

Issue 313

PS

December
1978

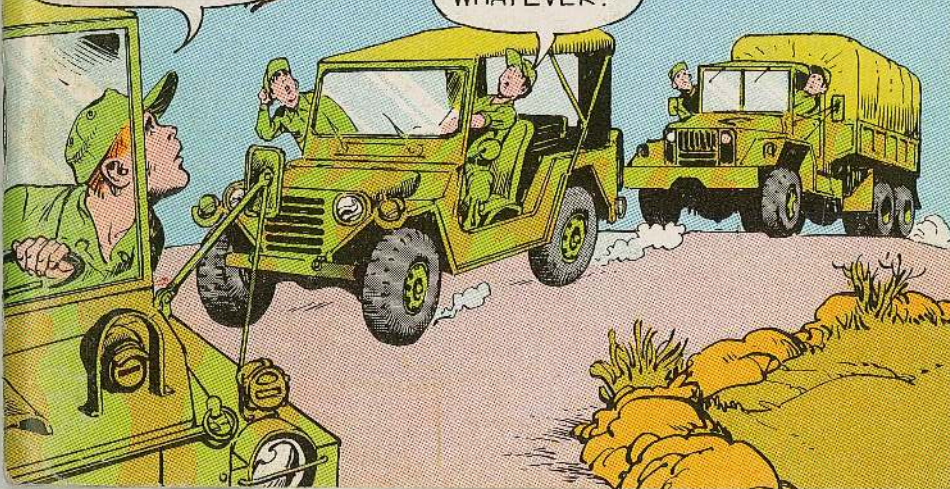
THE PREVENTIVE MAINTENANCE MONTHLY

NOW YOU
CAN SEE WHAT
HAPPENS WHEN
YOU NEGLECT
THOSE REGULAR
PM CHECKS!



GOT 'CHA,
SANTA! I WOULDN'T
LIKE TO BE SHORT
SEVEN REINDEER!

...OR TRUCKS
OR TANKS OR
WHATEVER!

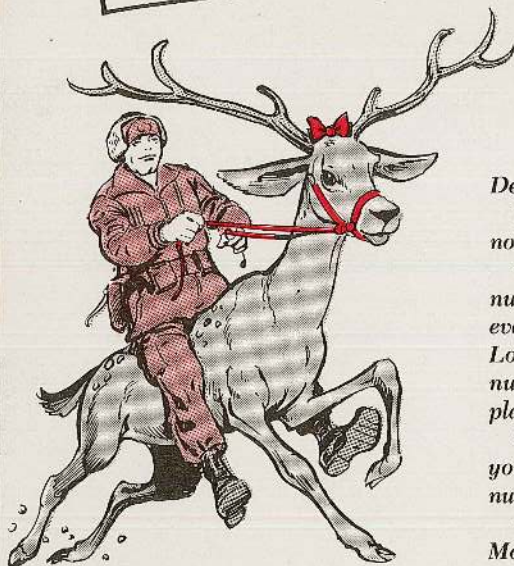


Serial Numbers for...

FORMLESS

Dear Hal. Mast,
We used the preprinted control number of the DA Form 2408-9 Acceptance Report for radio sets with no serial numbers. Since radio sets no longer need DA Forms 2408-9, what do we use for serial numbers?

MSG R. P. W.



Dear MSG R. P. W.,

You can handle the equipment with no serial numbers in 3 ways:

- Keep on using the control number as a serial number locally - even after the DA 2408-9's are gone. Lots of people etched the control number on the equipment data plates, anyway.
- Assign a local control number to your radio sets - like a bumper number, for example.
- Forget about the serial number. Most of the forms tell you to leave the serial number block blank or put the NSN there if the item has no serial number.

RADIOS



You will need some type of separate identification number, though, on any radio DD Form 314's you keep. Whichever method you choose, get it covered in SOP.

Half-Mast

Issue 313

PS
★
December
1978

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

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

MSG Half-Mast
PS Magazine
Lexington, KY
40511

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Your DA Form 2406...

READY AND RIGHT!

IT'S NOT NORM,
BUT IT'S SURE NOT
NORM EITHER!

SO HOW
DO WE
RATE IT?

NOMENCLATURE			
NO.	NOUN	MODEL	LINE NO.
1	DRAGON	M17	000000

Reporting a missile system? Para 3-6c (2) (k) 4 says put the ECC and 6 zeros in col. d. Do not use a component's LIN. Whatever items you're reporting, tho, check the the ECC and LIN — there've been some changes.

Your DA Form 2406 Materiel Readiness Report is decision data. It computes. It figures. It's for real. It tells the big brass if your unit can hack it.

The way you fill out the report tells a lot about you, too. It's cer-

tainly the time to put your best foot forward.

The experts can only rate unit materiel readiness based on the information turned in.

That's the info you put on your DA Form 2406.

Each entry — each number — you put on your report has to be right and readable. Readable, that is, for others to read!

Remember: Your form will eventually go into the computers. Type the form, if you can. Other-

wise, make like a professional scribe!

Wrong — but readable — entries, though, won't make it.

Watch for these trouble spots on your DA Form 2406:

1. PERIOD OF REPORT FROM: 8253 TO: 8349		2. DATE PREPARED 8352		3. TYPE DATA ACCUMULATIVE ☐ CURRENT STATUS ☐		REPORTS CONTROL SYMBOL CSOLD 1042 (R)	
5. FROM: (Include 24 Code) 2d Bn, 76th Armor Ft. Boonville, Ky 40511		6. UNIT IDENT CODE W02VA		7. TOE NO. 17-55M		9. UTILIZATION CODE ON	
						10. PAGE NO. 2	
						100. NO. OF PAGES 4	

The Julian dates you put in the Period of Report block must match the 3-month periods in para 3-6b (3) (a) of TM 38-750

List only those Utilization Codes with an asterisk (*) in table A-7. Change 1 to TM 38-750, put an asterisk by N.

Your UIC — not your DODAAC — goes in block 6

The Utilization Code you put in block 9 covers the equipment you're reporting. Equipment with different Utilization Codes go on different DA Forms 2406

Table A-7. Utilization Codes

Code	Description
*ON	Active components (except as otherwise listed)
1	Depot stock
2	Post supply activities, class I installations
3	Post supply activities, class II installations
*4	Operational readiness float (ORF)
5	Installation Maintenance and Service Equipment (Not used)
6	
M	Labor service units
N	Prepositioned stock

DID YOU ADD THE ASTERISK?

The numbers in each column added together MUST equal that column's entry on the basic line

+	2	180	160	10	4	6
=	18	1620	1540	15	11	35
	20	1800	1700	25	11	39

Reporting more than one model of a single LIN and ECC? Give each model its own subtitle

one model of a single LIN and ECC? Give each model its own subtitle				DENSITY		EQUIPMENT AVAILABILITY					
LINE NO.	d	AUTH	ON HAND	POSSIBLE DAYS	AVAILABLE DAYS	NON-AVAILABLE DAYS					
						ORG MAINT		SUPPORT MAINT			
						S	M	S	M		
11	TANK	FBV	13101	20	20	1800	1700	25	11	39	25
11a	TANK	M50	13101		2	180	160	10		4	6
11b	TANK	M50A1	13101		18	1620	1540	15	11	35	19

The total of the available days (column h) plus all nonavailable days (columns i and j) must equal the number in the possible days column (column g)

AVAILABLE DAYS	+	NON-AVAILABLE DAYS	=	POSSIBLE DAYS
h		ORG MAINT S M SUPPORT MAINT S M		g
1700		25 11 39 25		1800

M60-Series Tanks...

AMMO RACK BUST-UP

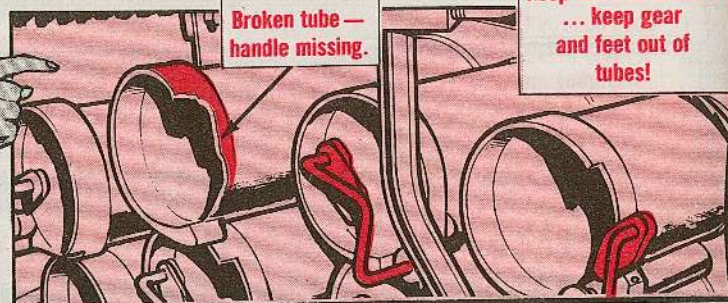
HOW WOULD YOU LIKE IT IF I RUINED YOUR RACKS?



COME ON, TANKERS! WHAT'S WITH THIS JIVE ABOUT BROKEN, BENT AND DAMAGED TUBES IN THE HULL AMMO RACKS OF YOUR M48A5 AND M60 TANKS?

Did you know the head shed can't even keep up with demands for ammo racks NSN 2590-00-244-1323 and 2590-00-937-1461?

So, what's happening to the racks? How do the locking handles get broken off? How do the tubes get broken or bent?



Carelessness! One guy leaves an ammo locking handle open to get snagged. Or, another stores his personal gear in one of the tubes. If anything sticks out of the tubes when the turret is rotated...zap goes another ammo rack. Or, maybe somebody used the rack as a ladder to get in or out of the tank.

If your ammo racks are damaged, the tank goes to DSU for repair. The turret has to come off to replace the rack.

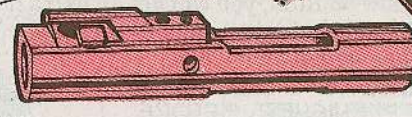
So, use the tubes only for ammo. That's what they're for. And always keep the handles closed.

M16A1 Rifle



Chrome Bolts Are OK

Dear Half-Mast,
There are a lot of M16A1 rifles in our division with chrome bolts and bolt carriers. Should the bolts and carriers be replaced?
SSG R. B.



Dear Sergeant R. B.,

No. They stay until they're unserviceable, then they should be replaced by black oxide coated ones. The chrome jobs are a throwback...to when all M16A1's had chrome-plated bolts and carriers.

That wasn't too swift in combat, because sunlight reflected off them when the ejection port cover was opened. So, later versions had black oxide coatings. That's the kind yours should have when the chrome bolts and carriers wear out.

Half-Mast



Dear Half-Mast,
TM 9-1005-249-10 (Apr 77) shows a top sling adapter kit on page 7 but gives no NSN. Is there an NSN for the kit?

SP5 D. T. K.

sling kit



case

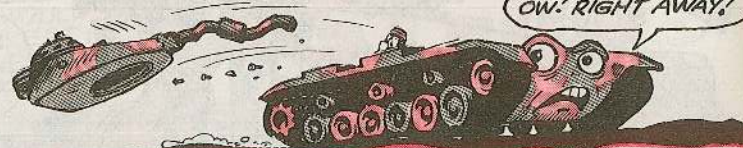


Dear Specialist D. T. K.,

There sure is. You can get it with NSN 1005-00-406-1570. While we're on page 7 of the TM, forget that NSN for the carrying case (1005-00-999-2430). The correct NSN is 1005-00-283-9439. Make a pencil change in your -10 TM.

Half-Mast

Check the Replenisher

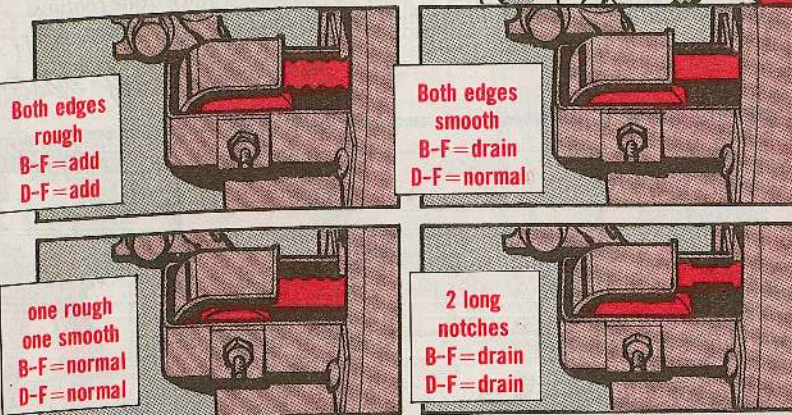


Make sure there's plenty of hydraulic fluid in the recoil system before you fire the gun.

If the mount is low on fluid, you can get an extra heavy recoil or the mount can fail. Either way, it's bad news for the tank and everybody in it.

ALWAYS CHECK YOUR REPLENISHER BEFORE FIRING!

Key to
pix
B-F/Before firing
D-F/During firing



Check your replenisher before firing the way it says in the Preventive Maintenance Checks and Services (PMCS) for your particular tank.

The info's in the -10 TM for the tank. See page 3-54 for the M60/M60A1; page 3-5 for the M60A1 RISE; or page 2-57 for the M48A5.

The replenisher check is also in the -10 TM for the M60A2 tank (page 3-65) and for the M728 combat engineer vehicle (page 2-63).

Look over the -10 TM before you fire.

New Oil Level Check

Lubrication orders for all M60-series and M48A5 tanks say: "Start engine and run 5 to 6 minutes at 1,000-1,200 RPM to fill oil passages. Reduce engine idle to 700-750 RPM. Check oil levels..."

For cold weather only —

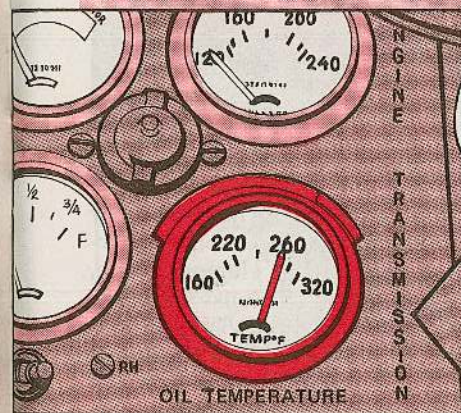
Cross all that out because when it's really cold outside, the transmission won't be heated to operating temperature within the 5 or 6 minutes.

So what happens then?

So your transmission oil level dipstick will show that oil needs to be added when it may not need it. You'll wind up with too much oil in the transmission and lots of trouble.

The right way is to check the oil level after the transmission oil is at normal operating temperature as shown by the transmission oil temperature gage on the driver's gage panel.

I DON'T CARE WHAT THAT RULE SAYS...I'M STILL C-C-COLD!



YOUR OIL TEMPERATURE GAGE GIVES YOU THE STORY!

The transmission oil temperature gage is in normal range when:
M60A1 — Needle is in green area of gage.
M60 — Needle is between 200°F and 280°F.

M60A1 (RISE)...

FILTER FOLLIES



You can't tell the filters on your M60A1 (RISE) tank without a score card. So, here it is:

Hydraulic Fluid Filter — The replacement element for the hydraulic filter is not Item 13 of Fig 58, page 96, in TM 9-2350-257-20P-2 (Dec 75). If you order that you'll just get the shell surrounding the filter element.

