

Issue 306

PS

May
1978

THE PREVENTIVE MAINTENANCE MONTHLY

TAKE US TO
YOUR LEADER...

WE MUST INFORM HIM
OF THE ATROCIOUS WAY
IN WHICH YOU STOW YOUR
ELECTRONIC GEAR!

YUK

TSK-
TSK!

MURPHY
ANDERSON

See Page 29

MAIT MAKES HOUSE CALLS!

Immobilized? . . .

HALP--
MAIT!

FOULED-
UP FILES

UNSECURED
ARMS ROOM

MISSING PUBS

DEADLINED
VEHICLES

GOOFED-
UP
PARTS
REQUESTS

SAFETY
HAZARDS

PUBS
POSTED
WRONG

'Course, you can help MAIT out with a little applied "ounce of prevention." Make sure you have trained people in as many positions as possible and set up good maintenance and supply techniques. Then, call MAIT when you need them and follow their prescriptions when they leave.

An attack of deadline fever got you down? Ask for a house call from your Maintenance Assistance and Instruction Team.

MAIT is mobile and ready to cure your supply, maintenance or pubs problems. All it takes is a call.

The best part is, MAIT won't leave you a bill—or send the diagnosis to your command.

If you ask, MAIT'll look back in after you've had a chance to work on their recommendations.



THE
**PREVENTIVE
MAINTENANCE**
MONTHLY

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

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

ISSUE No. 306 MAY 1978

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PS wants your ideas and contributions, and is glad to answer your questions. Name and address are kept in confidence. Just write to: Or call: AUTOVON 745-3355.

MSG Half-Mast
PS Magazine
Lexington, KY
40511

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FIREPOWER

M110A1 HOWITZER HANDIES

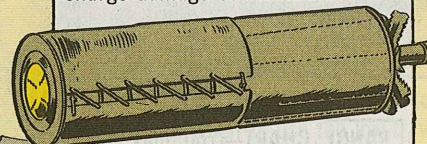
Sure there are going to be TM changes to help you get acquainted with your new M110A1 self-propelled howitzer, but until they come through, here are some handy things for you to know:

M110

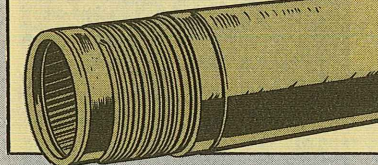
M110A1

M107

M188 PROPELLANT CHARGE—The M188 propellant charge is for use only on the M201 series cannon tube and only for getting zone 8 range. Never use the M188 charge in the M2A2 tube of the M110 since the chamber is too short and dangerous charge damage could result.

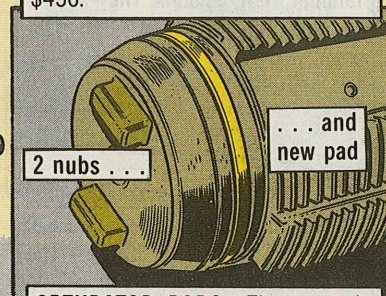


M110A1 AND M110A2—Both the M110A1 and the M110A2 will use the new M201 cannon tube. The only difference is that the M110A2 (when issued) will have a muzzle brake; the threads for it are on the muzzle end of every M201 tube. The M110A2 will have its own series of manuals.



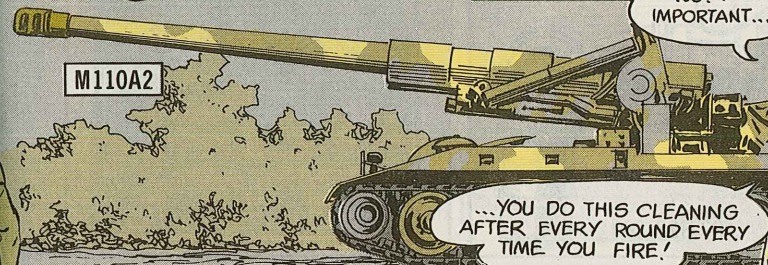
M110A2

OBTURATOR SPINDLE—The obturator spindle for the M110A1 has 2 nubs on its face to give better ignition. It is NSN 1025-01-024-9052 (P/N 11579243), and costs \$436.



OBTURATOR PADS—The new obturator pad for the M110A1 is pad, obturator, 8-in. M201, NSN 1025-01-032-5117 (P/N 11579507), and it'll work fine for the M107 or M110 as well as the M110A1 or M110A2.

CLEAN . . . CLEAN—To remove powder residue you must swab the obturator spindle and the breech block between rounds with a swab soaked in water.



NO. 1 IMPORTANT...

...YOU DO THIS CLEANING AFTER EVERY ROUND EVERY TIME YOU FIRE!

PS MORE

WHO'S SHE?

SHE LOOKS FAMILIAR!...

FIRST---

THE A1 IS A REWORKED M110 HOWITZER OR M107 GUN WITH A NEW GUN TUBE, THE M201!!

WOW!

SHE'S AN OUT-O-THIS WORLD HOWITZER EXPERT... NAME OF KAH-KNEE!

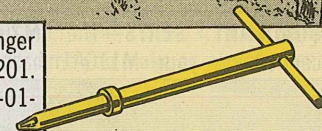


WE DIDN'T GET EXTRA SECTIONS FOR OUR RAMMER STAFF... WHAT DO WE DO, KAH-KNEE?

YELL 'TIL YOU GET 'EM!

KAH-KNEE, HELP ME FIND TH' RANGE CHART, HUH?

NEW REAMER—A new, longer reamer is issued with the new M201. The new reamer is NSN 4933-01-026-5253 (P/N 11578743).

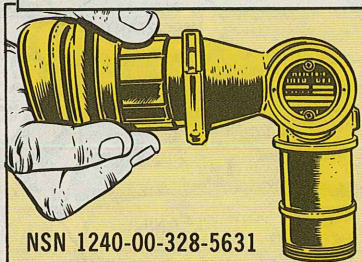


RAMMER STAFF SECTIONS—The M201 cannon tube on the M110A1 is longer than the M2A2 cannon tube on the M110 so you need 2 extra rammer staff sections. They should be with the cannon assembly kit when the M201 is installed. If they're not, yell until you get them.



You'll need 2 extra staff sections

M139 ELBOW TELESCOPE—The M139 elbow telescope you should get with the components of the end item is just a reworked M116 or M116C telescope. Still, it has a mil reticle scale and is different enough in its operation that you can't do without it for direct fire with prop charges M2 (Zone 7) and M188 (Zone 8). If you need one, order it as elbow telescope M139, NSN 1240-00-328-5631 (P/N 10556120). You maintain it just like you did the old one.

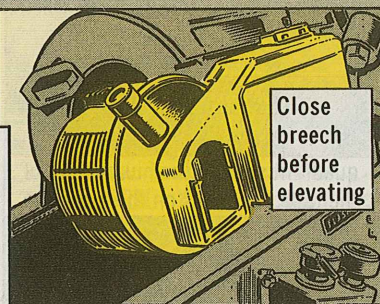


NSN 1240-00-328-5631

RANGE CHART—You may not be able to find the range chart right away. Look for it on the right trunnion mount (The Pork Chop).

RANGE CHART			
S.P. HOW. M110A1-W/EL TEL M139			
RANGE (METERS)	ELEVATION (MILS)		
	H.E. M106 PROJECTILE		
	P.C. M2 ZONE 7 MV407 M/S	P.C. M188 ZONE 8 MV 710M. S	
400	6	4	
500	7	5	
600	8	6	
700	10	7	
800	11	8	
900	13	9	
1000	14	10	
1100	16	11	
1200	17	12	
1300	19	14	
1400	20	15	
1500	22	16	
1600	23	17	
1700	25	18	
1800	26	19	
1900	28	20	
2000	30	22	
2100	31	23	
2200	33	24	
2300	35	25	

BREECH BLOCK—Always close the breech block before elevating the cannon tube. If you leave the breech block in the open position it'll hit the right trunnion support and you'll have a major repair problem.



Close breech before elevating

HIGH/LOW TRAVEL LOCKS—There's a lot of confusion about when to use the high travel lock and when to use the low travel lock on your M110 vehicle or M110A1.

LOW TRAVEL LOCK:

- When going cross country in forested area or whenever else you need a low profile.
- When changing cannon tube.



Low travel lock

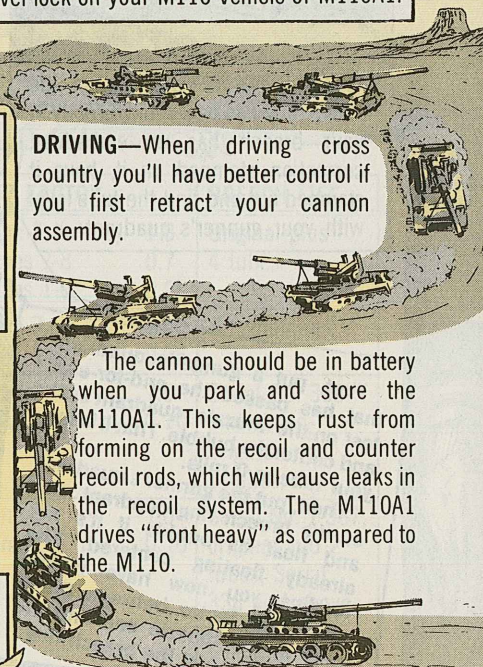
High travel lock

HIGH TRAVEL LOCK:

This is the normal travel position.

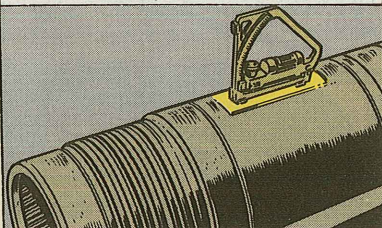
HERE'S THE DOPE...

DRIVING—When driving cross country you'll have better control if you first retract your cannon assembly.

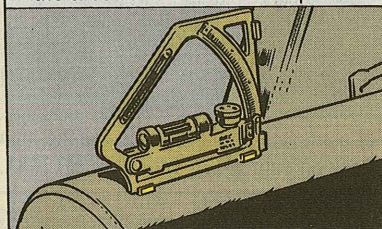


The cannon should be in battery when you park and store the M110A1. This keeps rust from forming on the recoil and counter recoil rods, which will cause leaks in the recoil system. The M110A1 drives "front heavy" as compared to the M110.

QUADRANT SEATS—The M201 cannon on your M110A1 has a



quadrant seat on the muzzle end of the tube as well as on the top of the



breech ring. For that reason the M201 tube can be leveled directly. If your breech has an embedded correction stamped on it, have it stamped out and find the tube level with your gunner's quadrant.

First, put a gunner's quadrant that has passed the end-for-end test on the muzzle quadrant seat and center the bubble. That'll bring your tube to 0 mils.

Then, put the gunner's quadrant on the breech ring quadrant seat and float its bubble if it's not already floating centered. The reading you now have is the correction factor between the 0 mils at the muzzle end and the reading taken at the breech ring.

CORRECTION FACTOR—The correction factor is a mechanical variation in elevation and you have to make allowance for it in taking your readings from the gunner's quadrant at the breech. If your correction factor (breech ring reading) is (+) then you have to subtract (-) the factor to get the real correct muzzle (or tube) elevation angle. However, if the correction factor is minus (-), then you have to add it (+) to the elevation reading taken at the breech to get the true weapon elevation.

DO THIS...

CANNON TUBE LIFE—The round life of your M201 cannon tube is different.

IT STACKS UP GREAT TO ME!

YOU SAID IT!

HERE'S HOW IT STACKS UP WITH THE M107/M110 YOU'RE USED TO...

VEHICLE	CANNON	EFC LIFE	EFC FACTOR	BREECH LIFE
M110A1	M201 auto-frettage tube	7,500 rds	Zone 9 (future) 1.0 Zones 7-8 0.7 Zones 1-6 0.25	Original plus 4 tubes
M110	M2A2	7,500 rds	Zone 7 1.00 Zone 1-6 0.25	No retubing
M107	M113A1 auto-frettage tube	1,200 rds	Zone 3 1.0 Zone 1-2 0.10	Serial No. 338 and above, original and 5 tubes.
M107	M113	400 rds	Zone 3 1.0 Zone 1-2 0.10	Serial No. 1-337, original and 2 tubes; Serial 338 and above, original and 17 tubes.

Once you're sure you have your correction factor right, record it in the Remarks section on the DA Form 2408-4 and use it every time you make an elevation setting with the gunner's quadrant.

WEAPON RECORD DATA

For use of this form, see DA Form 2408-4, 1 Dec 77, and instructions on DA Form 2408-4, 1 Dec 77.

1. TUBE SERIAL NO. 2. CANNON TYPE, MODEL, OR SERIES 3. ORGANIZATION ENTRY 4. SPECIAL LIFE DATA

5. END ITEM IDENTIFICATION 6. RDS ETC COMPUTATION

7. CANNON TUBE NO. 8. RETUBING 9. REBUSHING

10. Date 11. Projectile Type 12. Tube or Charge 13. Rounds Fired 14. EFC RDS Fired 15. Cumulative RDS Fired 16. Cumulative EFC RDS 17. Remaining EFC RDS

Remarks: Retub Exercise RDS Life or Velocity Based on Safety Inspection (S)

Correction Factor: Plus 2 mils

DA FORM 2408-4 1 DEC 77

Correction Factor: Plus 2 mils

NOTE: Your correction factor will change and will need to be refigured when a breech is retubed or when large temperature changes occur.

AN/VSS-3 and
AN/VSS-3A
Searchlights . . .

WEEKLY PM SHOWS-

On the "Clock",
On the Range



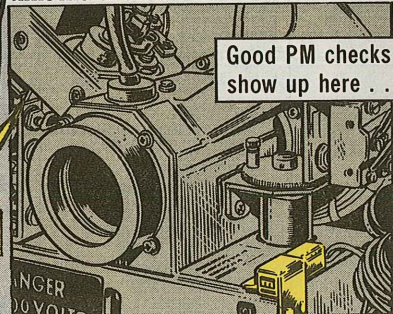
HEY, YOU BIG
CANDLE TYPES...

THERE'S MUCH MORE
TO IT THAN LAMP "GLOW"
WHEN YOU MUST HAVE A
SEARCHLIGHT THAT'S
READY TO "GO"!

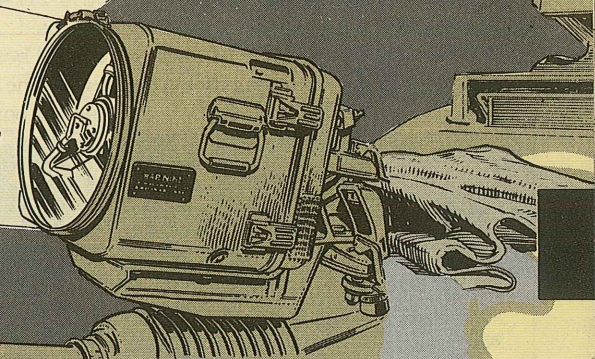
Sure, the tactical searchlight "flicker" technique keeps the operating time on your tank-mounted AN/VSS-3 or -3A searchlight low.

