

Issue 263

PS

October
1974

THE PREVENTIVE MAINTENANCE MONTHLY

SEE
PAGE
29

NO, PRIVATE, THAT'S NOT THE
WAY YOU REMOVE A PATCH
FROM THE BORE!

I
DIDN'T
KNOW
THAT...

THERE'S
ONE IN EVERY
OUTFIT!

MURPHY
ANDERSON





MOVES MEN TO ACTION?

"I don't know what it is that impels some men, either in peace or in wartime, to extend themselves beyond all expectation, or what holds other men back to do just as little as possible. In any group of soldiers you'll find both kinds."*



*Ernie Pyle, "Brave Men", 1944, Holt, Rinehart, & Winston, Inc.
Ernie Pyle was a noted war correspondent during World War II. He was killed by enemy machinegun fire on Ie Shima (near Okinawa) in 1945.

"... beyond all expectation, or ... as little as possible."

What do you expect of yourself? The best? Or the worst?

Your equipment tells the story. The Preventive Maintenance you do—or don't do—for your equipment tells how hard you try. It's a measure of your interest and ability in handling responsibility. Any responsibility. Job. Home. Family. Yourself.

"... beyond all expectation, or ... as little as possible."

If you're just half-way between these extremes, you're doing all any-one else expects of you.

Above or below is up to you. It's up to your expectation of yourself.



Published by the Department of the Army for the information of organizational maintenance and supply personnel. Distribution is made through normal publication channels. Within limits of availability, older issues may be obtained direct from Editor, PS Magazine, Lexington, Ky. 40507.

ISSUE No. 263 OCTOBER 1974

COMBAT SUPPORT

EIR's	2-3	Painting Handtools	60-61
New Publications	28	Shear Pins	62-63
DA Form 2408-9	54-59	Air Conditioner PM	64

FIREPOWER

4-17

BYOI Chaparral	4-11	Starlight Scope	15
Chaparral Tips	12-13, 14	.50-Cal M2 MG	16-17

GROUND MOBILITY

18-27

Battery Poop	18-19	2½-Ton Truck	24, 26
Carburetor Care	20-21	5-Ton Wrecker	24
Tire Flaps	22	Gama Goat	25
Battery NSN		Battery Decal	25
Changes	23	Chain Covers	26
Ice Scraper	23	¼-Ton Trailers	27

COMMUNICATIONS

37-45

KS-19 Camera Set	37	Shelter Tiedowns	42
DANGER Decals	38-39	AN/PRT-4 Cover	43
AN/VRC-64	40	SB-3082/GT	44
MX-6707	41	AN/ITC-7	44
Sensor Battery	45		

AIR MOBILITY

46-53

Cotter Pins	46-47	DA Form 2410	50
Aircraft Pubs	48-49	UH-1	51, 52
Huey Cobra		53	

PS wants your ideas and contributions, and is glad to answer your questions. Name and address are kept in confidence. Just write to: call: Autoven 745-3503.

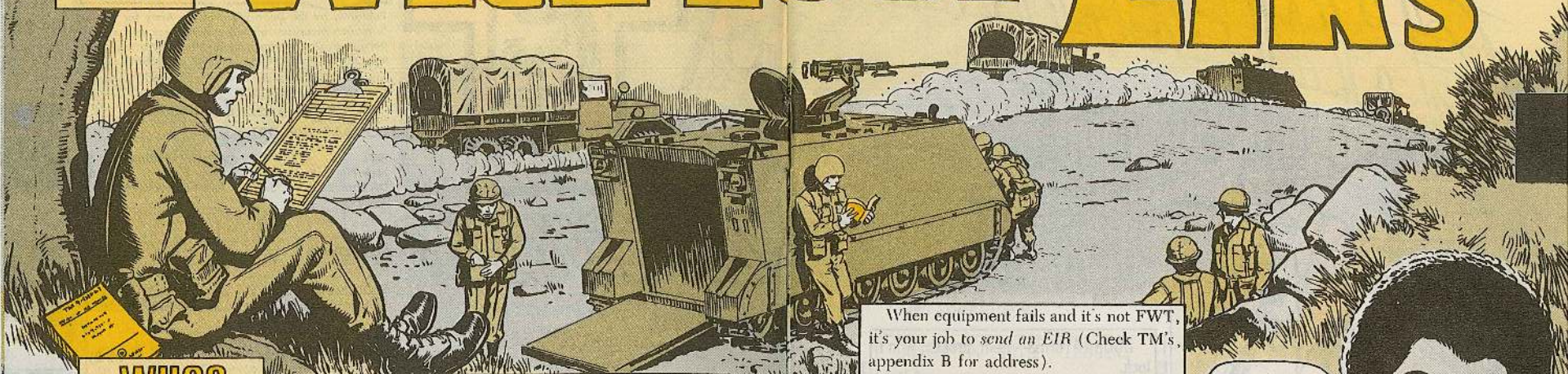
M S G Half-Mast
PS Magazine
Lexington, KY
40507

Use of funds for printing of this publication has been approved by Headquarters, Department of the Army, 17 July 1973.
DISTRIBUTION: In accordance with requirements submitted on DA Form 12-5.



THE WAY TO GO . . .

With Your EIR's



WHO?

YOU!—Operator, mechanic. . . every man-jack in the Army.

WHEN?

NOW!—Any and every time you suggest an improvement or there's an abnormal failure—not caused by fair wear and tear (FWT), including defects when equipment's received.

WHAT?

DA 2407!—Equipment Improvement Recommendation (EIR)
—Preceded by a TWX or phone call if there's an **EMERGENCY**
—with hazard to life, flight safety or national security or danger of serious personnel injury or damage or destruction of equipment.

WHERE?

ON-THE-SPOT!—Without delay . . . so do it ASAP.

WHY?

GOES WITHOUT SAYING!—It's your life, equipment and money (taxes) that're on the line.

HOW?

IN FULL DETAIL . . . Just like paras 3-16 and 3-17 in TM 38-750 say (plus para 3-19 if DA 2407-1 is used). Give it all you've got!

When equipment fails and it's not FWT, it's your job to *send an EIR* (Check TM's appendix B for address).

If equipment fails twice you've got double trouble—send *another EIR*.

Never take a failed item apart or clean it (until it's authorized)—*tag it with DA 2402 and send an EIR*. Don't send item until requested.

For quicker action, always *add your AUTOVON number* to your EIR's block 35.

If the response to your EIR leaves questions unanswered, ask for a translation.

When the failure's not a hazard or potential hazard to safety or security, rate it routine.

CRYING "WOLF!" TOO OFTEN CAN DAMAGE YOUR CREDIBILITY—BUT **DON'T UNDER-RATE THE DANGER, EITHER!**

SO... **SING OUT!**

DA FORM 2407		EQUIPMENT IMPROVEMENT RECOMMENDATION	
1. URGENT ☐	2. ROUTINE ☐	3. IMPROVE DESIGN ☐	4. REVISE PROCEDURE ☐
5. MODIFY ☐	6. OTHER/UNCLAS ☐	7. LOCATION ☐	8. LOCATION ☐
9. LOCATION ☐	10. LOCATION ☐	11. LOCATION ☐	12. LOCATION ☐
13. LOCATION ☐	14. LOCATION ☐	15. LOCATION ☐	16. LOCATION ☐
17. LOCATION ☐	18. LOCATION ☐	19. LOCATION ☐	20. LOCATION ☐
21. LOCATION ☐	22. LOCATION ☐	23. LOCATION ☐	24. LOCATION ☐
25. LOCATION ☐	26. LOCATION ☐	27. LOCATION ☐	28. LOCATION ☐
29. LOCATION ☐	30. LOCATION ☐	31. LOCATION ☐	32. LOCATION ☐
33. LOCATION ☐	34. LOCATION ☐	35. LOCATION ☐	36. LOCATION ☐
37. LOCATION ☐	38. LOCATION ☐	39. LOCATION ☐	40. LOCATION ☐
41. LOCATION ☐	42. LOCATION ☐	43. LOCATION ☐	44. LOCATION ☐
45. LOCATION ☐	46. LOCATION ☐	47. LOCATION ☐	48. LOCATION ☐
49. LOCATION ☐	50. LOCATION ☐	51. LOCATION ☐	52. LOCATION ☐
53. LOCATION ☐	54. LOCATION ☐	55. LOCATION ☐	56. LOCATION ☐
57. LOCATION ☐	58. LOCATION ☐	59. LOCATION ☐	60. LOCATION ☐
61. LOCATION ☐	62. LOCATION ☐	63. LOCATION ☐	64. LOCATION ☐
65. LOCATION ☐	66. LOCATION ☐	67. LOCATION ☐	68. LOCATION ☐
69. LOCATION ☐	70. LOCATION ☐	71. LOCATION ☐	72. LOCATION ☐
73. LOCATION ☐	74. LOCATION ☐	75. LOCATION ☐	76. LOCATION ☐
77. LOCATION ☐	78. LOCATION ☐	79. LOCATION ☐	80. LOCATION ☐
81. LOCATION ☐	82. LOCATION ☐	83. LOCATION ☐	84. LOCATION ☐
85. LOCATION ☐	86. LOCATION ☐	87. LOCATION ☐	88. LOCATION ☐
89. LOCATION ☐	90. LOCATION ☐	91. LOCATION ☐	92. LOCATION ☐
93. LOCATION ☐	94. LOCATION ☐	95. LOCATION ☐	96. LOCATION ☐
97. LOCATION ☐	98. LOCATION ☐	99. LOCATION ☐	100. LOCATION ☐

DA FORM 2407

GIVE ALL THE DETAILS HERE ON HOW YOUR GEAR FAILED.

CONTROL COPY

FIREPOWER

BE YOUR OWN INSPECTOR. . .

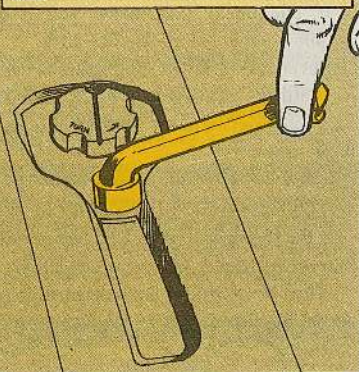
CHAPARRAL

HERE'RE SOME SPOTS THAT NEED SPECIAL ATTENTION.

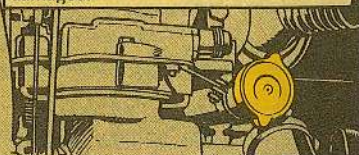
THOSE IN **BOLD FACE TYPE** NEED IMMEDIATE ACTION TO STOP DOWN-TIME OR PARTS REPLACEMENT!

FUEL TANKS—Filler cap bent; threads damaged. Chain broken. O-ring **missing**, damaged. Fuel gage rod missing, loose. TIP: Hand tighten the fuel cap.

DOOR LATCHES—Bent, broken, won't lock.



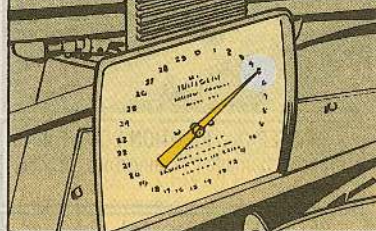
OIL LEVEL—Low; filler cap missing, damaged.



MPU COMPARTMENT

INTERLOCK SWITCH PLUNGERS — Stuck.

GENERATOR DRIVE BELTS — Too loose/tight. A deflection of 1/2 inch with 4-6 lbs of pressure at midpoint of each belt is OK. More'n this calls for belt adjustment. TIP: If one belt is frayed or broken, replace all four.



OIL/GASOLINE LINES—Loose, leaking.

ELECTRICAL CABLES, CONNECTIONS —Broken, damaged. Never force a connection.

A COPY OF TM 9-1440-585-12 (OCT 69) HELPS A HEAP!

FUEL TANK SELECTOR VALVE—Set on OFF.

DUCT COVER — Damaged, twisted/buckled, won't fasten. Seals rotten, dry, hard, brittle.



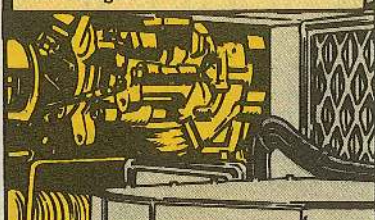
FIRE EXTINGUISHER — Underweight; seal missing. Mount clamp and bracket loose, damaged, broken, won't hold extinguisher.



PS MORE

AIR CONDITIONER COMPARTMENT

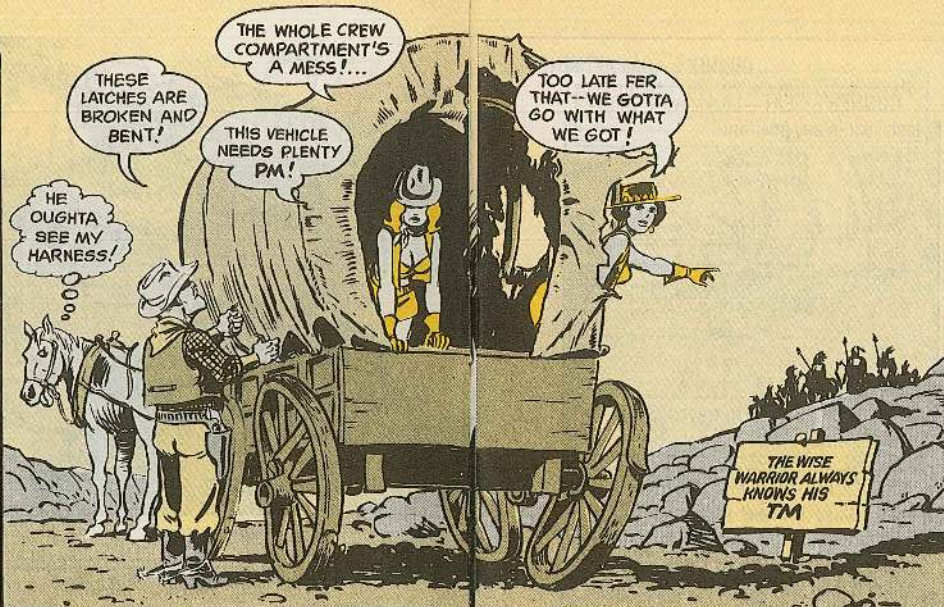
COMPARTMENT—Pull air conditioner away from mount. Check for hydraulic fluid leakage.



