Pick a spot on one of the corners of the cover, drill a small hole and attach a "Remove Before Flight" streamer.

Put 'em Under Covers



MANY OF THE APACHE'S NIGHT VISION DEVICES ARE BEING DAMAGED DURING STORAGE AND SHIPMENT.

This is because some units forget to put on protective covers. That leaves sensitive lenses exposed to further damage.

So whenever you store or ship a device, leave the cover on to protect the lens. Also wrap the entire unit in tissue and bubble wrap to protect it from damage.

Here are the covers:



Night vision shroud
5855-01-199-0150

Day side window cover
5895-01-270-3108



Night side window cover
1270-01-199-2058

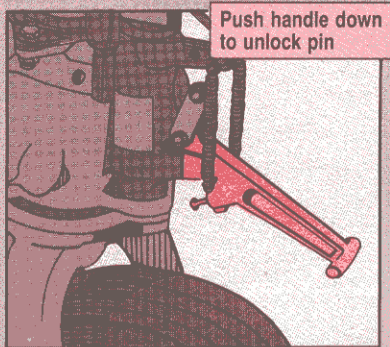
Boresight window cover
5340-01-231-3660



DISENGAGE BEFORE TOWING

After you hook up the tow bar to an Apache's tail wheel axle, make sure you unlock the tail wheel actuator lock pin.

If you don't, you'll shear the lock pin as you tow!



Push the handle down to unlock the pin. Then use the tow bar to slowly move the tail wheel from side to side to make sure it moves freely. If it doesn't, work the actuator handle up and down.

If the pin won't move freely, soak it with penetrating oil and let it sit for a few minutes.

If it still won't move freely, realign the actuator lock pin in the lock holes of the socket like it says in Task 3-3-6 of TM 55-1520-238-23-2.

Nacelle Latcherations!

What are nacelle latcherations?

They are those gashes — lacerations — that you get when you bang into an unlocked latch of an engine nacelle of an Apache!

When the nacelle is open, it's about 6 feet off the ground. Unlocked latches stick out and down another 3 inches.

It's not hard to see that if you're more than 5 feet 9 inches tall, a latcheration might be in your future.

Avoid latcherations by keeping the latches closed whenever you lower an engine nacelle. Make it a habit — open the latches, lift the nacelle, close the latches.

But . . . make sure you open the latches before you close the nacelle. If you slam the nacelle closed with the latches locked, you'll bend or break 'em.



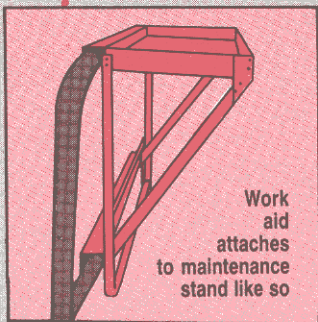
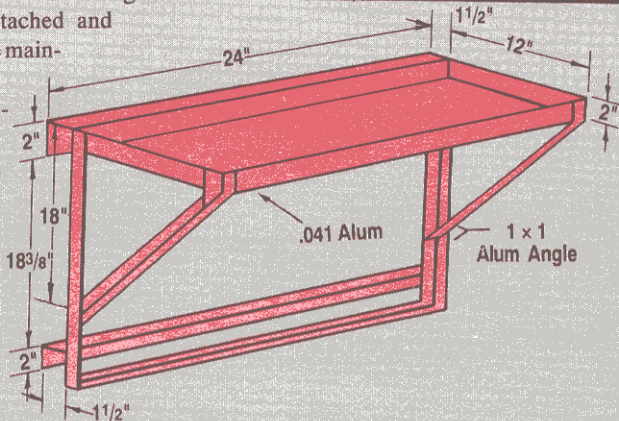
Work Aid Helps Stop FOD

Tools and trash left on an aircraft create a safety hazard. Light trash gets sucked into the engine inlet and destroys the engine. Misplaced tools can bring a bird down.

To solve the problem, make a removable work tray for B1 maintenance stands. It gives mechanics a place to put tools, parts and trash, such as safety wire, wire ties and clamps, instead of laying them on the aircraft.

Make the tray from 0.041-in sheet aluminum and 1 x 1-in aluminum angle. The tray is easily attached and removed from the maintenance stand.

Here are the dimensions:



Air Lift Rigging Procedures

Air crews and ground crews need to know how to rig their equipment for transport.

For copies of information on rigging procedures on any equipment you must sling-load under a helicopter, write to:

Commandant
US Army Transportation School
ATTN: ATSP-TIP-M
Ft Eustis, VA 23604-5408

Or call:

DSN 927-6570/COMM 804-878-6570.
The facsimile number is
DSN 927-6980/COMM 804-878-6980.

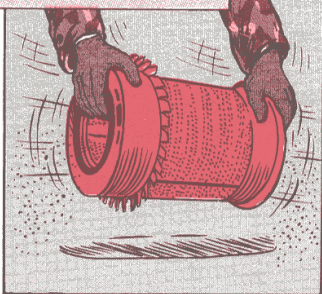
Dirty Filters Are a No-Go

Reeping the M113A2 personnel carrier and M901A1 ITV gulping clean, fresh air is a job for crewmen and mechanics. Unless you work together on air filter PM, that vehicle is going nowhere fast.