But pulling good weekly PM checks and services (including an operational check) will show up on the elapsed time meter on the control box or in the

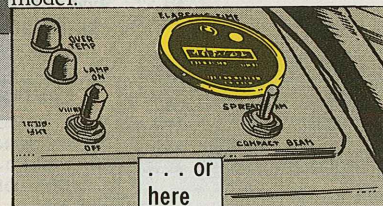
Good PM checks
show up here . . .



8



searchlight housing, depending on the model.



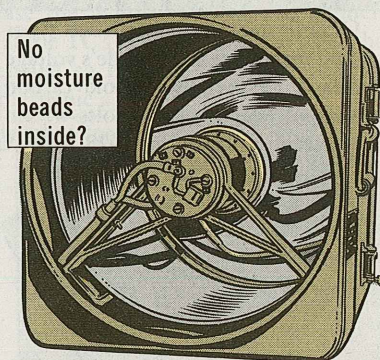
And that weekly PM will show up on the range, too—in the form of operationally-ready searchlights.

The run-down on operator and organizational maintenance is laid out in TM 11-5855-217-12 (Jan 70) for the AN/VSS-3 and in TM 11-5855-217-12-1 (Jul 70), through Ch 8, for the A-Model. But there are a few other items you need to check to keep that searchlight ready to go.

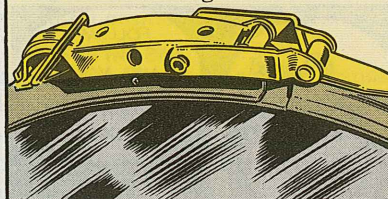
F'rinstance, when you're eyeballin' the window for dirt, scratches and cracks, keep a sharp eye open for any condensation on the inside surface. If you see moisture beads, the light goes

to organizational maintenance types for a further checkout. They're the ones to make sure the window seal and heat exchanger seal are both OK.

No
moisture
beads
inside?

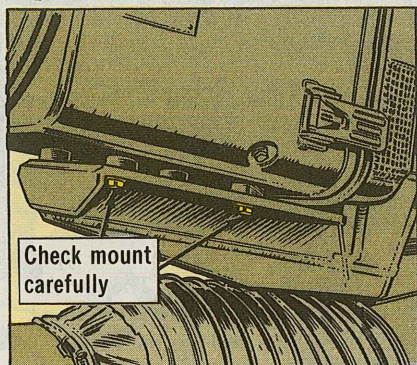


Operators and crew members don't mess with the window latch, but check it for visible damage.

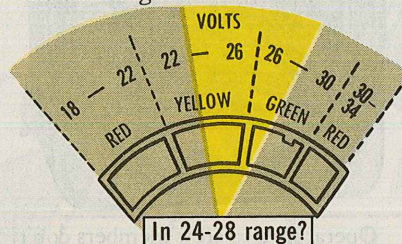


9

When you're checking the searchlight mount, watch for missing mounting screws, a bent or cracked mount, or worn or missing mounting pins.



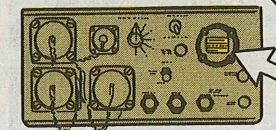
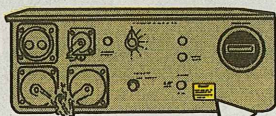
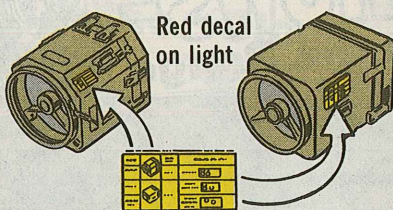
Organizational maintenance types should make sure the vehicle's voltage regulator (especially the old carbon pile type) keeps battery volts within the searchlight's limits 24-28 volts.



One final reminder—double check that the 2 decals included in TM 11-

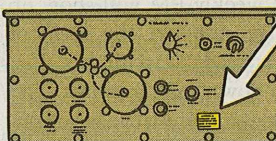


5855-217-12-2 (15 Jun 77) are mounted on your searchlight and control box. The red decal goes on the light; the yellow one's for the big control box.



Yellow decal on control box

CAUTION
AVOID SEARCHLIGHT DAMAGE. DO NOT MIX AN/VSS 3 AND AN/VSS 3A COMPONENTS TOGETHER.

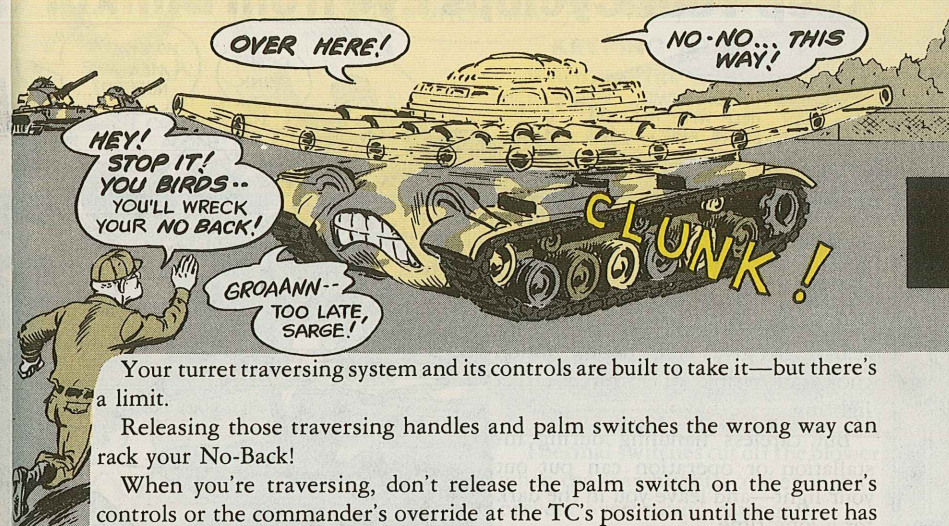


And pay attention to those cautions: Don't mix AN/VSS-3 and AN/VSS-3A components.

If you need more decals to cover each searchlight and control box in your unit, just order the -2 TM. Don't worry about building an unauthorized "library". The -2 TM just includes an envelope containing the 2 stickers and a one-page TM that tells you where to stick 'em.

Tank Turret Traverse Controls . . .

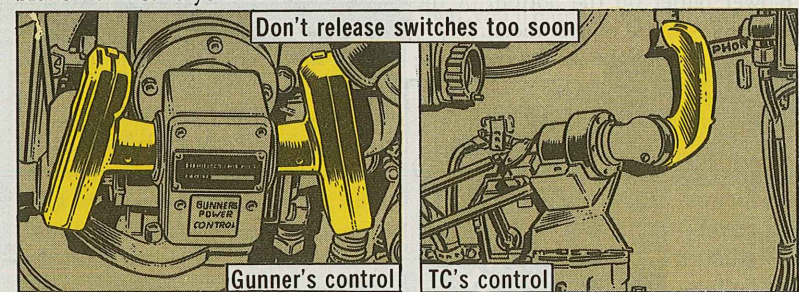
No-back No-go Number



Your turret traversing system and its controls are built to take it—but there's a limit.

Releasing those traversing handles and palm switches the wrong way can rack your No-Back!

When you're traversing, don't release the palm switch on the gunner's controls or the commander's override at the TC's position until the turret has stopped traversing. You'll reduce damage to the No-Back and magnetic brake—and save your favorite turret mechanic a hassle.



The TC can reduce turret traverse system damage by keeping a cool head and supple wrist when he has to override the gunner's control. Here's the ticket: Keep the power control handle in the neutral position before squeezing the override.

Cranking the TC's handle in the opposite direction of the gunner's handles while the turret's already moving, and then hitting the override? That can lock up the traversing gear box. It can do a number on the No-Back, too.

If you're spending plenty time on your turret traversing system—or blowing its parts out—better review your tank's -10 TM.

IR Searchlight Handling and Use . . .

Keep Your Cyclops Eye from Blinkin'

NEED SOME
HELP WITH THAT
LIGHT, FRED?

DON'T
THINK
SO...
I...
ULP!

WRONG!!
4 MEN ARE
NEEDED!...

BUT I
CAN DO IT
ALONE!

CYCLO MADE IT JUST
IN TIME, SIR!
LUCKY WE
SPOTTED THEM!

RIGHT
ON!

Your tank-mounted 2.2-KW searchlight gives you a double-option choice of visible or infrared target lighting.

But careless handling during installation or operation can put out your light—and leave you in the dark for a long time.

The grille on the heat exchanger blower outlet on the bottom of the housing is made of soft metal. If you rest the searchlight on the mounting

balls for even a moment, that "lightweight" 230-lb unit can end up with a bent or pushed-in outlet grille.

And that's the problem. Just inside the grille is a resistor that carries the amps for the light. If that metal grille comes in contact with the resistor even a little, the resistor is shorted to ground.

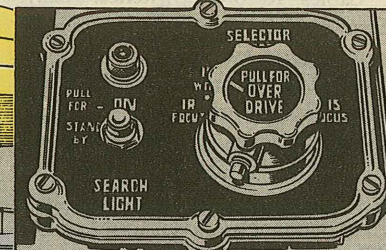
Metal
outlet
grille
must not
contact
resistor
inside

Mounting
balls

Blower
outlet
grille on
bottom

KEEPING YOUR COOL

When you fire it up, that searchlight's Xenon bulb gets plenty hot. Its cooling blower has to keep running even after you douse the light.

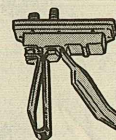


Thermal switches cut off the blower when the searchlight's cool enough to prevent overheating damage.

If you turn off the tank's master switch before the blower stops on its own, you'll damage the bulb and other parts.

That means a partial burning of the resistor until it breaks contact with the screen, or a complete resistor burnout—which means a trip to support.

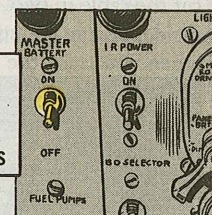
Burned-out resistor



Good one

So use enough crew members to muscle that searchlight onto either the operating or stowage mounts. Four wouldn't be too many. And never rest the unit on its grille.

Don't turn
off master
switch 'til
blower stops



TM 11-5855-250-12&P (May 77) covers the AN/VSS-1(V) 1 and -2 searchlights.

TM 11-6230-219-12 (Jun 70) has the poop on the regular AN/VSS-1 () and VSS-2.

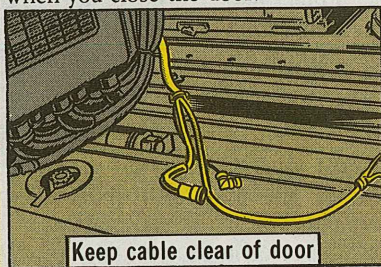
While you're at it, TEC lesson 020-171-5343-F includes a wrap-up of Xenon searchlight operations, including pre-operation safety checks.

FROM CABLES

Cables. Records. Switches. Relays. Screws. You name it, and somehow you've gotta take care of it right to keep your Chaparral missile system going.

For instance, you've got to disconnect the W30 commo cable from the radio set in the rear electrical compartment for several good reasons (like removing the radio set).

But, the cable tends to dangle over the edge of the compartment . . . and when somebody closes the rear electrical compartment door, bad news. At the least, the insulation will be damaged. At worst, the door will cut the cable in two. So, keep the cable inside, and make sure it's still inside when you close the door.



Record keeping gets hairy at times, but trying to figure out what form to keep . . . and on what component . . . can get downright confusing if you follow the dope on Page E-9, Appendix E of TM 38-750.

WHICH
FORM TO
FILL OUT
CAN BE A
PUZZLE...

... SO
HERE'S
SOME
HELPFUL
INFO!

TO RECORDS

WHAT'S HARRY'S TARGET?

A FLYIN'
SAUCER,
I THINK..

HEY!
WHO'S TH
FEMME?

A
UFO!

UFO?

YEAH -- AN
UNIDENTIFIED
FOXY
OBSERVER!

For instance, the line with Equipment Category Code BK on page E-9 lists the logbook and 6 forms to be kept on "CHAPARRAL." And, the line for the M48, the whole guided missile system, calls only for DA Form 2408-9.

That kind of makes you wonder what you do about the M730 carrier and such.

Cheer up. The X's on the "BK" coded line are in the wrong place. Move all the X's down one line, to the M48, and you've got everything in the system covered . . . including the M730.

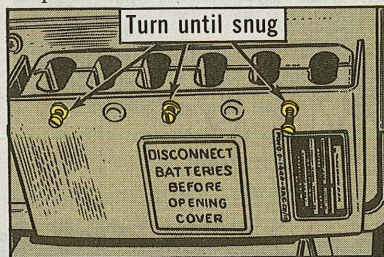
	Training Set: XM-76			X					
	Intercept-Aerial: Tracking Head Trainer				x				
BK	GM System: CHAPARRAL	X	X	X	X	X	X	X	
	Intercept-Aerial Carrier Mounted: XM-48	↓	↓	↓	↓	↓	↓	↓	
	Shop Equipment, GMS Sys: AN/TSM-95					X			
	Shop Equipment, GMS Sys: AN/TSM-96								

Move X's to blocks on next line as indicated

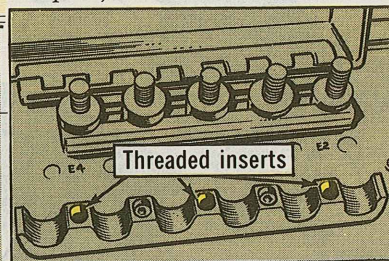


Think snug, not muscle, when you turn the captive screws on the terminal cover of the master distribution box.

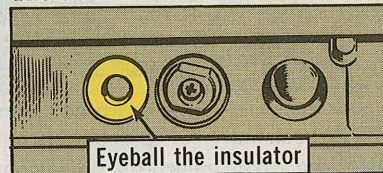
Just turn 'em down until they're snug with the surface of the cover (a little hand pressure on the cover will keep it flush with the bracket under it).



The idea is not to overtighten the screws. Turn 'em hard, and you'll pull out the threaded inserts they fit into in the lower bracket. That calls for a repair job.



Before you load your missiles, eyeball the insulator (firing pin) on the firing pin and detent assembly. There's one on each of the 4 rails.



The insulator chips and cracks from use, so be sure the cracks are not all the way through to the rail metal. If it's cracked through, it can cause misfires.

If you spot a bad crack, replace the firing pin and detent assembly, and send the damaged one to support for repair.