LATCHES—Bent, broken, won't engage

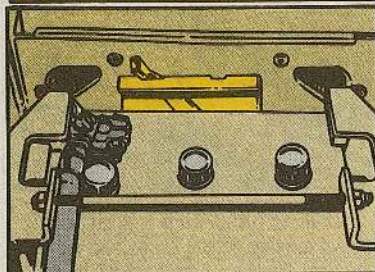
DUST/DOOR SEALS—Damaged, hard, dirty.

INTERLOCK SWITCH PLUNGER — Stuck, damaged.



CREW EQUIPMENT COMPARTMENT

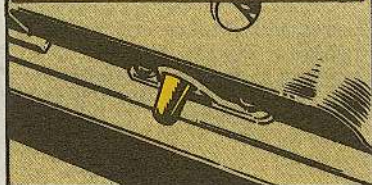
SUMMER-WINTER SWITCH — Set for wrong season. Heat air ducts damaged, clogged with gunk.



BATTERY BOX — Latches and hinges broken, damaged, bent. Inside of cover and box dirty; hold down clamps or battery mount frame corroded, damaged.

BATTERY CABLES/TERMINALS — Loose, dirty, corroded.

LATCHES — Broken, bent. Interlock switch plungers stuck. Door won't close.



MASTER DISTRIBUTION BOX—Cables broken, damaged; connectors broken, damaged.

BATTERIES — Damaged, dirty, corroded; electrolyte level too low. It's supposed to be above the split ring. Vent plugs loose.

AIR PURIFIER—Valve won't operate according to Hoyle. Dirty, damaged, leaks air.



RADIO/RECEIVER R-442/VRC — Mount damaged; cables unhooked; loose.



MISSILE AND LAUNCH RAILS

MISSILE DETENT LATCHING LEVER—Damaged.

RAILS — Dirty, corroded, unlubed, cruddy with exhaust build-up.

DAMPER ROLLERS—Damaged, won't turn freely.

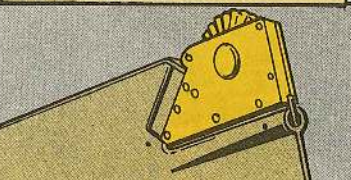


LEAF SPRING MOUNT SCREWS — Eroded beyond limits.

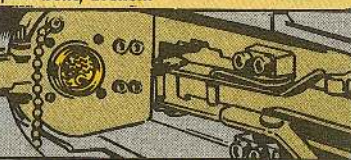
FIRING SAFETY PINS—Loose, damaged.

WARNING STREAMERS — Missing; pins bent, damaged.

ROLLERON — Covers damaged. Wheels won't spin free 'n' easy. No wobble or noise allowed!



UMBILICAL CONNECTOR AND CABLE — Loose, damaged. Retractor mechanism unhooked. Receptacle connector pins bent, broken.

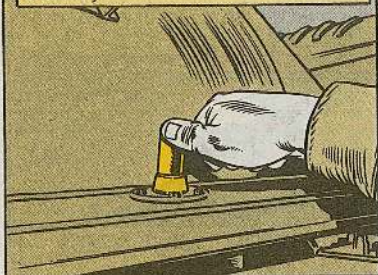


MISSILE SURFACE — Dented, scratched, punctured.

DOME COVERS—Missing, damaged.

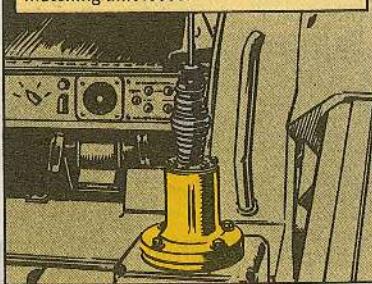
GUNNER'S COMPARTMENT

CANOPY ASSEMBLY — Damaged; won't **lock/unlock** from outside. Interlock switch **damaged**, won't operate smoothly.



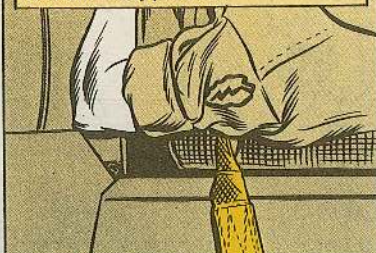
SEALS — Cruddy, crumbly, hard, ripped, **missing**, loose.

ANTENNAS—Whips loose in mounts; cables loose, **damaged**. Mounting base matching unit loose.



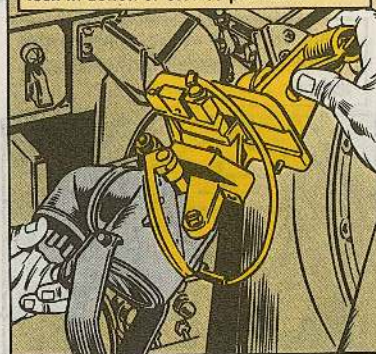
CANOPY — Can't be **latched/unlatched** from inside.

GUNNER'S SEAT—Locks worn; won't lock seat in any position.



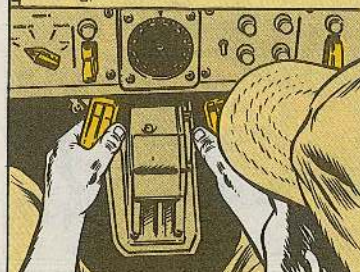
SEAT BELTS—Worn, frayed. Shoulder harness ditto.

SIGHT AND SIGHT MOUNT — Damaged. Glass **broken**, scratched (NOTE: Tender touch is the word when cleaning glass. Use lens tissue, lens cloth or camel's hair brush only.) Sight won't **lock** in action or stowed positions.



AIR CONTROLS AND AIR INTAKE CONTROLS—Sticky.

SWITCHES—Stuck, or work molasses--slow; spring tension weak. Knobs missing, broken.



TRIGGER AND ACTION SWITCHES—Stuck.

HAND CONTROL — Won't positively spring-load to center position. Action rough, sluggish throughout azimuth/elevation rotation.

CONTROL PANEL — Switch guards damaged, broken, missing; toggle switch boots damaged, missing; rotary switches and control knobs loose, missing.

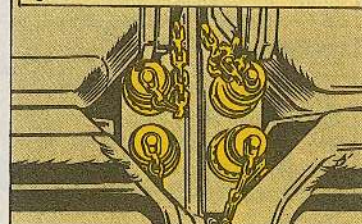
GUNNER'S HEADSET/MICROPHONE—Cable damaged; connections loose; ear cushions missing, hard 'n' dry, **damaged**.

COMPARTMENT—Dirty; catch-all for FOD items.

MISSILE STORAGE COMPARTMENTS

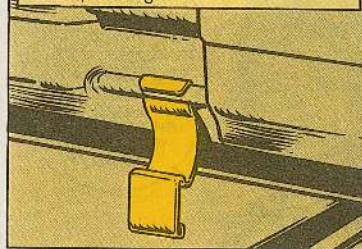
COMPARTMENTS — Sand, gravel between cases and sides of bins.

HEATER CABLES—Dirty, loose, deteriorated. Connectors, receptacles **damaged**.

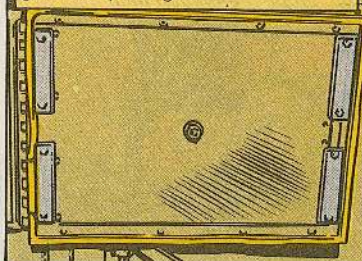


MISSILE DOME COVERS—Missing.

STORAGE CASE—Won't slide freely when pulled out; rails dirty. Latches broken, missing.



DOORS—Seals damaged, dirty, hard, brittle. Hinges and latches corroded, gummed up with gunk.



HEY! MY SEAT BELT GAVE WAY!

THIS COMPARTMENT'S FULL O' JUNK!

HECK! MY TRIGGER'S STUCK!

--AN THIS CANOPY'S SHOT!

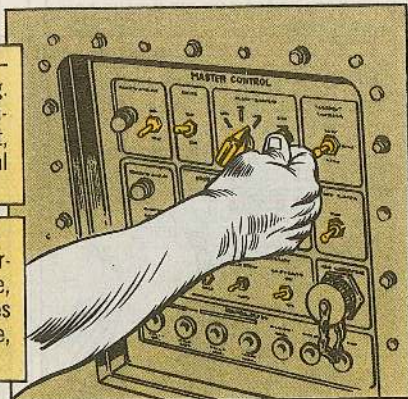
LUCKY FOR US-- THEY GOT BAD PM!

WATCH OUT FOR FOD, MY BRAVES!

OTHER

MASTER CONTROL PANEL DOOR — Seal damaged, brittle, dirty, missing. Hinge and latch corroded, damaged. Interlock switch plunger damaged, bent, won't operate smoothly. Electrical cables damaged, loose.

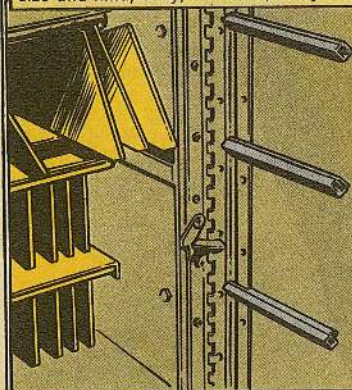
MASTER CONTROL PANEL (MCP) — Toggle switch boots damaged, deteriorated, split; rotary switch knobs loose, damaged. Elapsed time meter faces missing, damaged; switch mounts loose, damaged.



WING/FIN STORAGE COMPARTMENTS

COMPARTMENTS—Dirty.

TOOLS — Missing, damaged, wrong size and kind; dirty, corroded, rusty.



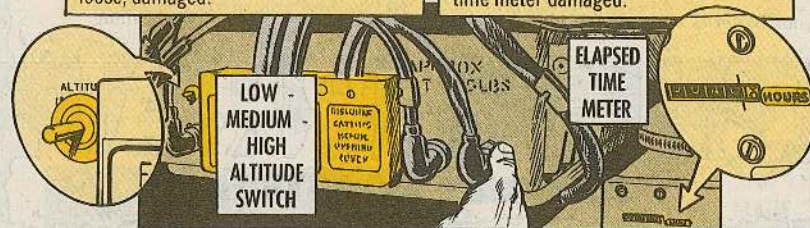
WINGS/FINS—Stored wrong; roller covers missing.

THERE --
BEING YOUR
OWN INSPECTOR
IS REALLY NOT
TOO BAD, HUH?
IF TH' TIME FOR
A SHOOT OUT
SHOULD COME
YOU CAN BE
READY!

PM AREAS

GENERATOR SET CONTROL BOX — LOW-MED-HIGH altitude switch in wrong position; electrical cables, connections loose, damaged.

AIR COMPRESSOR — Mount loose, damaged; air hoses and electrical cables loose, damaged. Compressor elapsed time meter damaged.



COMMUNICATIONS—Radio R/T, local control unit, or audio-amplifier mounts loose, damaged; electrical cables loose; indicators and controls damaged, broken, missing.

EXTERIOR

COMMO BINDING POSTS — Sluggish operation; mounts loose, damaged; protective covers damaged, missing; W-57 cables damaged.



FIELD WIRE CLEATS—Loose mounts; damaged.

SLAVE CABLE RECEPTACLE — Cover dirty, damaged, missing.

DRAIN AND OVERFLOW HOSES — Missing, damaged, clogged with gunk.

ABLATIVE COATING—Damaged.

YESSIR-E-E-E,
KEEP A SHARP,
TIGHT PM HAND
AND EYE ON YOUR
CHAPARRAL'S
SUB-SYSTEMS
AND THOSE MISSILES
WILL STREAK TO
THE TARGET--
ON TIME!

Chaparral missile system launch stations get extra kinky in cold weather . . . making demands on lead-acid batteries that fairly scream for top performance from those power sources.

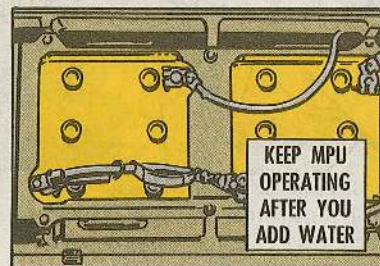
And so, oh squad leader, here's a pile of pertinent particulars on how to keep your batteries up and your launch station operating when winter comes calling.

CHAPARRAL BATTERY BOOSTERS

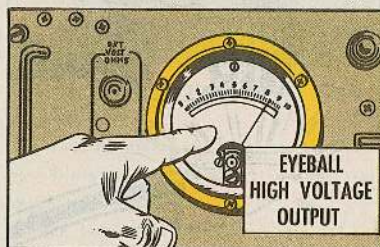
YOU OR ONE OF YOUR SQUAD MEMBERS SHOULD OPERATE THE LAUNCH STATION MAIN POWER UNIT (MPU) AT LEAST 3 HOURS EACH DUTY DAY.

Do not operate the launch station unless the MPU is charging the batteries. And, the MPU should be on for at least a half hour before you operate the turret.

Do not add water to your lead-acid batteries unless you operate the MPU for at least an hour after you add it. Putting in water and not charging the battery is a sure way to freeze the juice and ruin the battery.

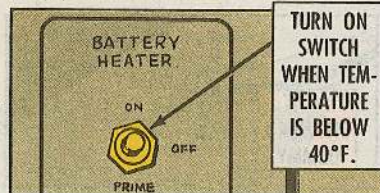


Have your maintenance people inspect the MPU to be sure it's supplying the voltage needed to keep the batteries charged.



Further insurance:

Operate battery heaters whenever the temp goes below 40°F.



When the mercury drops below 15°F, the battery heaters should be on at least 15 minutes before you start the MPU. At that temp . . . and down to -15°F . . . the MPU should be going for 20 minutes before you apply master power.



If it's *really* cold where you are, like colder than -15°F, operate the MPU for 45 minutes or so before you apply master power.

When batteries are down so bad they won't kick over the MPU, start the MPU with a slave cable. Otherwise, it's a manual job, like in Table 3-9 (4-d) of TM 9-1440-585-12.



Any discharged battery should be charged for at least 8 hours . . . or until the specific gravity is 1.280.

Never use jumper cables to charge the batteries or start the MPU.

Get with that program, and your lead-acid battery cold-weather problems will drift away like a snowflake on a breeze.

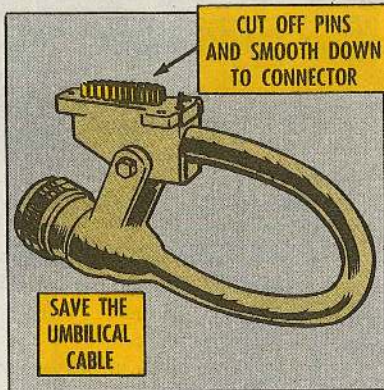
SAVE THE CABLE

Next time your Chaparral M-72A or -72B missile blasts off, save the umbilical cable.

