

Issue 334

PS

September
1980

THE PREVENTIVE MAINTENANCE MONTHLY

AOAP
Army Oil
Analysis Program

...SO THAT'S
WHY I'M HERE,
DOC...

ME AN' MY
GEAR GOT
PROBLEMS!!

HMMMM... TESTS SHOW
HIGH CONCENTRATIONS OF IRON,
COPPER AND LEAD WEARMETALS...

ANALYSIS SUGGESTS
PROBLEM MAY BE YOUR GEAR'S
SERVO BANDS... BUSHINGS...
OR THRUST WASHERS!

OIL
SAMPLE

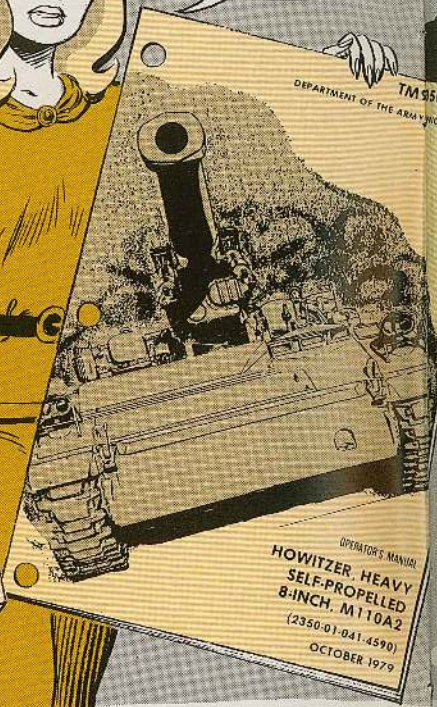
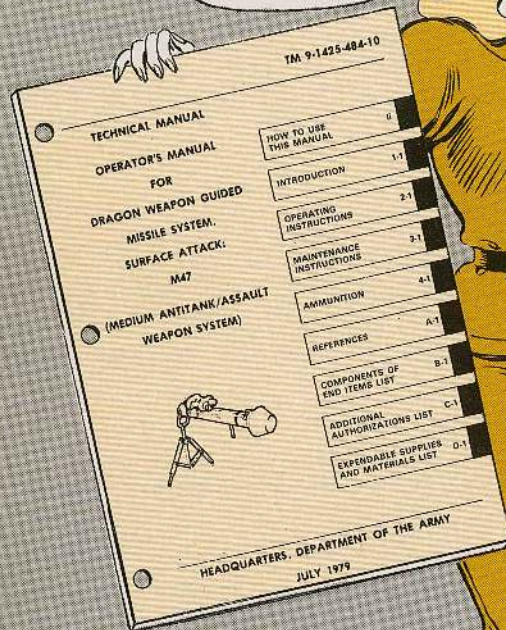
MURPHY
ANDERSON



The New **TM** *la Dif férence!*

IF YOU THINK **TM**'S
NOWADAYS AREN'T LIKE
TM'S USED TO BE...
YOU'RE RIGHT!

THERE'S A WHOLE
NEW STYLE, EASIER
TO USE AND EASIER
TO LOOK AT!



You've used one if you've gone to the book on your M60 machine gun, or M16A1 rifle, or M151-series ¼-ton truck. There are more'n 100 "New Look" **TM**'s now.

You can tell most of the new style books on sight—color covers, sharp picture up front, and usually a different size than the old-style manuals.

The real payoff is inside, with step-by-step diagrams keyed so that words and picture match up...and the pictures really look like the item as the user eyeballs it.

CRITICAL
MISSION-
ESSENTIAL
EQUIPMENT
COMES
FIRST!

Eventually, every combat item and troop-equipment item will have the new books...but it takes time.



PS THE PREVENTIVE MAINTENANCE MONTHLY

Published by the Department of the Army for the information of all soldiers assigned to combat and combat support units, and all soldiers with organizational maintenance and supply duties. Within limits of availability, older issues may be obtained direct from Editor, **PS Magazine**, c/o US Army Materiel Readiness Support Activity, Lexington, KY 40511.