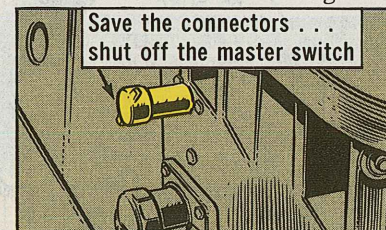


16



Tip: If you've got to hook up your W40 slave cable and it's not practical to shut down the engine of the carrier, just shut off the master switch.

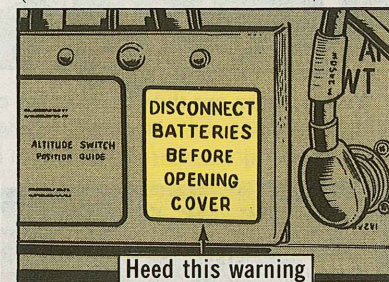
Engine shutdown's best, but the master switch will cut power to the slave cable connectors... which means the connectors won't be damaged.



Take a mental note on the generator set control box: Keep out if you're not authorized to adjust or repair it. Troops tinker with the K2 relay and other components in the GSCB to "make it better." It gets "better" by ending up in the support shop for repair.

Another note on the GSCB: Heed the warning on the box which tells you

to disconnect the vehicle batteries (cables W19E1 and W22E1) before



you remove or install the GSCB. If you don't disconnect those battery cables, you'll damage the K2 relay and other components.



17

PS END

CHAPARRAL BATTERIES

BATTERY POWER...
THERE ARE TIMES
WHEN YOU NEED IT, TIMES
WHEN YOU HOPE YOU
HADN'T HAD IT...

TIMES WHEN
IT'S GOOD AND
BAD!

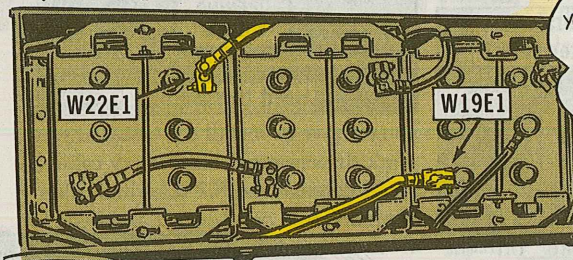
HERE ARE SOME
EXAMPLES SO FAR
AS YOUR CHAPARRAL
MISSILE SYSTEM
IS CONCERNED...

WOW... THIS
BAH-KNEE SURE
CHARGES MY
BATTERIES!

DITTO!

You can burn out the generator set control box (GSCB) on your Chaparral with battery power... if you don't disconnect a couple of battery cables before you attempt to take out the GSCB.

BE SURE
YOU DISCONNECT
THESE CABLES
BEFORE YOU
OPEN THE
GSCB.



So, before you do anything with the GSCB, disconnect the W19E1 and W22E1 negative cables from your lead acid batteries No. 1 and No. 3.

If you leave the battery leads attached... and accidentally ground the GSCB hot leads on metal... kiss the GSCB goodbye.

Finish re-installing the GSCB before you re-connect the negative leads.

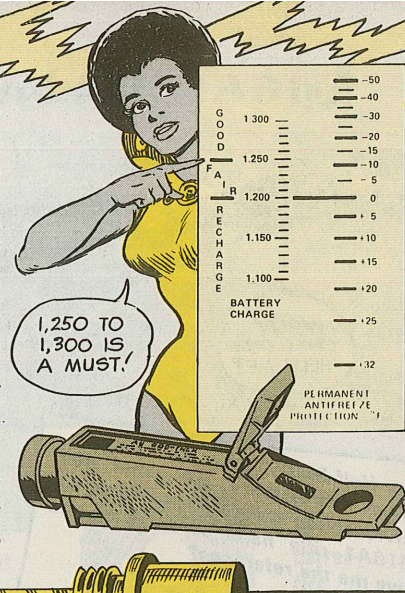
In other words, that caution printed on the GSCB about disconnecting the batteries is for real.

On the good side of the picture, charged batteries are the thing for a top operating launch station.

Your system mechanic provides that with a specific gravity check of the batteries at each monthly service, insuring that the batteries have a specific gravity reading of 1.250 to 1.300. Cells in each battery should vary no more than .040 specific gravity. Terminal voltage should be at least 12.0 volts.

If the readings are less than 1.250, they need a charge. Get 'em replaced if they don't come back up to at least 1.250.

The monthly, too, should insure that the charging system is putting out the right voltage (too much or too little is harmful).



CHAPARRAL OIL

Fifty hours. Mark that in your memory.

Fifty hours, and every 50 hours of operation, is the time period for changing the oil in your Chaparral missile system air compressor.

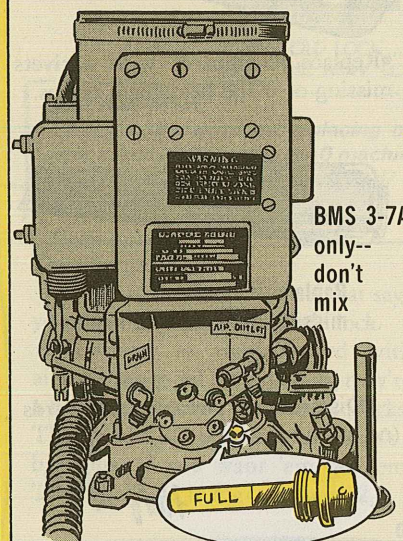
Forgetting it can be a very expensive lapse of memory. The compressor doesn't come cheap.

The oil gets a daily check, too. If it's low, bring it up to the mark on the dipstick.

When you change the oil, remove the sump pan and clean it.

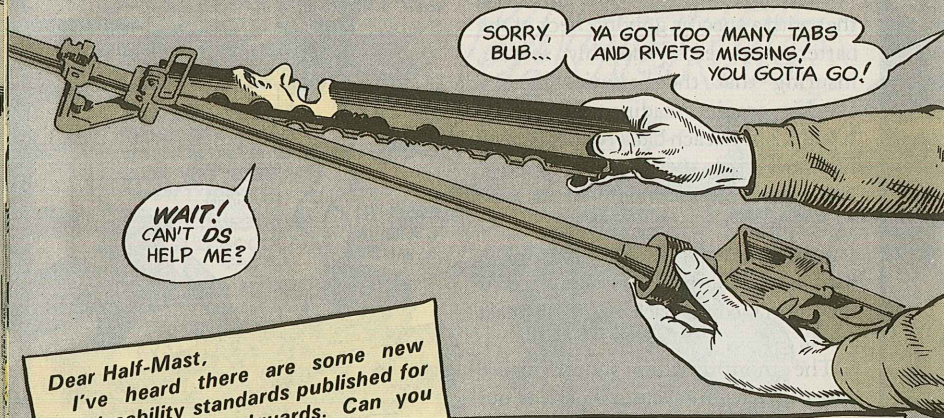
The only oil you use now in the compressor is BMS 3-7A. NSN 9150-00-753-4667 gets you a quart, and the compressor takes ½ pint for a refill. Never mix BMS 3-7A with any other oil.

THE LO AND
TM 9-1440-585-10,
Ch 1 and 2, PIECE
TOGETHER THE
STORY FOR YOU.



BMS 3-7A
only--
don't
mix

M16A1 Handguard Standards



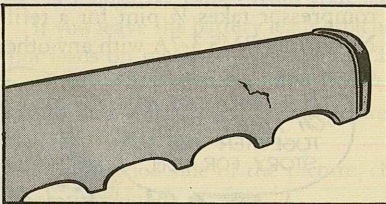
Dear Half-Mast,
I've heard there are some new serviceability standards published for M16A1 rifle handguards. Can you give me the reference?

SSG D.M.

Dear Sergeant D.M.,

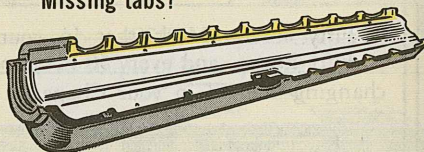
The standards are not so new, but they will be printed in Table 2-6 of TM 9-1005-249-20 before long. The new standards are in a world-wide letter from U.S. Army Armament Materiel Readiness Command (DRSAR-MAG 3 Jun 77). The letter stopped repair of handguards and set up these standards for replacement:

•Cracks up to 1 inch long are OK if the weapon can be operated.

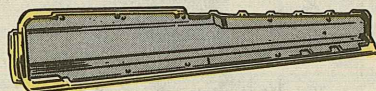


•If 4 or more tabs or 2 adjacent tabs are missing, replace the handguard.

Missing tabs?



•Replace handguards with 4 rivets missing or if the heatshield rattles.



Replace if rivets are missing or heatshield rattles

•Discard unserviceable handguards (no more turn-in to DS).

Half-Mast

M60 Barrel—Crack or Ring?



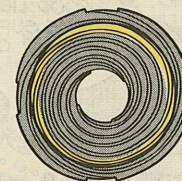
Dear Half-Mast,

We have a problem with M60 machine gun barrels cracking and separating on the inside near the breech end. We've been told that this is where a sleeve and the tube meet. Are they safe to fire?

SFC G.K.

Dear Sergeant G.K.,

Fire away, the barrels are safe! There is no crack. What you see, about 6 inches down the barrel, is a groove where the tube and a sleeve installed by the manufacturer meet. The groove varies from .020 to .040 inch ... and it's supposed to be there.



Groove in barrel—fire away

Half-Mast

M60 Barrel Lock

HEY, OLD LOCK... I'M THE NEW LOCK!

Dear Half-Mast,

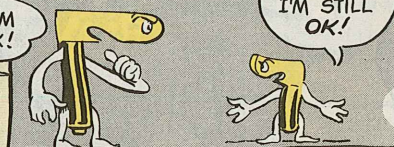
What's the word on replacing old style barrel locks on the M60 machine gun with new ones? Is it required?

SSG J.D.C.

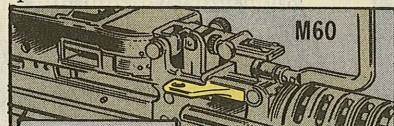
Dear Sergeant J.D.C.,

There is no DA directive that says you must have the new style lock.

However, as they proved with aircraft-mounted M60 models, they're a big improvement over the old locks. They hold that barrel in ... and that's a big plus. If you want 'em get 'em. They're shown in Fig C11, items 2, 3, 7



and 8 of TM 9-1005-224-24. Support puts 'em on.



Barrel lock



THE NEW LOCK IS BETTER!

PLenty of Pubs

As a PLL clerk, you're a Very Important Person. You're the one who keeps those repair parts coming, those vehicles moving, weapons shooting, and birds flying. That's a tall order.

You can do it if you stock plenty of pubs.

ZOWEEEE!

YOU HAVE A LIBRARY FIT FOR A KING!

SURE, BONNIE--I HAVE A GOOD LIBRARY. I KNOW THIS UNIT'S SUPPLIES AND READINESS DEPEND ON ME AND THE MOST UP-TO-DATE INFORMATION!

MAKE SURE YOUR LIBRARY HAS...

LOOK--I EVEN HAVE A COMPLETE SET OF PS MAGS!

•AR 710-2, Materiel Management for Using Units, Support Units and Installations, with 4 changes.

•20P TM's for all the equipment your unit has or supports.

•CTA 50-970, Expendable Items (Jul 74) with 2 changes. This CTA authorizes your requests for low-cost expendable items except repair parts, ammo, medical or heraldic goods.



•Local Pubs:
QSS Catalog lists the items stocked at your Quick Supply Store.

SSSC Catalog lists the items—office and housekeeping supplies, tools and common hardware—stocked at your Self-Service Supply Center.

SOP's tell you how to handle special and unique problems. You'll need copies of the Standard Operating Procedures of both your command and unit.

•FM 38-725-10 (Nov 76) Logistic Codes. Use this pub to translate status cards and printouts. Change I is due out soon.

•Microfiche:
AMDF, Army Master Data File, lists all items the Army uses by NSN. You check the AMDF for NSN changes, unit of issue, price and availability.

C-RL-1, Consolidated Master Cross-Reference List, Part 1, tells you what part numbers have NSN's.

SB 708-41, Name to Code, and SB 708-42, Code to Name, help you crack the Federal Supply Code for Manufacturers (FSCM). Use SB 708-41 if you know the manufacturer's name and you need the FSCM. Use SB 708-42 if you've got the FSCM but need the manufacturer's name.

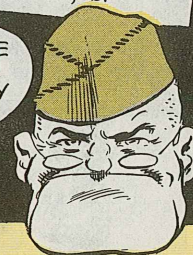
•Other Pubs:

You'll need your special system pubs if you operate under an automated system like DLOGS or SAILS.

Commercial Parts Manuals or Lists may give you the word on parts if your unit runs special commercial equipment along with its Army-issue.

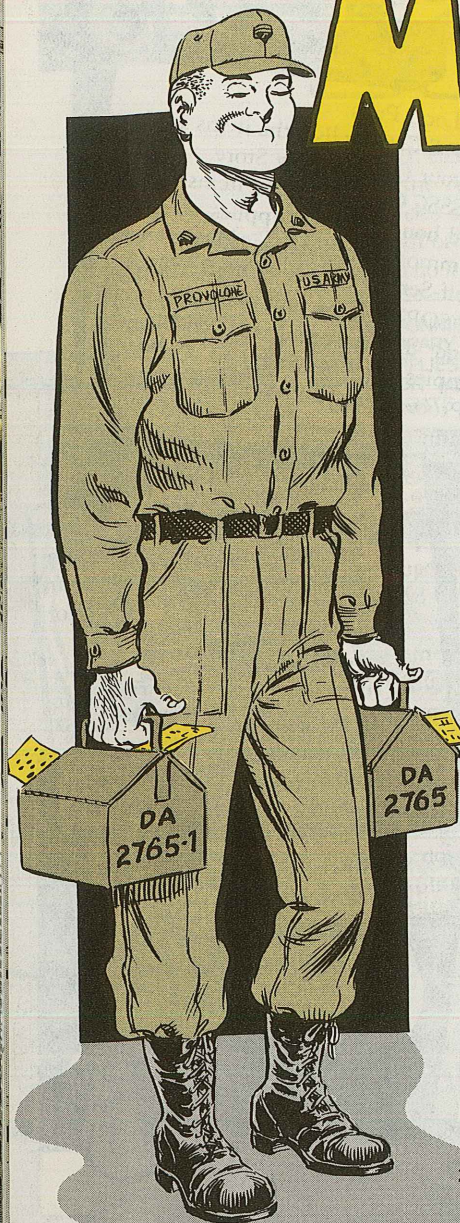
'Course, you also need to keep your soldier's manuals handy to stay on top of your job. The 76-series MOS manual spells out your job, tests you in job situations and steers you to the info you need about your job.

PUBS ARE THE LIFE BLOOD OF ALL ARMY PM!



Know-How and Judgment . . .

MARK



Using the right tool for the right job is what identifies a good mechanic—and a supply specialist!

By using supply system "tools" correctly, you, the supply specialist, make sure the mechanic has what he needs when he needs it.