With slight modification, you can use it on the M-30 trainer, get good practice in connecting and disconnecting it . . . and save money, too. Like, it saves buying M-30 cable assemblies.

To use the expended umbilical cable with the M-30, do this:

1. Clip the pins from the cable connector which mates with the guidance section.



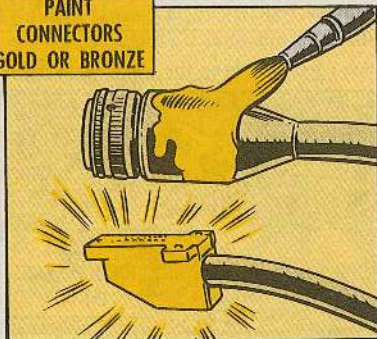
2. Smooth the pins even with the connector base by using a file or a grinder. Do not remove the air hose.

AW, SHUCKS, CONNIE! AH SEEN MAH DUTY...

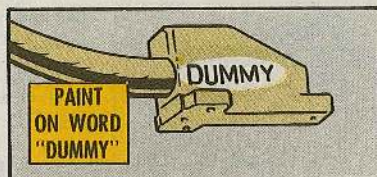
...AN' AH DONE IT!

3. Paint each cable connector with enamel, NSN 8010-00-079-2750 (MIL SPEC TT-E-488) 12-oz can, (gold or bronze).

PAINT
CONNECTORS
GOLD OR BRONZE



Stencil or print "DUMMY" on each side of the base connector.



STAR-
LIGHT

ADAPTER'S A MUST

HOLD ONE, SOLDIER-- ARE YOU SEEING GREEN?

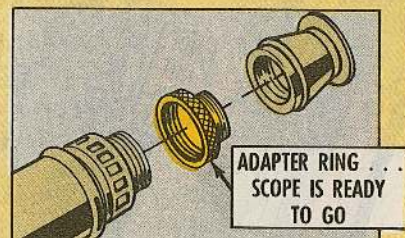


Seeing green on that starlight scope is a must.

'Cause no green on the scope can have you blinking red for woes headed your way.

Like, having a AN/PVS-1, -2(), -3() or AN/TVS-2() night vision sight without MWO 11-5800-210-30-1 (Feb 72) applied could damage your eye.

A scope which has the green knurled adapter ring on the eyepiece assembly has the MWO and the sight is ready to go.



And, o' course, a scope with green foil tape on the eyepiece is up to snuff and doesn't need to be modified.

WITHOUT THE TAPE OR RING YOU HAVE PROBLEMS.

SO GET YOUR SIGHT OFF TO YOUR SUPPORT, PRONTO, SO THEY CAN MODIFY IT.



.50-CAL M2 MG

CRUEL *And* Unusual PUNISHMENT

In Bonnie's PMD* (*Personal Maintenance Diary) there's a whole chapter on the .50-cal M2 machinegun.

50-CAL M2 MACHINEGUN
Para 5, Sect. II - "Cruel and Unusual Punishment
or Bend-Bang-and-Bung-up Bad Stuff

NEVER-

—Set the main assembly of your turret-type .50-cal M2 down on its rear end.

NO! NOT THIS WAY

OR YOU'LL DAMAGE SOLENOID TRIGGER

That moves, bends or breaks off the solenoid trigger or other vulnerable

parts. Instead, set it down easy, on its belly.

... SET IT DOWN LIKE THIS!

NEVER-

—Pile up your M2's like firewood, or you're just asking for bent, jammed, jimmied, broken or missing parts, especially rear sight assemblies on flexible and commander's cupola types.

THERE ARE LOTS OF DELICATE PARTS ON SIGHT ASSEMBLY

EASY ON NOTCHES & THREADS

NEVER-

—Pile up barrels. Carelessly tossing 'em into a pile bangs up the notches 'n' threads. Also, be careful when screwing the barrel onto the barrel extension.

Those barrel locking spring notches 'n' threads have gotta be respected.

SO TAKE THESE TIPS FROM A DAIRY-MAID AND YOU'LL NEVER CRY OVER SPILLED MILK ...

ERR...

MACHINE GUNS!



BATTERY CAPS

NO, NO-- OLD CHAP!!
LATEST POOP FROM THE
HEAD SHED SAYS WE KEEP
OUR CAPS ON FOR JUMPING!

As you were.

Leave battery caps on--screwed in--when you're jump-starting a military-design vehicle with dead batteries. Leave the caps on both the dead batteries and the live batteries being used for jumping.

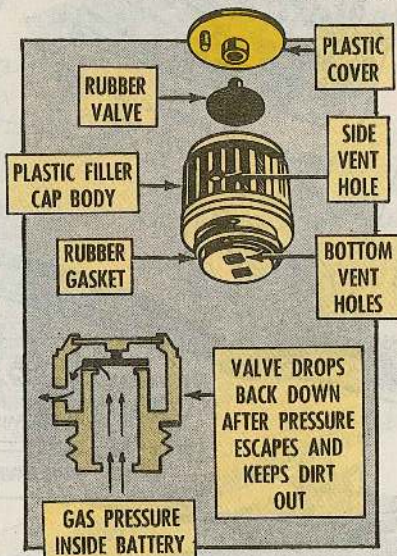
Forget what was said in PS Magazine 255, "Safety Tips For You," about taking the battery caps off for jump starting.

Some automobile manufacturers tell you to take the caps off for jumping. You'll find this in owner's manuals, and it's been printed in several civilian safety publications and in several military publications.

But the Army's battery experts see it this way:

Caps on the two most common military batteries, 2HN and 6TN, are vented to relieve any internal pressure, such as might come from "gassing" during either jump-starting or charging. Fact is, they both amount to pretty much the same thing as far as the dead battery is concerned.

There's a 2-way valve inside the cap. Besides relieving internal pressure, it keeps dirt, water and any other contaminants out of the battery.



ON for JUMPING



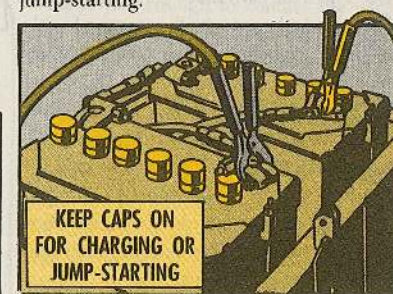
GREAT!
I ALWAYS DID
FEEL NAKED
WITHOUT MY
CAPS!

You should keep battery caps clean so the valve will work.

There you are:

Keep battery caps on for charging or jump-starting.

USE A STIFF PIECE OF WIRE TO
POKE DIRT OUT OF VENT HOLES.
CAREFUL WHEN YOU POKE UP INTO
THOSE TWO BOTTOM VENT HOLES —
YOU MIGHT DAMAGE THAT SOFT
RUBBER VALVE INSIDE



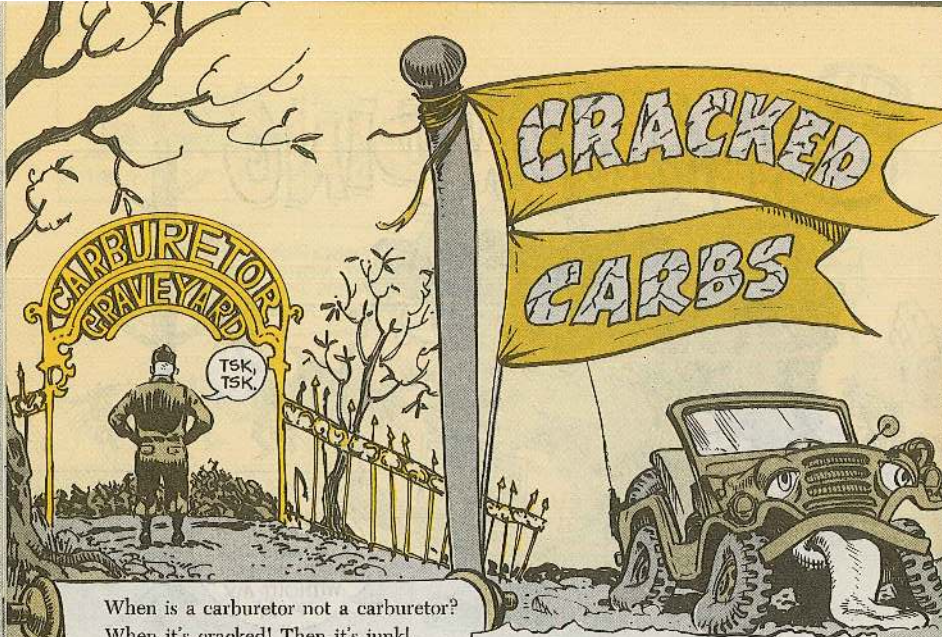
KEEP CAPS ON
FOR CHARGING OR
JUMP-STARTING

A dirt-clogged cap won't cause a battery explosion, though. Most likely, gas pressure inside the battery will force the dirt out. The worst that can happen is that the battery case may crack from the internal pressure.

Battery explosions come from escaping hydrogen gas being ignited by spark or flame.



KEEP SPARKS
AND FIRE
AWAY.



When is a carburetor not a carburetor?
When it's cracked! Then it's junk!

And a lot of cracked carbs for the M151A2 ¼-ton truck are being turned in to DS. This's the carb that's got an in-line fuel filter hooked up to it. Same goes for the M718A1 ambulance and M825-106MM recoilless rifle carrier.

Too much muscle is killing those carbs. Let's start from scratch, since your TM 9-2320-218-20 (Sep 71) does not give you the full picture. Para 2-44b (4) and para 2-52a(2) do not tell you about the elbow between the fuel filter and the carb—and it's not shown in Figure 2-82.

But this elbow and its locknut are in your TM 9-2320-218-20P (Jan 72)—listed on page 46 and shown in Figure 3-7—

—Locknut, NSN 4730-00-832-5670
—Elbow, no NSN in TM...

...BUT YOU CAN
GET THE ELBOW WITH
NSN 4730-00-006-4005.

PUT ELBOW &
LOCKNUT BETWEEN
CARBURETOR &
IN-LINE FUEL
FILTER



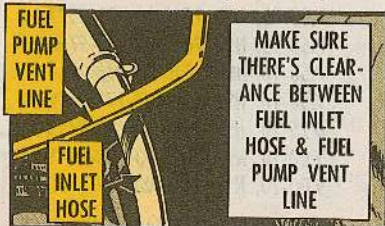
20



Here's how you hook up your fuel supply line and fuel filter to your carburetor so you don't crack the carb:

Run the locknut back on the elbow far enough to give you plenty of threads.

Turn the elbow into the carb, about 4 turns. Position the elbow so the open end points in toward the engine. This position



may have to go up or down a little so there's clearance between the fuel supply line and the fuel pump-vent line.

Now tighten the locknut against the carb.

Easy! Just enough to contact the carb. Then give the nut another half-turn. That's all it takes to get the right torque. This'll stop those leaks.

Then you're ready to install the in-line fuel filter.

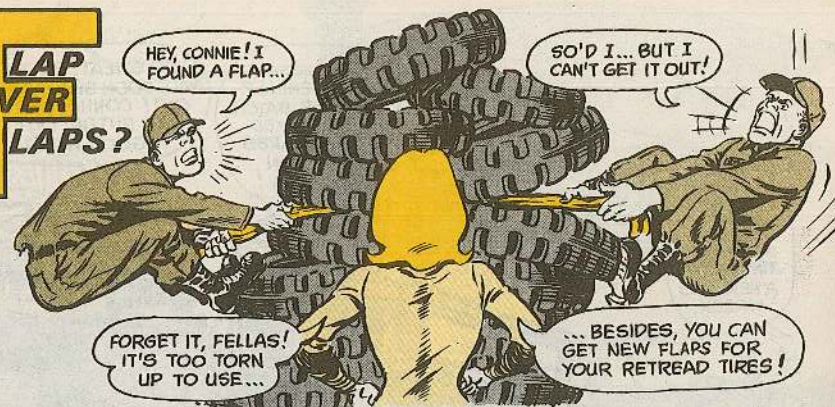
Sinear a little sealer, NSN 8030-00-088-7818, around the threads on the filter. Careful, though, you don't want to get that stuff on the end so it gets inside the elbow.

Screw the filter into the elbow just so it's snug—you don't have to lean on it.

FINISH UP
BY HOOKING
THE FUEL
SUPPLY LINE
TO THE
FILTER!

21

LAP OVER LAPS?

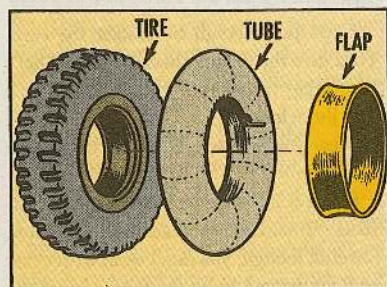


So you got a new tire—one that takes a flap?

But you didn't get the flap?

Then it's probably not a new tire. It's a retread. Only new tires come from depot supply with flaps.

OK, but where do you get a flap for that retread tire?



Try Property Disposal. When you turned in your old tire with the flap, the flap may have gone to your local PDO while the tire went off for retreading. If your own command hasn't set up a deal on re-issuing these flaps, they may be winding up on the salvage heap. And that's a waste of flaps—and that's money!

Careful, though. Just any ol' flap won't do. It's got to be the right size and in good

shape. You'll find tire flap poop in TM-9-2610-200-20 (Nov 72), paras 1-5g, 1-6c, 2-14, 2-16e and 2-16f.

When you're issued a retread tire, ask your supply support about the flap. In the best supply operations, those flaps turned in with old tires have been checked over for condition and the good ones kept for re-issue.

Or maybe your SOP says you keep the flap when you turn in a tire for retreading. Find out about it.

Still hurtin' for a flap?