Driver's Job

If the element is just dusty, shake it gently, then tap the sides with your hands to remove sand and dirt. Be careful to keep dust out of the filter's insides. Never hit the element against a hard surface. That ruins it.

Gently shake and pat element to remove dust and sand



Element still too dirty? Do not try to clean it yourself. Just turn the element over to your mechanic. He'll make sure it's usable when you get it back, or you'll get a new filter element.

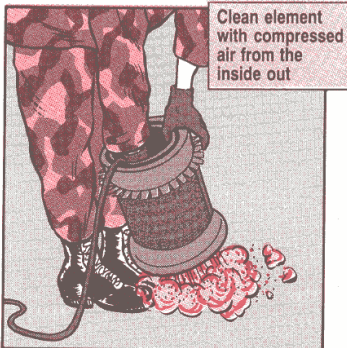
Mechanic's Job

The first step to removing dirt is compressed air. Use air blow gun, NSN 4940-00-333-5541, to clean the filter from the inside out.

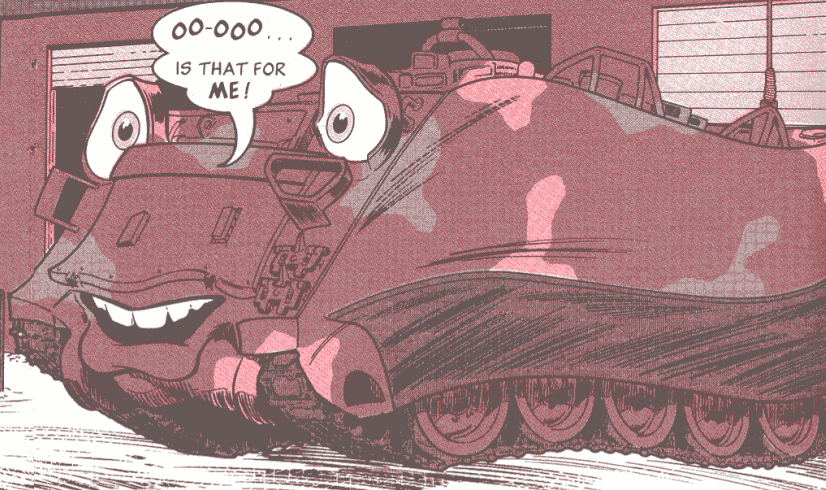


YEP, A FRESHLY CLEANED AIR FILTER TO KEEP YOU RUNNING STRONG!

When you use the gun, always wear goggles and gloves for protection.



Clean element with compressed air from the inside out

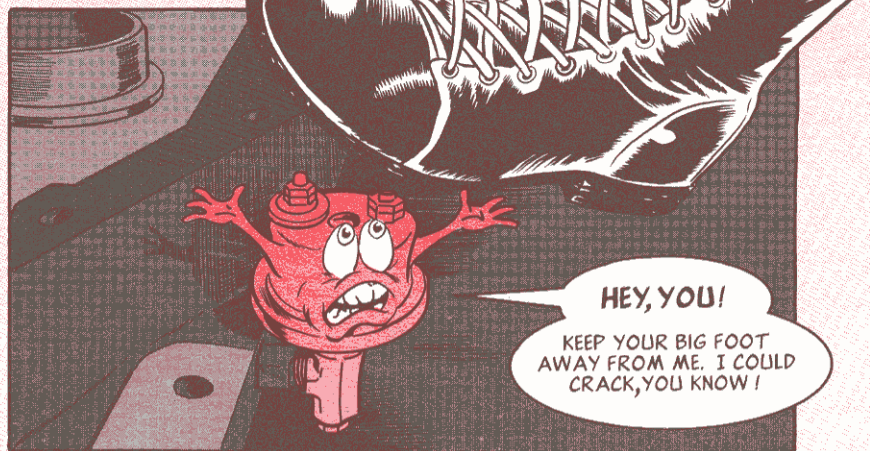


For more stubborn problems like heavy dirt, carbon or oil deposits, wash the filter element and use it again.

Here's how:

1. Mix a solution of one cup of detergent, NSN 7930-00-531-9715, to five gallons of water in a container large enough to completely submerge the filter element. Hot water works best, but keep it under 190° F.
2. Immerse the element completely in the washing solution. Move it in a circular motion for two minutes. Wear rubber gloves to protect your hands from the hot water.
3. Let the element soak in the solution at least 15 minutes. Agitate it again for the last three to five minutes.
4. Remove the element and use a water hose to rinse it with cold water. Rinse from the inside out until the water runs clear.
5. Air dry the element thoroughly. If the filter element is torn, worn or too dirty to clean, replace it with element, NSN 2940-00-168-2337. Always replace the filter element if the end seal or fabric is damaged.

Tee Cracks under Pressure



The mounting tee for the transmission low oil pressure switch on the M2/M3-series Bradley and MLRS can't take much pressure without breaking or cracking.

Remember that, mechanics, when you're working on the switch. Otherwise, you've started an oil leak that could result in a fire.

It takes two wrenches to safely install or remove the pressure switch — one to hold the tee and the other to turn the switch.

Watch what you're doing when kneeling on the transmission, too, especially on the Bradley. It doesn't have a bracket to protect the switch, so a carelessly placed knee or foot can break the tee.