The right "tool" for ordering expendable repair parts is DA Form 2765.

If you insist on using the handwritten DA Form 2765-1 when a preprinted 2765 is called for, you just double the number of entries needed to get the job done. 'Course, if your support can't supply preprints, you may be stuck with manual DA 2765's or 2765-1's. But, make sure it's a case of "have-to"!

Hold onto those -1's though! They're the right "tool" for ordering nonexpendables.

Use the DA 2765 for all repair parts and expendable supplies. They should be coded X in the expendability column (EXP) of the Army Master Data File (AMDF).

Sometimes you may need an item with no NSN. If the items FSCM and part number are too long for a DA 2765, go to DD Form 1348-6—not DA 2765-1.

Use the DA Form 2765-1 only when a DA Form 2765 is not available

of the PRO!

Entries required where there is color

Manual form entries

Less work required on preprint form

Preprint form entries

or when you're ordering nonexpendable items—usually end items and other property book-type gear.

Nonexpendable items are coded N in the AMDF expendability column.

You use the DA 2765-1 for all turn-ins, though, whether the item is expendable or nonexpendable.

PUT THE RIGHT SUPPLY "TOOL" ON THE RIGHT JOB! THE TIME YOU SAVE IS YOUR OWN!



That's what happens when you try to put maintenance NORS and supply NORS together.

It describes the condition of an item that is deadlined 'til an ordered part, component or subsystem arrives. But, maintenance and supply do not always agree on what you do with a NORS condition.

Maintenance NORS teams with NORM (Not Operationally Ready—Maintenance) to measure the amount of time equipment is not operational.

[illegible]

26

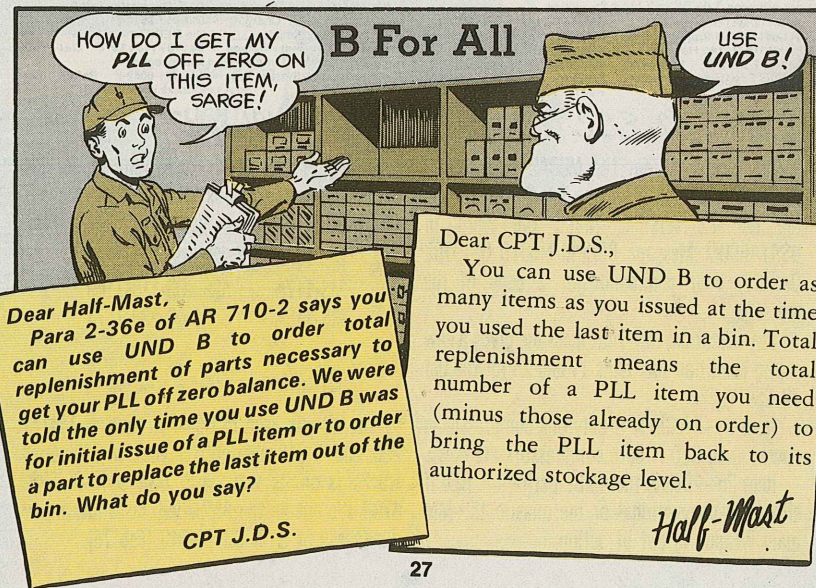
Supply NORS
teams with
*ANORS for
a special
type request.

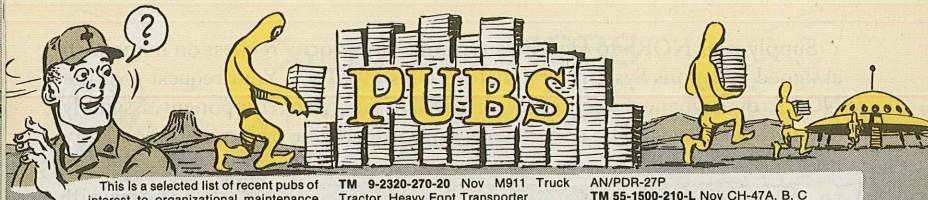
5H -----	AN/TPX-46 Interrogator Set VI Configuration
5J -----	AN/TPX-46 Interrogator Set V2 Configuration
5K -----	AN/TPY-50 Interrogator Set
5L -----	AN/MPQ Radar Set
5M -----	Defense Satellite Communications System (DSCS)
5N -----	Army Air Field/Heliport C-E Projects
5P -----	Automatic Voice Network (AUTOVON)
5Q -----	Radio, AN/TRC-80
5R -----	European Wideband Communications System (EWCS)
5S -----	Integrated Joint Communications System PAC (IJCS-PAC)
5T -----	Worldwide Military Command & Control System

*Anticipated
Not
Operationally
Ready
Supply

One type of NORS does not direct the other type. A NORS supply request is independent of the materiel readiness NORS/NORM time.

So until the experts put supply and maintenance NORS together, keep 'em separate!





This is a selected list of recent pubs of interest to organizational maintenance personnel. This list is compiled from recent AG Distribution Centers Bulletins. For complete details see DA Pam 310-4 (Oct 77), TM's, TB's, etc.; DA Pam 310-6 (Jul 77) and Ch 1 (Oct 77), SC's and SM's and DA Pam (C) 310-9 (Nov 76), COM-SEC pubs.

TECHNICAL MANUALS

TM 3-1040-266-20&P Nov M239 Smoke Grenade Launcher
Ch 2, TM 3-4240-279-20&P Dec M17/M17A1 Mask and Accessories
Ch 2, TM 3-6665-261-14 Dec M10 Alarm Power Supply
TM 9-258 Dec Elementary Optics, Fire Control Instru
Ch 4, TM 9-2320-266-10 Dec M880-Series 1½-Ton Truck

TM 9-2320-270-20 Nov M911 Truck Tractor, Heavy Ept Transporter
Ch 2, TM 9-2350-257-20-1 Nov M60A1 (RISE) HULL
TM 9-2350-258-10 Dec M48A5 Tank
TM 9-4320-269-20 Dec Truck Telephone Maintenance, Utility, XM876
TM 9-4940-421-14 Oct Maint Shop Ept Contact Maint Truck Mtd (Southwest Mod SECM)

TM 11-5820-401-10-2 Dec Radios AN/VRC-12, AN/VRC-43, AN/VRC-44, AN/VRC-45, AN/VRC-46, AN/VRC-47, AN/VRC-48, AN/VRC-49
TM 11-5855-203-23 Nov Night Vision Sights, AN/PVS-2, AN/PVS-2A, AN/PVS-2B
TM 11-5855-214-24&P Dec Night Vision Sight AN/TVS-5
Ch 1, TM 11-5855-238-10 Nov Night Vision Goggles AN/PVS-5, AN/PVS-5A
TM 11-6665-224-20P Jan Radiac

MISCELLANEOUS

Ch 6, AR 710-3 Nov Asset and Transaction Reporting Sys
TB 9-2300-405-14 Nov Mandatory Brake Hose Inspect, Replace-Tactical Vehicles
TB 55-1500-325-25 Dec Aircraft Quality Summary, Acceptance Inspection
Ch 3, TB 55-1500-334-25 Dec Conversion of Aircraft to Fire Resistant Hydraulic Fluid
Ch 1, TB 55-1500-337-24 Nov Phased Maintenance System

AUDIO-VISUAL STUFF TEC LESSONS

Available at battalion or post Learning Center

010-071-6635-F Boreighting
81-MM Mortar
020-171-1312-F Vehicle Classification
041-061-6132-J Prefire Checks on M109/M109A1 Howitzer
041-061-6135-J Prefire Checks on M114/M114A1 Howitzer
041-061-6136-J Prefire Checks on M101/M101A1 Howitzer
043-441-5432-F Improved HAWK: Fire Control Operator, Part 1

043-441-5436-F Improved HAWK: Tactical Control Assistant, Part 2
043-441-5440-F Improved HAWK Loading, Unloading: Part 1, Loader Transporter Operation
043-441-5443-F Improved HAWK: Decanning and Assembly, Part 1
201-113-4619-F PM Checks, Services, Troubleshooting for Radio Teletypewriter Set

AN/VSC-2
231-906-4401-E R-390A/URR Radio Receiver, Calibration, Operation, HF Signal Identif
412-061-7904-A M2 Aiming Circle
610-091-6060-F Test Generator Output, 25-Amp Charging System, Tactical Vehicles
610-091-6062-F Test Voltage Regulator, Current Limiter of 25-Amp Charging System, Tactical Vehicles

610-091-6074-F Adjust Carburetor of Tactical Vehicle with Emission Control
610-091-6082-F Troubleshooting Service Light System
662-051-7605-E Servicing the GED Generator: Part IV
662-051-7610-E Operation of the GED Generator Set
941-071-0119-F Cal .50 Machinegun
945-171-0052-F Before Op Checks on M113/M577

M60A2 ESC Flipflop

The latest ESC for the M60A2 tank, TM 9-2350-232-ESC (Jun 77), is no good. Instead, use the Oct 72 version. That's the word in USATARGOM Message DRCPM-M60TD 051915Z Dec 77. Your command got a copy of the message.

Pay attention, tho. That message gives a new rating condition for items 11 and 25 for the Oct 72 ESC.

Item 11—AMBER if only one compressor is operational. RED if both compressors are down.

Item 25—Delete the AMBER criterion. RED if either the conventional or the missile 152-MM main weapon is out of action.

Whipped?

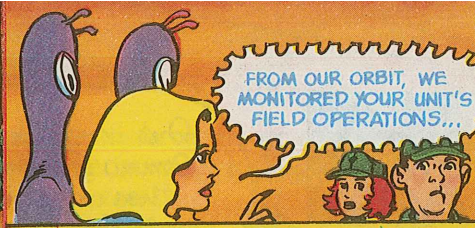
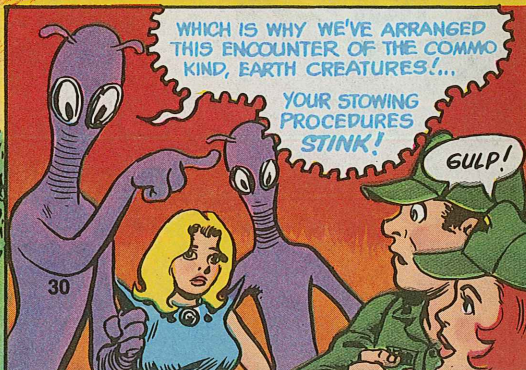
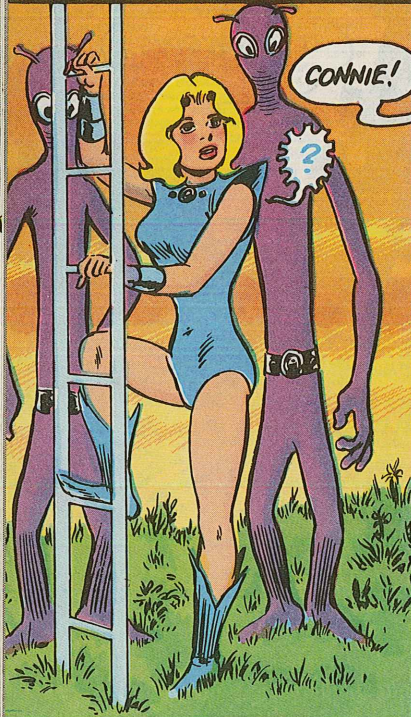
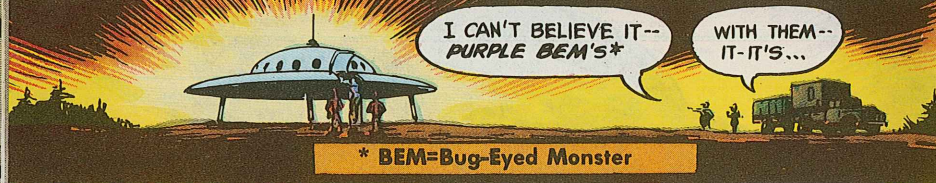
Trying to find good stock numbers for the whip antenna sections that go with your AN/GRC-106 radio set? Use these:

MS-116A	5985-00-199-8831
MS-117A	5985-00-115-7149
MS-118A	5985-00-238-7474

Shelter Tie-Downs

The kit you need to tie down those S-144, S-250 and S-318 shelters on your M-880-series trucks is on its way, with NSN 5410-01-026-4708. It's not on the AMDF yet. Installation and dunnage info is in SB 11-640 (Feb 78).





Joe's Dope Sheet

Out in space or down here on the ground,
Commo gear won't take banging around--
Use care when you stow it,
So the trip home won't blow it--
And return it to base safe and sound!



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.

YER RIGHT,
KAH-KNEE,
WE'VE BEEN
CARELESS...

WHAT
SHOULD WE
HAVE DONE?

THOUGHT YOU'D NEVER
ASK... TREKS, INSTRUCT
THESE TROOPS BY
MENTA LESSON!

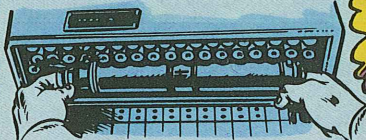
OUR PLEASURE!

Slow down! If you get in too big
a hurry, your antenna winds up
with broken clamps.



You'll just have to replace them
before the antenna is used again.

Equipment use batteries??
Remove 'em on the spot, or use a
tag to show you didn't.



Then take them out, pronto, when you
return to home base. If you don't, they'll
eat out the inside of the set.

When you put your headset
away in the cover of your SB-22(
switchboard...



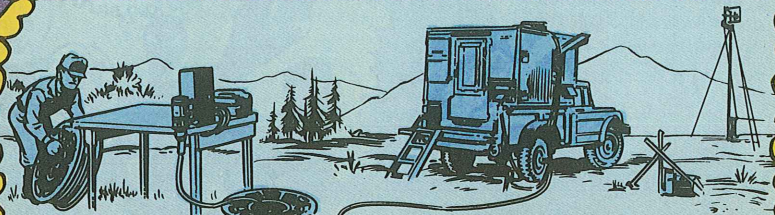
You can also bend plugs
if you slam the cover on with
the plugs in the line jacks.

...be careful putting the cover on
the switchboard front panel. You
can bust the headset or bend plugs
if you force the cover on with the
latches.

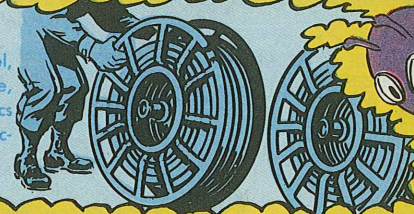
WOW!
LIKE 3-D
MOVIES!

THEY'RE
HOLO GRAMS...
TO REMIND YOU
THAT GOOD PM
IS 3-D NOT
JUST SURFACE!