You can get new flaps like so (tire size and NSN):

6.00-9, NSN 2640-00-535-7509
6.50-10, NSN 2640-00-472-8645
7.00-10, NSN 2640-00-799-0577
7.50-15, NSN 2640-00-895-5767
7.50-16, NSN 2640-00-696-0466
7.50-18, NSN 2640-00-797-0510
8.25-20, NSN 2640-00-699-9473
9.00-16, NSN 2640-00-208-7541
9.00-20, NSN 2640-00-147-5160

(or in a pinch, NSN 2640-00-158-5617 used with 11.00-20 tires)

11.00-20, NSN 2640-00-158-5617
16.00-24, NSN 2640-00-806-0488

FIX YOUR TRUCK NUMBERS



If you've got any 10-ton, 5-ton, 2½-ton or 1½-ton trucks, here're some NSN changes that'll be showing up in your -20P TM's:

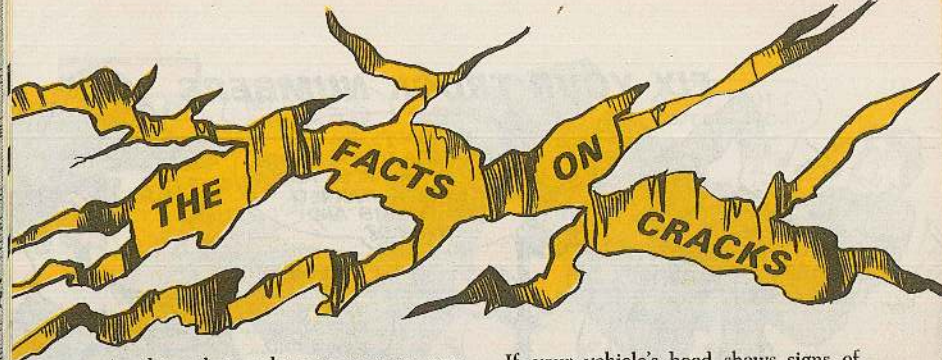


TM 9-2320-206-20P (Dec 71), page 27, change 2930-741-1061 to 2930-00-445-7217 for Cap Assembly, radiator.
TM 9-2320-260-20P (Nov 72), page 96, change 3030-788-1241 to 3030-00-778-1241 for Belt set, alternator drive.
TM 9-2320-209-20P (Oct 72), page 470, change 2540-930-9102 to 2540-00-391-4322 for Motor, windshield.
TM 9-2320-244-20P (Nov 71), page 51, change 2990-433-4809 to 2990-00-917-0739 for Pipe, exhaust, front, kit.

SCRAPE FOR FUEL



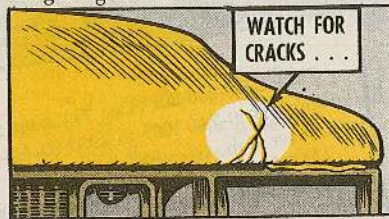
Here's a fuel-saver tip for y' all. Instead of running your vehicle engine a long time to defrost the windshield, use an ice scraper. With NSN 7920-00-045-2556, you get a combination plastic scraper and rubber squeegee.



Anything that undergoes as many ups and downs as the hood of your TM 209-series 2½-ton truck can sure be excused for getting a little cracked.

If your vehicle's hood shows signs of splitting at the front, your support has an easy fix.

They'll rivet or weld a piece of metal on the inside of the hood—



LIKE IT SAYS IN
TB 43-0001-39-2
(Apr 74).

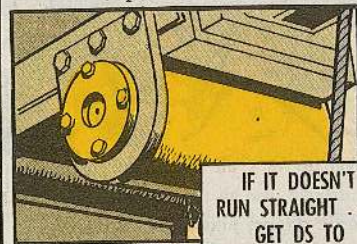


BOOM ROLLER BLUES?

BOY! NOW THAT'S
A BOUNCY BOOM
ROLLER IF I EVER
SAW ONE!

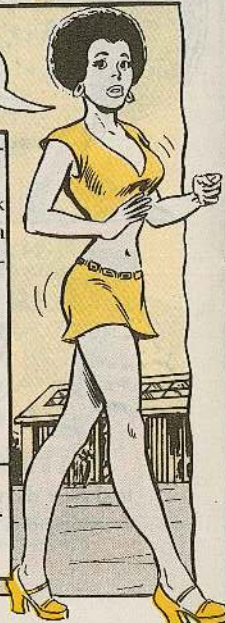
Don't sweat a bouncy boom roller assembly on your 5-ton wrecker.

If the boom won't run out straight, ask your Direct support to adjust the boom roller assembly the way it says in TB 43-0001-39-2 (Apr 74).



IF IT DOESN'T
RUN STRAIGHT...
GET DS TO
CHECK ROLLER

24



GAMA GOAT...

DRAIN AIR TANK MONTHLY

Dear Editor,
We've run into a problem here that's probably worldwide.

It concerns the air reservoir tank for the brake air pressurization system for the M561 1½-ton truck. This tank collects moisture like mad.

So SOP here requires frequent draining of the tank.

Other outfits may head off trouble by adopting the same SOP.

James M. Eubank
Fort Sill, OK



PETCOCK
ABOUT
HERE

HULL DRAIN PLUG

HULL
ACCESS
PANEL

OPEN
PETCOCK
MONTHLY

SOME GUYS
CAN REACH THE
AIR RESERVOIR BY
TAKING OUT THE REAR
HULL DRAIN PLUG. IF
YOU CAN'T, YOU'LL
HAVE TO TAKE OFF
ACCESS PANEL.

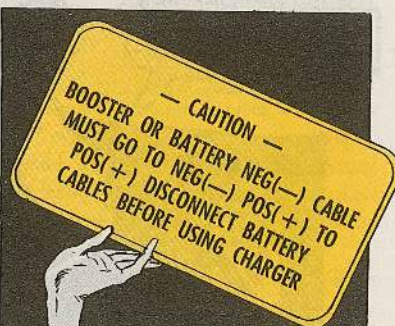


Ed Note: LO 9-2320-242-12 (Apr 72) calls for draining the air reservoir at 6 months or 6,000 miles. This interval will be changed to monthly in changes to the TM and LO.

DECAL FOR TRUCKS

All tactical trucks use it: Decal, alternator, warning, NSN 7690-00-912-3504. But parts manuals for all trucks don't list it. One that does is TM 9-2320-206-20P (Dec 71).

PUT THIS
DECAL NEAR
YOUR BATTERIES—
WHERE YOU'LL
SEE IT WHEN
YOU'RE HOOKING
UP A CHARGER
TO YOUR
BATTERIES.



25

SLIP IT TO 'EM

HERE,
WONDER
LADY,
TRY
THESE...

Use NSN 2540-00-594-0475 to get ready-made chain covers for your 2½- and 5-ton trucks.

Ask your DSU to make up tailgate chain covers for other vehicles, from canvas, NSN 8305-00-170-4956.

DSU
CAN MAKE
CHAIN COVERS

No need to run around with bare tailgate chains hanging the paint off your vehicle.

WANT A WINDOW?

If you're shy any window assemblies on your M109 or M185 series 2½-ton truck shop vans, rest easy not queasy, amigo.

HERE'RE
THE
NSN'S
YOU NEED--

SIDE WINDOW: NSN 2510-00-177-7793, sash assembly;
5071, screen assembly.
FRONT WINDOW: NSN 2510-00-179-5672, sash assembly.

EASY DOES IT

TAKE
IT EASY,
MAN!

IT'S
THOSE
(EXPLETIVE
DELETED)
SHOCK
ABSORBERS.

WHAT'S THAT
12-LETTER
WORD?

DUNNO--
MUST BE
3 TIMES
AS BAD AS
A 4-LETTER
THOUGH.

WAIT'LL
HE CHANGES
THOSE SHOCKS--
THAT'LL TAKE
A 24-LETTER
WORD!

No need to sweat, fuss and use that 12-letter word when you're changing shock absorbers on your ¼-ton trailer (M416 etc.).

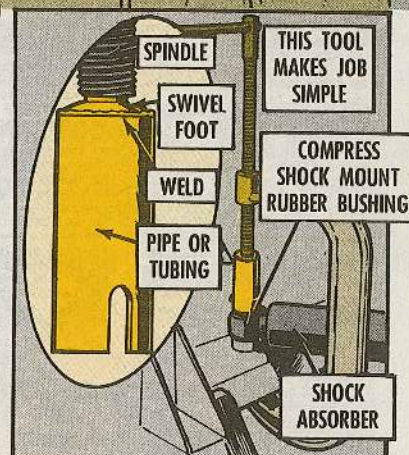
The tough part of the job is removing and installing the cotter pin. You've got to compress the shock mount rubber bushing.

But a simple tool makes the job simple.

It's just a C-clamp—at least 9 inches long—with a piece of slotted pipe welded onto the clamp spindle's swivel foot.

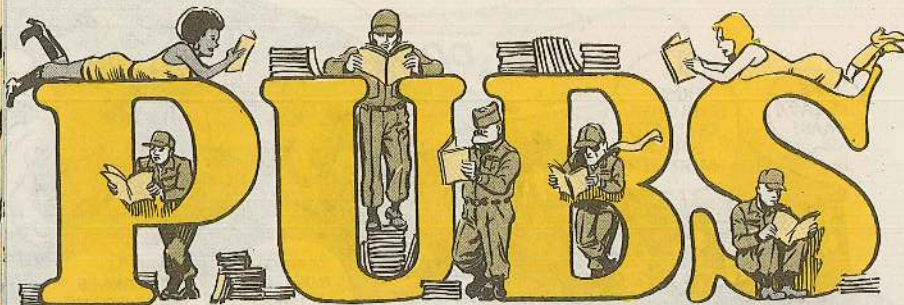
A "medium service," 10-inch C-clamp is listed under NSN 5120-00-203-6432 in Federal Supply Catalog C5120-IL-A (Apr 73) and in the GSA Catalog (Oct 73). Or you may find one in your Quick Supply Store.

SEE
ARTICLE
3-10 IN
TB 43-0001-
39-2,
(Apr 74).



You can scrounge a piece of pipe or thick-wall tubing, 1½-to-2-inches long. It should have an outside diameter of about 1¼ inches and inside diameter of ¾ inch. Cut slots at one end so it'll clear the cotter pin.

Then you don't need that 12-letter word: Ohmygoodness!



This is a selected list of recent pubs of interest to organizational maintenance personnel. This list is compiled from recent AG Distribution Center Bulletins. For complete details see DA Pam 310-4 (Aug 73), and Ch 2 (Dec 73), TM's, TB's, etc., DA Pam 310-6 (Jul 73) and Ch 3 (Apr 74), SC's and SM's; and DA Pam (C) 310-9 (Mar 73), COMSEC Pubs.

TECHNICAL MANUALS

TM 5-2410-208-10 Ch 6 Jul Tractor, I.H. Model TD 20 (201) w/w
TM 5-2410-209-12 Ch 7 Jul Tractor, w/ winch, Bulldozer, or ripper, AC mdl HD-16-M
TM 5-2410-231-10 Ch 3 Jun Tractor, (Caterpillar Model D5)
TM 5-3805-239-12 Ch 7 Jul Loader, Scoop Type 2 1/2 Cu Yd AC 645A
TM 5-3805-245-15 Ch 2 Jul Loader, Scoop 2 1/2 Cu Yd, (AC TL-645)
TM 5-4310-218-10 Ch 4 Jun Compressor, Air; 15 CFM 3500 PSI (Joy 15HGP9-MS-1)
TM 5-4610-220-14 Ch 3 Jun Water Purit Set; 600 GPH (Met-Pro VN500)
TM 5-4610-223-15 Ch 3 Jul Water Purit Unit, Van 3000 GPH (Met-Pro 3000V)
TM 5-4610-224-ESC Jul ESC for Water Purit Units, Trailer, Van and Base Mtd; Met-Pro-Mdl VN500, 600, 600C, 1500, 2600, 1500-2600A, 3000-2700, 3000, 2700A, 3000V, and Litton MDL-LPU-420-1
TM 5-6115-217-10 Ch 5 Jun Generator 15-KW, AC, (U.S. Motors 15-US-10327B-

A W/Continental Engine 1 HD-260)
TM 5-6115-218-10 Ch 5 Jun Generator 100-KW (Jeta 1001815-W With Allscholmers Eng (6DA-844)
TM 5-6115-223-10 Ch 5 Jun Generator 150-165-KW (Cummins NHR56-G)
TM 5-6115-234-10 Ch 6 Jun Generator Diesel 15 KW (Winpower D-15H18M)
TM 5-6115-365-15 Ch 5 Jul Generator Sets, Gasoline and Diesel, Variety of trailer Mtd P/Us
TM 9-1425-470-12 Jan TOW
TM 9-1430-526-24P Jun Mtd Battery Control Central AN/TSW-8
TM 9-1430-588-10 Jun AN/MPO-49 FAAR
TM 9-1450-501-20 Apr Carrier, XM727
TM 9-2300-224-ESC Ch 3 Jun ESC Carrier M113-Series
TM 9-2300-237-ESC Ch 3 Jun ESC Carrier M113A1-Series
TM 9-2320-233-10 Apr Truck, GOER M520 M553 M559
TM 9-2350-247-ESC Ch 2 Jun ESC for Carrier M548
TM 9-7012 Ch 15 Apr Tank, Combat-FT 90-MMA Gun, M48
TM 10-3930-242-20P/2 May Fork Lift, RT 6,000 Lb MLT-6 MHE-200, MLT-6CH MHE-202
TM 10-4510-201-14 Ch 3 Jun M1958 ORR Sembower, York-Shipley Models 8-SH1 thru 8-SH-70
TM 11-1510-209-20-4 Ch 1 Jun Elect Equip Config Mod RU-21A Aircraft
TM 11-5805-247-12 Ch 1 Jun TA-182/U Telegraph-Telephone Signal Converter
TM 11-5805-471-12 Ch 3 Jun SB-3082

(V) 1/GT and -2 switchboard
TM 11-5820-348-15 Ch 3 Jul RC-292 Antenna Equipment
TM 11-5820-519-12 Ch 4 Jun AN/TRC-90B -129 radio terminal set
TM 11-5820-590-12 Ch 3 May AN/PRC-74(i) Radio Set
TM 11-5820-610-14 Jul AN/TRC-133A radio terminal set
TM 11-5855-217-12 Ch 1 Jun AN/VSS-3 Infrared Searchlight Set
TM 11-6230-219-12 Ch 2 Jun AN/GSS-14(i), 18(i), AN/VSS-1(i), -2(i) Infrared Searchlight Set
TM 11-6625-366-15 Ch 3 May TS-352B/U Multimeter
TM 55-1520-209-20-1 Ch 6 Jun CH-47A Helicopter
TM 55-1520-220-20 Ch 2 Jun UH-1C/M Helicopter
TM 55-1520-227-CL Ch 3 May CH-47B, CH-47C Helicopters

MISCELLANEOUS

SB 746-1 Jun Pubs for Packaging General Supplies
C-RL-1A (Microfiche) Jul Master Cross Reference List (CL) Part 1
SC 5180-90-CL-N25 Jun Tool Kit, Plumber's
SC 5180-90-CL-N62 Jun Tool Kit, Body and Fender Repair Hand
Optional Form 72 Jul Fragile (Label)
Optional Form 76 Jul Magnetic Equipment-Cautions (Label)
Optional Form 79 Jul - Caution - Not Suitable for Shipment Via Military Aircraft Magnetic Equipment (Label)

Change 2 to AR 710-2!