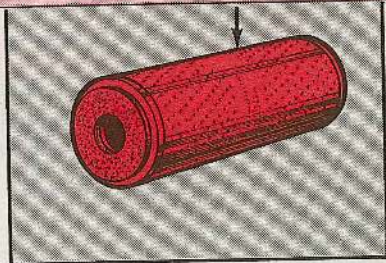
To get a replacement element, order Kit, Filter Bowl, seal, hydraulic fluid filter NSN 1015-01-031-0538. It's not in the parts manual yet. (Pencil it in.)

The filter kit also has back-up rings and packings.

Oil Filter Element — The replacement oil filter element is shown and listed on pages 10 and 11 of TM 9-2350-257-20P-1 (Dec 75) but only the part number (P/N 11668619) is given. However, a stock number, NSN 2940-00-000-0145, is now listed in the AMDF and you can get the filter element for \$8.22.

The filter element is also included in Parts Kit, fluid pressure filter, NSN 2940-00-397-3404 (P/N 5704486), which lists at \$28.09. That's the way you'll normally get it.

Save \$\$ — get this oil filter with NSN 2940-00-000-0145



However, there's no reason why you shouldn't save money by ordering the filter element alone, provided you can reuse the packing (P/N NAS1598-6Y) and gasket (P/N 11684047) or if you can fabricate these items.

300-Amp Generator... Oil Seep Can Ruin It

WOULD YOU TANKERS LIKE TO SAVE A LOT OF BREAD?

THE EATING KIND DOESN'T THRILL ME, CONNIE!

BUT THE KIND WITH REAL DOUGH IN IT DOES!



Take heed if your tank has the 300-amp generator, NSN 2920-00-830-6660.

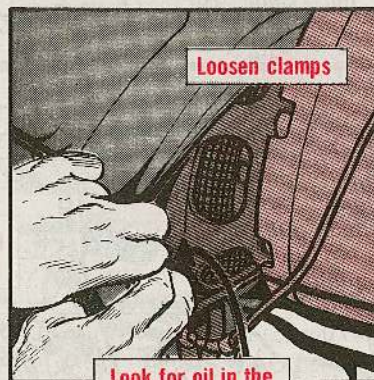
It's on the M60, M60A1, M60A2, M728 CEV, M48A5, and the AVLB vehicles.

One big reason for generator failure is a leaking generator drive oil seal. Oil seeps thru the drive housing into the generator. You can't find evidence of the oil with any of your electrical tests, but it'll short out the generator.

Take 10-15 minutes during your next Q-service to check it out. You might save that \$927 generator.

Loosen the air exhaust boot clamps between the generator and the generator drive housing.

Pull back the rubber boot. Look for oil in the bottom of the boot. No oil? Put the boot back on.



Look for oil in the bottom of the boot



Have DSU replace generator drive seal

Dear Half-Mast,
We, at DSU, have been getting in a lot of gas particulate filter units, NSN 4240-00-964-9061, for repair.

We found the plastic fan and fan cover inside the filter units were warped, buckled and cracked. This caused the motor to freeze up and burn out.

We checked some of the M60A2 tanks these filter units came from. The personnel heater ducts in the driver's compartment had been disconnected.

The extreme heat from the personnel heater blowing onto the filter unit is too much for it. It's hot enough to soften the fan and fan cover. They warp and crack.

To help save the lives of these gas particulate filter units, please get the word to M60A2 crews to keep the personnel heater ducts in place.

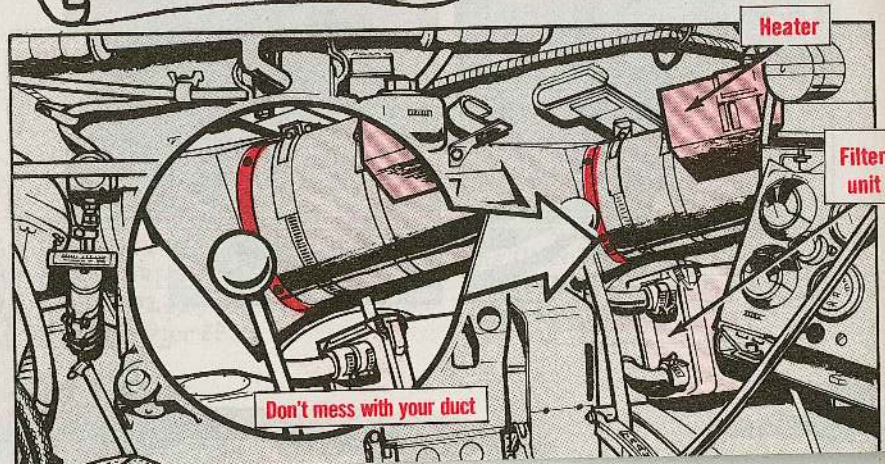
SFC P. R.

HEAT IS
HARD ON YOUR
FILTER UNIT...
SO KEEP THAT
HEATER DUCT
CONNECTED!

Dear SFC P. R.,

Right on! Consider it done. And the same goes for you other M60-series tank crews. Keep those heater ducts connected.

Half-Mast

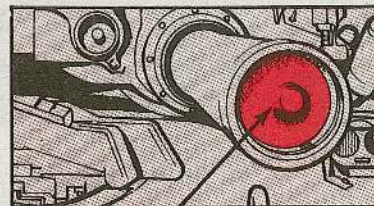


YOU NEED A COVER FOR
THE GRENADE LAUNCHERS
ON YOUR M551 / M551A1
SHERIDAN!

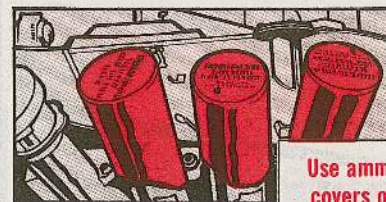


There used to be an official (and expensive) cover you could order from the parts manual. However, so many people started using the throw-away rubber covers from M551 conventional ammo rounds that the official grenade launcher covers were dropped because nobody ordered them anymore. So, go ahead and use the ammo covers.

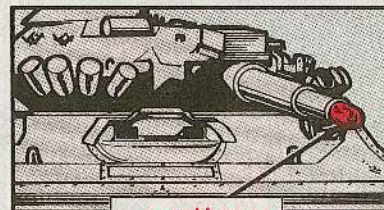
You also need a cover for the muzzle of your Sheridan. The muzzle plug is in your parts manual as NSN 1025-00-918-8129 and costs \$2.70.



Muzzle plug
lost? ...



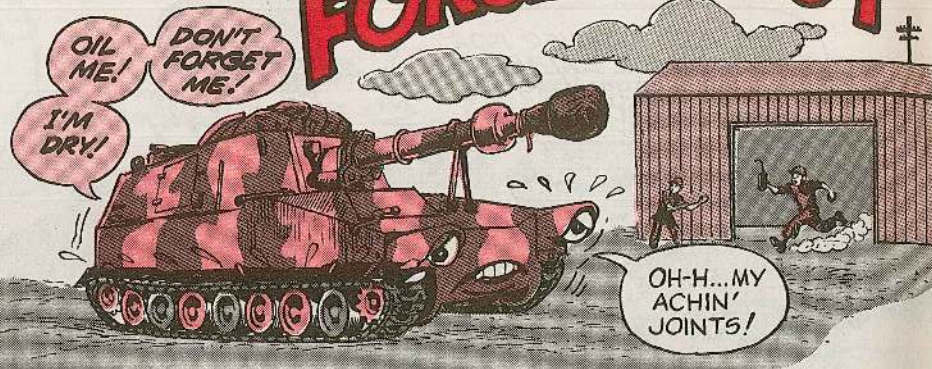
Use ammo
covers on
your grenade
launchers



... use old ammo
cover

**M109/M109A1 SP
Howitzers ...**

FORGET ME NOT



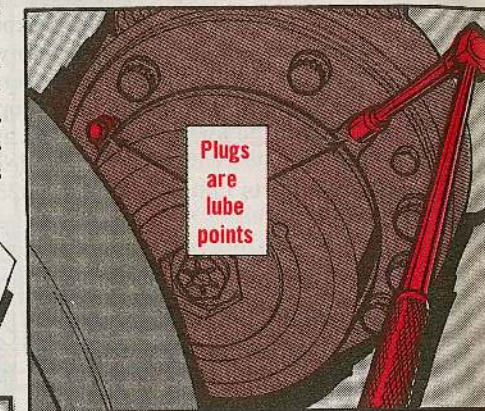
Those are the screams from the road wheel support arms.

LO 9-2350-217-12N (Jun 78) in note 31 calls for a semiannual service for the road wheel support arms. Trouble is, the lube points don't look like lube points, and lots of troops forget them.

Here's how to lube 'em.
Pull both plugs on the support arm near the hull.



Pump till oil comes out here.



Use a hand oiler. Pump OE/HDO 30 oil (OEA from 0°F to -65°F) into one of the holes until oil comes out the other one. Put the plugs back, wipe off the excess oil and go to the next support arm. Keep going until you've lubed them all.

M109/M109A1 ...

DECALS



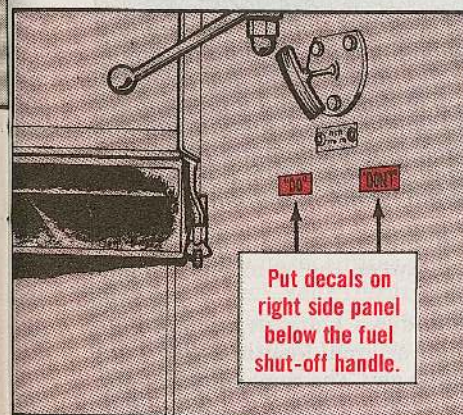
You drivers can get a couple of decals to help you keep your engines cool.

They tell you how to prevent engine overheating. NSN 7690-01-049-1771 gets the "DO" decal and 7690-01-059-4141 gets the "DON'T" decal.

Put the decals on the right side panel below the fuel shut-off handle.

PREVENTION OF ENGINE OVERHEATING
DO:
A. DO MAINTAIN PROPER COOLANT AND LUBRICANT LEVELS.
B. DO SHIFT TO A LOWER TRANSMISSION GEAR RANGE WHEN ENGINE RPM IS LESS THAN 1725.
C. DO RUN ENGINE FIVE MINUTES AT 1000 RPM PRIOR TO SHUTDOWN WHEN COOLANT TEMP. IS ABOVE 180° F.

PREVENTION OF ENGINE OVERHEATING
DON'T:
A. DON'T OPERATE ENGINE AT IDLE FOR MORE THAN TEN MINUTES. SET HAND THROTTLE AT FAST IDLE (1000 RPM).
B. DON'T BLOCK ENGINE AIR INTAKE GRILLS WITH CAMOUFLAGE OR OTHER MATERIALS.
C. DON'T HOLD VEHICLE ON GRADE USING ACCELERATOR.



Sprocket Cap Screw Torque

So what's the correct torque value for the sprocket cap screws on the M110/M110A1 howitzers, the M107 gun and the M578 recovery vehicle? It's 140-160 lb -ft (dry.) This info's not in the TM's but it'll be added.

53-Series...

Detroit Diesel Engine

"BUBBLES"

YOU'RE FOREVER
BLOWING BUBBLES!



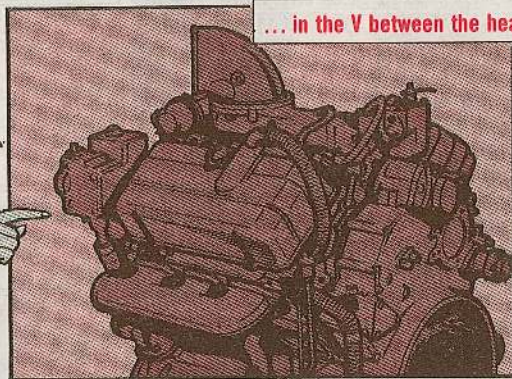
Listen up if your vehicle has a 53-series Detroit Diesel engine! They are in vehicles such as the M113A1 carrier family, the M551 Sheridan, some construction equipment, and the Gama Goat.

During operation, some 53-series engines show small "bubbles" — ripples actually — between the cylinder head and the cylinder block.

WATCH FOR
BUBBLES...



... in the V between the heads



These ripples are caused by an outside source of liquid — lube oil, fuel oil and the like — which fills the gap between the cylinder head and block.

As the cylinders fire, the head hold-down bolts stretch to their maximum limit and then return to their original length. This causes pulses, or ripples, in the liquid that fills the gap. The ripples do no harm. They are not leaks.

If they bother you, wipe off the liquid between the cylinder head and block. Run the engine 10-15 minutes. Check again. There should be no signs of liquids, beads or leaks.

If the ripple condition worries you (or your inspector), get your direct support unit to check it out.

No use trying to replace the cylinder head seals and O-rings because this won't help. Chances are the compression and crankcase pressures will be OK. If they are, keep on operating and forget the ripples.

Your direct support will let you know.

OR... YOU CAN JUST GO
ALONG WITH THE BUBBLES
... LIKE LAWRENCE WELK!



M113—Family Pub Flub

Some of the M113A1's, M548's, M730's and TOW anti-tank combat vehicles delivered since April 1977 had the wrong set of TM's overpacked. Check your pubs.

You need the TM 9-2300-257-series for the M113A1 and TOW carrier.

TM 9-2350-247-series for the M548.

TM 9-1450-585-series for the M730.

NOW IT'S
MY TURN
TO SHUFFLE!



Filter Unit Pub Index

If your job is riding around inside a combat vehicle, your fresh air probably depends on a filter unit. Be sure you have the pubs to keep it working. Check your library against the one you should have. TM 3-4240-282-L (Mar 77) is your LOAP (List of Applicable Publications) for 12- and 20-CFM filter units.

M548 Cargo Carrier...

KEEP YOUR BEAST
BREATHING, BUD!



Those filter element body clamps stretch and loosen up. This lets dirt and dust into the air induction system. Almost as bad, it lets the body jiggle and rattle on the cover.

That fiberglass housing can take only so much jostling before the sealing lip wears away. When the lip is damaged, the housing is ruined.

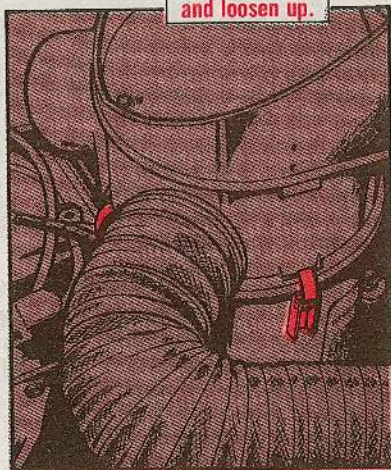
Keep an eye on the clamps. If you find one that won't snap and hold the housing against the cover real tight, call your mech.