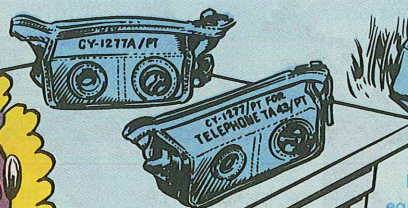
Remember to disconnect cable from vans or shelter equipment before the vehicles
roll. If you don't, you wind up with broken cable connectors or receptacles.



If you have rolled the cable up on its reel,
fasten it down before you leave. A loose,
flying reel will slam against other electronics
gear, breaking knobs, panels or cable connec-
tors.

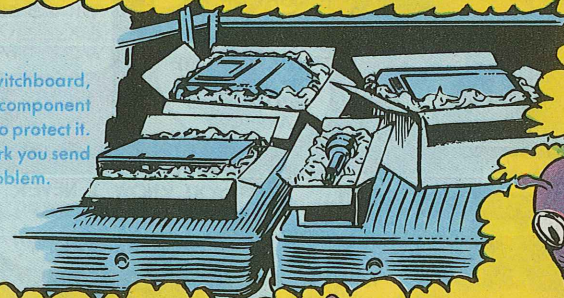


If it's been wet, get your antenna accessory and telephone set canvas covers dried
out as soon as possible.



Letting it go leads to canvas rot and
equipment rust.

When you have a switchboard,
radio set or some other component
in need of repair, pack to protect it.
Make sure the paperwork you send
with it describes the problem.





Retrieve your equipment's grounding rods so you'll have 'em the next time you need 'em.

GOOD SHOW, TREK I!!

MY STARS, TREK I-- THAT'S SUPER ADVICE!



TREK II, DO YOU HAVE SOME SHARP POINTERS FOR A WRAP-UP?

INDEED, KAH-KNEE...

ONE SHOULD FASTEN DOWN A RADIO SET IN ITS CASE BEFORE MOVING OUT.

IF THE CHASSIS IS LOOSE, THE SET AND SHOCKS CAN GET DAMAGED.

SO THAT'S IT, TERRANS--YOU HAVE THE INFORMATION!! PUT IT TO GOOD PM USE!

MUST GO NOW...

...WE'VE GOT MORE CONTACTS TO MAKE TONITE!



C'MON, DEKE--WE GOTTA GET ALL OUR GEAR STOWED CORRECTLY... BEFORE WE MOVE ANOTHER INCH!

RIGHT ON, AG-- BETTER LATE THAN NEVER! IT'S TOO LATE TO MAKE TH' NCO SHINDIG ANYHOW!



SOMEWHAT LATER...

OK, DEKE, WE CAN MOVE OUT, NOW!! BY TH' WAY... WHAT'S SO SPECIAL ABOUT TONITE'S NCO AFFAIR?

TH' MOVIE, AG... THE MOVIE!!

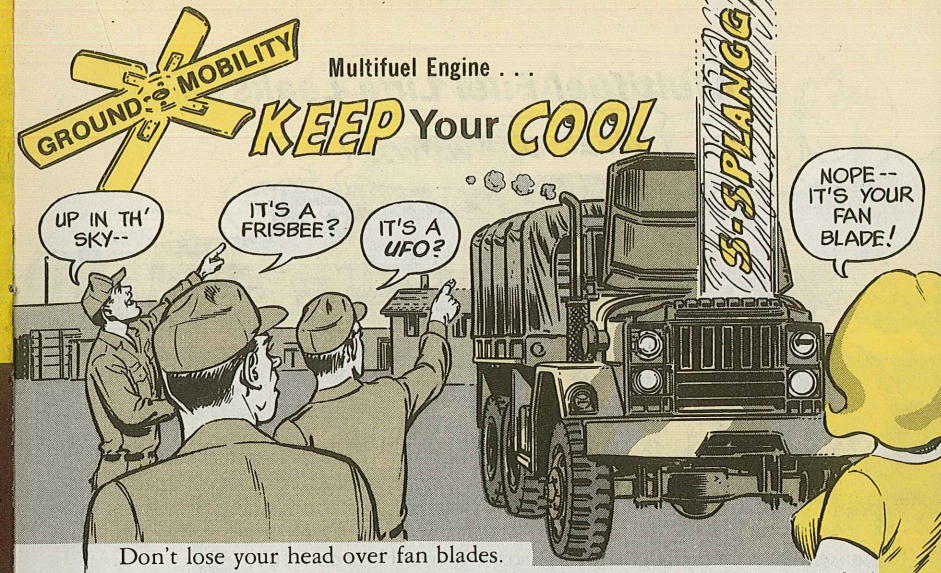


MOVIE?

YEAH... "STRANGE ENCOUNTERS OF THE 4TH KIND"!!

YOU KNOW I NEVER MISS UFO FLICKS!

GRRRMMP!



GROUND-S MOBILITY

Multifuel Engine . . .

KEEP Your COOL

UP IN TH' SKY--

IT'S A FRISBEE?

IT'S A UFO?

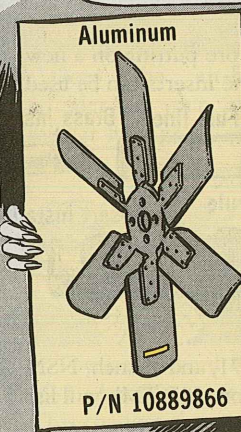
NOPE-- IT'S YOUR FAN BLADE!

Don't lose your head over fan blades.

It could happen. That aluminum fan blade on some older model multifuel engines can crack—even break off while the engine's running.

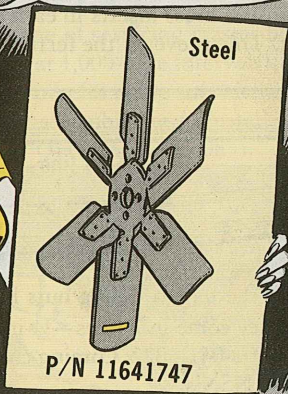
ALUMINUM BLADE GOING BAD?...

...ORDER A STEEL JOB, NSN 2930-00-113-0768... TB 43-0001-39-4 (Jan 78) HAS THE STORY.



Aluminum

P/N 10889866



Steel

P/N 11641747

Take a look at the fan blades on your TM -209-series, 2½-ton or TM-211-series, 5-ton multifuel powered trucks. The good fan's listed in TM 9-2320-209-20P (Oct 76), page 115 and in TM 9-2320-211-20P (May 73), page 2-55.

There's no problem with the fan on the other multifuel fleet—the M656, M757 and M791 5-tonners with the LDS 465-2 engine.

Multifuel Fuel Line Leaks

YEEEE-OWWWWW!!

I'VE HEARD OF HOT RODS... BUT THIS?...

HARRY PUT OFF FIXIN' THAT FUEL LEAK TOO LONG!

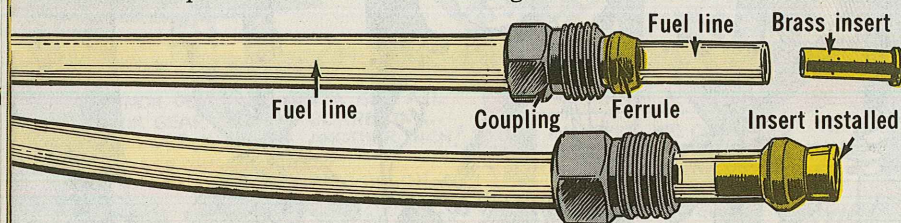
A leaking plastic fuel line on your multifuel 2½- or 5-ton truck is no joke. It makes for a messy engine compartment—maybe even a fire.

Your mech tightens the fuel line nut but the leak only gets worse.

That's because the metal ferrules used with the inverted tube coupling nuts cut thru the plastic line. Then, the more the nut is tightened, the more the ferrule cuts into the tube and the more the line leaks.

Here's how to fix it.

Install brass inserts in each end of the plastic line before putting on a new nut. This prevents the ferrule from cutting the tube. The inserts can be used



with the tube coupling nuts listed in your parts manuals.

They come in 2 sizes—¼-inch, NSN 4730-01-041-5271, and ⅜-inch, NSN 4730-01-041-3822. Coming change to the 2½ and 5-ton on -20P TM's will list these NSN's.

Next Month In LS

Surveying Set BYOI

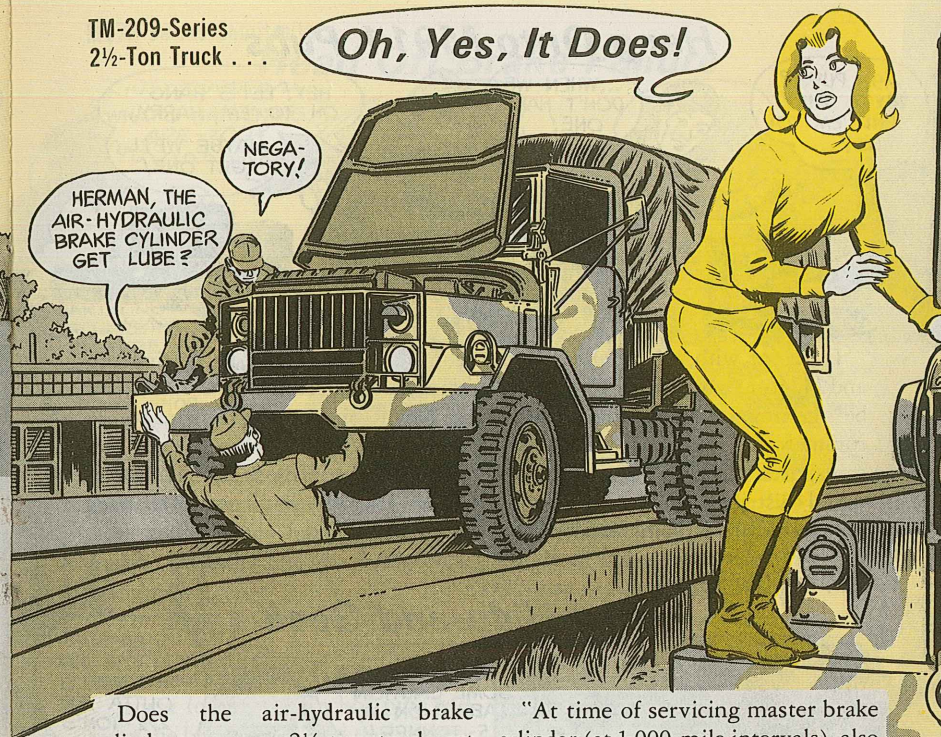
M28A1 Ammo Drum

For Good PLL Management

Tractor Track PM

TM-209-Series
2½-Ton Truck . . .

Oh, Yes, It Does!

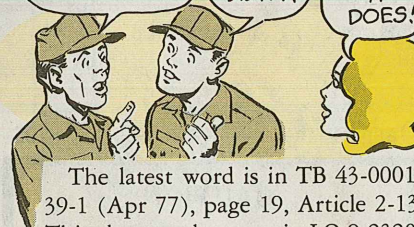


Does the air-hydraulic brake cylinder on your 2½-ton truck get regular lubing?

ONCE IT DID!

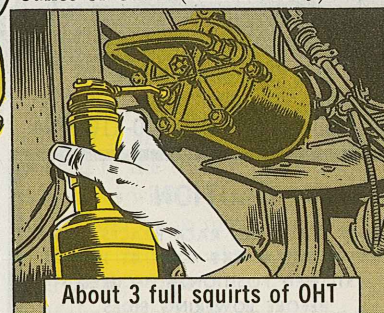
THEN IT DIDN'T!

...BUT NOW IT DOES!



The latest word is in TB 43-0001-39-1 (Apr 77), page 19, Article 2-13. This changes the poop in LO 9-2320-209-12/1 (Sep 76) for the multifuel deuce-and-a-halves. Natch, the same goes for the gas jobs covered by LO 9-2320-209-12 (Oct 71), since they've got the same cylinder:

"At time of servicing master brake cylinder (at 1,000-mile intervals), also remove oil fill plug of air brake cylinder assembly and install one ounce of OHT (MIL-H-6083)."



OHT comes under NSN 9150-00-935-9808 (gal).

Hang Onto M911 Pubs



Everyone with M123-series 10-ton and M746 22½-ton truck tractors will be getting pubs for the M911 commercial-design heavy equipment transporter (C-HET). That's the way initial distribution of pubs for the M911 tractors is being made. Don't

dump 'em—you may be getting the transporter tractor.

When you find out for sure you're getting the M911, write in your pub requirements in Block A17, DA Form 12-38. That way you'll get the changes as they're printed.

Dropside Cargo Trucks . . .

Label Hide-and-Seek



Need those metal side and tailgate labels for your 5-ton M54A1C, M54A2C or M813A1 dropside cargo truck!

Side label—NSN 9905-00-116-5294

Tailgate label—NSN 9905-00-116-5295

CAUTION

TROOP SEATS, SIDE RACK BRACES, BOWS & SIDE RACKS MUST BE IN STOWED POSITION & SECURED BEFORE LOWERING SIDES

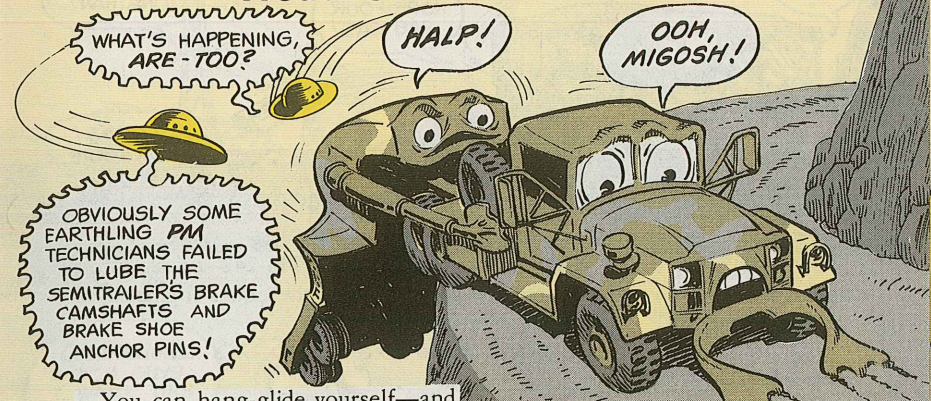
CAUTION

SECURE SIDE PANEL FRONT LOCKS PRIOR TO UNLATCHING TAILGATE
SECURE SIDE RACK BRACES TO FLOOR WHEN TRANSPORTING TROOPS

They're in TM 9-2320-209-20P for your 2½-ton M35A2C dropside truck.

M172-Series Semitrailers . . .

Head Off Brake Failure



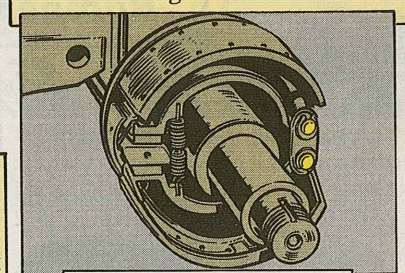
You can hang-glide yourself—and your M172-series semitrailer—right over a cliff if you forget to lube the brake camshafts and the brake shoe anchor pins.