Change 2 to AR 710-2 is out! It's dated 3 Jun 74.

Check it for a list of sensitive items you must report if they are missing, plus charts that plot Army standards on supply stockage, fill rates, inventory and all the things that add up to unit logistics.

It also features new housekeeping equipment procedures and standards for security classification of property book pages.

It explains and simplifies procedures for accountability of found items and sets the requirement for NSN's instead of FSN's. There's also a new table of accountability of ammunition and a new policy for establishment of dues-out.

If you didn't get Ch 2 to AR 710-2, order it on DA Form 17 from the AG Pubs Center at Baltimore. The change is effective 1 Oct 74.

JOE'S DOPE MAGNUM CRUD

...OR WHO KILLED OL' M?

NO ORDINARY INVESTIGATION CAN SOLVE THIS CRIME!

THIS IS A JOB FOR THE WORLD'S GREATEST SLEUTH--



...SO THAT'S THE STORY--A TRUSTED OLD FRIEND IS GONE--AND OTHERS DOOMED ALSO UNLESS YOU FIND THE VILLAIN! YOU MUST HURRY!

RIGHTO!



SOB! OL' M'S GONE!! THEY GOT HIM HERE TOO LATE! NO WAY WE COULD SAVE HIM!

GOOD BYE, OL' BUDDY--

WHOEVER OR WHEREVER HE IS...

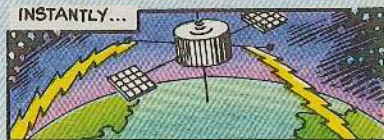
YOUR MURDERER WILL BE BROUGHT TO JUSTICE...

I SWEAR IT!



YES, OPERATOR--BAKER STREET, LONDON...

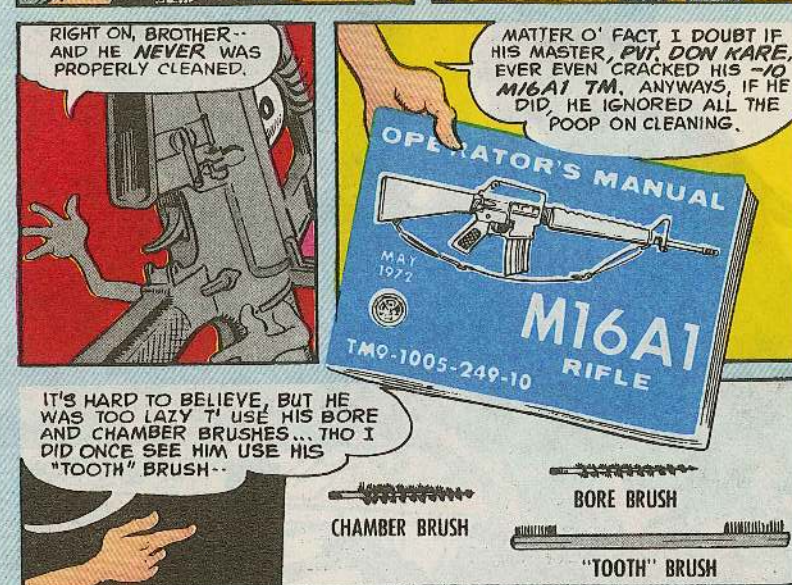
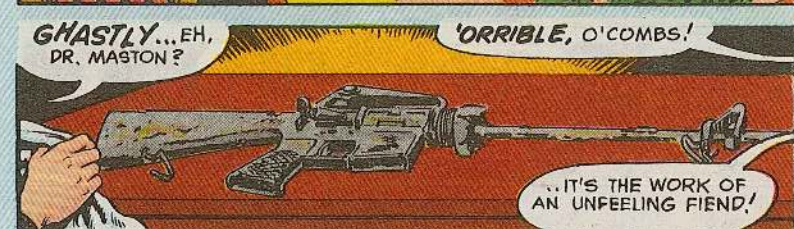
INSTANTLY...



I ONLY HOPE THEY'RE IN TIME.



HUH--WHAT'S THAT?



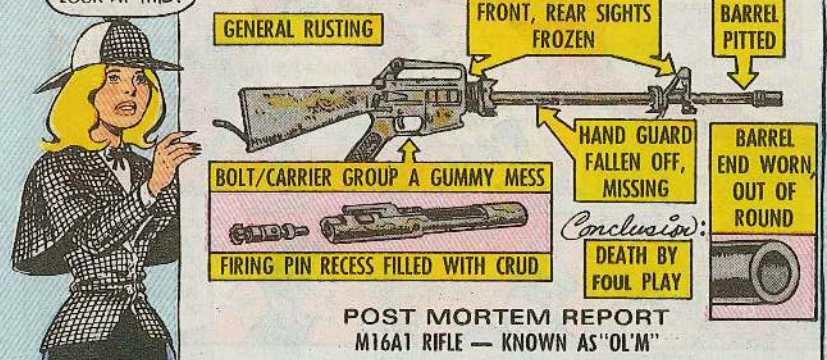
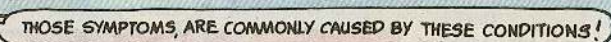
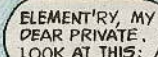
Joe's Dope Sheet

To score with your trusty A1
Make sure all the PM is done,
Keep it well lubed and clean--
And no matter the scene--
You can chalk up the action as "won"!



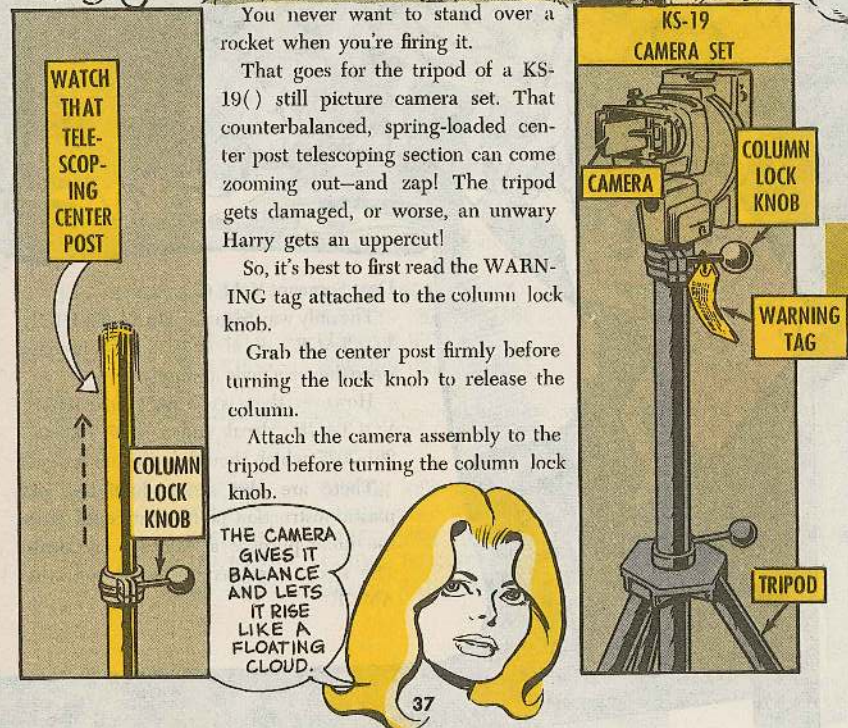
WE HAVE THE WORLD'S BEST EQUIPMENT ... *Take care of it*

IF YOU WANT TO DISPLAY THIS CENTERPIECE ON YOUR BULLETIN BOARD, OPEN STAPLES, LIFT IT OUT AND PIN IT UP.





TRICKY TRIPOD



You never want to stand over a rocket when you're firing it.

That goes for the tripod of a KS-19() still picture camera set. That counterbalanced, spring-loaded center post telescoping section can come zooming out--and zap! The tripod gets damaged, or worse, an unwary Harry gets an uppercut!

So, it's best to first read the WARNING tag attached to the column lock knob.

Grab the center post firmly before turning the lock knob to release the column.

Attach the camera assembly to the tripod before turning the column lock knob.

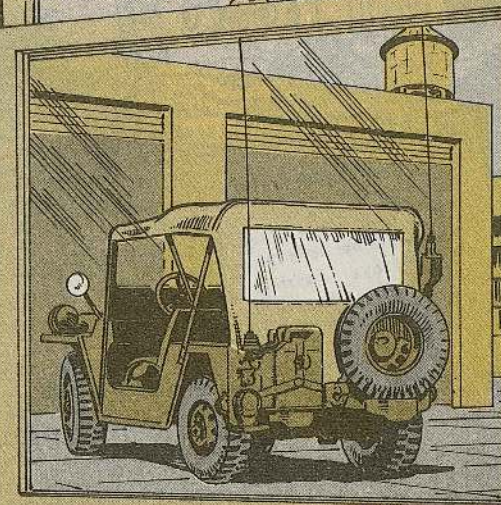
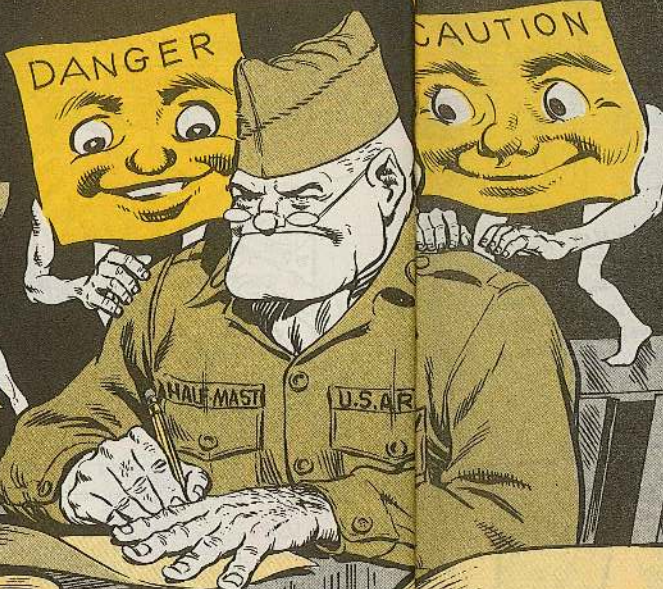
CAUTION

DECAL INSTEAD

Dear Half-Mast,

How can I get the 2-in by 3½-in DANGER HIGH VOLTAGE stickers that can be put on matching units of radio antennas. I see them on vehicle-mounted radio antennas, but I can't find them in any publication.

SSG V. M. C.



Dear Sergeant V. M. C.,

The only way to get a "DANGER HIGH VOLTAGE" decal is go local purchase since there isn't one in supply.

However, there is a "CAUTION: HIGH VOLTAGE" decal under NSN 7690-00-281-3077 which should do the job for you.

There are also some aluminum and plastic instruction plates that could serve the same purpose as stickers or decals. The stock numbers are good on the AMDE.

NSN's for aluminum plates with pressure sensitive adhesive backing are:

NSN 9905-00-553-8291	DANGER HIGH VOLTAGE	5½-in by 5/8-in
949-8611	WARNING HIGH VOLTAGE	1¾-in by ¾-in
925-4414	WARNING HIGH VOLTAGE	3½-in by 1½-in
454-5155	WARNING HIGH VOLTAGE	2½-in by 4/5-in

The info on the plastic-type plates, with mounting holes, which could be cemented to surfaces is as follows:

NSN 9905-00-215-3796	CAUTION HIGH VOLTAGE	1¼-in by 8 9/16-in
784-7570	DANGER HIGH VOLTAGE	11½-in by 5½-in
826-7131	DANGER HIGH VOLTAGE	2½-in by 3-in
057-7002	CAUTION HIGH VOLTAGE	5¾-in by 1-in
807-2987	DANGER HIGH VOLTAGE	2½-in by 2½-in

Half-Mast

GETTING ESC TO AGREE

NO PROBLEM ANYMORE!

Dear Half-Mast,
What gives with the ESC for the AN/VRC-64 radio set installed in a M60 or M60A1 tank?

Item 16 in TM 9-2350-215-ESC (Mar 73) says the system's RED when there's no communications between the commander and driver, but Item 3 in TM 11-5820-498-ESC/3 (May 69) says the system's RED when there's no communications between the commander and one or more of the other crewmen. There is nothing about the driver, and there is only a GREEN or RED rating—no AMBER.
Could you shed some light on this apparent conflict?

SSG W. F. L.

Dear Sergeant W. F. L.,

Since there seems to be a difference in the two TM's, TM 11-5820-498-ESC/3 is being changed to make it more compatible.

THE INFO WENT
TO THE FIELD THROUGH
EIR DIGEST
TB 43-0001-9-2
(Mar 74) AND ITEM
3 READS:

GREEN—Intercommunication occurs between all crewmember control boxes.

AMBER—In tanks, intercommunication does not occur between crew commander and gunner and/or loader. In other vehicles, intercommunication does not occur between one or more crewmember control boxes.

RED—In tanks, intercommunication does not occur between crew commander and driver control boxes.

NUTZ! WATER'S GETTIN' IN AGAIN, SIR!

WHAT'S NEEDED IS ...
**TIGHTER
TOGETHERNESS**

Dear Half-Mast,
We have several MX-6707 matching units with the bottom half of the case getting filled with water.
The water is getting in around the gasket or O-ring between the bottom and top of the base, and as a result the matching units are rusty and becoming totally unusable.
What can be done to stop this excess moisture from getting inside the base?
SSG C. B.

Dear Sergeant C. B.,

You need a gasket that makes a tighter seal like the one under NSN 5330-00-078-4184.

When it's put in it should be thinly coated with silicone grease to make it seal better. An 8-oz tube is covered by NSN 6850-00-880-7616. DS does the job.
Temporarily removing the drain screw on the bottom of the unit will help get rid of excess water, like the Quarterly PM Chart says in Change 3 to TM 11-5985-262-15 (Mar 69).

NOW--GO TO
IT! ... AND
HAPPY
COMMUNICATING!

"O" - RING
SNUG?

REMOVE
EXCESS WATER
HERE

SHELTER TIEDOWN TIPS

SUMPIN' TELLS
ME WE SHOULD
INSTALL THAT
MODIFICATION
TIE-DOWN KIT!

The tiedowns furnished with the S-144()/G and S-318()/G electrical equipment shelters were made for the M37 ¾-ton truck only.