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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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M60A1
RISE
Passive
Tanks...

Who's Who?

WHAT A
FUNNY LOOKIN'
TANK!

COULD IT
BE A RISE
IN DISGUISE?

If your tank has all that, it's a RISE Passive. The NSN should be 2350-01-059-1503—NOT 2350-00-116-9765.

Make out a list—by serial number—of all your RISE Passives with the wrong NSN on the data plate and on the DA Form 2408-9 Acceptance Report.

- RISE 1790-2C engine 650-AMP system.
- Driver's Night Viewer, AN/VVS-2 (Passive), NSN 5855-00-629-5278.
- Gunner's Passive Periscope (M32E1), NSN 1240-01-016-2272.
- Commander's Periscope (M36E1), NSN 1240-00-348-8441.

SEND THE
LIST TO...

Project Manager
US Army Tank-Automotive
Command
ATTN: DRCPM-M60-L
Warren, MI 48090

You will get new data plates for each of the tanks on your list. The data plates are free issue. Most of the information will already be printed on the new data plates. You just stamp the manufacturing date, serial number and inspector's initial on the plate and put it on the right tank.

YOUR NEXT MOVE
IS STRAIGHTENING OUT
THE PAPERWORK...

GET WITH YOUR
PROPERTY BOOK
OFFICER.

YOU NEED DA
FORM 444 INVENTORY
ADJUSTMENT REPORT...

SENT
TO...

SENT TO...

INVENTORY ADJUSTMENT REPORT
(AR 721-16)

SUPPLY BRANCH

PROPERTY CLASS

REPORT NO.

ADJUSTMENT COURTS

CRASH

ITEM NUMBER

STOCK OR PART NUMBER

NOMENCLATURE

UNIT

RECEIVED

TO INVENTORY

HARD COPY

CREDIT

**Commander
US Army Depot System Command
ATTN: DRSDS-LA
Chambersburg, PA 17201**

DATE APPROVED

ACCOUNTABLE OFFICER

NAME

PLACE

TER NO.

ADGT. TRANS. CODE

LOCATION OF COUNT SLIPS DISCLOSED ANY DISCREPANCIES

DA FORM 1 AUG 34 **444** PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

U. S. GOVERNMENT PRINTING OFFICE: 1969-O-361369

That report will correct your asset records for the Continuing Balance System.



Then make out a corrected copy of the DA Form 2408-9 Acceptance Report. Print "CORRECTED COPY" in large letters across the face of the form. Line out the preprinted control number and write the original form's control number above it.

219744		1. ORGANIZATION BCASR		2. LOCATION Seymour MI 48211		3. UNIT IDENT CODE KJWKA		4. UTILIZATION CODE		5. VEHICLE USE CODE	
6. NONCIRCULAR		7. MODEL M60A1		8. FEDERAL STOCK NO. 2350-01-059-1503		9. SERIAL NO. P 9281		10. REGISTRATION NO. JK111		11. WARRANTY PERIOD	
12. YEAR OF MFG M79		13. MANUFACTURER (AFFO CODE) DATP		14. CONTRACT NO. DA-00-XXX-040X0		15. PURCHASE ORDER NO. D0619499-X0		16. SHIPPED TO UIC		17. RECEIVED FROM UIC	
18. TYPE REPORT		19. REPORT CODE A		20. USAGE		21. SHIPPED TO UIC		22. RECEIVED FROM UIC		23. REMARKS	
24. ACCEPTANCE AND CERTIFICATION		25. USABE		26. MILES		27. OTHER		28. INSPECTOR'S SIGNATURE		29. JULIAN DATE 0121	
30. TRANSFER		31. LOSS		32. GAIN		33. OTHER		34. REPORTS CONTROL SYMBOL C60LD-1608		35. FORM 2408-9	

Mark out the control number and write the original forms number above it

CORRECTED COPY

NSN 2350-00-116-9765

MENT CONTROL RECORD

DA FORM 2408-9

CORRECTED COPY

NSN 2350-00-116-9765

PUT THE BUM NSN FROM THE ORIGINAL FORM IN THE REMARKS BLOCK OF THE CORRECTED COPY AND CIRCLE THE NSN IN RED!