He can put more life back into that old clamp.

Take off the housing.

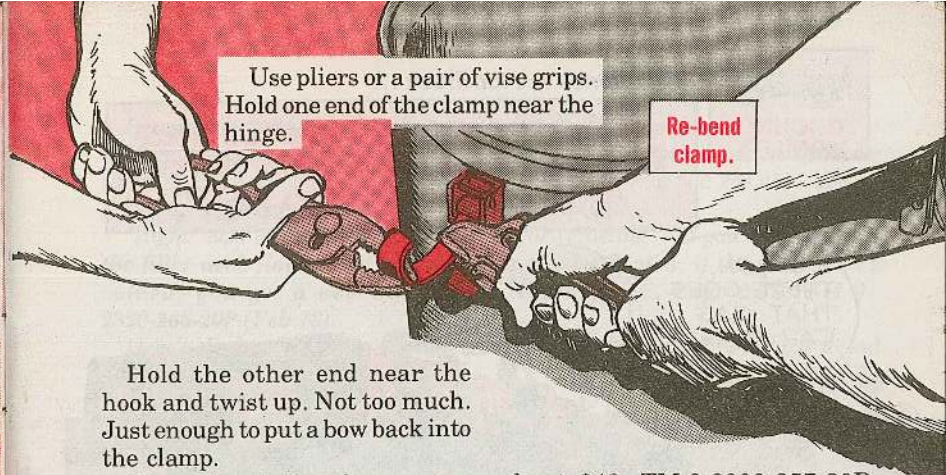
Air Cleaner Clamps

Clamps stretch
and loosen up.



Use pliers or a pair of vise grips.
Hold one end of the clamp near the
hinge.

Re-bend
clamp.



Hold the other end near the hook and twist up. Not too much. Just enough to put a bow back into the clamp.

If you break the clamp, your DSU can replace it. They'll need NSN 2940-00-930-2338 for the clamp and 5320-00-930-2343 for the rivet.

Now, what do you do if the housing is shot? TM 9-2350-247-20P (Feb 74) for the M548 doesn't list the housing as a repair part. Do you have to replace the complete \$172 air cleaner?

No way!

You need only a new housing for

about \$43. TM 9-2300-257-20P (Aug 75) for the M113 vehicles has a run-down on the parts you need.

NSN 2940-00-999-2119 gets a housing for the old air cleaner, NSN 2940-00-999-1992.

NSN 2940-00-103-5797 gets the housing for the new air cleaner, NSN 2940-00-168-2338.

If you need filter elements, NSN 2940-00-168-2337 gets one for the new cleaner, and 2940-00-930-2065 for the old air cleaner.

NEXT MONTH IN PS

M60 Cold Weather Starting

BYOI on the OH-58C

Tracked Vehicle Intercom Set

Ch 2 to TM 38-750

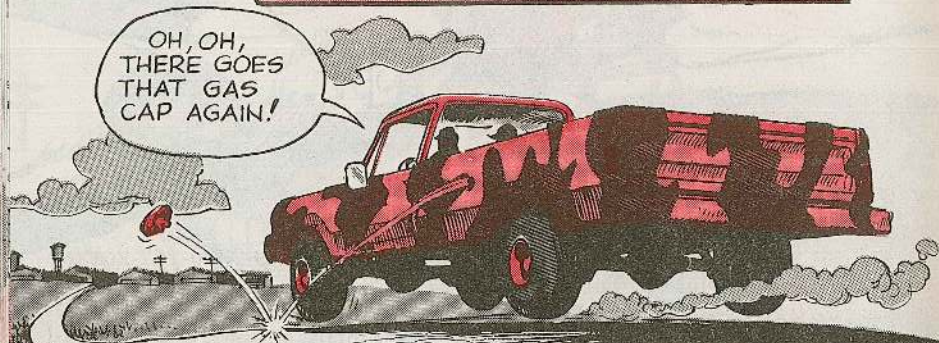
40 Issues Available

Approximately 40 back issues of PS Magazine are yours — for free. Just write to Connie, PS Magazine, Lexington, KY 40511.



M880-Series 1½-Ton Truck ...

DANGEROUS GAS CAP CAPER



Dear Half-Mast,

We can't keep gas caps on our M880-series trucks.

Some trucks are running around with nothing to keep the dirt and rain out. And others have got rags stuffed into the filler hole.

Drivers forget to put the cap back on after refueling. Or they bang up the filler hole locking lip with a big fuel hose nozzle – and then the cap won't stay on. Help!

SFC J.P.



Dear Sergeant J.P.,

First, you never – but NEVER – stuff rags into the fuel tank filler hole of any vehicle! You'll have a rolling Molotov cocktail just waiting to blow up.

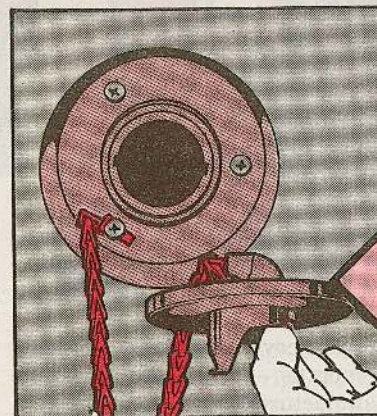
Some commanders require attaching the gas cap to the truck with a chain, but there's no Army-wide authorization for this.

If the driver forgets to put the cap back on after refueling, there's danger of someone along the road getting hurt by that cap flying around at the end of the chain.

If refueling is done right, the cap won't fall off. "Right" means making sure the cap is put back on – all the way – after refueling. You can be fooled by the first lock position of the gas cap. You've got to turn the cap further to the full lock position.

"Right" also means using a 1-in nozzle for refueling – so you don't tear up the filler neck flange that holds the gas cap on. Natch, if the filler neck's ruined, you get a new one – Part No. 3894787, Page 2-11, TM 9-2320-266-20P (Feb 78).

Here's the hardware for putting a smaller nozzle on the 1½-in hose found on most refueling equipment:



You can use CTA 50-970 as your authority for ordering these parts.

If your own command tells you to chain the cap to your truck, make sure you use spark-proof chain – such as aluminum chain, NSN 4010-00-114-0198. A few inches of chain will do it.

One end of the chain goes under one of the gas cap handle screws. The other end goes under the lowest filler tube screw.

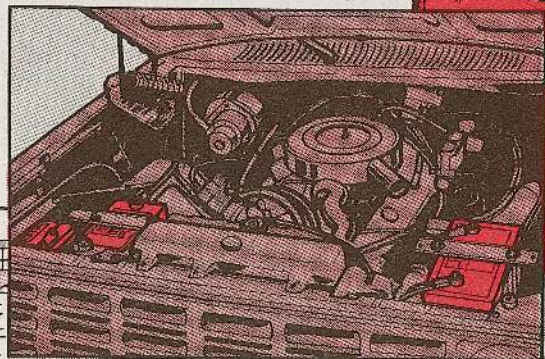
On the contact maintenance truck, use a self-tapping screw to fasten the chain to the body.

Half-Mast

New Battery Warranty?

I USUALLY LET MY ELVES WORRY ABOUT ALL THESE THINGS!

Dear Half-Mast,
What is the warranty coverage on a new, replacement battery for the M880-series 1 1/4-ton truck?
CW3 C. L. B.



Dear Mr. C. L. B.,

Although that's a civilian-type battery and probably would be covered by a warranty if you bought it for yourself, it's not covered in this case.

If a new replacement battery poops out, treat it like any other defective repair part. Send in an EIR (SF 368) so the headshed will dig into the problem.

True, the original battery in the vehicle is covered under the overall vehicle warranty for 12,000 miles or 12 months — TB 9-2300-295-15/14 (Dec 76). But that's under the truck manufacturer's warranty. The battery manufacturer is not involved.

Bows 'n' Tarps

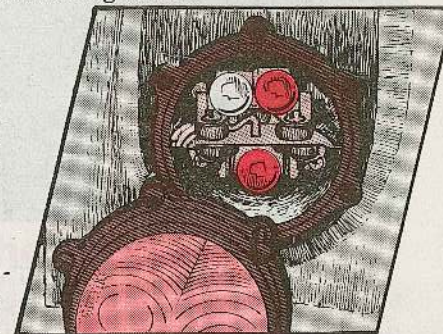
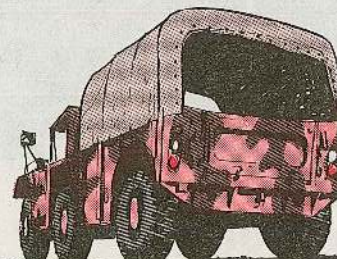
CTA 50-915 (Dec 77) has the straight poop on who gets tarp and bows accessory kits for cargo trucks and trailers. Once your CO says the kits are needed, you can get one kit for each vehicle you're authorized.

Here're the kit NSNs for your vehicles:

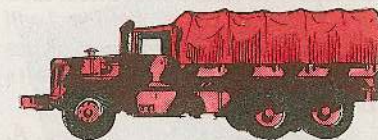
Vehicle	Model	KIT NSN 2540-00-
1/4-ton trlr, cargo	M101,A1	133-3492
1 1/2-ton trlr, cargo	M105,A1,A2	133-3524
2 1/2-ton trk, cargo	M36,A2,C	327-1845
2 1/2-ton trk, cargo	M35A1,A2	319-5724
2 1/2-ton trk, cargo	M35A2C	322-8957
5-ton trk, cargo	M54A1C,2C;M813A1	121-9082
	M54,A1,A2;M813	121-9077
	M55,A1,A2;M814	121-9081

Gama Goat Tail Light... Wrong Lamp Ruins Lens

Mechanics sometimes put a 32-cp (candlepower) lamp, marked 1683, in the tail light socket meant for the 15-cp lamp, 1691. A 32-cp lamp makes more heat than a 15-cp lamp. This extra heat warps the tail light lens. Lens warp ruins the tail light watertight seal.



The 15-cp lamp goes in the left socket. The 32-cp lamps go in the center socket and the right socket — no matter what it looks like on



5-Ton Trucks ...

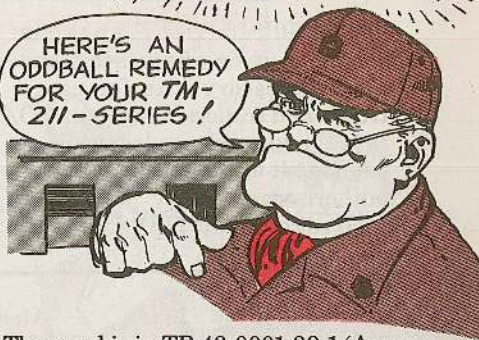
BOGIE BOLT BUSTER

Dear Half-Mast,

What's the story on removing the front bogie bolts from 5-ton trucks? I've heard that this'll take some strain off the frame and will cut down on the chances of the frame cracking. Do the bolts come out or not?

CW3 J. A.

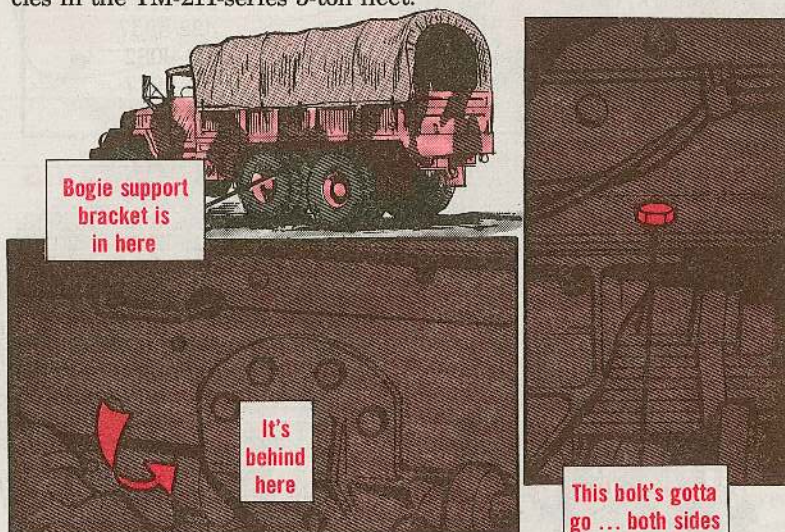
HERE'S AN
ODDBALL REMEDY
FOR YOUR TM-
211-SERIES!



Dear CW3 J. A.,

Yes, the bolts should be removed. The word is in TB 43-0001-39-1 (Apr 78), page 2-94.1, para 2-14.

The front bogie support bracket bolts must be removed from all vehicles in the TM-211-series 5-ton fleet.



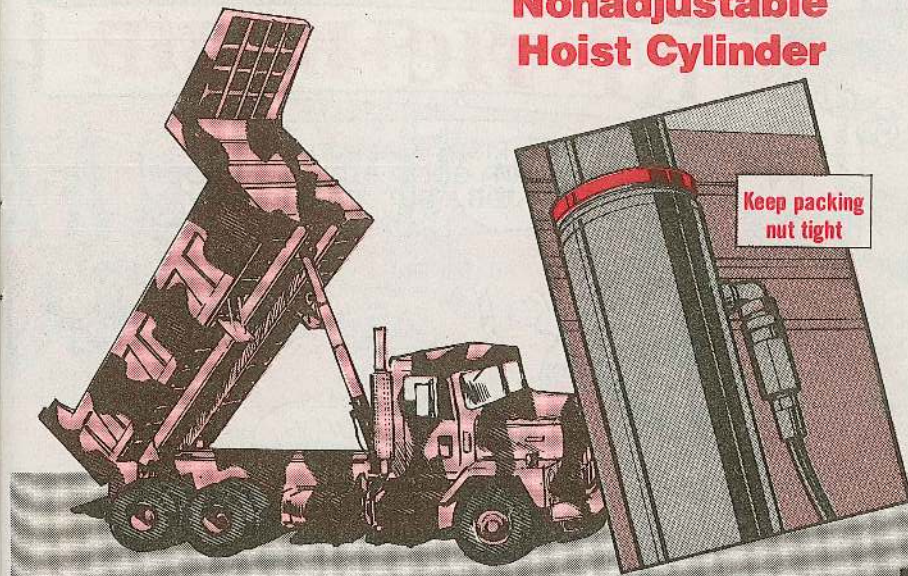
But this's a job for your support. They'll remove the bolt — on each side.

This does not apply to the TM-260-series 5-ton truck. The bolts stay in those trucks.