The shafts and pins need greasing at least twice a year to keep the semitrailer's brakes from failing.

If you forget, the anchor pins will seize the brake shoes, and the brackets will seize the camshaft.

CAMSHAFT—Look to the lube chart on page 3-3 of TM 9-2330-211-14 (Oct 69). Lube the shaft through the grease fittings at the mounting bracket points.

BRAKE SHOES—Pull the bearings and brake drum. Loosen up the shoes and grease the anchor pins. Go easy on the grease, though—keep it off the linings.

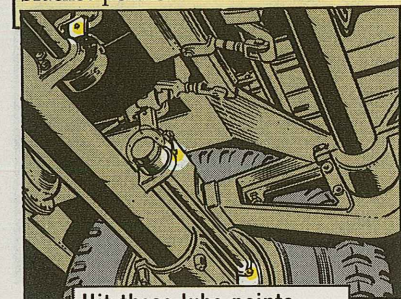


... and these anchor pins

Between lubes, you can make sure the brakes are A-OK with the trailer hooked to the tractor. Get a buddy to take notes while you apply the trailer brakes and try to move out.

If the trailer's wheels stay locked, everything's super.

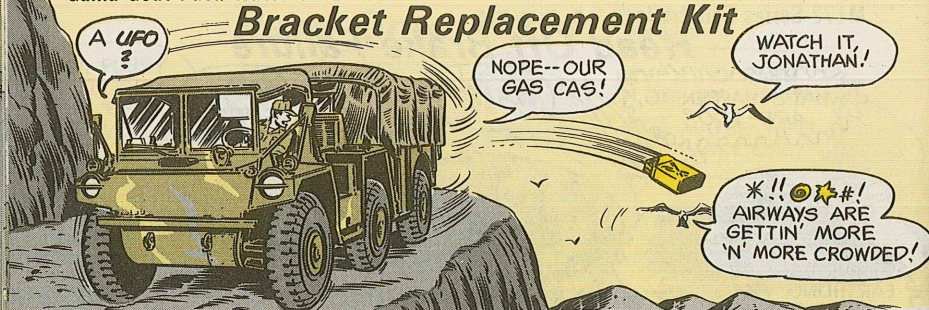
If the trailer's wheels jerk and turn, you're headed for trouble. Get your brakes repaired.



Hit these lube points . . .

Gama Goat Fuel/Water Can . . .

Bracket Replacement Kit



The brackets that hold the fuel/water can on your TM-242-series 1¼-ton truck's left fender frequently break . . . specially when the Goat's engine cover slams shut on 'em.

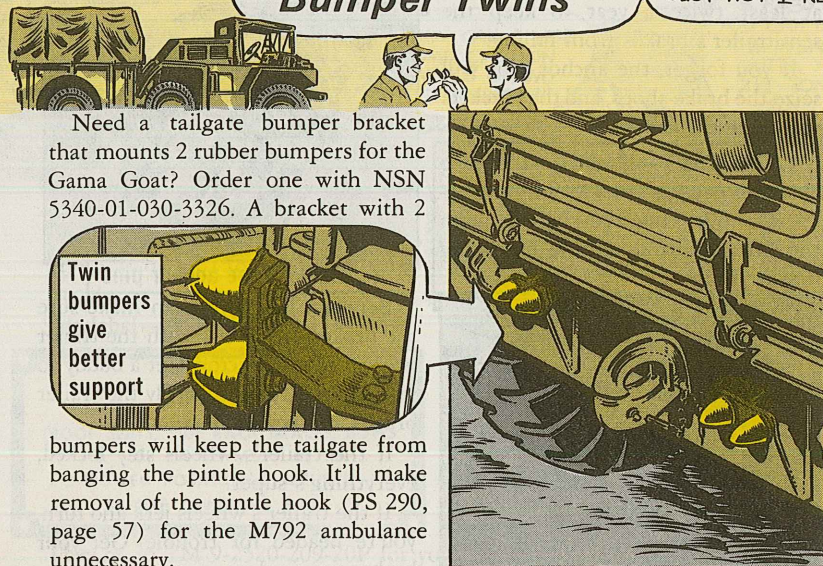
Fixing the brackets used to mean a trip to direct support. DS's authorized to rivet a bracket strap.

Now you can fix 'em. Use kit NSN 2510-01-029-7819. It has the parts to replace 4 brackets. Since the straps won't have to be riveted, you'll save a trip to support.

The kit will be added to the parts on page 208, TM 9-2320-242-20P (Mar 77).

Bumper Twins

JUST WOT I NEED!

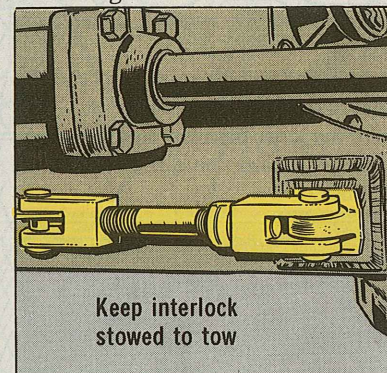


bumpers will keep the tailgate from banging the pintle hook. It'll make removal of the pintle hook (PS 290, page 57) for the M792 ambulance unnecessary.

Goer Towing No-No



Never use that intervehicle lock when towing your Goer. You can bust something!



Never mind what it says on page 2-30 of TM 9-2320-233-10 (Jun 76). That's wrong.

If you engage the intervehicle lock when you lift and tow, turning that

rigid unit can break the lock bracket, weld.

If you use the tow bar and engage the intervehicle lock, the towed Goer won't turn. The front wheels will skid to make the turn. And skidding all that weight is bound to break the lock bracket welds. Then your Goer has to go to DS for repair.

The intervehicle lock is supposed to be used only for lifting the Goer for placement on a flatcar or ship.

TM 9-2320-233-10 (Jun 76), pages 2-29 thru 2-32, shows both ways to tow: With a tow bar and all 4 wheels on the ground; and with lift and tow with 2 wheels rolling. Everything in there is OK except the bit about using the intervehicle lock.

BUTTON 'EM UP!

BOY! THIS OL' FLYIN' BUCKET O' BOLTS IS SURE NOISY!

RIGHT ON! I THINK TH' OL' BOY IS COMING UNFASTENED!

OUCH!
OWWW!

WE'D ALL BE BETTER OFF IF THESE YO-YO'S WOULD SEE THAT MY BLANKETS WERE SECURE!

FASTENERS DO MORE THAN JUST KEEP OUT THE WIND.

Soundproofing blankets with snap fasteners that are worn or pulled loose from the fabric can really cause you grief.

The faulty fasteners not only make the cabin and cockpit noisier, but can also damage the structural bulkhead and transmission island panels.

If you fly missions with the doors open, the loose blankets can flap in the breeze. When the snaps slap the panels, they can cause dents and voids in the material; the outer skin's only .008 inch thick.



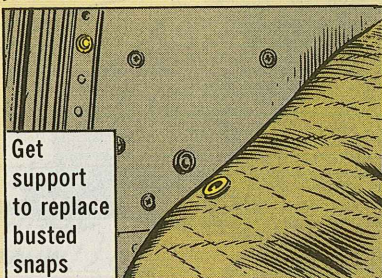
So it really pays to check those fasteners for how well they're secured to blankets and bulkheads, and how well they work.

Blanket fasteners loose or shot? Don't sweat—you may not need a whole new blanket assembly. Instead of ordering a new blanket (big ones cost more than a hundred bucks), you can have the fasteners and stitching repaired for a few cents.

Though the blankets are coded "unit-repairable" in the parts manual, neither TM 55-1520-210-20 nor the General Aircraft Maintenance Manual (TM 55-1500-204-25/1) tells you how.



Your friendly neighborhood DS or GS textile trailer shop can put new snaps onto the blanket with an attaching press, NSN 5120-00-880-0619.



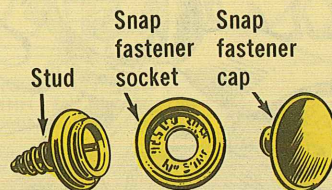
The trailer tailors can also tighten up any loose stitching around the blankets by matching the thread and stitch.

You can cannibalize unserviceable blankets for edge reinforcing coated cloth and blanket fabric.

You can get new blanket material by ordering bulk material, NSN 5640-00-269-1048. You get a square yard for \$5.90.

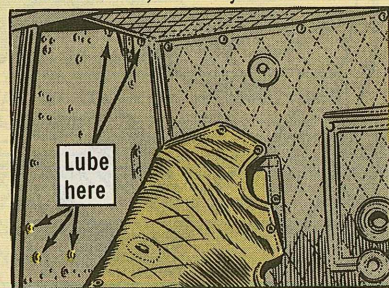
For parts, use cap, snap fastener, PN AN-227-6 (NSN 5325-00-276-

4953) at \$1.70 a hundred; and socket, snap fastener, PN AN-227-7, NSN 5325-00-276-4946, at \$1.35 a hundred.



How are your bird's studs? If you need new ones, use PN AN-227-26BM8, NSN 5325-00-985-6488, or AN-227-8, NSN 5325-00-174-2923. Check your parts manual for which kind goes where.

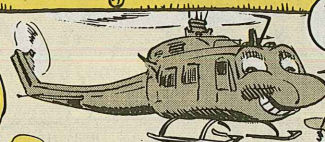
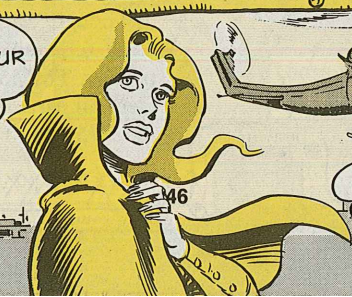
If the studs and fasteners are not worn or bent, but they're still hard to



work, you can ease 'em up a bit. Use a shot of spray lubricant.

A few cents' worth of supplies and a little time will add up to big savings when you avoid buying new blanket assemblies.

THESE PM STEPS WON'T JUST KEEP YOUR BABY QUIET AND TUCKED IN-- YOU'LL ALSO SAVE ITS SKIN!



S'ALRIGHT, PAL!

THANKS, BUDDY!

Leg Is Part of Monopod



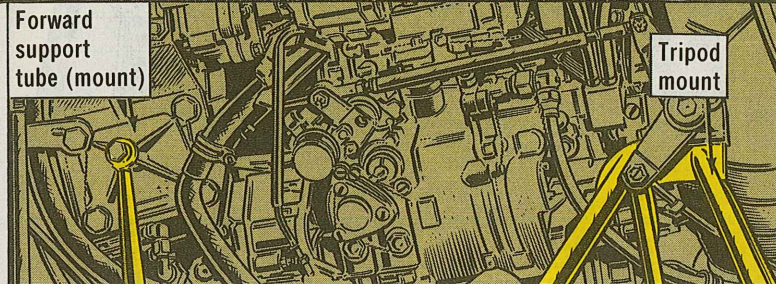
NOW WE CAN FINISH TH' JOB, CHIEF-- I FOUND US A NEW FORWARD SUPPORT LEG!

Dear Windy.
Fig 5-1 of TM 55-1520-210-20 identifies the forward support tube (item 12) as a "forward support leg." I say it's really part of the engine mount, and requires an engine alinement

check when it's replaced, regardless of the nomenclature in the figure. My maintenance people disagree. Who's right?

SSG R.H.

Forward support tube (mount)



Tripod mount

Dear SSG R.H.,

You are, Sarge. That tube is really a monopod, part of the engine mount. If any part of the engine mount (monopod, bipod or tripod) is changed, or the shim stack-up for any one of 'em is disturbed, you gotta make that drive shaft alinement check.

Thanks for payin' attention to the function—not just the nomenclature.

AND THANKS FOR THE TIP!



"Hold One!!"

OK, GOOD BUDDY--
IT'S FUEL CONTROL
CHANGING TIME!

THANKS,
WINDY!

Dear Windy,

In my opinion too many T-63 engine fuel controls on our OH-58A's are being changed when they shouldn't be.

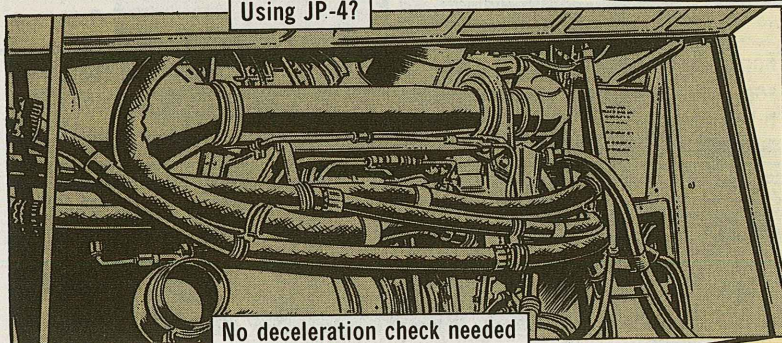
For example, when deceleration time is less than that called for in Table

5-1 of TM 55-2840-231-24 (Mar 72), my buddy says the control must be changed. There are no problems in starting and running the engine, so I disagree with him.

Who's right, Windy?

SP6 R.O.W.

Using JP-4?



No deceleration check needed

Dear Specialist R.O.W.,

You both are!

The problem is that Table 5-1 applies when you use alternate fuel only. The headshed is in the process of updating para 5-11 of the engine pub. A note will be added saying the deceleration check is required only

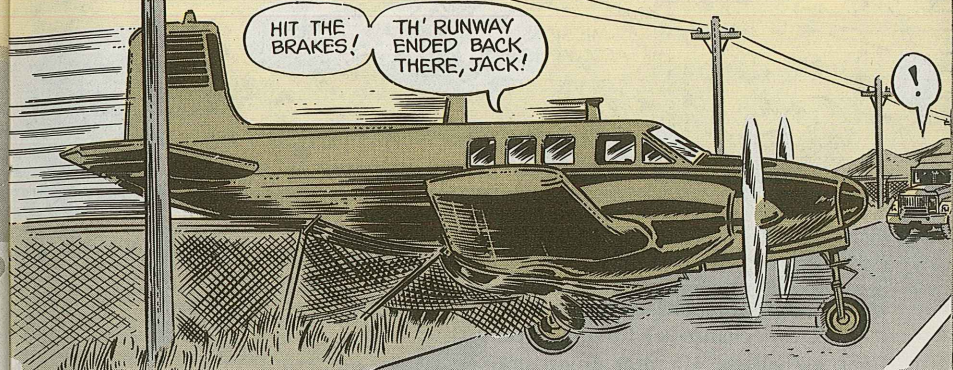
when using alternate fuels. Your buddy also has a point. The book says you have to meet coast down time limits or replace the fuel control—when you're not using JP-4.

Windy

There Is a Difference!