Pull Copy #1—the NMP copy—and mail it directly to Commander, MRSA, ATTN: DRXMD-MS, Lexington, KY 40511. The logbook copy of the form goes in your DA Form 2408-9 Acceptance Report binder.

MAKE SURE YOU CORRECT ALL YOUR OTHER FORMS AND RECORDS TO SHOW THE GOOD NSN--2350-01-059-1503!

GOTCHA, BUDDY!

M60-Series Tanks...

Final Drive Damage

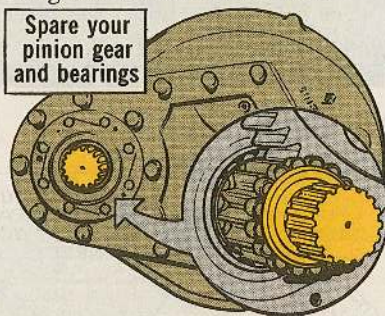
HORRORS!

I'LL TELL YOU WHAT'S WRONG WITH ME!

MY MECH HAMMERED MY PINION GEAR... RUINED BOTH THE GEAR AND THE GEAR BEARINGS!

The pinion gear and pinion gear bearings on a lot of final drives are being hammered to destruction.

Spare your pinion gear and bearings



Remove final drive by-the-book



Troops are beating on the pinion gear with a hammer to loosen the final drive from the tank hull. This mushrooms the pinion gear and damages the gear bearings.

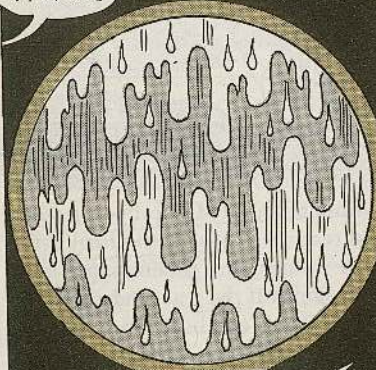
After you've done all the steps and you're ready to remove the final drive from the hull, use a pry bar—instead of a hammer—to break the drive away from the hull.

M60 Tank Gasket NSN

You'll need NSN 5330-01-030-6807 to get the door gasket for those armored top-loading air cleaners. You won't find the NSN in your parts manuals so jot it down. Use adhesive to put the seal on. NSN 8040-00-152-0063 gets a 2.5-oz can and 8040-00-152-0067 gets a 6-oz can.

M60A2 Tanks...

IS THAT
A FISH?



CAN'T TELL... WIPER
BLADE'S GONE!

Wiper Blades

Yep! No more wiper blades will be issued for the M50 and M51 periscopes on your M60A2 tank.

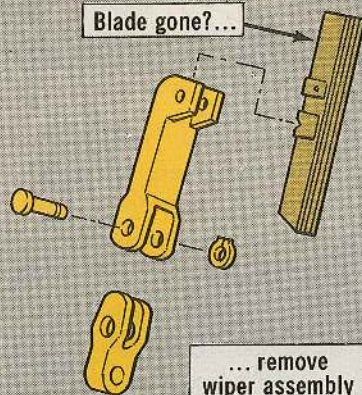
When present stocks of these blades, NSN 1240-00-003-8404 and NSN 1240-00-003-8405, have been handed out, no more will be available.

So, when your periscope wiper blades get lost or worn out, remove the entire wiper assembly so the wiper blade arms don't scratch the periscope window.

You should not remove the wiper motor assembly.

Wiped Out

Blade gone?...



... remove
wiper assembly

M60A1 (RISE) Change

BLAST!! I DIDN'T
ORDER A 15-lb.
EXTINGUISHER!

RIGHT! YOUR TM
LISTS THE WRONG
NSN!



TM 9-2350-257-10 (Jun 78) has the wrong stock number for the 5-lb portable fire extinguisher. Change the page B20 Item 83 entry to read NSN 4210-00-270-4512. (The NSN that's there now is for a 15-lb extinguisher.)