Half-Mast

20-Ton CCE Dump ...

Nonadjustable Hoist Cylinder



Whoa ... stop ... wait!

You don't back off that packing nut on the hoist cylinder to stop leaks. The packing can't be adjusted. Backing off the nut could be dangerous — and it won't stop the leak.

The packing is supposed to leak a little. The polished surface of the cylinder rod needs to have a thin coating of oil on it.

If the cylinder packing gets to

leaking too much — more'n about a ½ pint in an 8-hr day — get your DSU to replace the packing.

If you think your truck's packing nut has been tampered with, get your shop to send that truck to DS — right now — to get the nut tightened. Every truck should be sent to support at the next semiannual service to get the nut retightened.

5-Ton Wheel Seal

The outer seal for the rear axle on your 5-ton truck will be back in the system soon. NSN 5330-00-961-3596 is being reinstated. It's in Ch 2, TM 9-2320-260-20P (Nov 72). And it'll be in TM 9-2320-211-20P (May 73) for Item 4, Fig 123.

Tank and Pump Units ...

RT TIE-DOWN

ALL RIGHT! ALL RIGHT!
I ADMIT GOOD STRAPS'LL DO
THE JOB... BUT I'M NOT IT!

BUT WE
DIDN'T TIE
YOU DOWN,
SANTA!

UP IS
NICE!

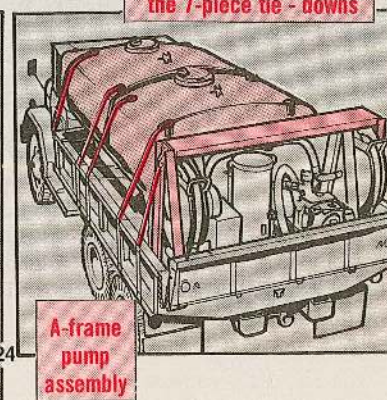
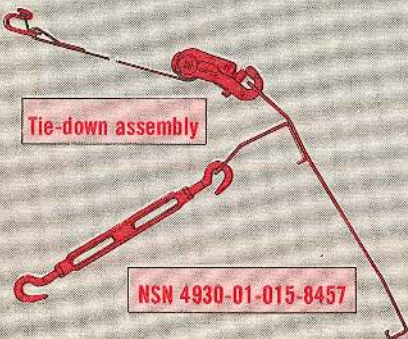
Let's start from square 1 with
the article on pages 22-23, PS 292.

Use NSN 4930-01-015-8457 to
get the latest design tank and
pump unit rough terrain tie-down
assembly. The assembly is made
up of 7 items: A tie-down strap
assy, a tie-down bracket, a

turnbuckle, 2 jam nuts, and 2
bolt/hooks.

You need 10 of these 7-piece
tie-down assemblies for tank and
pump units—LIN V12141—that
have an A-frame pumping assembly.

A-frame types need 10 of
the 7-piece tie-downs



STRAP RAP

DOWN IS
ON A DUCK!

NOT
TIE-DOWNS,
SILLY!

Each item in this tie-down as-
sembly is available as a replace-
ment part.

Strap assembly
NSN 5340-00-476-9245

RH thread jam nut
NSN 5310-00-891-1734

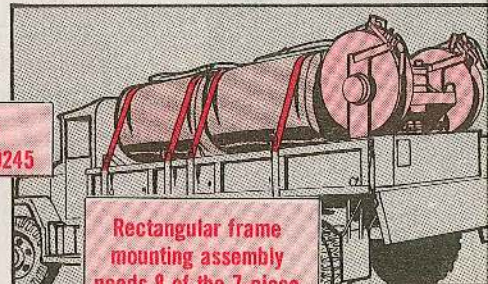
LH thread bolt/hook
(96906) P/N MS 27953-9

RH thread bolt/hook
NSN 5306-01-029-8881

Turnbuckle
NSN 5340-00-150-4777

LH thread jam nut
NSN 5310-00-088-8513

Bracket
NSN 4940-01-040-7191

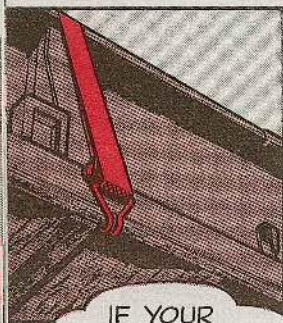
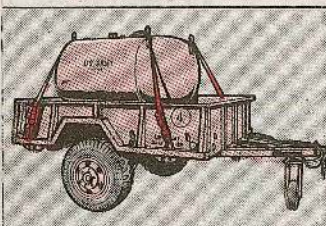


PLUS!



Trailer-Mounted Pump Units

Left front hold down plate
NSN 4930-01-022-8631



IF YOUR TRAILER DOESN'T HAVE LIFTING EYES, TURN THE STRAP ASSEMBLY 180° AND PUT THE OPEN HOOK UNDER THE TRAILER FRAME!



Right front hold down plate
NSN 4930-01-022-8632

4030-00-185-0482

Shackle and anchor
(81352 AN116-6)

Chain (97403)
613218E0028-82

Left rear hold down plate
NSN 4930-00-078-2633

Right rear hold down plate
NSN 4930-01-027-2325

Tank unit, liquid dispensing for trailer mounting

For trailer-mounted tank units
— NSN 4930-00-752-9983 — go
by the individual replacement
item route and order as follows:

PART	NSN
4 strap assys	5340-00-476-9245
1 right front hold-down plate	4930-01-022-8632
1 right rear hold-down plate	4930-01-027-2325
1 left front hold-down plate	4930-01-022-8631
1 left rear hold-down plate	4930-00-078-2633
2 turnbuckles (front plates)	5340-00-150-4777
2 LH thread bolt hooks	(96906)
5306-01-055-3756 ← PN MS27953-9	
2 RH thread bolt/hooks	5306-01-029-8881
2 LH thread jam nuts	5310-00-088-8513
2 RH thread jam nuts	5310-00-891-1734
2 chains (18 links ea)	(97403)
(for rear hold-down assys)	PN C13218E0028-82
4 anchor shackles	(81352) RN 116-6
	4030-00-185-0482

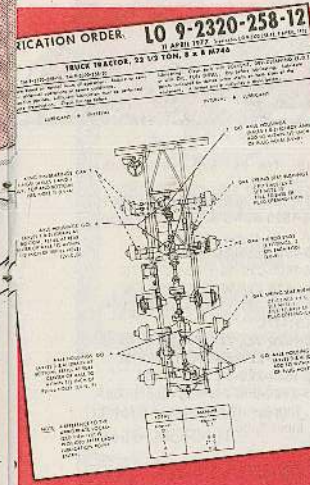
M746 HET Tractor LO Update

There've been some changes made in the engine oil weight called for in your LO 9-2320-258-12 (Apr 77). Here's the correct engine crankcase oil for the KEY on page 5:

- ▶ FOR EXPECTED TEMPERATURE ABOVE 32°F, USE OE/HDO 40
- ▶ +40°F TO -10°F, USE OE/HDO 30
- ▶ 0°F TO -65°F, USE OEA.

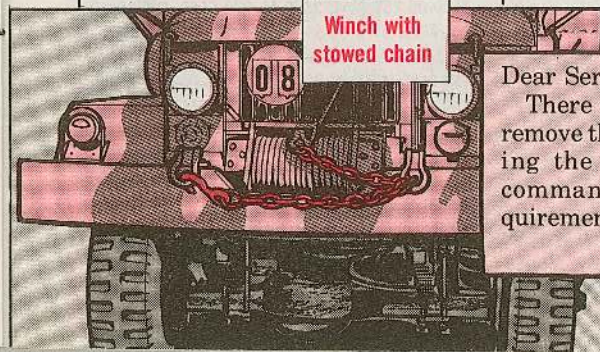
TB 43-0001-39-2 (Jul 78) has the word. Where the TB says OES, it should be OEA.

When the temperature is above 32°F, just add OE/HDO 40 to the present OE/HDO 30 until the next oil change.



Dear Half-Mast,
Does the shear pin have to be removed after operating the winch on a truck? I was taught that the shear pin is removed to prevent damage to the front bumper support and to the chassis if the winch is accidentally engaged.

MSG R.T.L.



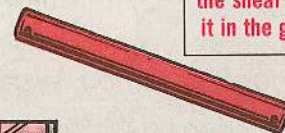
Winch with
stowed chain

Dear Sergeant R.T.L.,
There is no DA requirement to remove the shear pin after operating the winch. But your own command may have such a requirement in local SOP.

Half-Mast

Winch Shear Pin SOP

If you take out the shear pin store it in the glove box



IT'S BEEN CHANGED!





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 78), SC's and SM's and DA Pam (C) 310-9 (Nov 76), COMSEC pubs.

TECHNICAL MANUALS

TM 3-4230-204-12&P Feb Decon ABC-M11
TM 5-6115-457-24P Apr Gen Set, DED, 100-KW DOD Mods MEP 007A, 106A, 116A
TM 9-1340-418-14 Sep BATS
TM 9-1425-485-L May Lance
TM 9-1430-529-24P Apr Improved HAWK
TM 9-1450-585-10 Jul M730-Carrier
TM 9-2300-257-10 Aug M113A1 Carrier Family
Ch 6, TM 9-2300-257-20 Jul M113A1 Carrier Family
Ch 5, TM 9-2320-218-20 Jul M151-series 1/4-ton trucks
Ch 1, TM 9-2320-266-20P Jun M880-series 1 1/4-ton trucks
TM 10-5410-221-20P-1 Jun Shelter, Expandable, MUST, Mod SE-1
TM 11-3895-202-24P Aug RL-31 B-E Reel Units
TM 11-5815-359-24P Sep AN/FGC-140 Teletypewriter Set
TM 11-5820-401-10LD-2 Jun AN/VRC-43

TM 11-5820-401-10LD-4 Jun AN/VRC-45
TM 11-5820-401-10LD-5 Jun AN/VRC-46
TM 11-5820-401-10LD-6 Jun AN/VRC-47
TM 11-5820-401-10LD-7 Jun AN/VRC-48
TM 11-5820-401-10LD-8 Jun AN/VRC-49
TM 11-5820-469-20P Aug AN/TRC-80B Radio Terminal Set
Ch 6, TM 11-5820-474-14 Aug AN/GRC-109 Radio
TM 11-5820-453-20P Nov AN/GRC-87 (12V), AN/GRC-87 (24V) and AN/VRC-34 radio sets
Ch 8, TM 11-5820-520-12 Jul AN/GRC-106 and -106A Radio Sets
TM 11-5835-212-24P Aug RD-173 and A/UN Sound Recorder-Reproducer Sets
Ch 5, TM 11-5840-211-12 Aug AN/PPS-4A Radar Set
Ch 11, TM 11-5840-298-12 Aug AN/PPS-5, -5A and -5B Radar Sets
TM 11-5895-222-24P Jul AN/MGC-19 Teletypewriter Operations Central
TM 11-6625-2595-24P Jul Set, TS-3134/ARN-103 (V 524) Test Set
Ch 27, TM 55-1500-204-25/1 Jul General Aircraft Maint Manual
TM 55-1510-201-CL/4 Jul U-8D, U-8G, RU-8D
TM 55-1510-201-CL/5 Jul U-8F
TM 55-1510-213-10 Aug OV-1D/RV-1D

Ch 35, TM 55-1520-210-20 Feb UH-1D/H
Ch 1, TM 55-1520-210-23P-1 Jun UH-1
TM 55-1520-214-S Jun Prep for Ship OH-6A
TM 55-1520-235-CL Jul OH-58C
TM 55-1520-227-10-1 Aug CH-47B
TM 55-1520-227-10-2 Aug CH-47C
TM 55-1520-227-23-1, -4, -5 Aug CH-47B, CH-47C
TM 55-1520-227-23-2 Aug CH-47B, C
TM 55-1520-227-23-3 Aug CH-47B, C
TM 55-1520-228-CL Jul OH-58A
TM 55-2620-200-24, Aug Inspection, Maint, Storage, Disposition of Aircraft Tires, Inner Tubes

MISCELLANEOUS

AR 190-51 Oct Security of Property
DA Pam 310-7 May Index of MWO
FM 10-14-1 Jul Commander's Unit-Level Supply Handbook
FM 10-71 May Petroleum Tank Vehicle Operations
SB 740-99-31 Jul Storage Serviceability Standard for Aviation
TB 9-2300-405-14 Jul Mandatory Brake Hose Inspection and Replacement on Tactical Vehicles
TB 43-0106 Jul Aeronautical Eqpt Army Oil Analysis (AOAP)
Ch 1, TB 43-0118 Aug Electron Cnd Eqpt, Camouflage Painting
TB 43-0210 Jul Non-aeronautical Eqpt Army Oil Analysis (AOAP)

No. 2 Common Mistake

A whole bunch of tools was deleted from the April 78 edition of SC 4910-95-CL-A72 on your No. 2 Common shop set by mistake. Here're the NSNs for the D items that you should keep in the set:

5120-00-227-8104, 5130-00-293-2330, 5120-00-293-0019, 5120-00-243-7338, 7125-00-357-5337, 5120-00-224-1390, 4940-00-190-5164, 5110-00-289-0003, 5110-00-289-0007, 5130-00-889-9004, 5110-00-203-4645, 5110-00-234-6539, 5110-00-241-9152, 5110-00-241-9153, 4910-00-273-3658,

5120-00-251-2267, 5110-00-263-0349, 4940-00-261-8415, 7520-00-298-7043, 7520-00-298-7044, 7520-00-269-9012, 7520-00-272-9683, 5345-00-198-8050, 5120-00-596-0980, 4910-00-092-9136, 4910-00-788-8549, 6630-00-105-1418, 4910-00-250-2423, 4910-00-255-8673, 6635-00-449-3750, 5180-00-448-2362, 5180-00-422-4975, 5180-00-357-7510, 5120-00-449-7073, 5120-00-765-8536, 5120-00-422-8558, 5120-00-580-8924, 5180-00-422-8594, 4910-00-243-3130, 5120-00-853-4538, and 5120-00-221-7983.

A new updated SC is in the works. ARRCOM.Msg DRSAR-MA-T 162115Z Oct 78 puts these tools back in the set.



WE'LL LOSE BUSHELS OF POINTS ON THIS, TIGER... ALL BECAUSE OF YOU!



THE NEXT THING
TIGER KNOWS...

THIS ONE IS
STILL ALIVE!

IT...IT'S ALL
MY FAULT!

THE MAJOR WILL
QUESTION YOU!

I DON'T HAVE TO
GIVE YOU ANYTHING
BUT MY NAME, RANK
AND SERIAL NUMBER!