Cotter Pin Assortment

Mechanics, you can get a cotter pin assortment for your tool box with NSN 5315-00-598-5916. That NSN brings an assortment of 100 pins.



Stop Starter Shutdown

Mechanics, have drivers been writing up their M109A4 and -A5 SP howitzers because the starters seem to be locking up?

The source of the problem may actually be in one of the two starter protection relays.

When the howitzers were converted from the -A3 configuration, the relays were not modified along with the rest of the electrical system. They can short out during startup, causing the starter to shut down prematurely. It looks like the starter has locked up when actually it's getting no power.

Before you troubleshoot or replace the starter, activate the combat override switch and engage the starter. If the engine cranks, the problem is in the relays.

Replace the faulty relay with NSN 5945-01-291-0734. The new relay has been upgraded with a special filter that eliminates premature shutdown.



Replace bad relays

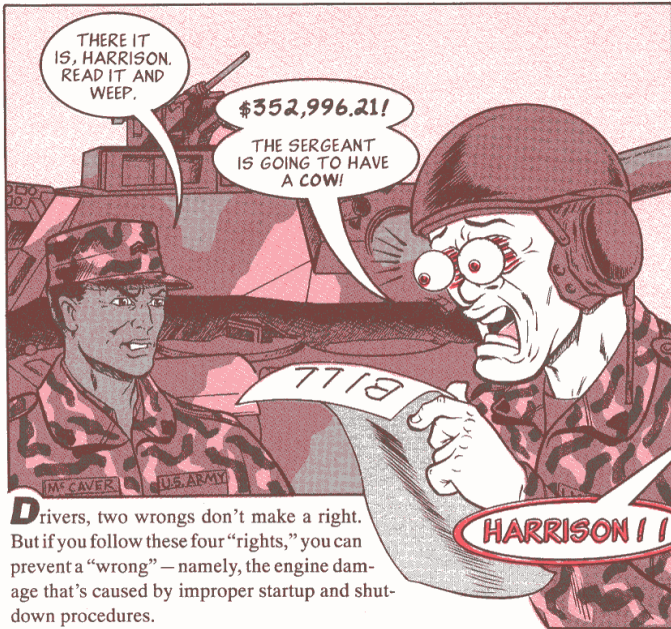
Before you replace both relays, though, take a close look. If one is marked with part number 12363092, keep it. That's the new and improved relay. If both have a different part number, replace 'em both.



THE STARTER TURNED OVER A FEW TIMES, THEN . . . NOTHING.

COULD BE A BAD STARTER PROTECTION RELAY.

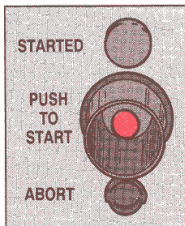
Four Rights Prevent a Wrong



Drivers, two wrongs don't make a right. But if you follow these four "rights," you can prevent a "wrong" — namely, the engine damage that's caused by improper startup and shut-down procedures.

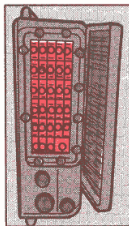
HARRISON !!

1 Never, ever, use the combat start information in TM 9-2350-200-BD-1, Battlefield Damage Assessment and Repair—unless you are in combat or you are directed to do so by your CO for training.

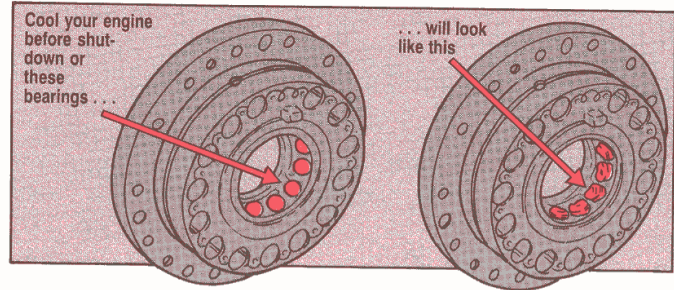


2 Never press the **START** button longer than one second. And don't push the button more than once during the cycle.

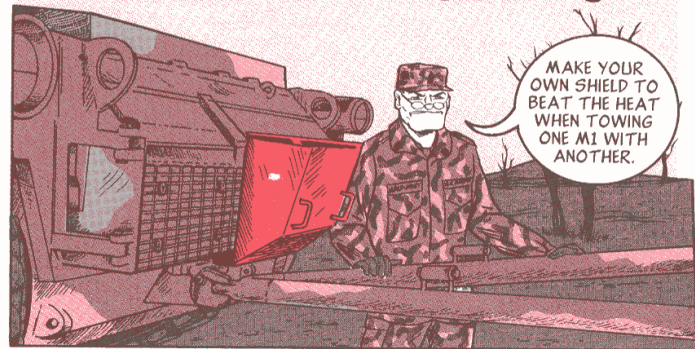
3 Never turn **OFF** any circuit breaker once the start cycle has begun. The last two actions could put too much fuel into the engine. The extra fuel will explode, causing internal damage to the engine.



4 Idle the engine at least **TWO MINUTES** to cool off before shutdown. This prevents clogged oil passages. Ignoring the cool-down period lets the engine oil boil, coking bearings and obstructing oil ports. Dry bearings ruin the engine.



Deflect Heat during Towing



Prevent heat damage to vision blocks, hatch covers and other front end components when towing an M1 with another M1 by using a heat deflector.