M48/M60 Tanks...

HOW CAN WE KEEP
TH' AIR CLEANER
BOX CLEAN?



Keep the air cleaner box clean and dry when you do your scheduled services. Any time the power pack is out, plug the air inlet pipe in the engine compartment. Get a 4-in

Plug Air Inlet Pipe

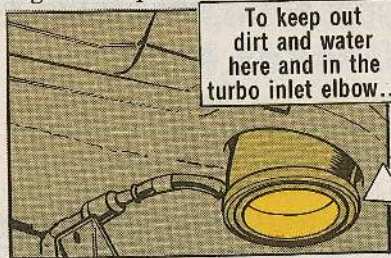
WHEN YOU PULL
THE POWER PACK,
I'M WHAT YOU
NEED!



plastic plug with NSN 5340-00-855-7993.

To keep out
dirt and water
here and in the
turbo inlet elbow...

...use
this plug



Shift Bearing for Tanks

ONE OF THESE TM'S
WILL HAVE TH' CORRECT
NSN FOR THE SHIFT
BEARING WE NEED...
RIGHT?



WRONG!



TM 9-2350-257-20P-1 (Dec 75) on page 182 lists the wrong FSCM and P/N and shows no NSN for Item 22, Fig. 93, bearing for transmission shifting controls. The right FSCM for the bearing is 60380 and the right P/N is M20161XOH. You can get it

with NSN 3110-00-902-1686. The wrong P/N and FSCM for the same item (P/N M20161XOH) also show up in TM's 9-2350-253-20P-1 and 9-2350-258-20P-1. TM 9-2300-378-20P-1 (Dec 75) fails to list the item at all.

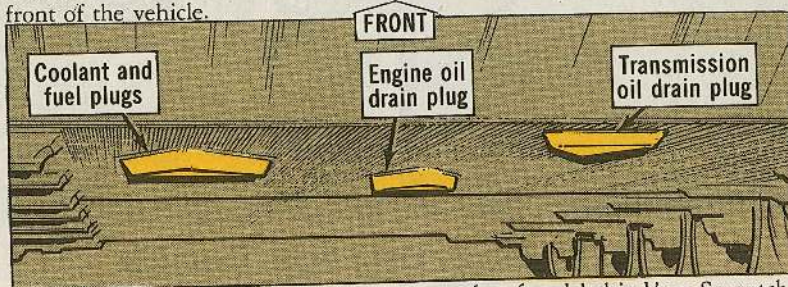
Save Sweat, Paint

When you camouflage paint your tracked vehicle, you can forget the pattern bit when you get to the vehicle's hull within the area outlined by its tracks. Just basic primary camouflage color will do for there. Continue to pattern paint the wheels, bogies, sprockets and the like within the perimeter of the tracks.

M109-Series Howitzers... The Triangle Solution

The Bermuda Triangle may still have its mysteries—but there's no reason to be puzzled by the triangles on the bottom of your howitzer.

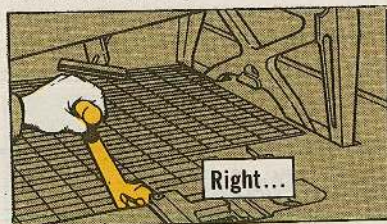
The plate closest to the front protects the transmission drain. The center one covers the engine oil drain. The left plate (from the front) covers both the fuel drain and the coolant drain. The recessed fuel drain plug is the one closest to the front of the vehicle.



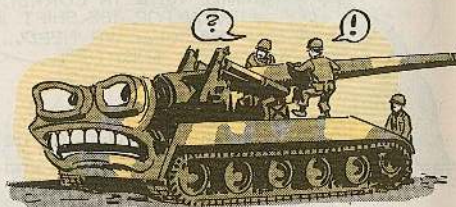
One thing the triangles have in common—a lot of gook behind 'em. So watch for it when you take 'em off.