To mount these shelters in the M561 Cama Goat or M715 (1¼-ton) truck...

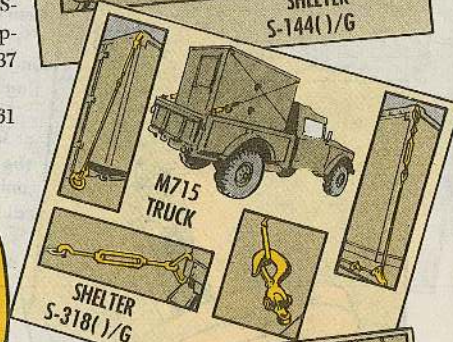
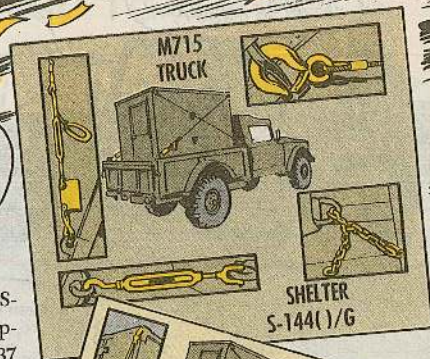
YOU'LL NEED
ONE OF THESE
MODIFICATION
KITS!

Shelter	Truck	Mod Kit
S-144()/G	M715	NSN 5410-00-164-3593
S-144()/G	M561	5410-00-164-3571
S-318()/G	M715	5410-00-164-3595
S-318()/G	M561	5410-00-164-3594

TB 11-2300-374-14-1 (Apr 73) shows you how to use the tiedowns.

When you're mounting an S-141()/G or S-280()/G shelter in a 2½-ton truck, you need a plate and ring assembly for each side of the truck's bed. You can get this assembly under NSN 4030-00-956-5820 if the issue sling assembly does not have one.

To make sure you're tying down your shelter like you're supposed to, eyeball TB 750-240 (Jul 69).



BY ANY OTHER NAME...



IS TRANS- DUCER

TM 11-5820-549-35P

CAN'T FIND AN
AN/PRT-4 COVER
ANYWHERE, SARGE!

HEY,
BUDDY...
HERE
I AM!

PRT-4()
MICROPHONE
COVER IS
TRANSDUCER

Dear Half-Mast,
My outfit has a couple of AN/PRT-4() radio transmitting sets that are down 'cause they have cracked or broken microphone covers.

I have looked everywhere and I can't locate these covers in supply.
How about some help?

SGT. A. J. N.

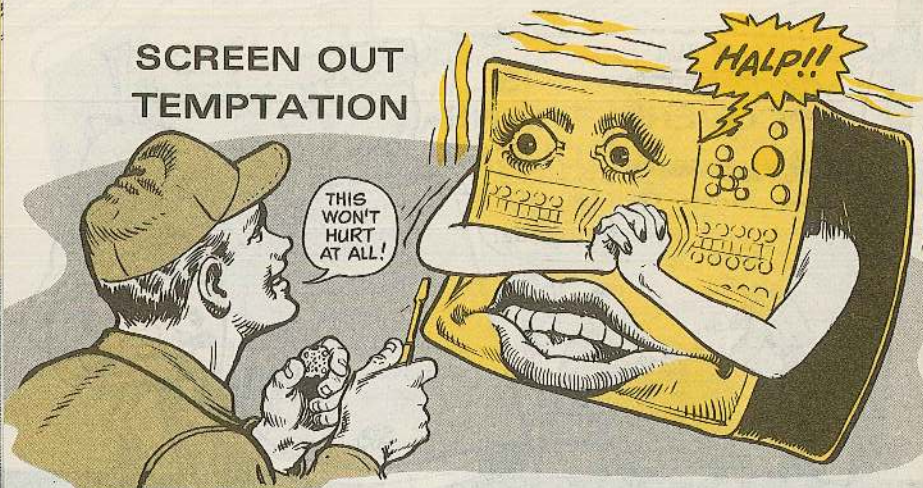
Dear Sergeant A. J. N.,
Sure 'nuff!

That microphone cover (SM-D-523238) is listed as a housing transducer on Page 7 of TM 11-5820-549-35P (Aug 69). So, have your support get one and put it on. You might tell 'em the stock number, NSN 5820-00-995-2339, is not given in the TM.

BUT, THIS
SUPPORT ITEM
IS GOOD ON THE
AMDF.



SCREEN OUT TEMPTATION



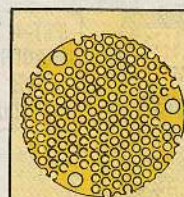
Nature hates a vacuum—but man has a thing about cavities. Always trying to stuff 'em with something.

Like poking pencils, pens or other sharp objects into the night alarm transducer cavity on the SB-3082()/GT switchboard.

Shoving stuff into the hole could leave you with a punctured cavity base and put your switchboard out of business.

Your best bet's to get your support to cover the cavity with a perforated brass disc.

The 3 screws already there can be used to hold the disc in place.



INFO ON THE
HOMEMADE
COVER IS IN
ITEM-2-14,
TB 750-911-4
(SEP 73).

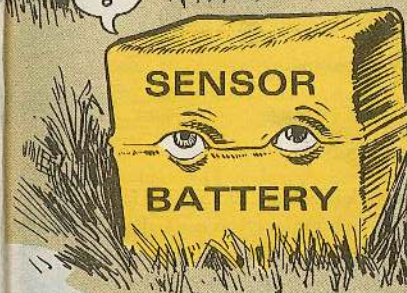


TAPE A CONNECTOR

Putting a 48-V DC connector into a 110-V AC receptacle could make it hot and zingy for your AN/TTC-7 telephone central office.

Since the connectors and receptacles could pass for twins, put a piece of red tape (NSN 7510-00-550-7126) around the 110-V cord near the connector, and put another piece near the receptacle.

This'll help you keep from getting 'em crossed up.



About to slip some new power to your AN/CSQ-159 (DSID) unattended ground sensor?

Then you better check the DSID part and serial number. If the DSID part number is 96214 717500 (channel number stamped in ink) and the serial number is above 4000 (stamped in ink), you need the modified 96214-717490-1 series power pack.

THE MODIFIED
POWER PACK
96214-717490-1 HAS
FOUR WIRE LOOPS.

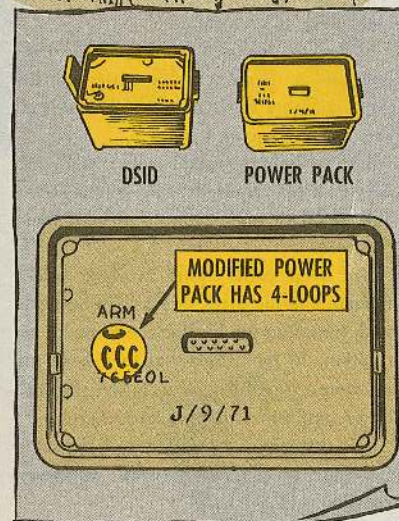


1. Arm
2. 7 for 7 day operation
3. 65 for 65 day operation and
4. EOL for "end of life" operation (battery life).

These loops have to be cut according to "DSID Programming and Arming Instructions" inclosed with each power pack.

DSID part number 97403 13218E9400 —(channel number stamped in ink) requires power pack NSN 6350-00-182-7621. Power pack 96214-717490-1 will also work properly with this unit.

The latest model power pack NSN 6350-00-182-7621 will function with any DSID units with the exception of the disable capability for 7 days and 65 days.





AIR MOBILITY

THESE OLD FRIENDS SHOULD NEVER BE UNDERRATED!



Some improved aircraft hardware, like the positive retention bolts that require no safety, have made the scene. Yet a major burden of holding aircraft parts together is borne by the cotter pin.

Never underrate the power of a cotter pin. Rotating, turning, twisting, vibrating forces are always working... working... working. After you torque a nut, it's the little pin that can keep a nut from backing off.

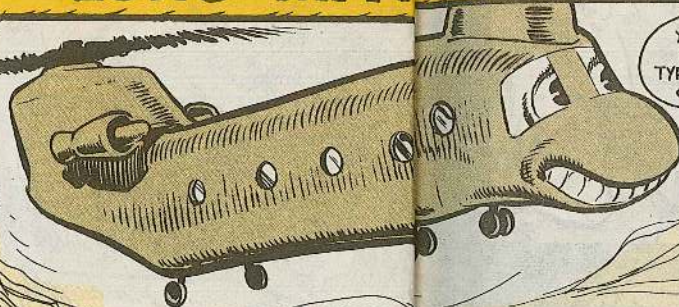
SO, ANY TIME YOU REMOVE A COTTER PIN INSTALL A NEW ONE. THEY'RE DIRT CHEAP COMPARED TO THE COST OF YOUR AIRCRAFT... OR YOUR LIFE.

Use the bolt, washers, nut and cotter pin called for in the parts pub for your aircraft.

If you don't make out with the specified hardware, the general rule is to use 1

THE LITTLE GIANTS...

LONG MAY THEY SERVE



YUP... WE "WILD-BLUE-YONDER" TYPES USE COUNTLESS COTTER PINS!

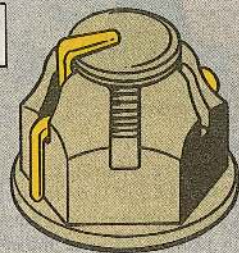
RIGHT ON, BROTHER...

... MIGHT SAY WE USE AS MANY AS "CARTER'S GOT PILLS"!

method is also used when working in close quarters where you have difficulty inserting the pin.

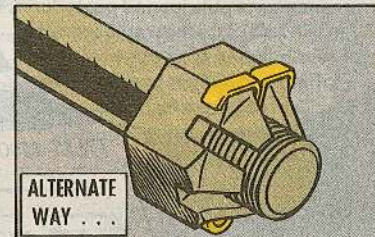
Insert the cotter pin in castellated nuts and in bolts with the head parallel to the slot in the nut, if possible. This is the preferred method. Avoid sharp bends and kinks that could weaken the cotter pin.

PREFERRED WAY...



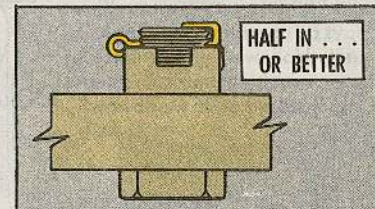
If there's a possibility the cotter pin might snag an air type's hands, clothing or equipment, put the cotter pin in with the head horizontal to the slot in the nut. This

ALTERNATE WAY...



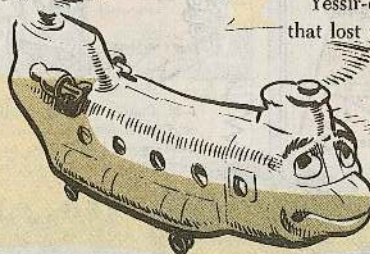
At least 50 percent of the cotter pin diameter must be below the nut castellations. If not, add a second washer.

HALF IN... OR BETTER



Yessir-e-e, it was only a missing nail that lost the shoe... that lost the horse.

YOU WOULDN'T LET A MISSING PIN DO THAT TO YOUR FLYING BRONC, NOW, WOULD YOU?



"IT'S ELEMENTARY, WATSON!"

There are times when a general pub goes into a lot of detail, Holmes. The result can sometimes create a conflict with information in an equipment pub.

Apparently, Watson.

Take TM 55-1500-328-25 (Jul 72) on maintenance policies and procedures. Para 3-2c(3) says that replacement or reinstallation of power train drive shafting and hanger bearings does not require a test flight.

But, para 7-28a(5) of TM 55-1520-228-20 (Oct 72) on the Kiowa says an operational test flight is needed following maintenance on those same drive shaft components. My word, what do we do now?

Look here, Watson, para 1-26 of AR 310-1 (Aug 71) on the publication system says that if you have a conflict in manual material, the most recent dated manual governs.

1-26. Conflict among publications. In case of conflict among provisions of publications, the most recent publication or higher headquarters publication, if applicable, will govern.

(5) Perform operational test flight.

Then the Kiowa needs a test flight... so be it!

Quite so, Watson. Equally important is the fact that TM-55-1500-328-25 is a general pub and is not written specifically for the OH-58A.

The relationship of general manuals to specific equipment manuals is spelled out in, for example, TM 55-1500-204-25/1 (Apr 70) on aircraft general practices

Oh, what's the good word, Holmes?

Para 1-4, Scope, says that specific details required for a particular aircraft, or piece of equipment, will be obtained from the applicable technical manual.

That means using the aircraft organizational maintenance pub, Holmes!

Precisely, my dear fellow.

"They're INSEPARABLE"

NO QUESTION ABOUT IT, BONNIE!
WE BELONG TOGETHER!

PRETTY SHREWD! HE
FOUND OUT BONNIE WAS
COMIN' AS A DA FORM 2410...
SO HE CLAIMS HE CAME AS
A COMPONENT!

ANNUAL
MASQUERADE BAZZ



Aircraft components are still ending up at overhaul without a DA Form 2410, bird men. The result is no operating time poop. Parts are scrapped ahead of time, costing much moola.

One of the reasons for the form dropout is the reading of TB 55-1500-307-25 (Jan 74) on components requiring historical data.

Focus in on column 10 of the pub table headed, "Local history, refer to para 5e(3)." That para says that you do not have to send a copy of the 2410 to the Maintenance Management Center. Your using unit keeps tabs on the part locally.

When a serviceable or repairable part listed in column 10 is removed from your bird, tho, always fill out and forward a 2410 with the part.

That'll keep the historical info flowing!



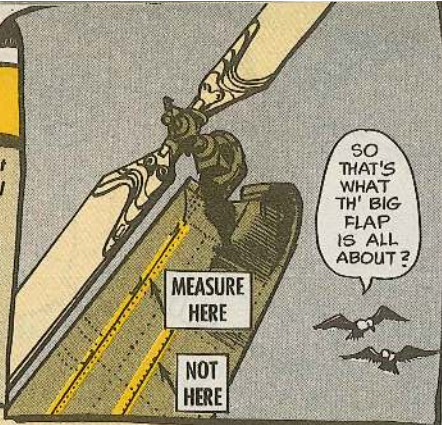
BLADE FLAP

Dear Windy,
There is a bit of a disagreement about where to measure the Huey (UH-1) tail rotor blade flap.

My buddy says the measurement is taken between the center row of rivets on the vertical fin and the blades. I use the row of rivets at the vertical fin cover as the measuring point.

Who's right, Windy?

SP6 A. I.