HAH...AN ARMY OF FOOLS!
THEY CAN'T EVEN KEEP A
TRUCK OPERATIONAL!

ALL RIGHT, ALL RIGHT...BUT
YOU'LL BABBLE FOR FAVORS
AFTER YOU SEE WHY WE
SHALL SWEEP OVER YOUR
LAND! **THIS WAY!**

AN ARMY'S SUCCESS DEPENDS ON
DETAILS... AS IN THE INSPECTION
OF VEHICLES **BEFORE**
DURING AND **AFTER**
EACH USE!

WITH MEN LIKE
YOU IN **YOUR** ARMY,
WE ARE CERTAIN
TO CRUSH YOU ALL!

AW-W...

THIS FILM IS OUR RESEARCH
STUDY! IT ILLUSTRATES THE
POINT **YOU** HAVE PROVED!

THERE! YOU SEE YOUR SQUAD WIPED
OUT BECAUSE **YOU** CONSIDERED
REGULAR INSPECTIONS A WASTE
OF TIME!

BUT WITHOUT INSPECTIONS, HOW CAN
YOU GOOF-OFFS **EVER** BE SURE YOUR
GEAR WON'T FAIL... WHEN NEEDED
MOST?

WELL...

YES, BUT ALL WHO **ARE**
GOOF-OFFS CAUSE FAILURES
IN TIRES, BATTERIES, FUEL
AND ENGINES!

YOUR NEGLECT
COST FIFTEEN
LIVES!

BUT...BUT I'M
JUST **ONE** GOOF-OFF!
...EVERYBODY
ISN'T!

IF YOU WOULD TREAT YOUR
ARMY VEHICLE LIKE YOUR
PERSONAL AUTOS...THERE
MIGHT BE HOPE FOR YOU!

CORRECTING MINOR PROBLEMS
BEFORE THEY BECOME MAJOR ONES
...OR DISASTERS... **THAT** IS THE WAY OF
A SMART SOLDIER IN AN
ARMY OF WINNERS!

REMEMBER THE LOST NAIL...LOST
HORSE... LOST KINGDOM? **THAT**
NAIL SHOULD HAVE BEEN INSPECTED!

YOUR ARMY WILL LOSE BECAUSE
MEN LIKE YOU SHRUG OFF DAILY
INSPECTION OF **YOUR...**
EH... HORSES!

IN THE
STOCKADE
...HEH...YOU
CAN TRY TO
DENY IT!

SPECIALIST TIGER!
HERE'S A MESSAGE
FOR YOU!

A
POSTER?

Joe's Dope Sheet

FOR EQUIPMENT THAT MUST STAY IN USE,
IN GOOD SHAPE DESPITE SERVICE ABUSE,
YOUR ONLY PROTECTION
IS DAILY INSPECTION
SO BREAKDOWNS WON'T MAKE YOU
THE GOOSE!

THIS TIME
I'D SAY HE'S
THE GOAT!

GOING TO
A WAR?

YEH... BUT
NOT VERY
FAST!

Z-Z-

AT TIMES
LIKE THIS, I
EVEN HATE
GORGEOL'S
SCENERY!

I JUST
HATE HIM!

IN VEHICLE OPERATION

BEFORE

CHECK TIRES... FUEL,
FAN BELT... OIL
LEVEL... ENGINE
INSTRUMENTS
... RADIATOR

DURING

LOOK, LISTEN, FEEL
AND SMELL POSSIBLE
DEFECTS. PAY SPECIAL
ATTENTION TO YOUR
BATTERY-GENERATOR
INDICATOR, ALSO YOUR
AIR PRESSURE AND
OIL PRESSURE
GAGES.

AFTER

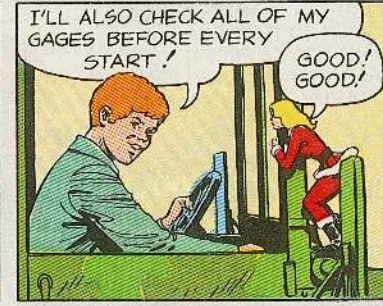
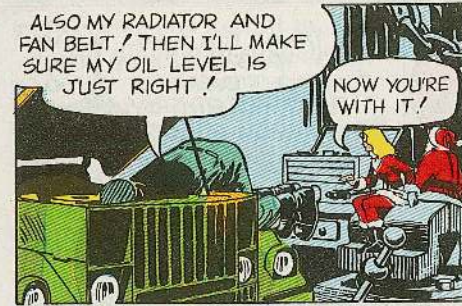
MAKE THE SAME
CHECKS YOU DID
BEFORE YOUR
TRIP.

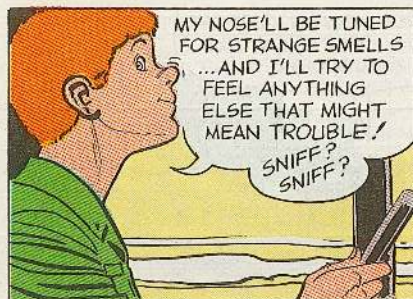
IT'S INSURANCE
... AGAINST BEING THE
GOOSE, GOAT, CLUCK,
CLOD, SAP, SIMP, OR
A TOTAL

CENSORED

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

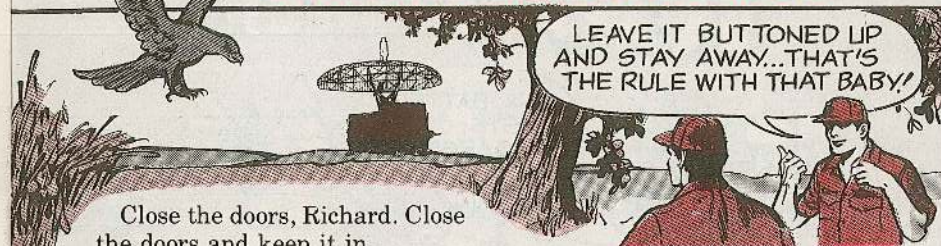
IF YOU WANT TO DISPLAY THIS CENTERPIECE ON YOUR BULLETIN BOARD, OPEN STAPLES, LIFT IT OUT AND PIN IT UP.





FIREPOWER

HAWK Radiation Caution



Close the doors, Richard. Close the doors and keep it in.

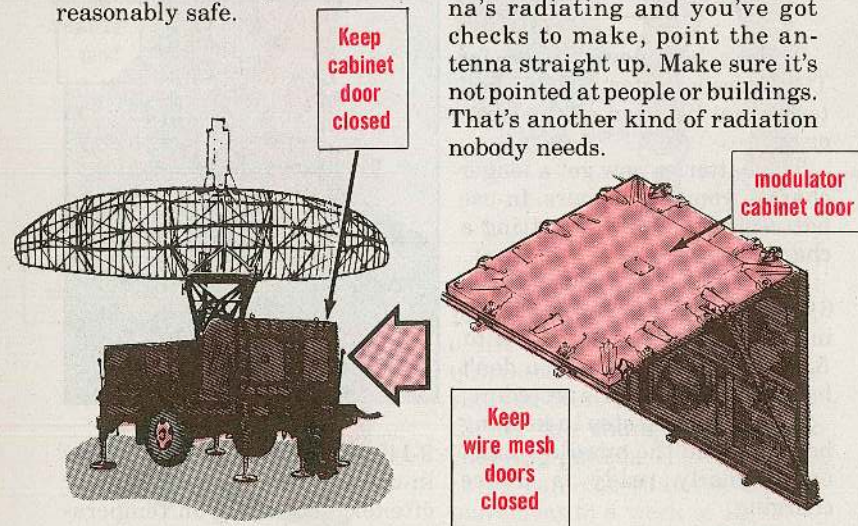
It's nothing to sing about, but X-ray radiations have been measured from the modulator cabinet of your HAWK system AN/MPQ-35 and AN/MPQ-50 PAR/IPARs.

With the inner, metal mesh doors open, the radiation from the thyatron tube, NSN 5960-00-542-7181, is too high for safety. With the doors closed, X-ray emissions are way down...and reasonably safe.

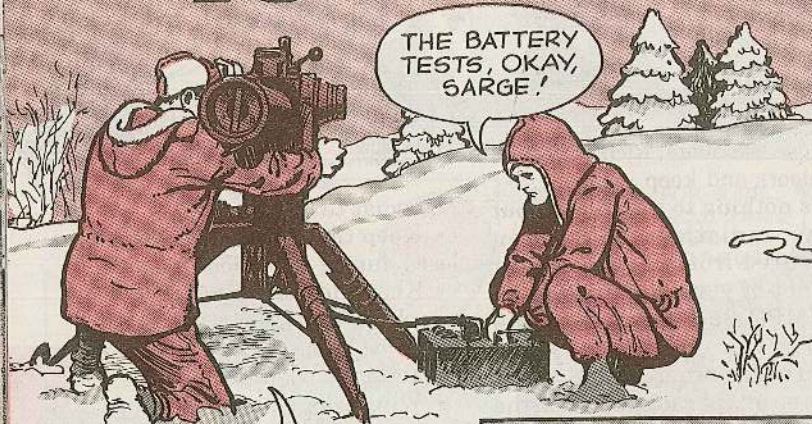
So what to do:

- Keep the metal mesh doors closed during operation.
- Keep the modulator cabinet door closed except for tests where they *must* be open. Limit your exposure to the opened cabinet.
- When the equipment's operating, rap sessions and loitering are best held elsewhere. Don't hang around too long, that is.

A reminder: When the antenna's radiating and you've got checks to make, point the antenna straight up. Make sure it's not pointed at people or buildings. That's another kind of radiation nobody needs.



TOW BATTERY



THE BATTERY TESTS, OKAY, SARGE!

THEN, WE'RE IN BUSINESS!

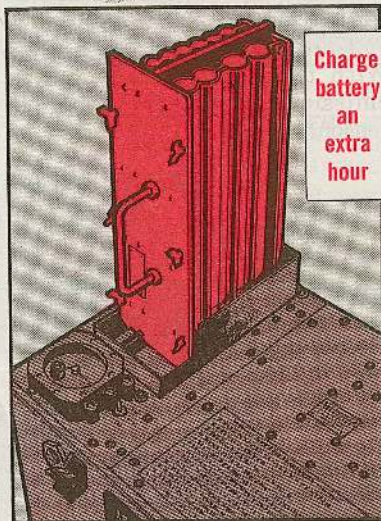
There's bad news ahead for TOW missile system BB-287 batteries that lie down on the job... or off.

The batteries now get a longer charge, from 4 to 5 hours. In-use batteries soon will be getting a charge more often.

Change 1 (1 Sep 78) to TM 9-6130-470-12 increases the charging time a full hour, from 4 to 5. Get the change if you don't have it. It spells out the procedure.

The second big step in keeping batteries and the missile system operationally ready is in-use charging.

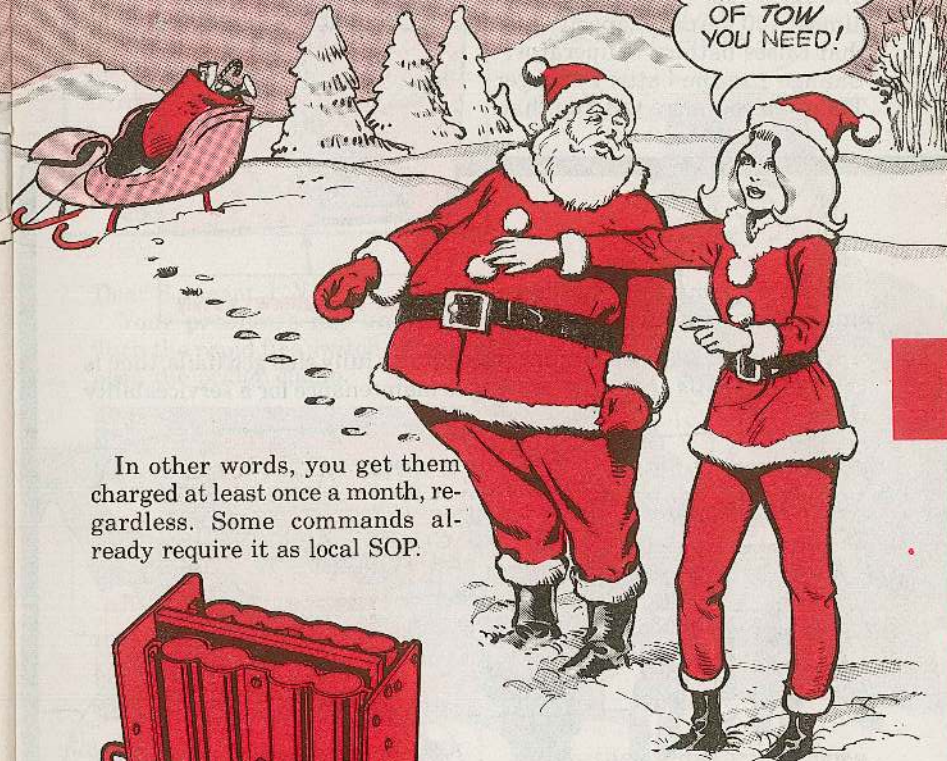
A scheduled Change 6 to TM



Charge battery an extra hour

9-1425-470-12 requires charging in-use batteries every 30 days or oftener, depending on temperature, self-test readings, etc.

ON THE CHARGE



NO, SANTA! THAT'S NOT THE KIND OF TOW YOU NEED!

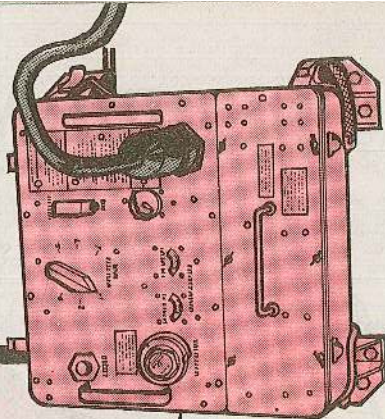
In other words, you get them charged at least once a month, regardless. Some commands already require it as local SOP.



In storage? charge it!

If you've not done it lately, eyeball Change 3 to TM 9-1425-470-12. That's the third shot of life for tired batteries and requires that stored batteries be charged every 30 days or oftener. Check the change for specific charging periods. High temperatures can cut that 30-day requirement to a week or less.

The new 5-hour charge may heat up some batteries during the last hour, but that's not unusual. The extra hour builds batteries to almost 100 percent capacity and that raises battery temperature. Change 1 to the battery charger TM gives you more word on that.



Bonus Babies

Here are some tips which your unit might want to consider:

- If a battery fails self-test checks after it is fully charged (fails, then is charged and fails again), job order it to maintenance for a serviceability check.