You can make a deflector that attaches to the towing M1's exhaust grate.

Plans for the deflector are on Pages 3-15 through 3-20 of TB 43-0001-39-3 (Dec 92). If your local TACOM Logistics Assistance Representative doesn't have a copy, write to Half-Mast.

BETTER CHARGING

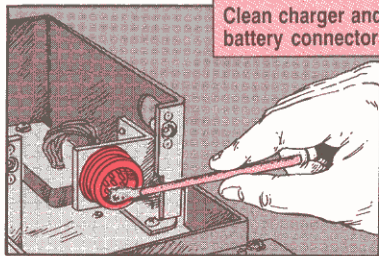


Dear Editor,

We've come up with a couple of ways to keep the "charge" in missile guidance set battery charging.

If you charge the battery for four hours like you're supposed to, but only get a couple of firings, it may not be a bad battery. Dirty battery and battery charger connections could be stopping the battery from getting a full charge.

Before you replace the battery, clean both the battery and charger connectors with denatured alcohol and a swab. Recharge the battery and try it again.

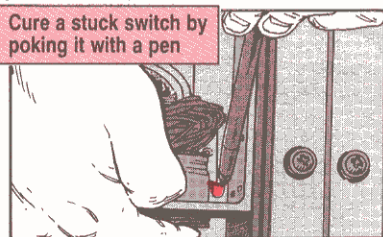


Clean charger and battery connectors

If the battery's got its strength back, you're back in business. If not, turn in the battery.

If the battery's not charging at all, the microswitch on the charger may be sticking. Check by pushing down on the charger connector. If the switch's OK, you'll hear a click. No click? It's stuck.


Cure a stuck switch by pushing down on the connector and poking the switch with a pen. Then test again for the click. If it clicks, you're ready to charge.



Cure a stuck switch by poking it with a pen

Get a stuck switch replaced at the first opportunity.

SGT John Fengl
SSG David Cody
Redstone Arsenal, AL

FROM THE DESK OF THE Editor 
We're all charged up about your tips.
We think they'll click with the field.

Keeping a Load On

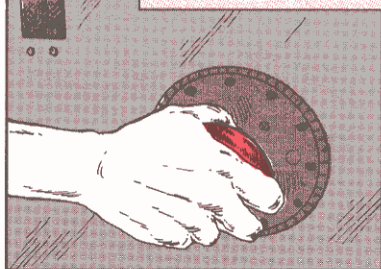
Dear Half-Mast,

If the dummy load (TA-111) doesn't work, you can't do the Confidence and Maintenance 1 Tests. That means you can't run the Land Combat Support System.

The problem is that when you adjust the dummy load for voltage and then back to no load, the load's arms get hung up. Until they're unhung, you're hung up, too.

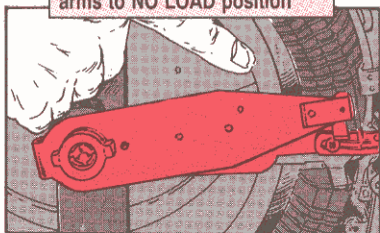
We've found you can often free the arms by turning the load's dial back and forth from no load to maximum load.

If turning the dial back and forth doesn't work . . .



If that doesn't work, just disconnect the power to the load and take off the load's back and manually move the arms back to the NO LOAD position. You're back in business.

. . . take off the back and move arms to NO LOAD position



SSG Daniel Walker
Redstone Arsenal, AL

PMCS

Plus

SOMETIMES PMCS IS NOT ENOUGH. YOU FAITHFULLY DO THE CHECKS AND SERVICES IN TM 9-1015-215-10, BUT YOU STILL HAVE PROBLEMS WHEN YOU GET TO THE FIELD.

DANG!
IT STILL WON'T FIRE!
I GIVE UP!

DON'T GIVE UP.
THESE EXTRA STEPS
WILL MAKE SURE I'M
READY FOR DUTY.

No lube or dirt
under collar

After you have your M30 assembled, push down the cannon and eyeball the area underneath the collar and sight mount for grease and dirt. Clean any off. They will cause binding during firing.

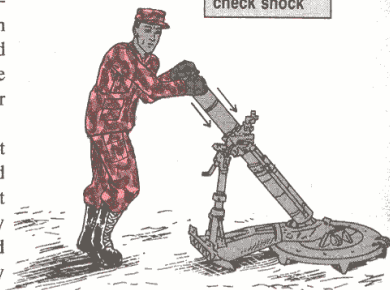
If the mortar binds even after you clean the cannon, report it to your armorer. Binding causes recoil problems and poor accuracy.

The best way to check the function of the shock absorber is to raise the cannon so that it's at maximum elevation. Push the muzzle end of the cannon down and release it. The cannon should spring back smoothly. Do this before and after firing. If the shock absorber binds, report it.

On the standard assembly, check not only that the elevating mechanism and traversing assembly work smoothly, but also that it can handle recoil. Sharply pull down on the cannon muzzle and release it. If the standard assembly doesn't snap back in place, report it.

Lube the cannon if it's going to sit for weeks. It needs to be first cleaned with RBC and then lubed with GPL. Do not forget the area under the collar and sight mount. Otherwise, corrosion will soon ruin the cannon.

Push down
and release to
check shock



Stumped for a Tow?