Handle With Care

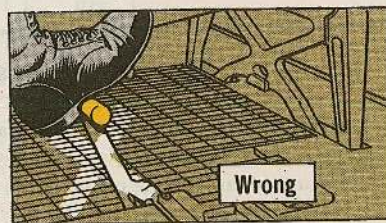
The replacement rate on the travel lock handle of the M107/M110 howitzers tells a grim story:



A lot of guys don't use their heads—or their hands. They're using their feet—and kicking the handle right out of supply.



You can stop this self-defeating situation by remembering—and passing the word—that the handle is for hands only, like the TM's say.



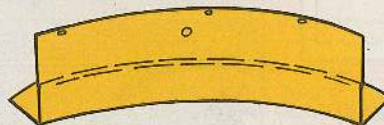
M109/M109A1 Howitzers...

New Shield For Race Ring



You can now get a protective shield so that the exposed part of the race ring can't cause an accident.

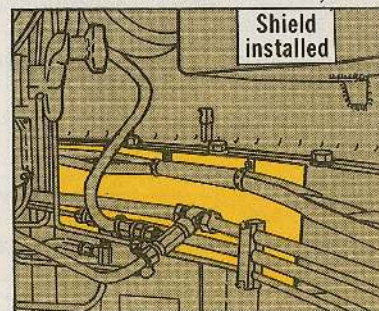
Order protective shield
NSN 1025-01-055-6085



Order a shield, protective, NSN 1025-01-055-6085, for every M109 family howitzer you have with Serial Number 1122 or above. The Routing Identifier Code (RIC) is B14.

The shield reaches from the right trunnion support to the existing shield on the right side of the cab. You use the existing wiring harness holes

and hardware to mount the shield, and the unit mechanic can do the job.



This shield fits only M109/M109A1's with 5 cab electrical contact arm assemblies—Serial Number 1122 or above. The earlier model M109/M109A1's with only 3 cab electrical contact arm assemblies—Serial Number 1121 and below—take a different kind of shield that is not ready for issue yet.

M109 Howitzer Cooling Tips



The cooling system of the M109-series howitzers is so small you can't afford to make mistakes. Unless you do the right thing, your engine will overheat and you risk cracked heads, scored cylinders or burned-out turbo bearings.

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 TEMPERATURE IS ABOVE 180° F.

NSN 7690-01-049-1771

(Black Letters—White Background)

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.

NSN 7690-01-059-4141

(Red Letters—White Background)

HEED THE WARNING
IN THESE OVERHEATING
DECALS!



Battery Morning Sickness



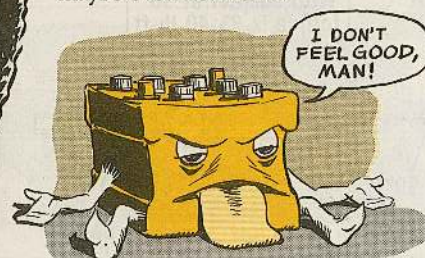
Do the batteries in your M109-series howitzer act sick in the morning like they had been up all night?

Well maybe they have.

Lots of drivers stop their engines by pulling out on the fuel shut-off control handle. Then they leave the vehicle with the master switch ON.

Whatever electrical circuits are ON when that happens pull current from the batteries. The amount of current may be small but it is continuous, hour after hour.

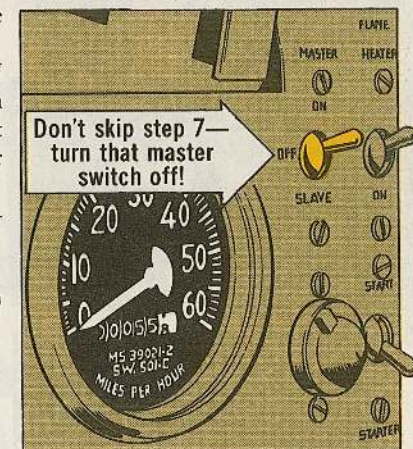
You wind up with sick batteries—maybe even dead ones.



To keep this from happening, go through all 8 steps in vehicle shutdown the way it shows you on page 2-43 of your TM 9-2350-217-10 N.