Self-test batteries weekly



- Store batteries in as cool a place as you can. High temperatures drain off a charge.
- Turn in batteries which won't maintain a charge for 50 shots. Some help there: complete a self-test as fast as you can. Tests use at least 2 shots worth of charge.

TOW M70 Console...

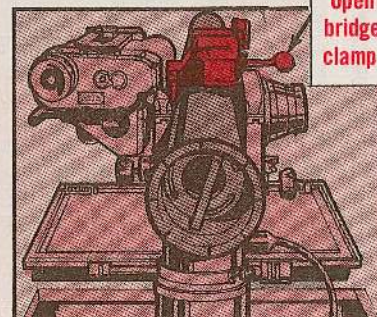
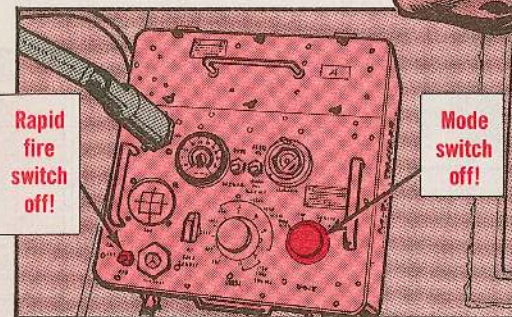
Dear Half-Mast,
When we turn off the rapid fire switch on our TOW system M70 instructor consoles, we still get current drain. It even drains the batteries.

How can we prevent it?
SFC J. Y.

Cutting the Current

HERE'S WHAT TO DO TO AVOID CURRENT DRAIN.

Dear Sergeant J. Y.,
Your problem's not unusual. Turn the rapid fire switch off and open the bridge clamp.



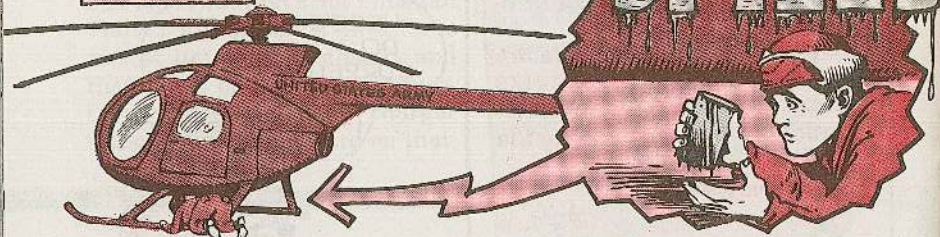
Keep the bridge clamp open until the mode switch on the M70 console is turned off. If you don't do it that way, your battery drains.

Another note: If the rapid fire switch is on, opening the bridge clamp will not remove launcher power. You drain your batteries. Read the caution in Step 6, Table 2-3, TM 9-6920-470-12.

Half-Mast



NO MORE SPILLS

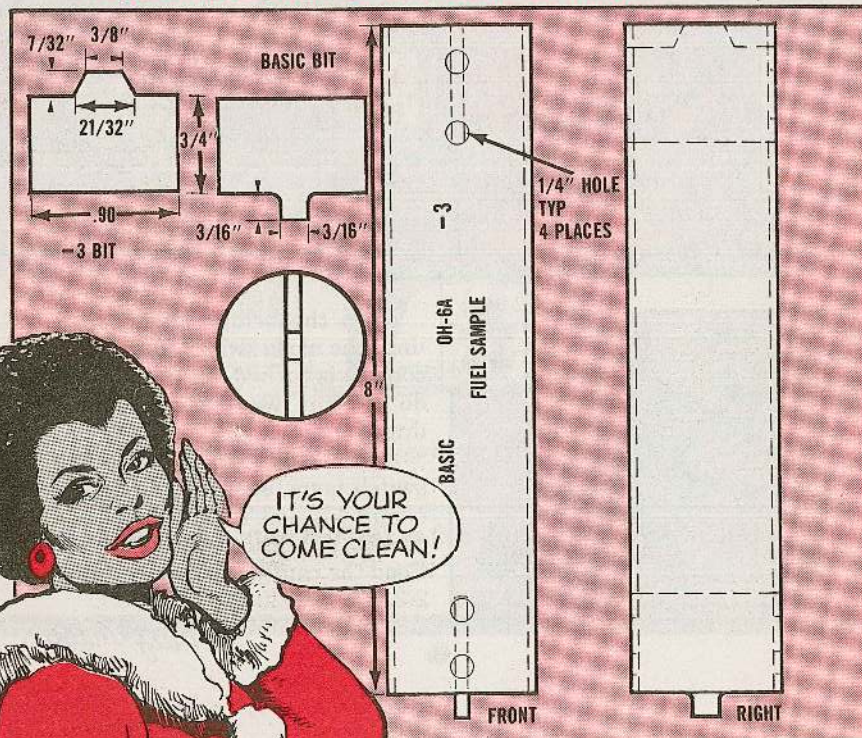


Dear Editor,

Use of screwdrivers and other tools on the OH-6A drain valve can really make a mess of taking the fuel sample during the PM Daily.

Fuel runs down your hands and arm. The valve in the drain plug can easily jam in the open position unless direct upward pressure is applied. Your clothing gets soaked trying to close the valve and this is a safety hazard.

Well, we made up this work aid to take the sample.



Just use 1-in steel tubing, NSN 4710-00-169-4703. Stamp "-3" on one end and "Basic" on the other. The tool is stamped "OH-6A Fuel Sample."

Next, make up 2 bits from .050-in steel sheet, NSN 9515-00-184-8807. Drill four 1/4-in holes thru the tubing walls. Insert the bits and weld them to the tubing wall at the holes. Weld the holes closed.

No more fuel spills for us!

(Ed Note — Right on!)

Dennis A. Carvalho
Army Avn Spt Fac
Otis AFB, MA

New Cover Coming

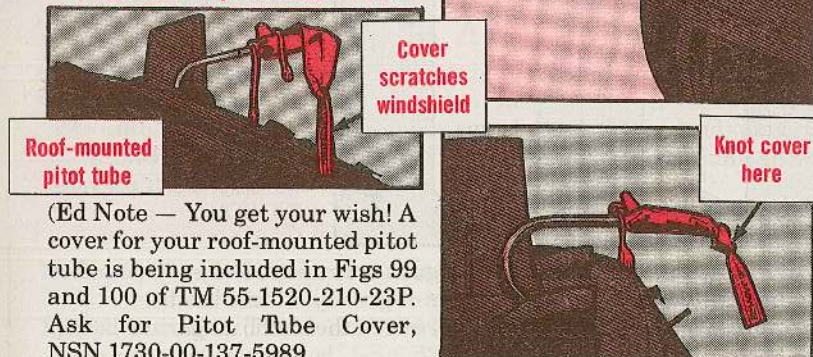
Dear Editor,

The cover for the pitot tube mounted in the nose of our Hueys fits fine — no problem.

Most of our birds have a roof-mounted tube of a different design, tho, and the cover won't fit properly. The cover hangs down and can scratch the windshield.

Well, to keep the cover off the windshield we simply shorten it by tying a knot in the end. This works real fine but we would like to see a cover for the roof-mounted model in supply.

SFC Conrad Ericson
Arizona Army National Guard



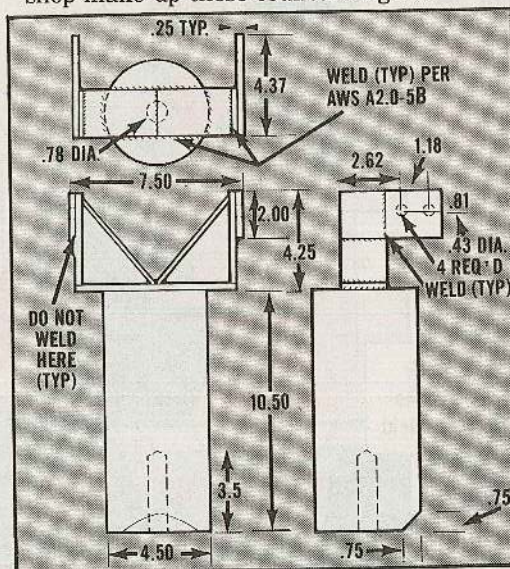
(Ed Note — You get your wish! A cover for your roof-mounted pitot tube is being included in Figs 99 and 100 of TM 55-1520-210-23P. Ask for Pitot Tube Cover, NSN 1730-00-137-5989.

Center of Gravity Aid

SOME CATS CALL ME SELF-CENTERED, BUT I'M NOT!

HUH?

Straighten up and fly right, Cobra types, by having your sheetmetal shop make up these counterweights.

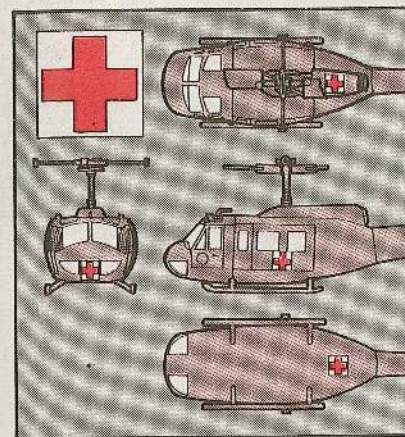


Installed in the turret when the guns are removed, the 100 pounds of ballast will keep your bird's center of gravity within limits.

'Course, the correct CG also requires that the ammo magazines be kept on board.

NOTES:

1. Braces .25x2.00 4130 Sheet Steel Stock
2. Cylinder of Counterweight 4130 Steel Rod 4.50 inch Diameter
3. Heliarc welded using Heliarc Weld Rod, A5.18-69E7051B
4. Sand Blast & Paint O.D.
5. Two Weights per Helicopter — 50 Pounds each — Secured by Quick Release Pins, M517986C610, NSN 5340-00-904-6859
6. Fillet Welds per MIL-W-8611



For Flying Medics

The red cross markings on UH-1D/H med-evac choppers have been applied in different sizes and at various locations. No more!

Headed for the pages of TB 746-93-2 on painting aircraft is a standard-size marking at 4 places on your bird.

SAFETY-OF-FLIGHT-MESSAGES

- U-8-78-7 Maint Advisory Msg Gen Mtg Nuts, U-8/RU-8.DRSTS-MEW 081600Z Aug 78
- U-8-78-7 (Amend) Amendment to Maint Advisory Msg U-8-78-7, Gen Mtg Nuts, U-8/RU-8.DRSTS-MEW 041900Z Aug 78
- GEN-78-09 Maint Advisory, Msg, NSN 4920-00-372-4593, P/N BH112JB-53 Tester, Exhaust Gas Temp, MFG by Howell Instru on Contr. No. DAAJ01-77-C-0502. DRSTS-MEG 031800Z Aug 78
- GEN-78-10 Safety Msg — One Time Inspect Seat Belt Latch MS3488(AS) in CH-47, CH-54, UH-1, AH-1, T-41, U-1, U-6, U/RU-8, EH-1H, TH-1G, O-1, TB55-1500-200-20-23. DRSTS-MEG 071701Z Aug 78
- GEN-78-11 Same Subj as GEN 78-10, Change GEN Number from 9 to 10 only. DRSTS-MEG 151827Z Aug 78
- GEN-78-12 Safety Msg — One Time Inspect Seat Belt Latch MS3488(AS) in CH-47, CH-54, UH-1, AH-1, T-41, U-1, U-6, U/RU-8, EH-1, TH-1G, O-1 and OH-58 Aircraft, TB55-1500-200-20-23. DRSTS-MEG 151827Z Aug 78
- GEN-78-13 Maint Advisory Msg NSN 4920-00-962-3097, Test Set, Indicator, Fuel Qty Gage, P/N TF20-1, Mfg by Consolidated Airborne Sys Co, Bendix, on Contr DAAJ01-73-C-0522. DRSTS-MEG 241630Z Aug 78

Now In A Kit

You can convert the tail rotor silent chain on all UH-1 birds to the improved roller chain that has no special inspections. Included in Kit, NSN 1615-01-047-8614, are the chain, sprocket, guard, fairlead supports and instructions. It's a stock-funded item, which means your unit shells out the moola ... \$100.

For Internal Filter

The O-ring packing for the Cobra (S Model), given on page 49 of PS 306, is for the transmission internal oil filter — not the external filter. Fig 81, item 46 in TM 55-1520-236-23P (Jun 77) is being updated to include Packing, preformed, NSN 5330-01-018-6498.

Improved Battery Here!

OH! WHAT A CHARGE I'M GOING TO GET OUT OF THIS!

HAND

Action, Only!

AND LOTS OF YOU ARE GOING TO BE AS LUCKY!

BB-600 A/A

Replaces BB-600/A

Permion is better

There's an improved nickel-cadmium battery headed your way, aircraft types. Damage from overheating and boilovers are behind you with the new BB-433A/A, NSN 6140-01-046-1116.

The BB-433A battery, used in a Huey and Mohawk for example, is being upgraded with the new-type BB-600A/A cells. The Permion material in the new cells is a better separator so you won't likely have plates shorting out and the battery going bad.

You can't forget PM, of course. The new battery doesn't stop overheating and boilovers—just damage from them. You still check the voltage regulator and electrolyte level as usual.

Your support adds the 19 cells and re-identifies the battery.

Watch out, tho, if you ever have to switch a cell. Those BA-600A/A's have been issued under several stock numbers. Some can be used for the conversion; some can't.

Any cell under NSN 6140-01-051-9844 or 6140-01-044-4132 is OK. The -9844 number is the one your support uses to order new cells.

But eyeball any cell with NSN 6140-01-032-3938. It must have "General Electric" stamped on top. If it doesn't, don't use it. It won't discharge like the rest. This puts the burden on the other cells.

It's true that there is no portable sprayer to inject cleaning compound into the compressor of your gas turbine engine.

But, you never want to use a pressurized fire extinguisher, either. It will explode if overcharged by an air compressor and that can lead to more than lumps on your noggin!

Instead, latch on to a non-pressurized, hand pump type water fire extinguisher. If you can't locate one in the salvage yard, NSN 4210-00-241-8343 will get you a 5-gal capacity extinguisher for \$17.99.

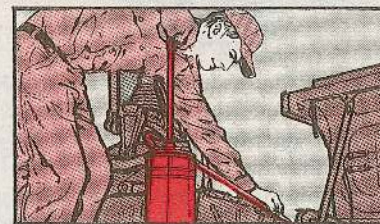
Adapter Here!

It's no sweat to torque the main rotor retaining nut on your Huey or Cobra when using a power wrench. A little hand action will do the job.

The wrench adapter and socket are no longer in short supply. Go ahead and ask for Reaction Adapter, NSN 5120-00-619-9776 and Socket, NSN 5120-00-619-9779, for the UH-1 and AH-1.