HIT THE
BRAKES!

TH' RUNWAY
ENDED BACK
THERE, JACK!



One aircraft part may look exactly like another but that's where the similarity ends. Using the wrong part can ruin your whole day.

Take the air induction hose on a U-8F engine. The wrong hose was

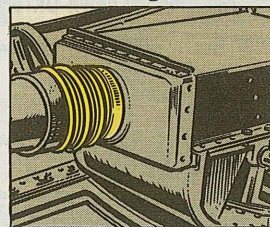
installed. At full throttle the hose collapsed, resulting in a loss of power. . . on take-off, no less!

After engine shutdown the hose returned to its original shape so it took some time to "figure" the problem.

A closer look and a hands-on check indicated a heater hose was installed instead of a wire reinforced air induction hose.

'Course, TM 55-1510-201-20P (Dec 76), Fig 104, item 18, shows the right hose as NSN 4720-00-799-8704. Accept no substitute.

Use
right
hose



Big O-Ring Needed

When you Cobra snake charmers replace the transmission external oil filter element on a Periodic inspection, you need a new O-ring that fits inside the housing. It's not listed in the parts pub, so ask for Packing, preformed, NSN 5330-01-018-6498, at \$7.75 each.

Need a Belt?

When you go for a passenger safety belt replacement on your Huey, ask for NSN 1680-00-447-9504. Another belt, NSN 1680-00-787-4299, will also fit—but it's for use only on the litter configuration. Supplies of that belt are getting mighty low!

Gap Down—OK!

MISSION ACCOMPLISHED!

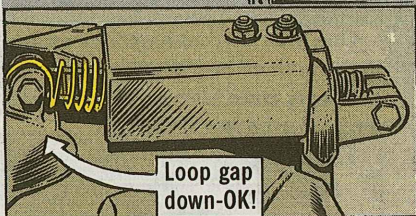
THAT'S SPECIALIST HAWKMAN, SIR!

HE'S FOUND A NEW WAY TO CHECK THE AFT ROTOR DROOP STOP EXTENSION SPRINGS!

The first chance you Chinook types get, eyeball the aft rotor droop stop extension springs, NSN 5360-00-901-4953.

Make sure the inboard end, attached to the rotor hub oil tank, has the loop gap facing "DOWN."

If the gap faces "UP," the spring will chafe the oil tank.



Save Some For C

SAVE SOME FOR ME...

HUH?

To make sure the supply pipeline on linear actuators for the C Model Chinook doesn't dry up, ask for the one that is usable only on your A or B Models.

ALWAYS USE ADVICE CODE "26" (DO NOT SUBSTITUTE) WHEN GOING FOR THESE PARTS...

Model NSN
A/B 1680-00-922-2701
A/B/C 1680-00-140-3522—But use only for C Model.

For Your Passengers

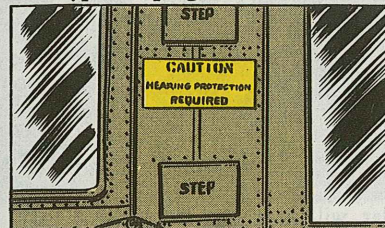
WHY DON'T YA PASS OUT THESE EAR PLUGS?

EAR PLUGS?...

I THOUGHT THEY WERE CIGARETTE FILTERS...

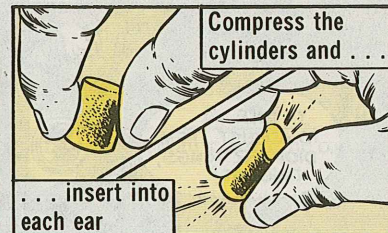
Passengers transported in turbine-powered birds deserve the same protection air types get from permanent type ear plugs.

ear. Held in place a minute, the plugs expand to keep out harmful engine noise.



So, temporary ear plugs are the answer.

Passengers simply compress the small, sponge-like cylinders between the fingers and insert them into each



No "Ops" room should be without Ear Plug, hearing protector. NSN 6515-00-137-6345 will get you a box of 200 pairs for \$17.26. They're authorized in Appendix A, CTA 50-970, on expendable items.

Pre-flight Helper

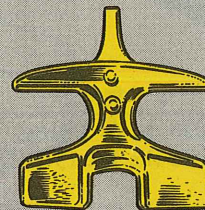


It's called a flight wrench.

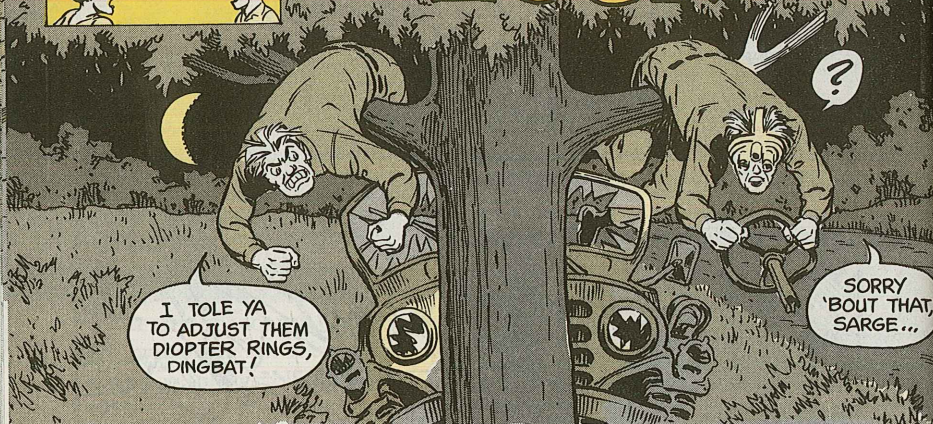
Makes your pre-flight inspection job a lot easier. You can open fuel tank cap covers 'n' cowlings with it. It has a flip-out screwdriver and a Dzus-type fastener bit.

Get it with NSN 5120-00-777-7596. Use Appendix A, CTA 50-970, as your authority.

Multi-purpose flight wrench



A LOOK AT

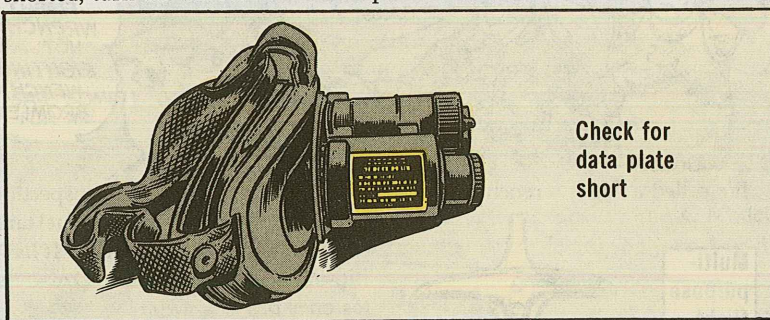


Your AN/PAS-5 electronic binocular will give you trouble-free night driving vision ... if you use it like TM 11-5855-210-12 tells you and follow a few basic PM tips.

First, to keep from bashing trees, adjust each diopter ring until you have sharp focus. If one lens is out of focus, or both are slightly out of focus, you can get disoriented ... even sick at your stomach.

If the lens is fuzzy, focus it ... even if you have to do each eye separately.

Power leaks can cause a short at the data plate, which might cause you to drop the binocular when you pick it up. Give the data plate a quick touch. If it's shorted, turn the binocular in for repair.



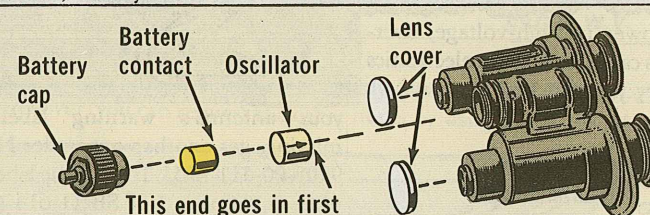
Check for
data plate
short

If you need it, short or no, just don't grab the data plate.

When the binocular's not in use, remove the BA-1312/U battery. Saves corrosion damage.

THE AN/PAS-5

You don't have to remove the oscillator (the fatter one) for storage. However, when you do remove the oscillator, be sure the arrowhead on it goes



in the binocular first. The battery goes in after the oscillator, with the contact end against the oscillator.

Don't touch the contact end of the oscillator (arrowhead). It'll shock you.

Finally, when you take off the objective lens covers, put 'em where you can find 'em. They're the best insurance your lenses have.

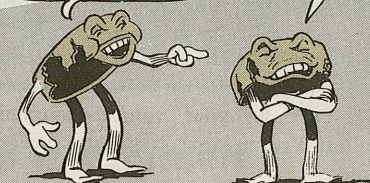
Hock Cap Coming Up

Dear Half-Mast,
Many of our CX-7453A power cables have broken or missing caps for the U-237/G electrical connector plug assembly. We have to order the entire hock to get a cap. This wastes money. Is there a way to get the cap separately?

LT R.A.J.

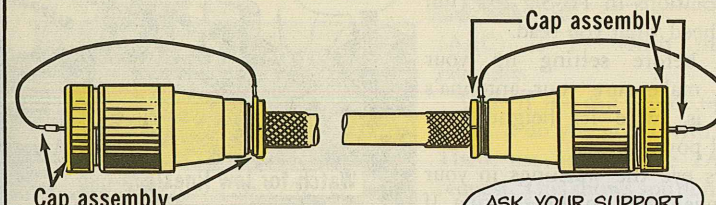
HAH! YER CRACKED!

THOSE THAT LIVE IN GLASS HOUSES, ETC...



Dear LT R.A.J.,

You can get it with an 8-in retaining wire using part number SCC162382GR-PI FSCM 80063, or with an 18-in retaining wire using part number SCC162382GRPII FSCM 80063.



Keep Antenna Out of High Lines

The power in high-voltage, overhead lines can burn up your electronics gear or fry you—or both.

Don't set up an antenna too close to lines

EEEEOOHH!

Never set up an antenna too close to these lines.

Never let your vehicle-mounted antenna come into contact with power lines.

Save your equipment . . . and yourself . . . from a shocking jolt by following safety precautions.

You can start by eyeing the people-gear precautions in TB Sig 291 (Jun 56) and heed what you read.

Then, before setting up your antenna, make sure your antenna's distance is twice its height from overhead power lines.

Always eye the warnings in your tech manuals and on the antenna. If

your antenna's warning label is missing, get another one under NSN 9905-00-511-8751. Info on the label or plate is on page 1 of SB 11-614 (Jun 67).

If warning label is missing . . .

. . . get another one

On vehicle- and shelter-mounted antennas, never raise the antenna when you're under high lines, or step out of your vehicle until you make sure the antenna is clear of any electric lines. Never let the antenna on a moving vehicle hit a low electric line.

YEOWW!

Watch for low lines!

MK-1069 Items Given

Dear Half-Mast,

It would be a real money-saver if we could get replacement items for the MK-1069/GRC-103 mast accessory kit. Can you give us the NSN's?

SSG G.W.V.

Dear Sergeant G.W.V.,

Only the guy attachment ring assembly has an NSN, 4030-00-155-8507. However, you can request the other items by using these FSCM numbers:

Guy anchor (3)	80063SMC697082	→
Strap wrench	80063SMC697081	→
Spike, common (3)	80063SMC697080	→
Hammer, hand (Universal tool)	80063SMC697079	→
Bag, mast accessories	80063SMC697077	→
Guy (3)	80063SMD697075	→
Guy (3)	80063SMD697074	→
Adapter, ant to ant, mast	80063SME697076	→

ONLY THE RING ASSEMBLY HAS AN NSN!

TA-312/PT Designation Plate . . .

You Gotta Do It Yourself

You won't get a new designation plate for your TA-312/PT telephones with the information on page 51 of PS 299.



NSN 9905-00-226-1742 is right, but the Acquisition Advice Code

WHAT'S YOUR ADVICE, SARGE?

GO 2A, YOUNG MAN... GO 2A!

(AAC) is F, which means you fabricate.

Only if you can't come up with the makin's do you go in with the NSN. Then, use advice code 2A on your request. This shows you don't have the material to do it locally.

Keep It Dry

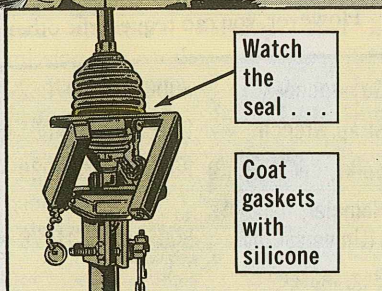
LOOK, SARGE--
THE LEVEE
IS BREAKING!

MAKE SURE
THE MP-68
INSULATOR
BOWL STAYS
DRY!

It doesn't take a river to short out your RC-292 antenna group. Just a little condensation in the MP-68 insulator bowl will do the trick.

You'd probably replace that insulator if you saw a bad crack. But a poor moisture seal that lets water in is just as bad.

To keep water out, remove the bowl once in a while and wipe it dry. Then, apply a coat of silicone compound to both sides of your rubber gaskets. This



moisture guard comes in an 8-oz tube under NSN 6850-00-880-7616.

Keep Your Distance

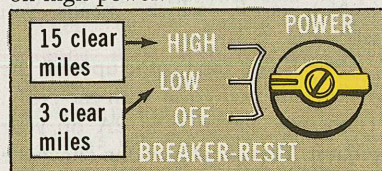
CLEAR AT
3 MILES,
SIERRA TWO!

CLEAR AT
15 MILES,
EARTHLING!

WLP!

When you're making PM checks on your AN/VRC-12 series radio set, put some distance between you and your testing station.

Make sure that distance is 3 clear miles on low power and 15 clear miles on high power.



This is the only way you can know that your set will do what it's supposed to do. Power, sensitivity and frequency accuracy must be good to talk these distances.

If you can't talk over these distances, better start troubleshooting the radio set . . . or turn it in.

Drive Within Speed Limit

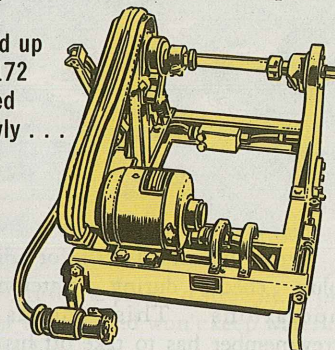


TH' CHARGE!

EXCEEDIN'
TH' SPEED
LIMIT!

That RL-172() motor-driven cable-reeling machine can let out a lot of line if you let it . . . and, take it up, too.

Build up
RL-172
speed
slowly . . .



Always make sure the crank handle is snugged into the control and crank arm when it's not needed. A wagging

Keep
crank
handle
snug?

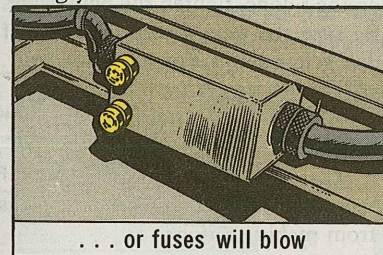


handle can get damaged or broken or it may become a club that can clobber an unwary person.