If you skip step 7—Turn off MASTER SWITCH—your batteries can be drained by any or all of these circuits:

Fuel pumps, radios and other commo equipment, personnel heater,



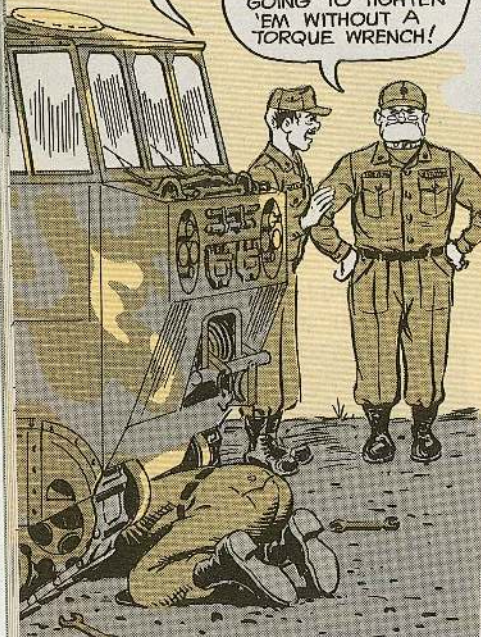
bilge pumps, ventilation blower, inside dome lights and vehicle outside lights, particularly low power ones that will not be noticed and shut off.

To master battery sickness, turn off the master switch.

Look for Loose Connections

HE'S LOOKIN' FOR LOOSE CONNECTIONS 'T TIGHTEN!

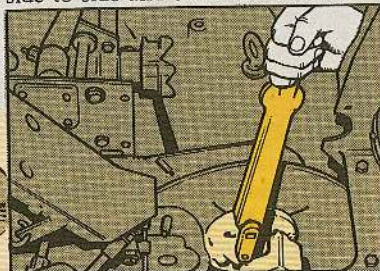
THE LOOSE CONNECTIONS ARE IN HIS HEAD IF HE'S GOING TO TIGHTEN 'EM WITHOUT A TORQUE WRENCH!



The transmission in your M113A1 type carrier is supported in only one place—where it bolts to the transfer case. There is no support under its output end.

This is OK as long as the propeller shafts and universal joints are working right. They connect the transmission to the differential and the differential to the left and right final drives.

If some of the screws in these connections get loose, the torque will tend to whip your transmission from side to side and even tear it loose.

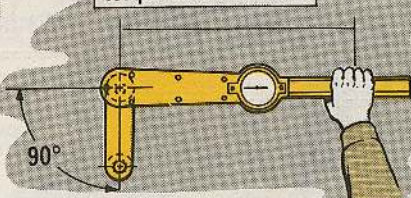


Check and torque loose screws

So-o-o-o, check these screws often. Be sure the U-joints are spot-faced and hardened washers are used under the mounting screws.

Get your mechanic to torque any loose screws with torque wrench adapter NSN 5120-00-977-7421 from Tracked Vehicle Special Tool Set A.

With adapter at 90° torque is 35-40 lb-ft



It will take a torque of 35-40 lb-ft if the torque wrench is used with the adapter at a 90° angle to the wrench or if the wrench is used without the adapter.

M113A1 Air Cleaner Twist

YEAH--BUT HOW GOOD ARE THEY AT THE AIR CLEANER TWIST?



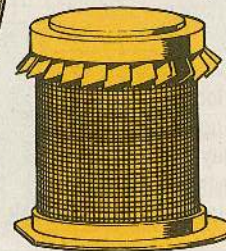
How are you at doing the air cleaner twist?

You really need to know this step if you have the new filter element, NSN 2940-00-168-2337, in your M113A1 type vehicle. The new filter element has a closed bottom, a fringe around

the top, and it goes into housing NSN 2940-00-103-5797, which has 3 raised knobs in its bottom.

Just putting the air cleaner element into the housing is not enough. The element will sit too high for the 4 housing clamps to latch properly.

Just twist the element about a third of a turn to either the left or the right and it'll drop into place.