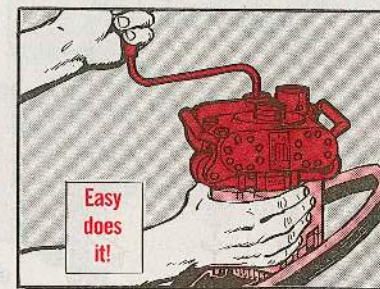
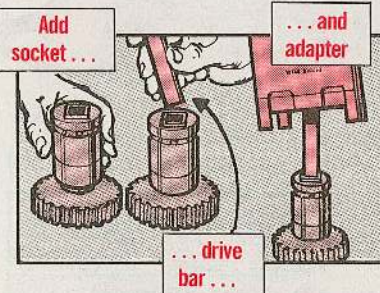
Follow the wrench use poop in the maintenance pubs by monitoring the torque reading a few minutes, until it stabilizes and the split cones are seated.

Retorque of the nut is not needed when using the power wrench... saves elbow grease.



'Course your favorite throttle jockey should follow the cleaning poop in each engine manual. For example, on a T-53 engine, starter engagement is limited to 40 seconds, followed by a 3-minute cooling interval. Three engagements are allowed in a period of an hour.

That'll keep your engine compressor clean — safely!



Seat the Cap!

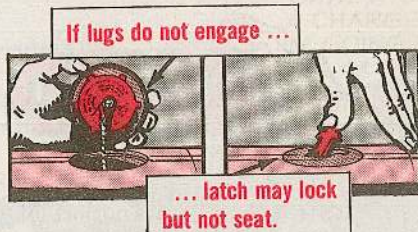


JP-4 fuel handlers—listen up!

After you fill the Ute (U-21) fuel tanks, you need positive seating of the filler caps. Otherwise, fuel will be siphoned from the tanks in flight. That means halting a mission for a precautionary landing.

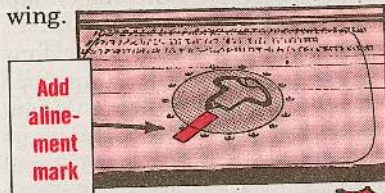
Sure, the cap will fit in the filler neck—and you can even close the cap latch. But that won't hack it. If the cap lugs do not engage right in the filler neck, the cap won't seat.

To prevent that revoltin' situation, the 6 lugs should be engaged. Insert the cap and turn it



clockwise until you get that solid engagement feeling, indicating the cap has seated. Then close the latch.

As an aid to seating the cap, crew chiefs should paint an alinement mark on the cap and wing.



Try Key Rings!

WHEN A 5-RING MAN LIKE ROONEY GETS MARRIED, HE'LL PROBABLY WANT IT TO BE A 10-RING CEREMONY!

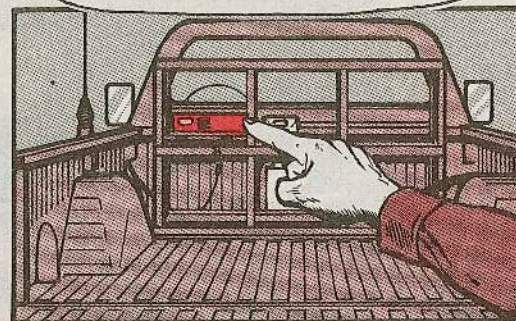
The new, larger pilot's check lists and maintenance test flight pubs won't fit the TM 1500-1 binder. So, latch onto some individual key rings to hold them together...no binder needed!

Use at least 5 rings so you won't tear the pages. Depending on the pub thickness, here're the rings you can use:

Capacity	NSN	Amount in Box
1-in	7510-00-286-5787	100
2-in	7510-00-286-5789	50
3-in	7510-00-286-5790	10

COMMUNICATIONS A New Radio Message

AFTER THE WARNING "DON'T START YOUR VEHICLE WHILE THE RADIO IS ON!!" YOU GOT THE MESSAGE ... RIGHT ?



Well, here's a new one. Installing a switched-on radio in a vehicle with the engine running can burn you out just as fast.

It can also fuse your radio connector pins to the mount's receptacle. A nasty job for support and maybe a tidy repair bill for you.

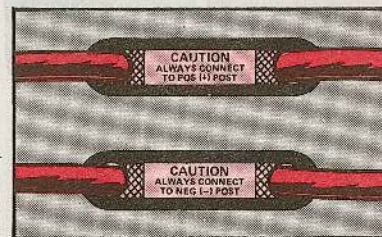
So, be sure your vehicle engine and commo gear are off before you plug in the commo.

Remember this, too!



Be sure RT and vehicle are off before installation

Reversing connections to the vehicle battery is another quick way to get burned. Nip that problem with cable labels.



NSN 9905-00-477-3714 brings you the positive cable marking. NSN 9905-00-477-3715 is for the negative.

FIGURES

THERE OUGHTA BE A
LAW AGAINST LIARS!

BUT YOUR
RADIO'S NOT
EVEN PEOPLE!

There's a word for operators who treat the tune and load chart on their radio sets as gospel. That word is lonely.

But only on the airwaves. Support shops know 'em well. Workbenches sag with burned-up AM-3349 radio frequency amplifiers that weren't ready to operate. Improper loading and tuning traps the radio's power inside the amplifier. If this load is not being sent to an antenna, tubes blow. This puts your amp out of business.

CAN LIE!

Ready to tune and load?

**Start
here**

GENA TUNING AN

**Record tune
and load
readings here**

For the record, the numbers on that chart are only a starting point. Once you've set them on the tune and load dials, you're ready for fine tuning.

Your goal is to put the tune and load meter needles in the green. That's dead center on the meter. Then you're ready to operate.

**You're ready when
needles are centered**

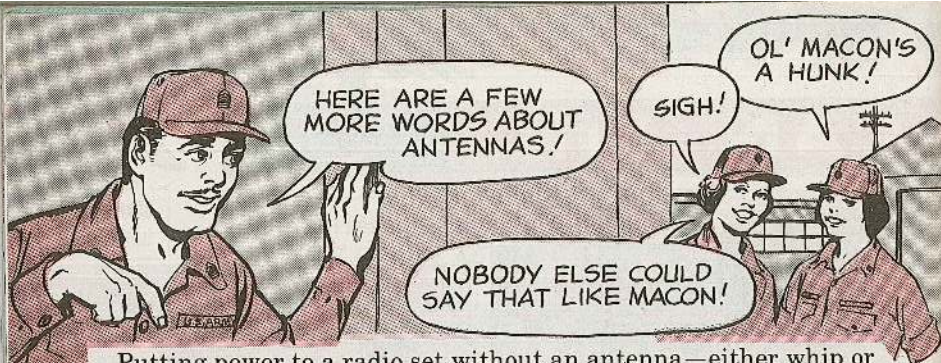
Load
meter

**Tune
meter**

Keep in mind that you've only got 2 minutes to do this tuning. If you hit that time limit, TM 11-5820-520-12 (Feb 71) says turn your HV RESET switch to OP-

ERATE and let your set cool down for 5 minutes.

THIS COOLING DOWN PERIOD WILL KEEP MORE TUBES FROM BLOWING!



Putting power to a radio set without an antenna—either whip or doublet—is a sure way to burn out the power amplifier tube. Not only must the antenna be hooked up, but hooked up right. Eyeball cables and connectors.

Those hookups can fool you, too. A case of mistaken identity has burned up many tubes. For instance, if you hook your whip's UG-201A connector adapter to the doublet receptacle, you still have no antenna. That's trouble.



Having trouble centering the needles at the same time? Try this before shipping the set off to repair: Turn both knobs very slowly (and at the same time) in the direction you want the needle to go. That usually does the trick.

Once you're tuned and loaded, grab a pencil. Use the logging chart to note your readings. This might save you a few seconds next time you set up.

Remember that your work is not permanent. If your frequency changes, you tune and load again. Same if you change location or antenna.



The buzzer diaphragm on your TA-312/PT telephone set is so sensitive that if you treat it badly it may not let you know when someone's ringing you up.

With a little care, tho, you'll always get a buzz. For instance, since it's thin-skinned, keep sharpies like pens and pencils away.

Dull objects will do a job, too, ... like thumbs trying to change the tone of the ring.

If the diaphragm's already done in, ship your telephone to support. They'll replace the buzzer assembly.

AT-271 Antenna Tips

Keeping your AN/PRC-25 or -77 radio set's AT-271A/PRC antenna in top form sometimes calls for a little inside information.

Like on the cord that helps hold up the antenna when you're com-



municating. If it goes bad, you can replace it with NSN 4020-00-281-8439. Use Appendix A, CTA 50-970 (Jul 74) as your authority when requesting this 11-ft nylon cord.



Here's another "tip".

If your antenna's going around topless, order a new tip with NSN 5999-00-259-5009.



HANDLES ARE
HANDY... AND
PROTECTION
TOO!

LEAVE 'EM ON!

I LIKE 'EM! I LIKE 'EM!

Some local SOP's call for the units to remove the MWO handles from their AN/VRC-12-series radios before they turn the sets in for repair.

That may save support some work—but it's not good for the equipment.

Leave MWO
handles on

First bad thing is possible damage during the trip to support. Without the handles to protect 'em, panel controls can be broken. Just more work for repair—and a longer wait for you.

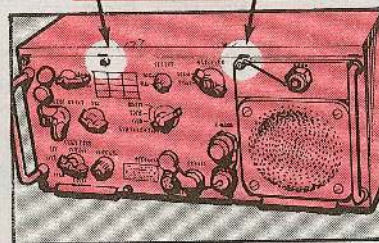
You also risk trouble when you get your set back. Many troops forget to replace the handles. This

unbuttoned RT is then a big target for dirt and moisture.

Not just water hose damage, either. Condensation will put you off the air, too.

So you're willing to keep every-

Without handles dirt and
moisture can get in here



thing together and tightened down, but need the hardware? Take note.

The bevelled screws you need to fasten down the handles are NSN 5305-00-764-0071. The front panel hex screws are NSN 5305-00-234-6199. The top cover screws go by NSN 5305-00-957-7033.

If your RT doesn't have the MWO yet, take special care. For instance, lay off the guards. They won't double as handles.

They won't support the RT's 50 pounds. Not always, anyway. If that gear hits the dust, it goes to the shop...and you may be paying the bill.

Let There Be Light

If getting bulbs (lamps) for your AN/GRC-122 or -142 radio tele-typewriter set has you in the dark, here's some info which

should light up your life.

NSN 6240-00-155-8651 is the one bulb for all your needs. Trouble is, the Army Master Data File (AMDF) codes it for overseas users only.

That's fine if that's where you are, but what about you other RATT Riggers?

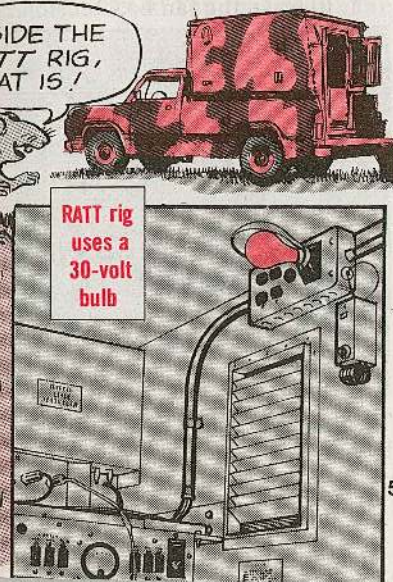
You can tell your support to ask local suppliers for the same kind of bulb Uncle Sam sends overseas.

Have 'em ask for General Electric lamp ordering number 25A (30V).

If that still doesn't do the trick, put a 2A advice code on your bulb request. That tells everybody up the supply line you can't get the bulb locally.

INSIDE THE
RATT RIG,
THAT IS!

RATT rig
uses a
30-volt
bulb





10,000-lb RTFLs...

FAN HUB RUB

OH-H-I WISH SOME-BODY WOULD LET ME TELL 'EM MY SYMPTOMS!



Model RTL 10 and RTL 10-1 mechanics need to check the fan hub—pulley—assembly on their RTFLs monthly from now on. Item 3-9 in TB 43-0001-42-3 (Oct 77) has the PM word.

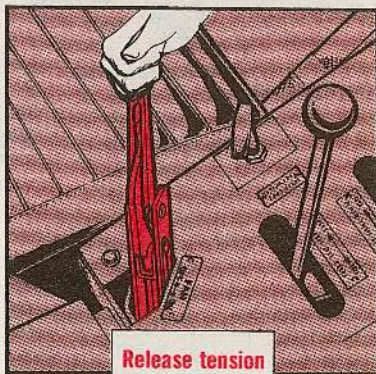
The monthly check is needed because a lot of trouble can develop with the assembly in short order. Among other things, the fan blades can start hitting the radiator.

Give fan belt tension and the condition and alinement of the fan, special attention:

- A fan belt that's too tight causes most of the hub bearing damage and failure.
- Bent, cracked, or out-of-line

fan blades put extra strain on the hub, bearings, and seals.

1. Release the fan belt tension.



Release tension

Turn the fan pulley several times by hand. You should easily spot a



THE FAN WILL TELL YOU A LOT!

I'M A FAN OF YOURS, BONNIE!

SAME HERE! JUST LET ME TELL YA!

blades...specially near the hub area.

Bent blades keep the fan from doing its best cooling job. They'll throw the fan out of balance...and damage the radiator core.

Check free play...

bearing that's dry, rough, loose or has too much free play.

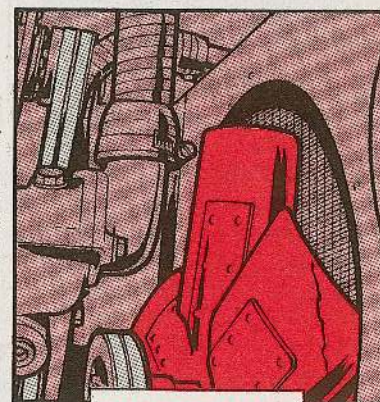
2. Look at the rear of the fan pulley. Excessive grease loss at



... and grease loss

the rear grease seal means a bearing failure for sure.

3. Remove the fan shroud. Look for bent, broken, or cracked fan



Look for bent blades

Check the blades for alinement. They must clear the radiator core when you turn the pulley. The blades must be in a vertical plane parallel with the radiator core as you rotate the pulley.