Dear Specialist A. L.,

You are, Sarge!

'Course the Caution in para 8-11 of TM 55-1520-210-20 (Sep 71) says the tail rotor blades will be adjusted to give not less than 2.5 inches of clearance between the trailing edge of the blades and the vertical fin.

This measurement has to be taken at the nearest point of possible contact so the blades won't chop into the fin . . . happens!!

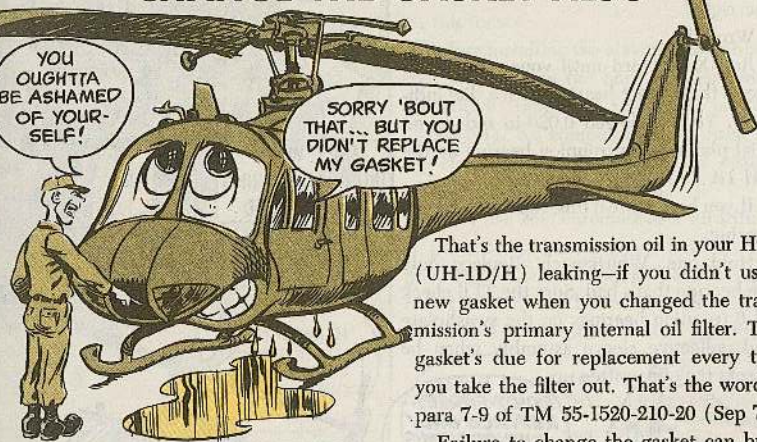
The rivets at the vertical fin cover are about 1/4-in closer to the blades than the center row of rivets. That's where you should take your measurement.

Windy

CHANGE THE GASKET ALSO

YOU
OUGHTTA
BE ASHAMED
OF YOUR-
SELF!

SORRY 'BOUT
THAT... BUT YOU
DIDN'T REPLACE
MY GASKET!



Drip . . . drip . . . drip.
No, that's not a leaky water faucet.

That's the transmission oil in your Huey (UH-1D/H) leaking—if you didn't use a new gasket when you changed the transmission's primary internal oil filter. That gasket's due for replacement every time you take the filter out. That's the word in para 7-9 of TM 55-1520-210-20 (Sep 71).

Failure to change the gasket can bring about bad things like emergency landings, due to loss of oil.

HUEY HONCHOS ...

STOP RUNNION URNOVERS

WHO--
ME?
?

Save your muscle—and parts, too.
Never order 6 when 1 will do!

When a Huey pilot writes up a worn trunnion bearing on the DA Form 2408-13 you red X the bird until you put in a new one, right?

Wrong!

Red X the bird until your unit TI inspects the suspect bearing with a dial indicator. You're allowed 0.020-in radial and axial play in each trunnion bearing on the UH-1B, D, H model choppers.

If you have more'n this, replace the worn bearing.

Hold one, Whirlymech. Replace only the bearing that's bad. Sure the TI'll check all 6 trunnion bearings on the swashplate and collective sleeve assembly when he checks the one written up.

DON'T FORGET--
REPLACE ONLY
THE BEARING
THAT'S BAD--
NOT ALL 6.

This bearing is an "intensively managed" item. At \$64.15 per copy you could spend a heap of money in a hurry by ordering more than you need.

ONLY WORN
TRUNNION BEARING
GETS REPLACED



52

COMPOUND USE A-OK

Dear Windy,
Recently I noticed some Cobra mechanics installing the synchronized elevators into the horn coated with corrosion preventive compound.
The chopper organizational maintenance pub doesn't say anything about using the compound. Is it OK, Windy?
SP6 T. W. P.

Dear Specialist T. W. P.,

Yes, indeed! Look for a change to TM 55-1520-221-20.

To protect the elevator from corrosion try this for size.

Before installing the elevator assemblies, coat the inside of the horn with corrosion preventive compound (item 308 or 311, Table 1-4). No compound is required on the elevator spars because they're coated with electrofilm dry lubricant.

Never use zinc chromate as a substitute. If, per chance, zinc chromate has been applied to the inside of the horn or spars, get rid of it with methyl-ethyl-ketone (item 300, Table 1-4) and a soft rag.

IT'S A
GREAT FEELIN'
T' KNOW THAT
MY ELEVATORS
ARE CORROSION
FREE!

NEVER SOAK THE
SPAR WITH METHYL-
ETHYL-KETONE! IT
MAY REMOVE THE
ELECTROFILM
COATING.

53

KEEPING ENTRIES IN LINE . . .

ON DA FORM 2408-9

Some say a cat has 9 lives—tho they never say who counted.

What's easier to prove is that many a soldier may live thru 9—or more—separate uses of DA Form 2408-9 on the same piece of Army equipment.

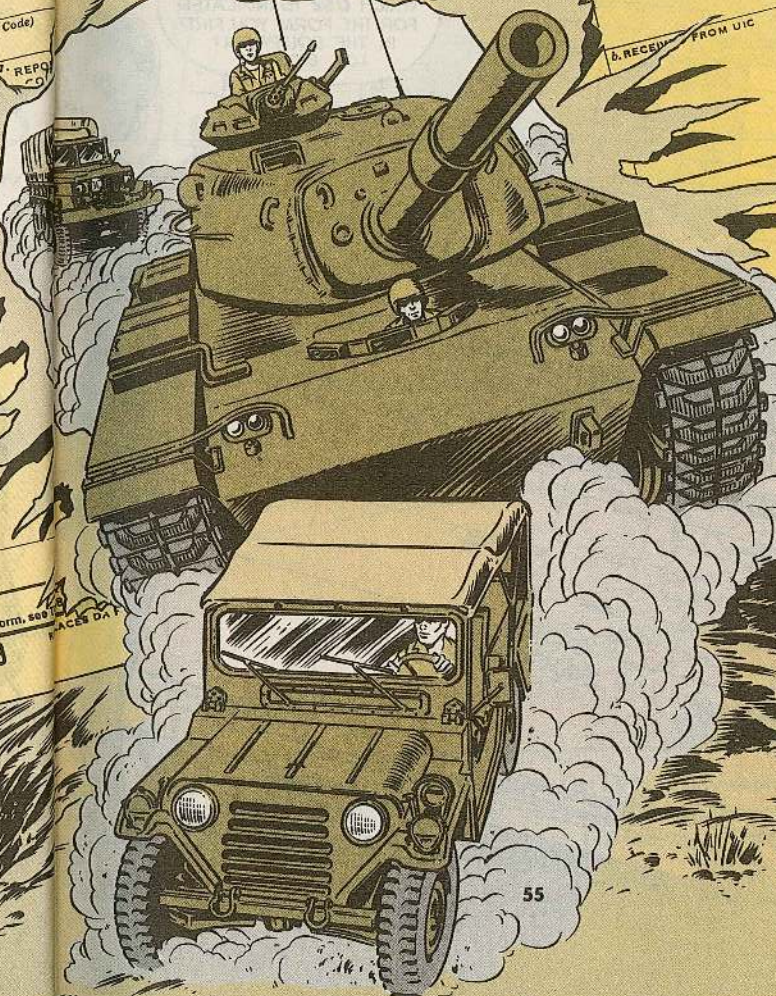
FIRST OFF, THE DA FORM 2408-9 IS A FORM THAT SERVES 6 BASIC PURPOSES:

1. A record of acceptance of the equipment by the Army.
2. A gain report when the equipment's received by a unit from outside the Army.
3. A periodic usage report (on designated equipment items).
4. A report of overhaul or rebuild (at GS or depot).
5. A transfer report when the equipment's received from or delivered to another unit.
6. A loss report when the equipment's combined with other items in a system or when it's destroyed, captured, abandoned, stolen, cannibalized or turned over to a property disposal officer (PDO).

CONTROL NO. 602345		1. ORGANIZATION	7. MODEL
6. NOMENCLATURE		12. MANUFACTURER (MFG Code)	
11. YEAR OF MFG	12. MANUFACTURER (MFG Code)	7. REQ	
16. TYPE REPORT			
a. ACCEPTANCE AND REGISTRATION			
b. USAGE			
c. TRANSFER			
d. LOSS			
e. GAIN			
f. OTHER			
21. REMARKS			
22. INSPECTOR'S SIGNATURE			

For use of this form, see 16 PLACES ON

DA FORM 2408-9
OCT 72



All these different uses make DA 2408-9 a true heavyweight in its role as a part of the equipment records system (TAMMS or The Army Maintenance Management System.)

And this means you've got to know which use is indicated when the form is found in the equipment log. You may find as many as 3 separate copies of the form

in the log at the same time—each for a different purpose.

These 3 are the acceptance, the receipt showing a gain or transfer, and the latest usage report (if this is required). They're not duplicates—you need all 3. And if there's no usage report, you need both the acceptance and the transfer (or gain) report.

REMEMBER--
YOU'VE GOT TO KNOW
WHICH **USE** IS INDICATED
FOR THE FORM YOU FIND
IN THE EQUIPMENT
LOG BOOK!

DIFFERENT USES
OF DA 2408-9 ARE
LINED UP LIKE DUCKS
IN A ROW. CHECK MARK
SHOWS THIS IS AN
ACCEPTANCE.

CAREFUL!
IF YOU FIND
3 SEPARATE
COPIES--
THEY'RE
NOT
DUPLICATES!
YOU NEED
ALL 3!

FORM NO. 2408-9		ORGANIZATION		LOCATION		UNIT IDENT. CODE		NATIONAL STOCK NO.		SPECIAL NO.	
602343		B Co, 3rd ARMOR		FT FRYMORE AL 3026		WANE 10		2320-00-177-9258		02A16472	
YEAR OF MFG		MANUFACTURER (MFG CO)		REPORT CODE		HOURS		MILES		RECEIVED FROM	
M72		CHRYSLER		A		0		0		USA DETROIT PROC DIST	
TYPE REPORT		ACCEPTANCE AND REGISTRATION		TRANSFER		LOSS		GAIN		OTHER	
A		✓									
13. CONTRACT NO.		14. PURCHASE ORDER NO.		15. SHIPPED TO		16. SHIPPED TO		17. RECEIVED FROM		18. RECEIVED FROM	
DA 41-181-080-424		DOD 28216-72		USA DETROIT PROC DIST		WOBWAA		786326		786326	
19. JULIAN DATE		20. REPORT CONTROL SYMBOL		21. REPORT CONTROL SYMBOL		22. REPORT CONTROL SYMBOL		23. REPORT CONTROL SYMBOL		24. REPORT CONTROL SYMBOL	
2136		COLD-100		COLD-100		COLD-100		COLD-100		COLD-100	

PERMANENT LOG BOOK COPY

FORM NO. 2408-9		ORGANIZATION		LOCATION		UNIT IDENT. CODE		NATIONAL STOCK NO.		SPECIAL NO.	
602345		B Co, 3rd ARMOR		FT FRYMORE AL 3026		WANE 10		2320-00-177-9258		02A16472	
YEAR OF MFG		MANUFACTURER (MFG CO)		REPORT CODE		HOURS		MILES		RECEIVED FROM	
M72		CHRYSLER		A		0		0		USA DETROIT PROC DIST	
TYPE REPORT		ACCEPTANCE AND REGISTRATION		TRANSFER		LOSS		GAIN		OTHER	
A		✓									
13. CONTRACT NO.		14. PURCHASE ORDER NO.		15. SHIPPED TO		16. SHIPPED TO		17. RECEIVED FROM		18. RECEIVED FROM	
DA 41-181-080-424		DOD 28216-72		USA DETROIT PROC DIST		WOBWAA		786326		786326	
19. JULIAN DATE		20. REPORT CONTROL SYMBOL		21. REPORT CONTROL SYMBOL		22. REPORT CONTROL SYMBOL		23. REPORT CONTROL SYMBOL		24. REPORT CONTROL SYMBOL	
2136		COLD-100		COLD-100		COLD-100		COLD-100		COLD-100	

FORM NO. 2408-9		ORGANIZATION		LOCATION		UNIT IDENT. CODE		NATIONAL STOCK NO.		SPECIAL NO.	
602346		B Co, 3rd ARMOR		FT FRYMORE AL 3026		WANE 10		2320-00-177-9258		02A16472	
YEAR OF MFG		MANUFACTURER (MFG CO)		REPORT CODE		HOURS		MILES		RECEIVED FROM	
M72		CHRYSLER		A		0		0		USA DETROIT PROC DIST	
TYPE REPORT		ACCEPTANCE AND REGISTRATION		TRANSFER		LOSS		GAIN		OTHER	
A		✓									
13. CONTRACT NO.		14. PURCHASE ORDER NO.		15. SHIPPED TO		16. SHIPPED TO		17. RECEIVED FROM		18. RECEIVED FROM	
DA 41-181-080-424		DOD 28216-72		USA DETROIT PROC DIST		WOBWAA		786326		786326	
19. JULIAN DATE		20. REPORT CONTROL SYMBOL		21. REPORT CONTROL SYMBOL		22. REPORT CONTROL SYMBOL		23. REPORT CONTROL SYMBOL		24. REPORT CONTROL SYMBOL	
2136		COLD-100		COLD-100		COLD-100		COLD-100		COLD-100	

NOTE WELL, THO—You may have a DA 2408-8 that's still a good acceptance—hang onto it. Likewise, a DA 2408-7 submitted when your unit got the equipment a few years ago may still be good until the next transfer—so don't drop that till you report the next transfer or the loss of the item.

SHOW AN' TELL

Here's how to tell which DA 2408-9 you've got. It's easy to know since all the separate uses are lined up like ducks in a row.

See the check mark under "Type Report" in block 16.