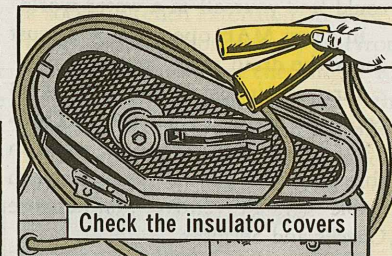
While you're eyeing your reel, look over those insulator sleeves or covers

So, build up the reel's rotating speed gradually when you're letting out or taking up wire.

If you throw your reel into a drag-strip kind of speed you'll knock those 20-amp slo-blow fuses for a loop and bring your reel to a standstill.



. . . or fuses will blow



Check the insulator covers

for the power cable. If they're damaged or missing, get them replaced. Without these covers you can wind up with a short or shock.

TROOP SUPPORT



Mobile Floating Assault Bridge . . .

The HOLE TRUTH ... and OTHER POINTERS

A hole in the hull of your MAB is necessary—if it's the right kind of hole and used for the right purpose.

F'rinstance, a hole for draining bilge water overboard is a must if you want to keep your MAB afloat. If you don't pay attention to the plugs, tho, you could find yourself in a water world.

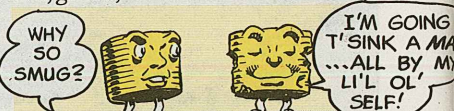
In every MAB operation you must check the drain plugs several times.

First, do it just before your MAB enters the water. Para 2-11b(2) TM 5-5420-210-12 (Jul 73) has the word on this plug PM. It's also spelled out in Table 3-1, Preventive Maintenance Checks and Services.

Then, when you're loading or unloading your bridge/ferry vehicle at the docking site, check the drain plugs—bilges—again.

A note in para 2-13 calls for a drain plug check during waterborne operations. This means a crewmember has to take off his life jacket and go down inside the transporter to check 'em.

You check the drain plugs again after every waterborne operation. This's when you open the 10—that's right, 10—drain plugs and pump the bilges dry as possible. When the drying's done, tighten the plugs tight. Be sure the plug threads are free of dirt, grime, burrs. You want 'em clean.



... nothing on 'em that'll keep the plugs from making a tight seal.

... AN' IT SUNK LOWER THAN THE OTHER UNITS!!!

JONES, DID YOU CHECK FOR WATER IN THE BILGES?

UPLP

NOW THEY'VE DONE IT... WE CAN'T BEACH IT!

YEAH-- HOW CAN WE HOOK UP TO IT?

THERE'S AT LEAST ONE IN EVERY OUTFIT!

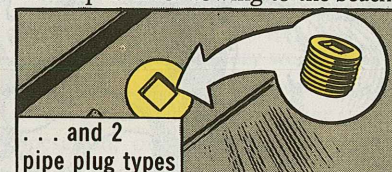
Screw the plugs in straight. A plug put in cockeyed won't keep water out very long!

If you don't keep these drain plugs tight, you could take an uncalled-for dunking . . . not to mention losing your MAB and any other transporter that may be pinned to it.

You'll find 2 drain plugs in the front hatch compartment; 4 in the engine compartment, and 2 in the rear compartment. These 8 drain plugs are T-handle types. The other 2 drain



plugs are pipe plug types. You'll find 1 under each side of the differential. Use a socket wrench extension on these 2 plugs. Never disconnect any unit from the raft without first checking it for bilge water. If the unit has water in the bilges, it'll sink lower than the other units in the raft. You won't be able to hook up to it for towing to the beach.



WHERE'RE UNITS
3 + 4?

WELL, THEY'D JUST
PINNED UP WHEN...

UNIT 4 TOOK
ON WATER AN'...
AN...

Pulley PM

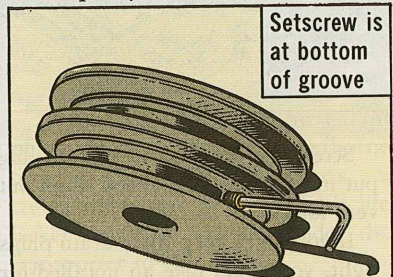
Para 4-132a(5) has the word on how to remove the air blower pulley. Trouble is ... where's the setscrew you loosen to take the pulley off the blower shaft?

Change 1 to Fig 86 in the -20P shows the pulley (Item 50) with the setscrew (Item 49) going into a shaft. No so, good buddy. You'll find the setscrew down at the bottom of the puller groove.

Take it easy with the setscrew. It gets "frozen" and it's not hard to round out the hex drive. That's a heartburn case.

Forget the pulley picture that's in your -20P manual. The change shows

a 3-sheave pulley with a shaft, but there're only 2 drive belts for the air blower. When you request a replacement pulley, code your requisition



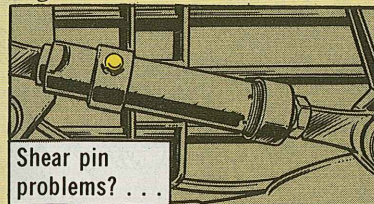
Setscrew is
at bottom
of groove

2B—Do Not Substitute—in Block 22 on DA Form 2765. You want a 2-sheave pulley PN 9740313207E7363.

GOT A 1-SHEAVE
PULLEY? GET YOUR GS
TO MAKE A
2-SHEAVE FROM
STOCK MATERIAL.

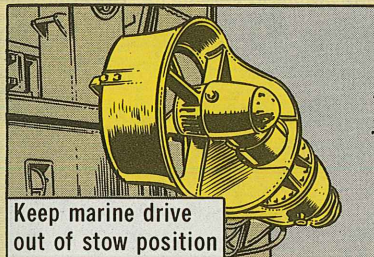
Marine Drive Tilt!

Here's a word of caution that will save you some downtime. If the outdrive link assembly shear pin fails during water operations, don't put the marine drive in full stow position. Rotate it to any other position—as long as it does not hit the stow lock.



Shear pin
problems? . . .

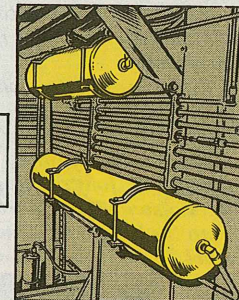
Now you can drive the MAB out of the water without damaging the marine drive if it should hit the ground. You can replace the shear pin a lot easier than the marine drive.



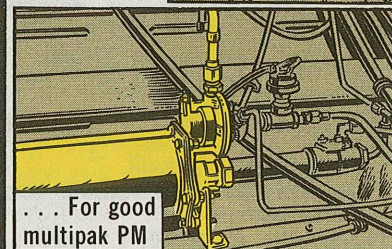
Keep marine drive
out of stow position

Multipak PM

You can't keep the inside of your brake air-hydraulic power cylinder—Multipak—from corroding. It's operated by compressed air from the air reservoir, and pressured air in your MAB always carries moisture. Malfunction—and replacement—of the multipak is as certain as death 'n' taxes.



Drain
condensation
weekly . . .



. . . For good
multipak PM

You can cut down on this corrosion bit—and delay multipak repair/replacement costs—with good PM.

Make doubly sure you drain the condensation from the air reservoir and pressure tank every week. That's the story in Table 4-3—your PMCS. Drain 'em daily and after each operation, or more often if you're having frequent temperature changes.

HEY,
GOOD THINKING,
CONNIE!

Military Standard Engine Tips

UH OH...
CAREFUL
WITH THE PAINT,
SPECIALIST!

WHEW--
SAVED!

?

Dear Editor,
Here're some maintenance tips on
Mil Std Engines you might want to
pass along.

Rusty governor control arm ball
joints on 6-, 10- and 20-HP engines
knock out the governor's job. The tech
manuals say nothing about lubing
these ball joints. Stop the rust by
letting some OE drip from the dipstick
onto the ball joints when you check oil
level.

Drop
oil here

Fresh paint looks good—but it'll clog
the pressure release valves on your ½
and 3-HP engines and eventually blow
some oil seals. So, keep paint off those
valves.

No paint on valves

Also, paint will clog the screen in the
air cleaner housing where the restric-
tion indicator screws on. The indicator

won't work, and dirty air can get into
the engine. So, unscrew the indicator
and scrape off any paint.

SFC Acy and SFC Petain
MAIT, Ft. Stewart, GA

(Ed Note: Thanks for sharing the
brain power!)

3-KW Generators . . .

Load Terminal Covers

Dear Half-Mast,
Some of our 3-KW generator sets
are missing a load terminal cover. TM
5-6115-271-14 (Aug 76) does not
show the cover and the -24P manual
does not list an NSN or PN for it.

What's the purpose of the cover? If
we need it, what is the NSN or PN?

CWO H.W.

Dear Mr. H.W.,

Some early production models of
these sets had the gasoline filler neck
too close to the terminals . . . an

explosion hazard for sure. These sets
came with a hinged plastic cover for
protection.

WE DIDN'T NEED
THEM LOAD COVERS,
SO I TOSSED 'EM
OUT, RIGHT?

WRONG!

Redesign of the set moved the filler
neck out of the danger zone and
eliminated the cover.

TO GET THE
PLASTIC TERMINAL
LOAD COVER USE
NSN 5340-00-758-
6385.

Lantern, Lantern,
Shining Bright . . .

Everybody Needs A Light

HEY-- I CAN READ
TH' FINE PRINT NOW!

YA DID SOME
LANTERN PM,
EH?

?

That Lantern, gasoline, NSN 6260- 00-170-0430 can be a dandy answer out in the boonies to the demand, "Let there be light!."

To keep it in good order, you may need these parts:

NSN 6260-00-

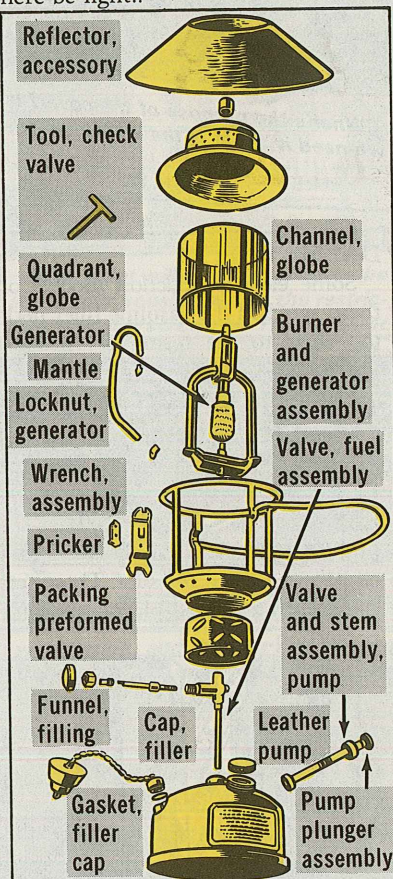
Mantle (6 per box) 270-4060
Parts kit, repair 553-1090

(You get spare generator, filler cap gasket, pump leather, valve stem packing, and pricker)

Pump Plunger Assy 284-0555
Valve & Stem Assy, pump 624-4847
Channel, globe 174-3873
Quadrant, globe (set of 4) 174-3874
Funnel, filling 578-7162
Reflector, accessory 273-9219
Locknut, generator 161-1859
Valve, fuel assy 284-0549
Cap, filler 270-4061
Burner/generator assy 284-0554

TOOLS NSN 5120-00-

Tool, check valve 646-7576
Wrench, assembly 288-9687



Connie's Mini Minis

CONNIE -- WE
GOT A MAINTENANCE
PROBLEM ...

?

Clean, Man, Clean!

Want to help prevent the Seminole cockpit from becoming a hot seat? In-flight fires in the engine compartment and main wheel wells have been a problem recently. So keep the engine nacelles free from dirt and fuel and oil spills.

Goer Pump On!

Keep the M553 10-ton wrecker's hydraulic pump engaged at all times. The pump drive gears are getting chewed up from being shifted in and out of gear. Never mind what it says about cold weather disengagement in TM 233-10 (Jun 76), p 2-22, or TARCOM Message DRSTA-WG 211330Z Dec 77. That's changed. TARCOM Message DRSTA-WG 152030Z Mar 78 has the new word.

M107/M110 Obturator Pad

Obturator pad NSN 1025-00-015-2975 on page 454 of your TM 9-2300-216-20P (Dec 73) is out of the system. Use NSN 1025-01-032-5117.

Files Inspection

Better check your files if you've got an inspection coming up. A new AR 340-2, Maintenance and Disposition of Records in TOE Units of the Active Army and the Army Reserve (Nov 77) changed all the file numbers to match those in the AR 340-18 series.

☆U.S. GOVERNMENT PRINTING OFFICE: 1978 - 757-081/7

Bayonet Scabbards

Hey, troop, if your bayonet's loose in its M8A1 scabbard . . . and the scabbard's not damaged, relax. You're still in business, no matter where you are.

That note on the M8A1 in PS 303 . . . about the scabbard holding the bayonet even upside down . . . was strictly for Support types making an overseas preshipment inspection (TB 9-1000-247-34).

PM for Logistics

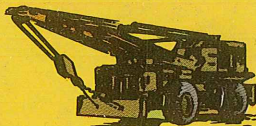
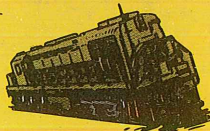
Looking for some guidance on tightening up your supply and maintenance operations? Eyeball DA Circular 700-18 (Oct 77), Preventive Measures for Improved Army Logistical Support. Don't let the title scare you off. That circular gets down to nitty-gritty problem areas at all levels.

M551A1

Sheridan Shenanigans

Some M551A1 Sheridan crewmen have cut into the wiring harness at the loader's dome light to run a wire to a second dome light outside the vehicle for night gunnery. This could get you killed! An unauthorized wiring change can set off stored ammo. In one case the wiring change fired the blaster and a round went off as soon as the breech was closed. So leave the wiring alone!

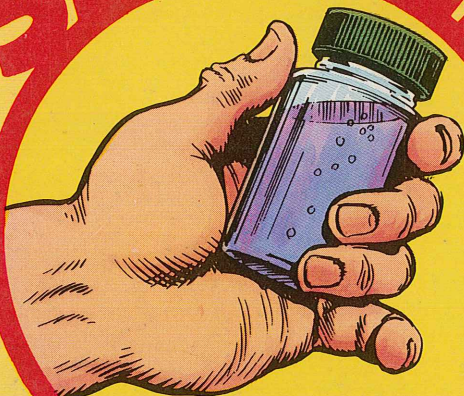
Would You Stake Your Life ^{right now} on
the Condition of Your Equipment?



GROUND EQUIPMENT USERS—



SAMPLE



YOUR

OIL



25 Hours or 30 Days—

(See TB 43-0210 for details)