Twist element to drop in place

Oil Filter Surprise

??!! YOU GOT 4 OUTLETS...BUT WE ONLY NEED 2!!



DON'T FRET IT!

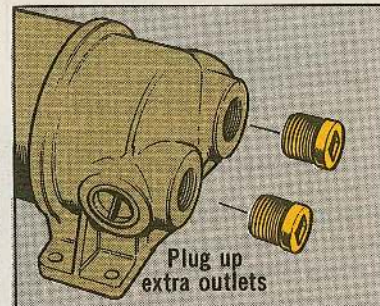
You're in for a big surprise when you get the new engine oil filter assembly you ordered for your M113A1.

It'll have 4 outlets in the head.

You have hook-ups for only 2.

You can't use the filter assembly unless you plug the 2 extra 1-in holes.

Use NSN 4730-00-221-2141 for a steel plug. Mark your TM so you'll order the plugs when you order the filter assembly.



M29/M29A1 Mortar Maintenance

Having problems with your M29/M29A1 81-MM mortar?

Could be you expect too much from it.

This mortar was designed as an area weapon. It is not a high precision piece, so, there's no way you can get all the play out of its parts.

On 'tuther hand, it can work a lot better than most mortar crews have been getting it to work.

HERE ARE THINGS THAT CREWMEN SHOULD WATCH--

Keep screws tight

• **SCREWS**—During firing, some of them will work loose. If you tighten them back up—no problem. If you neglect them, they can get lost. So check out the screws before and after firing and tighten them.

• **LUBRICATION**—There's no separate LO so follow the lubrication instructions on page 3-1 of your TM 9-1015-200-12. They call for weekly lubing through the 3 oil caps with hand oiler, NSN 4930-00-274-5713. Fill it with PL, lubricating oil general purpose, MIL-L-3150, medium, when temperatures are above +32°F. Use PL special, VV-L-800, when the temperature is below +32°F.

Lube oil caps weekly

• **OIL CAPS**—When repainting or touching up your mortar, keep a little rag moistened with turpentine handy. Use it to keep your oil caps free of paint.

• CAREFUL HANDLING—

Unnecessary roughness draws a penalty, even in football. If you throw the mortar tube into a truck, for example, you can burr the muzzle. If this has already happened, get your armorer to stone away the burrs. If the muzzle is smooth, keep it that way.

Armorer stones away burrs

HERE'RE SOME THINGS THAT'LL HAVE TO BE CORRECTED AT SUPPORT--

• TRAVERSING ASSEMBLY—

The traversing assembly will work hard at some places along its line of travel and have too much play at other places if it's not lubed right from the inside.

Keep traversing assembly lubed

• **ELEVATING HOUSING**—The elevating mechanism housing can get full of water and start to rust from the inside.

Keep dry and greased

• **ELEVATING CRANK**—Water gets down into the elevating crank housing through the elevating crank cap.

These maintenance jobs are bound to improve the speed and accuracy of any M29 or M29A1 81-MM mortar.

How to **CHARGE** a Dragon

A charged-up Dragon system is a happy one. It also works pretty well.

But, forgetfulness or confusion can wipe that good stuff away, especially with the Launch Effects Trainer (LET) and the monitoring set. Example: Turn to Change 5, Table 3-3, Step 3 of TM 9-6920-480-12-1 (Feb 74). It concerns the monitoring set.

Table 3-3.

TM 9-6920-480-12-1

At the end of 8 hours battery charging time, at temperatures between 54° F, and 110° F, if the meter needle does not indicate in the operate zone when the METER selector switch is in the -VOLTS and +VOLTS positions, notify support maintenance.

16

AH'M
POOPED!

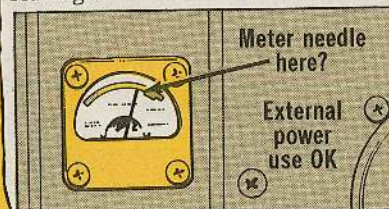
When you read the check in the "Reference for Action" column, next to Step 3, you might think it means that you wait for 8 hours after doing Step 3 before you go on to Step 4. Not so. Step 4 immediately follows Step 3.