In many other blocks the entries are the same, regardless of the type report. But in some blocks there are differences. Here's the way they line up, block by block—

BLOCKS	ACCEPTANCE	USAGE/ REBUILD/OVERHAUL	GAIN/ TRANSFER/LOSS
1-3	Entries: Name, Location, UIC of User or Hand Receipt Level (Reporting Unit not BDE or DIV UIC)	Code from TM 38-750 Table A-7 (most eqpt) or A-15 (comm vehicles)	Same for all uses.
4	No entry (except for commercial vehicles enter appropriate code from Table A-15)	Code from Table A-15 (comm vehicles only)	Same as for Usage/Rebuild/Overhaul
5	No entry (except for commercial vehicles enter appropriate code from Table A-15)	Code from Table A-15 (comm vehicles only)	Same as for Usage/Rebuild/Overhaul
6-10	Entries in corresponding blocks are same type for all uses. except for commercial vehicles, block 7 will show the LIN + block 8 will show the ACUG.	Same as Acceptance on	No entry
11	For most eqpt: M + last 2 digits of Yr of Mfr (Comm veh: 4 digits of Yr of Mfr only)	Yr of Mfr (No of last Overhaul + H + last 2 digits of Yr of Overhaul) (No of last Rebuild + R + last 2 digits of Yr of Rebuild)	No entry
12	Mfr Name + Mfr code from SB 708-41 or -42	No entry	No entry
13	Contract Number	No entry	No entry
14	Purchase Order Number	No entry	No entry
15	Warranty Period	No entry	No entry
16	Check on line a	Check on line b (usage) Check on line f (rebuild or overhaul)	Check on line e (gain) Check on line c (tsfr) Check on line d (loss)
17	A or B on line a (from Table A-16)	C on line b (usage) (from Table A-17) V on line f (rebuild or overhaul)	Code from Table A-20 (gain) Table A-18 (tsfr) Table A-19 (loss)

THIS CHART SHOULD HELP YOU MARK UP THOSE 2408-9s RIGHT...

...SO CLIP IT OUT OR KEEP IT HANDY.

18	No entry except for weapons	Total accumulated hours, miles and/or rounds that apply to eqpt (include readings from replaced meters—DA 2408-10)	Same as for Usage/Rebuild/Overhaul
19	No entry	No entry	No entry
20	No entry	No entry	No entry
21	Marked "Permanent Log Book Copy" + data on rebuild or overhaul when applicable	No entry	Name, UIC of unit eqpt transferred to. (Used only on tsfr out of unit—otherwise, no entry)
22	Signature of person accepting equipment	No entry	Name, UIC or unit received from by tsfr.
23	Julian date of action reported—entry is same type for all uses.	No entry—but if lost by re-designation of NSN, new DA 2408-9 will be made—see para 4.9c(3)(p), TM 38-750	No entry except for gain from other than DA procurement, then marked: "Permanent Log Book Copy"

(Disposition of the form's 3 copies is the same for all uses—NMP copy to local data collection center, control copy to unit designated by local command and log book copy to the equipment log.

Upon replacement by new forms, the old copies of usage reports and transfer reports are removed from the log and destroyed.

But keep in mind that each log should have an acceptance copy (permanent) and the latest transfer copy at all times. And, in addition (for all items designated as usage report items in Appendix E of TM 38-750) each log should have the latest usage report copy.

There's 1 other use for DA 2408-9—control of registration numbering of Army vehicles and equipment as spelled out in AR 708-1. (This reporting was eliminated 1st Qtr FY75 for tactical and combat vehicles.) But these copies never show up anyway.

So guard that -9. Even tho it doesn't have 9 lives, it may come back to haunt you if you don't use it right.

PAINTING HANDTOOLS . . .

You better believe it . . . painting handtools isn't just for looks. You need a special reason to do it.

Before waltzing out with the paint can, ask yourself these questions:

Are the tools stored outside in the weather?



STORED OUTDOORS?

Are they pioneer tools on a vehicle and not used much?



NOT USED MUCH?

If the answers are yes, you've got the green light to paint those tools. But, hold your brushes . . . first things first!

Never paint a tool that's so defective it can't be repaired. Hiding the defects could later cause a serious injury.

Make sure the cutting edges aren't painted over. Protect 'em with masking tape.



BEFORE PAINTING . . . PROTECT CUTTING EDGE WITH TAPE

BEAUTY CAN BACKFIRE

HEY, JOE! AIN'T THIS A PURTY PAINT JOB?



Know the tool's moving parts and remember to keep paint away from 'em. Even a little paint will bind a swivel, a slide or a pivot.

FOR ADDITIONAL INFO ON CARE AND HANDLING OF HAND TOOLS, CHECK OUT TM 5-461 (Jun 66).



THAT'S LIKE PUTTIN' MAKE-UP ON A HALLOWEEN WITCH!



METAL PARTS: Remove or smooth minor rust, burrs and metal slivers. Do it by buffing with a wire brush, filing, sanding or



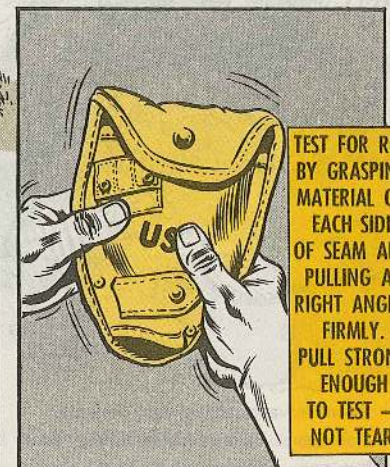
REMOVE RUST & SMOOTH IT, FIRST

grinding. Sharpen the striking edges. Never remove more than 1/4 inch from the original length of the shovel. Be careful you don't take off more than 1/4 inch from the length of the axe or pick, either.

WOODEN PARTS: Clean off dirt and grease. Look for cracks, splinters, slivers and looseness. Sand all the rough areas to a smooth finish. Tighten or replace loose or missing wedges. Replace damaged axe handles and those infected with wood-boring insects. You'll find replacement handles in Fed Sup Cat C5110-IL-A (Apr 73).

When you go to paint, use the rust-inhibiting olive drab enamel, TT-E-485. NSN 8010-00-297-2124 will get you 1 gal. This paint's for both the wood and the metal parts.

While you're checking out these tools, take a look at the tool's canvas carriers too. Brush off mud, dirt, dust, spots and mildew.

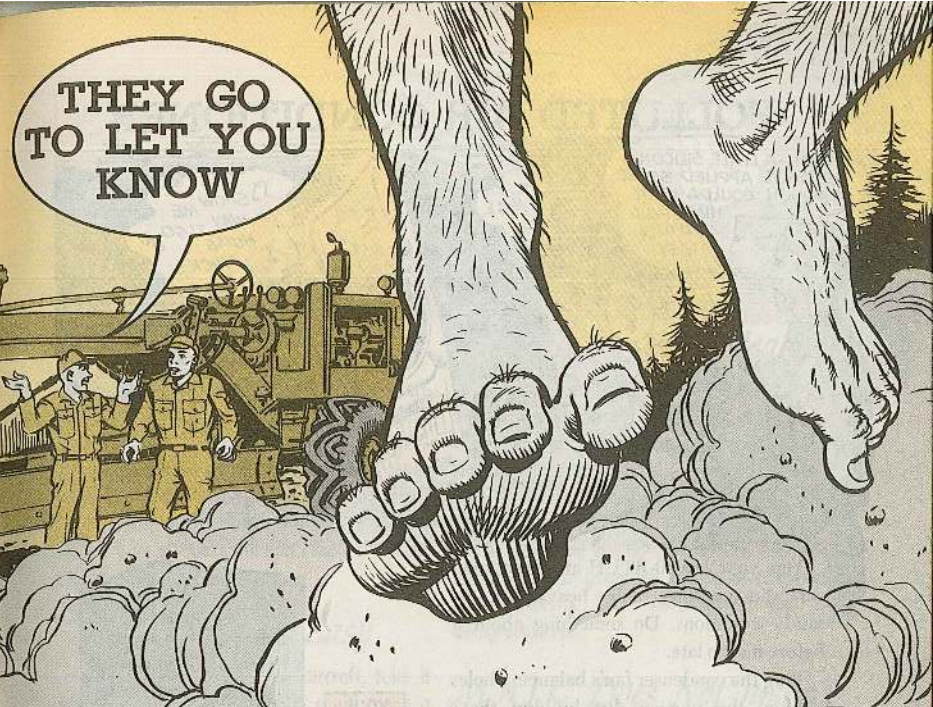


TEST FOR ROT BY GRASPING MATERIAL ON EACH SIDE OF SEAM AND PULLING AT RIGHT ANGLES FIRMLY. PULL STRONG ENOUGH TO TEST — NOT TEAR.

Give the mildewed areas a test. See if there's any weakness. Apply thumb pressure. Test also for rot. Grasp the material on each side of the seam and pull. Pull enough to test, not tear.

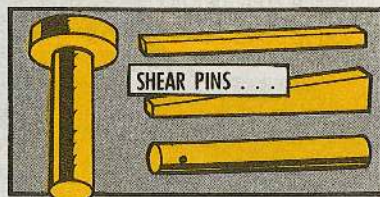


NO DOUBT ABOUT IT-- YOU'LL FIND YOUR TOOL A PLEASURE TO WORK WITH AFTER YOU'VE DONE THIS WORK RIGHT!



Silent servants, that's what they are. You never hear of them unless something goes wrong. Never know they're there. Unseen, undemanding, like perimeter guards of a night in a far country— But those forgotten shear pins can save your neck, your equipment, your life . . . if you don't double-cross them.

Take road graders, for instance. Cat 12's have a drive protection on the shaft—it's Item 1, Fig 83, TM 5-3805-208-20P. It



snaps when hit too hard, and it keeps the whole power assembly from flying into shrapnel from extreme misuse. Or take the Wahco 440HA—the shift lever will break rather than let you tear up a transmission and roll to disaster.

Or say it's cold weather—SnoGo snowplow blowers have a shear pin to keep the



operator from getting a face full of ice-cold shattered metal in case the rig hits a solid block. And on blade lift gears and ditching

machines and 40 HP outboard engines and no end of other places, those shear pins are on the job.



Or you might say, they're there, but better they never have to do their job. Because when they do do their thing, they're goners . . . like burnouts in a fuze box, it's all over for them. If they hadn't been there, it'd be all over for the equipment and maybe for the guy behind it.

But, believe it or not, some cats foul up this system. Mostly from knowing no better, they put in pins or bolts that "will last longer," or "hold better." Or worse yet, they put in whatever pin happens to be the right size, and handy.

People who put pennies behind electrical fuzes get similar results: the house burns down.

The hard word is, the only way to be safe is to use no substitutes for the pin or bolt in your -20P TM. Maybe it won't even call it a shear pin. But be suspicious of a key or pin or bolt that seems too small for the slot, or comes painted a different color. Your silent sentry on the perimeter of equipment failure can't protect you if he's not there.

POLLUTED AIR CONDITIONER

YEAH--A LITTLE SILICONE ADHESIVE APPLIED SOON ENOUGH COULDA KEPT HIM FROM GETTING TIPSY!



~NICE~

♪ SHOW ME
TH' WAY T' GO ♪
~HICK~

Yep, your 18,000-BTUH air conditioner sure can get tipsy under heavy dusty or sandy conditions. Do something about it before it's too late.

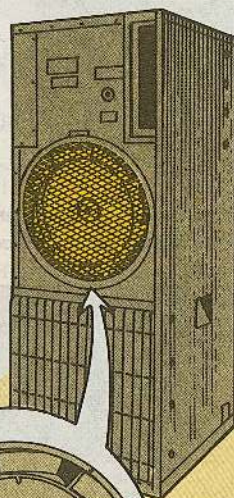
Plug the condenser fan's balancing holes to stop the uneven dirt buildup that's knocking the fan off kilter.

Use the general purpose, MIL-A-46106, Type I, RTV silicone adhesive sealant to do the trick. You can request it with NSN 8040-00-763-7145. It's also commercially available, and the color is optional.

'Course, you gotta put it on just right or it'll be thrown out by the spinning fan.

Form it like a rivet. Make the head about 1/32 inch in thickness on both sides of the cross section.

YOUR
18,000-
BTUH
AIR
CONDITIONER
NEEDS
TLC



PLUG
BALANCING
HOLES TO
PREVENT
DIRT
BUILD-UP

TO HOLD HER
STEADY AS SHE
GOES, INSPECT
AND CLEAN THE
CONDENSER FAN
EVERY DAY... JUST
TO BE SURE.

Connie's Mini Mini's

Y'SEE, CONNIE--HIS PROBLEM WAS HE HADN'T MAINTAINED A CLEAN WINDSHIELD--AND THEN THIS MOB OF GIRL STREAKERS RAN PAST...



Goose Your Goat

Hard starting and early starter failure are waiting for you this winter if your M561 or M792 1 1/4-ton vehicles haven't got MWO 9-2320-242-30-1 (Jan 73). Gama Goats, especially in cold climates, need the auxiliary starter relay switch that's installed with that MWO. A lot of Goats still don't have the relay switch.

Take It... Easy

When you tow the T-42A aircraft, take it easy. An abrupt start or stop could mean a broken towing pin. Ditto if you cut too short.

Air Filter Seal

There's a better rubber seal for that fender-mounted engine air cleaner on your M813 or other TM-260-series 5-ton truck. Get NSN 5330-00-432-2142 instead of the job listed on page 33 in TM 9-2320-260-20P (Nov 72) under FSN 2990-825-1069.

Every Year

Inventory your birds every 12 months, air types, according to the poop in most aircraft organizational maintenance pubs. That's the time frame also spelled out in Ch 1 (1 Apr 74) to TM 38-750 (Nov 72).

☆ U.S. GOVERNMENT PRINTING OFFICE: 1974 - 657-026/3

New Spark Plug Cleaner

If you've been eyeballing DA Poster 750-51 or DA Pam 750-22 on your spark plug cleaner/tester, forget that stock number for the abrasive, NSN 5350-00-222-0581. It can damage your plugs. What you need is either NSN 4910-00-787-4430 or 4910-00-845-1775. Either one will do the job. New issues of the poster and pamphlet will have corrected stock numbers. TM 9-4910-389-12 also is being corrected.

MAIT Does Not Inspect

Sometimes the printed word can mislead you. Take DA Pamphlet 350-35-2 (Jan 74), Operator Training Course, Power Generator Equipment. It tells you on Pages 3-5 and 3-16 that the MAIT team inspects. That's just not so. MAIT only assists and instructs. They're the A and I in MAIT. If in doubt, read AR 750-51.

Steer for Goat

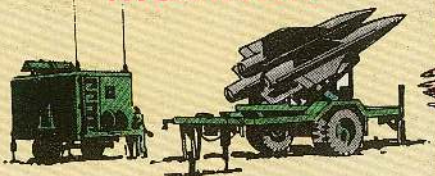
Add a number to your Gama Goat's TM 9-2320-242-20P (Sep 70) — NSN 2530-00-081-0674. It's for the Universal and Shaft Assembly, steering column assembly, listed on page 276 with only Part No. 11601572, used on both the M561 and M792 1 1/4-ton vehicles. It's available as a normal repair part, so the "X2" SMR Code no longer fits.

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

DIRTY FILTERS CAN STOP ALL...



MOVING...



SHOOTING...



COMMUNICATING...

CLEAN
'EM
OR...

CHANGE
'EM
!