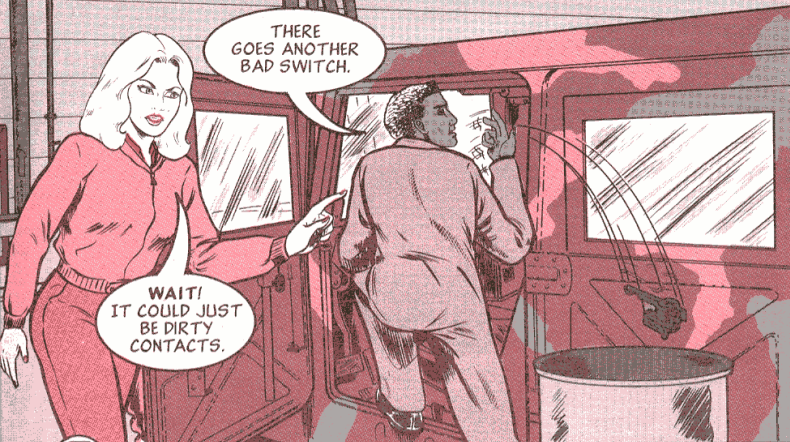
GOT QUESTIONS ABOUT TOWING
WHEELED OR TRACKED VEHICLES THAT
YOUR TMs DON'T ANSWER?

Call:
The Battlefield Recovery
and Evacuation Management Office
at DSN 298-5419/7687, or
commercial (410) 278-5419/7687.

Or write to:
Directorate of Combat Developments
ATTN: ATSL-CD-RE
Aberdeen Proving Grounds, MD 21009-5000



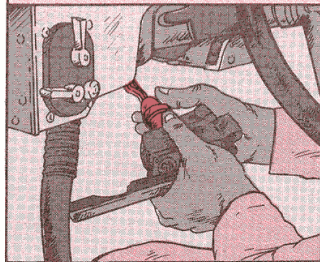
Don't Toss Signal



Chances are, mechanics, you're tossing good turn signal switches when the contacts are just plain dirty or corroded. Put some life back into the switch, NSN 6220-01-322-2271, like so:

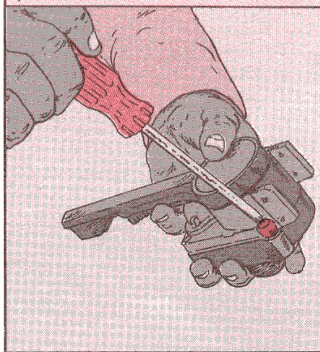
1. Disconnect the battery ground.

2. Disconnect the switch from the steering column.



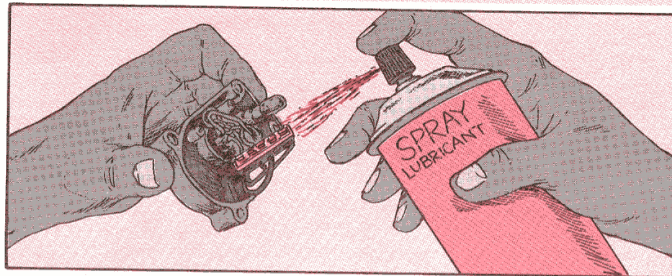
3. Disconnect the wiring harness plug from the switch.

4. Remove the four screws from the signal arm plate, and then remove the plate.



Switch Just Yet

5. Spray the switch's contacts with spray lubricant cleaner, NSN 6850-00-003-5295. The cleaner has an alcohol base that dries quickly. Do not sand the contacts with sandpaper or an emery board. That only removes the contact's protective coating that fights corrosion.

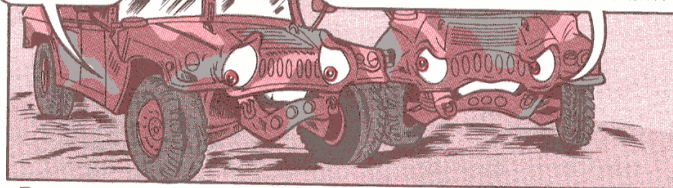


6. After cleaning, reassemble the switch and install it. If your truck's turn signal still doesn't work, replace the switch.

Tired Tires

WELL, THIS SET OF TIRES DIDN'T LAST LONG.

YEAH, TOO BAD YOUR MECHANIC DIDN'T USE THE OPTIONAL ALIGNMENT.



As everyone knows, whether on our POVs or Humvees, tires never last long enough.

Even if you keep Humvee tire pressure up and the front end aligned, tires can still wear excessively on the outer edges.

The tire experts at the truckers' top shop say tires wear out before their time because mechanics align the front end while the truck is empty. They say you should put on the load the truck normally carries — say a half ton. Then align the front end to the optional specifications so you'll get maximum wear from the tires.

You'll find the optional alignment procedure in Table 8-2(b) in the -20-2 TM.

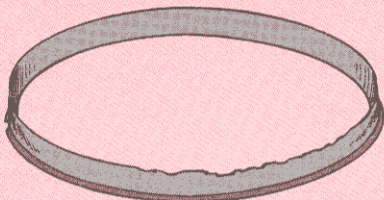
Lock in Wheel PM

There's scant information out there for inspecting split-ring wheels on tactical trucks.