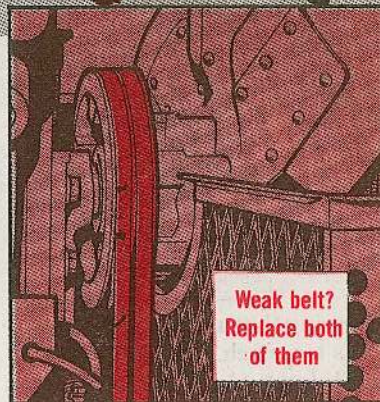


Never turn the fan by pulling on the blades! Never try to straighten a bent blade either. You'll weaken it in the hub area. Maybe crack it.

Replace any cracked or bent blades you find.

If the hub assembly needs lube or repairs—other than replacing fan blades—remove it and call Support.

4. If your PM inspection's OK, check the fan belt tension. You want the belts to flex $\frac{1}{2}$ to $\frac{3}{4}$ of an inch when you push on 'em firmly halfway between the pulleys.



If a belt is weak or damaged, replace both belts. They come as a set, so use both of 'em.

Oil Pressure Gage NSN

Use NSN 6685-00-957-8674 to get the engine oil pressure gage for your 6000-lb rough terrain fork lifts. Jot it down in TM 10-3930-242-20P/1 (Mar 72) and TM-242-20P/2 (May 74) until the changes come out.

JD410 Tire NSN

You can get tires for your JD410 loader backhoe:

Front NSN 2610-01-049-2796

Rear ... 2610-01-054-0338

Jot down the numbers in your parts catalog CJT25021A on pages 82 (front) and 88 (rear tire).



When your new J-SIIDS intrusion detection system arrived, you probably said to yourself, "Self, we're really cooking with gas now." How right you were.

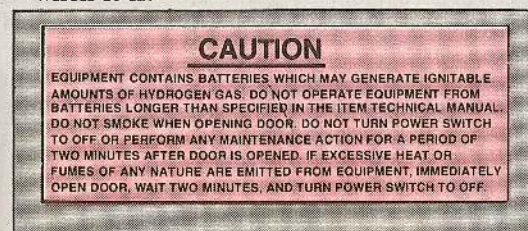
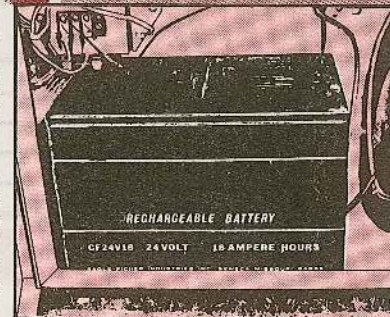
Trouble is, the gas is dangerous. Those rechargeable batteries in your control unit and monitor cabinets give off hydrogen gas... which can lead to an explosive situation.

If you aren't ready for that kind of cookin', you'll have to prevent it. Here's how.

Heed the cautions and warnings in your TM 5-6350-262-14-series manuals about gas buildup. Consider *all* cautions as warnings, too. The headshed is issuing TM changes which make them warnings.

Then, watch for overheating in your power supplies when they're charging the batteries. Report it to your support ASAP.

Finally, the CAUTION decal on the cabinets which hold the rechargeable batteries will give way to a new decal. Hold one on those requests, tho. The new decal is not available yet. You'll get the word ASAP when it is.



THIS WILL GIVE WAY TO A WARNING DECAL!



General Purpose Tents ...

You can now get replacement pins for the aluminum tent poles that hold up your GP tents.

Pole Pin NSN's

Get the pin assemblies like so:

NSN 8340-01	dia, in	lg, in	Used on tent poles NSN 8340-00
036-3781	$\frac{3}{8}$	1½	753-6574
036-3782	$\frac{3}{8}$	2	"
036-3783	$\frac{3}{8}$	2½	"
036-3779	$\frac{1}{4}$	1	753-6575
036-3780	$\frac{1}{4}$	1½	"

This info will be in a change to TM 10-8340-211-23P (Jan 72).

Fuel and Water Can TM

Draw a new piece of equipment, and you get its TM and parts list, too. Right?

Wrong—at least for the 5-gal military can family.

TM 10-4200-200-13 (Feb 74) does it for all 5 items—the gasoline (fuel) can, the steel, aluminum and plastic water cans, and the water can cold weather case. It lists repair parts.

But the TM's not automatic issue. Unless you're on for pinpoint in Block 454 of DA Form 12-25A for petroleum items, you have to order the manual specially ... or do some thirsty walking.

So, order your copies.

Battery Tester ...

Stick 'n' Pump PN's

Dear Half-Mast,

Can we get the stick and pump tester—NSN 6630-00-105-1418—thru supply, or will we have to buy a new tester?
D.F.K.

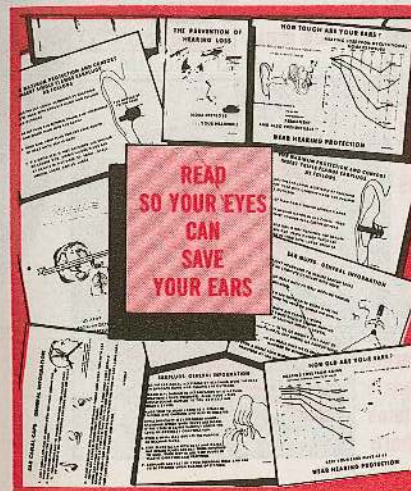
Dear D.F.K.,

Order 'em by part number.

You can get a pump FSCM 78039 PN 7181-821 for \$1.06 and a stick FSCM 78039 PN 7124-13 for 25 cents.



Hearing Protection Info



A lot of what you need to know about protecting your hearing from "noise pollution" is in AR 40-5 (Sep 74), Health and Environment, and in TB MED 251 (Mar 72), Noise and Conservation of Hearing.

But your safety officer can get more info from:

Commander
US Army Environmental
Hygiene Agency
ATTN: Bio-Acoustics Div
Aberdeen Proving Ground,
MD 21010

Or phone Autovon 584-3797 or 3829. They've got posters, pamphlets and other good stuff on hearing protection.

X MARKS



NOW, IF MEMORY SERVES ME RIGHT !...

...WE'LL FIND THE GOLD... UH... THERE!

(SIGH)... IF ONLY HE'D MARK LOCATIONS ON HIS 3318!

Stow it! There's a place for everything, and everything in its place.

That goes for your repair parts, too.

'Course, your storage area has to be secure with a door that locks. Stick up a "Keep Out" sign.

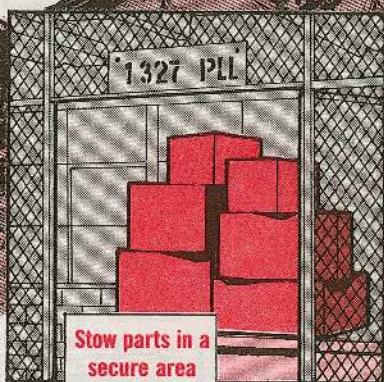
The area must protect your parts from the weather and be large enough to store all of your parts — where you can find 'em.

For that, you need a system.

First take stock of what you've got. That's so you can store 'em by:

● **END ITEM** — Try to put all the parts for the same end-item in the same general area.

● **SIZE, SHAPE AND WEIGHT** — Small, light items go in drawers and on top-row shelves. Large, bulky items go in wide



THE SPOT

shelves and bins. Heavy items go near the floor — but not on it if at all possible. Stash 'em on pallets — or something similar — if you can't keep 'em at the bottom or end of a bin or on a low shelf.

● **DEMAND** — Stow the parts your mechanics use most in handy areas.

● **CONTROLS** — Put high-cost, sensitive or controlled items in cabinets and bins with locks. Para. 2-10 of AR 190-11 has the info.

'Natch, 1 or 2 parts on a shelf or in a bin is a waste of space. Here's how to mix parts and still keep 'em straight:

— Keep parts that look alike apart. Mix only those that look different on the same shelf or in the same bin.

— Tag each part with its NSN and name *before* storing it with other parts.

Locating Parts

Give 'em an address. Here's how:

● Tag each cabinet, shelf stack or wall shelf with a letter.

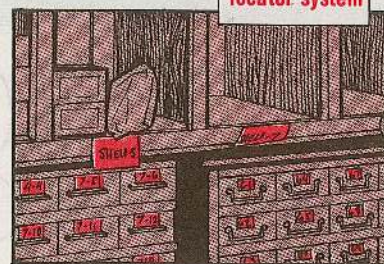
● Number the rows.

● Label each section or drawer within a row with a letter.

If you've got more drawers or bins than you have rows, you may want to letter the rows and number the drawers. That's up to you.

Either way, make sure you match the part's address with the letters and numbers you write in the location block on the part's DA Form 3318 or your PLL printout.

Set up a good locator system



'Course, the location on the form or printout changes every time you move parts. You may, for instance, move your parts around after inspecting your stock for out-dated or no longer needed parts.

After that, keep your parts stowed where you put 'em.

On 1-ton Clark MHE...

Correct Filter NSN

Pencil this change into the parts list in TM 10-3930-632-20P before you forget—

Page 15, make it NSN 2940-00-892-6214 for the engine oil filter, Fig 42, item 13.



Confirmed Cancellation

Para 2-24 of AR 710-2 tells you to trashcan all status cards on a request in the Due-In Status File when:

The item arrives (entire amount requested);

Your request is rejected (canceled); or,

You get a confirmation.

Don't get hung-up over the word confirmation. That just means you hold off on cleaning out all the cards on a request you've asked

THIS MEANS YOU'LL EITHER GET IT OR NOT GET IT... VERY POSSIBLY OR DEFINITELY...



support to cancel until you get back a status card — usually status code BQ, BR or BS — confirming the cancellation.



Hold Checklists

Even tho the new Phase Maintenance pubs for your OH-58A, C and AH-1 birds are hitting the field, hang on to the old PMS checklists. You need 'em to pull the Daily inspection — until the new PMS checklists arrive.

M49A2C Separator Fuse

To get the filter element fuse for the separator on your M49A2C 2½-ton fuel tank truck, use NSN 4930-00-872-1779.

Jumper Cable Clamps

Need clamps to repair those 25-ft jumper cables, NSN 2920-01-027-0125, in your No 1 and No 2 Common Shop Equipment? Use ARRCOM PN 7550899-2 for the red clamp and ARRCOM PN 7550899-1 for the black one. ARRCOM's FSCM is 19204, and the RIC is B14. The cable comes under NSN 6145-00-705-6674.

Good Brake Rod NSN

The parking brake rod (Part No. 11631488) for your M107/M110 or M578 series vehicle is listed with a bad NSN in TM 9-2300-216-20P and -34P/1 and in TM 9-2350-238-20P and -34P/1. The right NSN is 5340-00-009-2209.

M880 Oil Filter

The M880 1¼-ton truck's oil filter, NSN 2940-00-586-4792, is sometimes hard to get. There's no need to hold off your scheduled service if you can't get one. Your CO can authorize the use of the M151A2 ¼-ton truck's oil filter, NSN 2940-00-832-6054, for an emergency situation. That's a one way-switch, tho. You don't use the M880's filter on the M151A2 ¼-ton truck. And, if your M880-series truck's still in warranty, you use only the M880 filter.

Sensitive Pilferage Codes

Need a sensitive or pilferable item code for your supply forms and records? Check your AMDF. Sensitive item codes show up in the SCI (Special Control Item Code) column. Pilferable item codes are in the SEC (Physical Security/Pilferage Code) column.

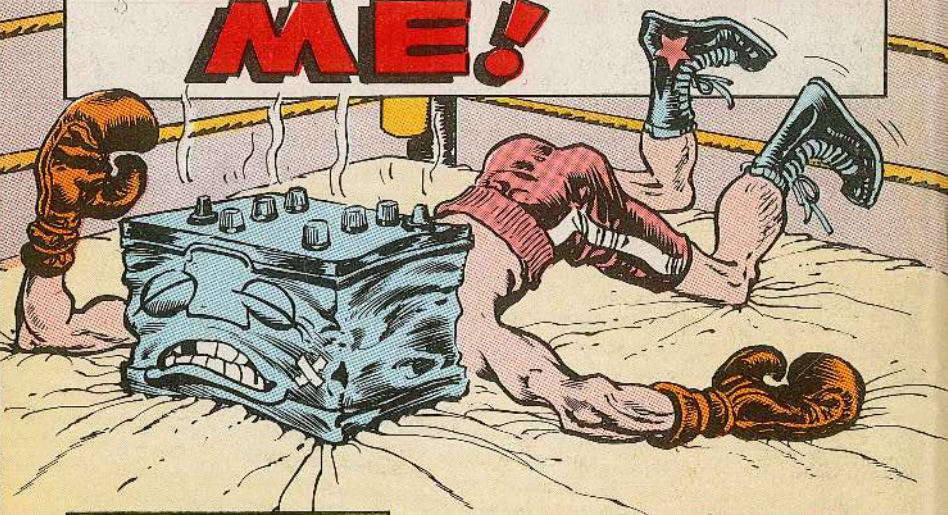
Mutilate 'em!

Some rotor blades beyond the finite (retirement) time were found headed back into the supply system! Had they been installed, they could have spelled bad news! That's why Para 4-5a(6) in TM 55-1500-328-25 (Jul 72) says all finite life components with less than 100 hours time remaining must be made non-repairable. Your maintenance officer decides on the method before sending the parts to PDO.

☆ U.S. GOVERNMENT PRINTING OFFICE: 1978—657-003/1

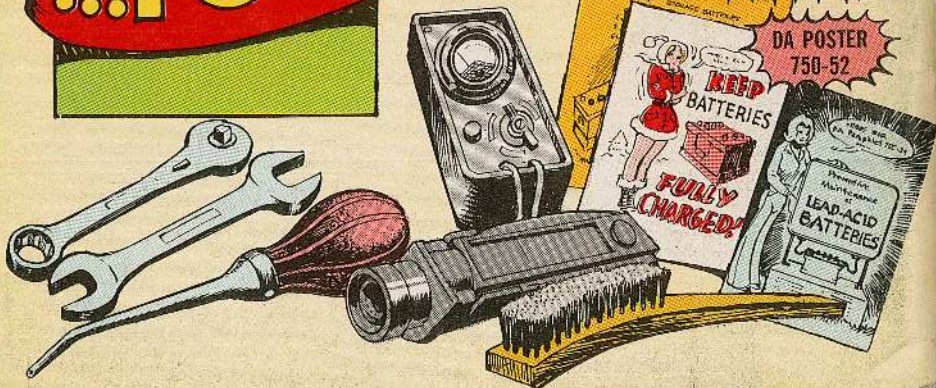
Would You Stake Your Life ^{right now} on the Condition of Your Equipment?

DON'T BLAME ME!



YOUR BATTERY'S
ONLY AS GOOD
AS ...

...YOUR P.M.



TM9-6140-200-14

DA POSTER
750-52