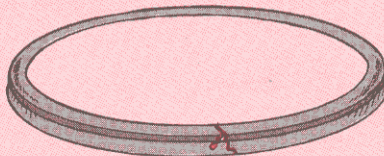
Here's what to look for when you're repairing a flat or replacing a tire.

Split Ring

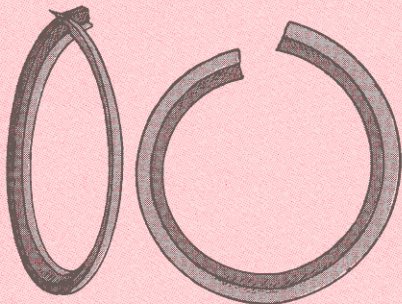
EROSION? Corrosion causes bead seat of lock ring to erode and chip. Ring won't seat properly.



CRACKS? Any crack in lock ring means it will break. Don't use it.

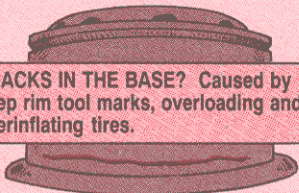


SPRUNG OR OUT-OF-ROUND? Ring won't seat properly into wheel rim. If you find a bum split ring, replace it.

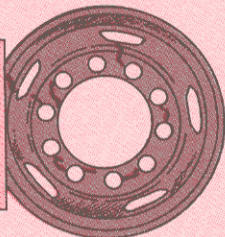


Wheel Rim

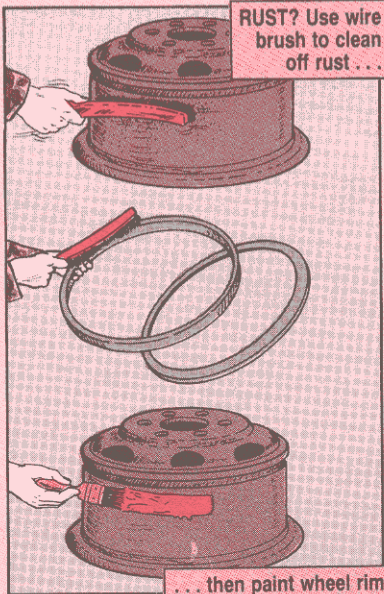
CRACKS IN THE BASE? Caused by deep rim tool marks, overloading and overinflating tires.



CRACKS IN THE DISC? Caused by loose lug nuts or from overloading. If you find any damage to wheel rim, replace wheel.



RUST? Use wire brush to clean off rust . . .

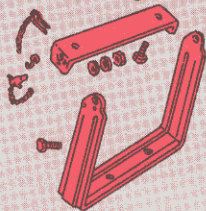


. . . then paint wheel rim.

2 1/2-, 5-Ton Trucks . . .

Take a Step Up

There's no need to slip and bang your shins when climbing up on the front bumper of an M44-, M39- or M809-series truck. A bumper step makes that first step safer.



Get a step kit with instructions with NSN 2540-01-149-1389



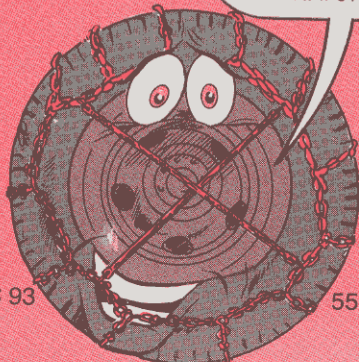
Or use a truck tailgate step, NSN 2510-00-119-3903, on the front bumper. It'll save you a few bucks.

Use skidproof paint, NSN 8010-00-141-7838, on the step, the bumper, and on the fenders where you'll be stepping.



Straps Snug Chains

TIRE CHAINS SLACKING UP? PUT THEM BACK ON THE SNUG AND NARROW WITH RUBBER STRAPS. HERE ARE THREE USEFUL SIZES. . .



NSN 5340-01-	Length (inches)	Stretch (inches)
029-9084	15	20-30
030-3098	21	26-42
029-9085	31	36-42

Your authority to order these items is Appendix A, CTA 50-970.

THINK LIKE A FOX

THAT'S NO FOX. IT DOESN'T EVEN LOOK LIKE ONE OF US!

HMMM... LET'S TAKE A CLOSER LOOK.

If your Fox is going to sniff out chemical and nuclear threats, you will need to outfox problems with PM. Keep your Fox on the NBC trail like this:

Vehicle

Clean engine air filters daily in dusty areas like the desert and weekly in other environments. Empty and wipe out dust collectors and filter housings with a clean, dry cloth.



Wipe out dust collectors...

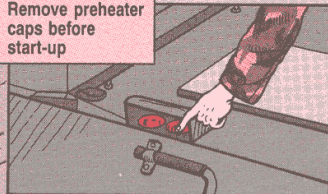


... and blow out air filters

Service air cleaner elements whenever the engine loses power or the air restriction indicator stays in the red after setting it.

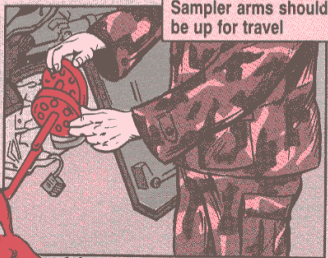
Before start-up in cold weather, remove the plastic caps from the engine preheater. Otherwise, the caps melt and gum up the preheater. At the end of operations, put the caps back on to seal out dirt.

Remove preheater caps before start-up

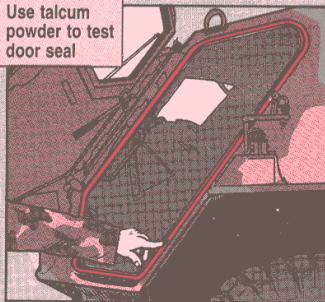


Before any movement when you're not taking samples, make sure the sampler arms are in the UP position. If they're down, they could be damaged. In rough country, drive slowly — no more than 10 MPH. The vehicle skid plate can protect the arms only so much. Then, SNAP.

Sampler arms should be up for travel



Use talcum powder to test door seal

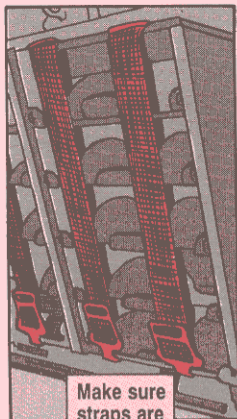


HEY, WAIT FOR ME!

THERE'S MORE ON THE NEXT PAGE!

Remember the Fox is an extremely wide vehicle that needs extremely wide turns at slow speed to avoid collisions and bumps that destroy tires and steering arms.

Before you move out, make sure the marker base weights have safety straps and the straps are buckled tightly. If the weights start flying around during movement, people and equipment take brutal hits.

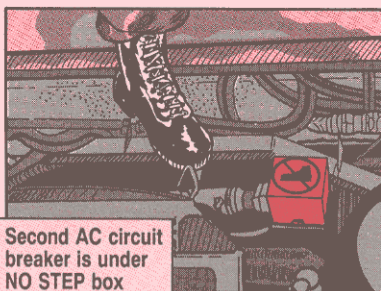


Make sure straps are tight

Air Conditioner

If AC circuit breakers trip, remember there are two circuit breakers, not one. Besides the one on the AC, there's one

under the NO STEP box at the front of the engine. Both must be reset before the AC will work.



Second AC circuit breaker is under NO STEP box

Keep the areas in front of the AC vents open. If the vents are blocked, the AC works too hard and shuts down.

Also make sure the heater has been turned off if the AC is on . . . and vice versa. If both run together, the AC circuitry could overheat and burn up.

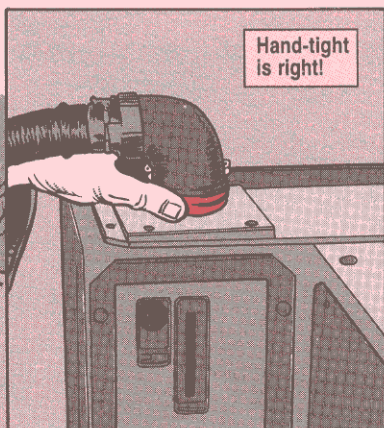
MM1

Feel the top of the Gems probe for tightness during BEFORE PMCS. But tighten it no more than hand-tight. If you force it tighter, you puncture the



ARE YOU CONVINCED YET?

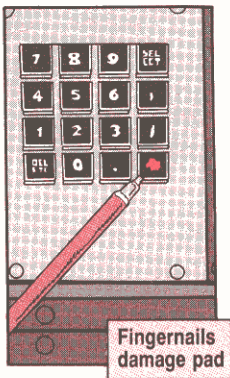
NO, LET'S KEEP LOOKING!



Hand-tight is right!

membrane in the detection unit. The MM1's not usable.

Trim your fingernails before you use the MM1 keypad. Long fingernails puncture the pad and eventually it won't work. Your best bet is to use your finger pads to key the pad.



The only MM1 light you repairmen are allowed to change is the one for the printer. Stay away from the other lights. They break if you disassemble them.



PS END

6,000-lb RT Forklift . . .

Know When to Shift Gears

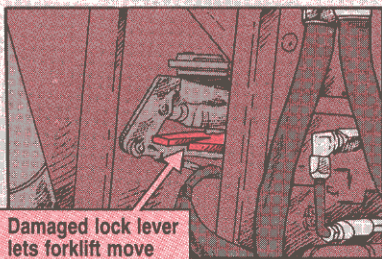
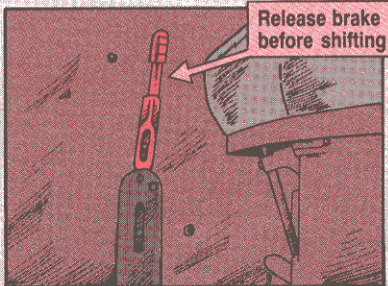
You can't shift your MHE 200, 202 and 222 forklift's transmission out of neutral when the emergency brake is on. So don't go banging up the neutral shift lock lever assembly trying to shift gears.

If you bang it around enough, you'll shear the pin in the transmission's neutral lock lever or bend the linkage rod.

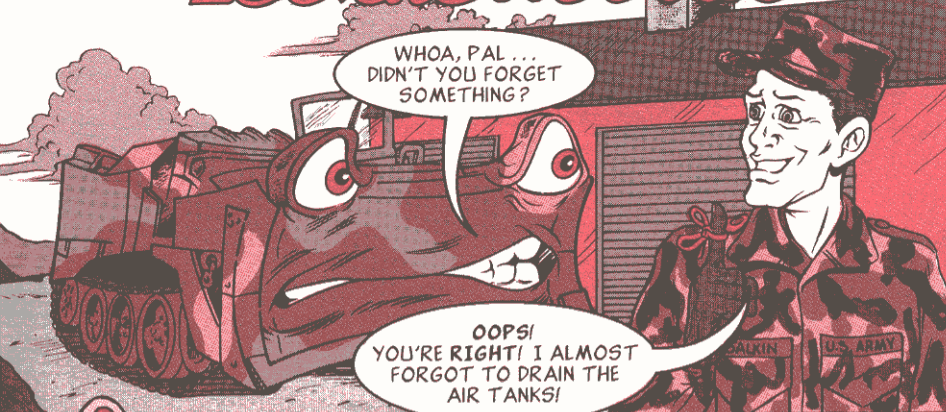
Then you'll find the forklift moving even if you set the emergency brake.

If you can't get your forklift into gear, get your mechanic to check the pin. It's probably sheared.

Make sure the transmission is in neutral and the emergency brake is off before shifting. That'll save the shift lock lever for sure, and maybe a life.



Let the Air Out



Operators, not bleeding the air out of your M9 ACE's brakes after operation causes condensation in there. Water leads to rust and corrosion in brake valves and cylinders. Corrosion leads to brake failure.

To keep your vehicle's brakes braking, drain the air tanks after each day's operation.

Hold the valve open until you hear no more air escaping. That keeps moisture from stopping you cold.

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9. The purpose, function and nonprofit status of this organization and the exempt status for Federal income tax purposes Has Not Changed during the Preceding 12 Months	1. Office use, left over	-0-
	2. Return from News Agents	-0-
	G. Total	145,739
	11. I certify the statements made by me above are correct and complete. Jerome J. Hill, Production Manager	140,920

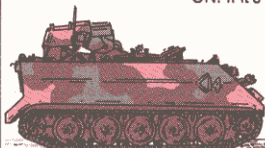
M88A1 Night Sights

You only need one night vision device on your M88A1 recovery vehicle. Page B-6 of TM 9-2350-256-10 is wrong when it says you need both the M24 periscope AND the M24A1 or AN/VVS-2 night vision viewer. Make a note until the TM is corrected.



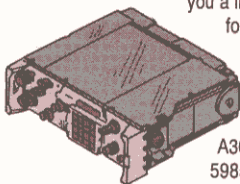
M901 TM's Wrong

Hold one, M901 ITV crews, when you get to Step 28 of your BEFORE PMCS in TM 9-2350-259-10. The TM's wrong. When you depress or elevate the launcher to the max, the elevation stow light should be OFF, not ON. If it's on, report it.



SINGARS Antenna Parts

TM 11-5820-890-20P (Jun 93) leaves you a little short of info for AS-3900/VRC antenna sub-assembly. Item 14 in Fig. 107 should be PN A3017902-1, NSN 5985-01-306-4604.



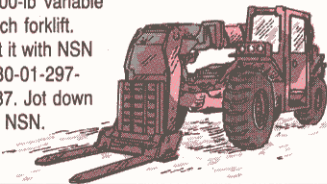
M548 Wiper Blade

Get the windshield wiper blade for your M548 cargo carrier with NSN 2540-01-098-1865. Make a note until the -20P TM is updated.



MHE-269 Filter Element

Your parts TM doesn't list the spin-on element for the hydraulic oil filter on your 6,000-lb variable reach forklift. Get it with NSN 4330-01-297-0387. Jot down the NSN.



MTT Cleaner NSN

To get "clean" cans of compressed air to blow out loose dust in magnetic tape transports (MTT), use NSN 6830-01-334-7026. That gets you a dozen 10-oz refills that will not damage the environment.



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

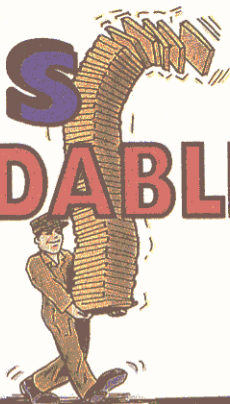
Would You Stake Your Life *right now* on the Condition of Your Equipment?

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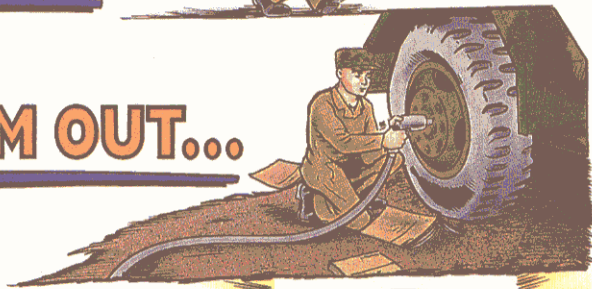
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Washington, D.C.

TMS ARE EXPENDABLE!

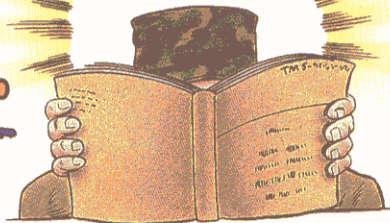
USE 'EM UP...



WEAR 'EM OUT...



MAKE 'EM DO...



BUT DON'T DO WITHOUT!



ORDER
NEW
ONES!