Fact is, you do Steps 3 and 4 after 8 hours of charging to determine whether the meter needle is in the operate zone. All clear?

External Power

When you use external power on the monitoring set, its nickel cadmium batteries still must be charged. You didn't read it wrong. Your meter should show batteries at least in the upper two-thirds of the yellow band before using external power for training.

Otherwise, when the set's batteries are weak, you'll get wrong or faulty readings.



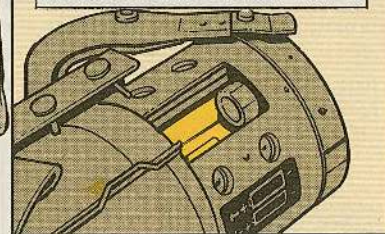
DON'T WORRY, OL' BUDDY--
I'M JUST TH' GUY TO GET
YOU BELCHIN' FIRE AGAIN!



Dry-Cell Batteries

Dry-cell batteries do a good job in powering your LET. But, past, present and future (almost certainly), they can mess up your LET with corrosion. **TAKE DRY CELLS OUT AFTER USE.**

Remove batteries before turn-in



You've heard that one before, right? So how come the batteries get left in the LET?

At the least they corrode the battery tube. At the most they ruin an expensive piece of equipment. Batteries won't stop corroding, so somebody's memory has to improve. After use, take 'em out. Think on it.

17

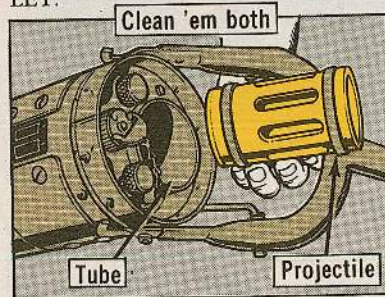


Clean Pressure Tube

Another area on the LET which units forget is the pressure tube. The tube and its dummy projectile should be cleaned after firing. Otherwise, residue from the M64 NATO cartridge oil (which you shouldn't use) or



whatever can jam up the dummy projectile. In that case, you lose the effect of the missile leaving the tube...an important function of the LET.



How to clean the tube and projectile is spelled out in Table 3-1, pages 3-13 and 3-14 of your -12-1 TM.

Slow It Down

When a driver pushes his \$100,000 race car beyond its endurance and it blows up, what does he gain? Wasted money and a pile of junk.

When a soldier attempts a speed record by smashing an expensive tracker in the tracker support, what does he gain when he damages the support or the tracker? He's got a missile he can't fire. If he had to launch, he'd be in a lot worse shape than the race driver.

When you install the tracker in the support, you can be fast and careful, both. Line it up...and follow the installation word on page 2-12 of your TM. The tracker may take a little pushing to slide it home, but it'll work when it gets there.



Trackers and supports are damaged during installation. That's a fact: Cut the speed and the ramming and cut out the damage.



TOW Counterbalance



Dear Editor,

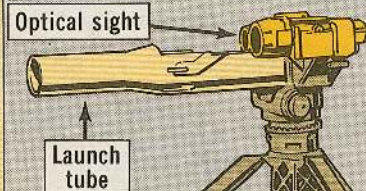
Correct adjustment of the counterbalance of the TOW system launcher elevation mechanism is vital to the accuracy of the missile.

If balance is off, expensive missiles are wasted and targets are missed. DSU makes an annual inspection and adjustment, but there's nothing in the PMCS of TM 9-1425-470-12 which allows the crew to check adjustment during the year.

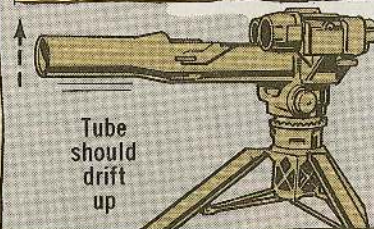
We've beat the problem with a swift, easy check which may be helpful to TOW crews elsewhere.

HERE GOES...

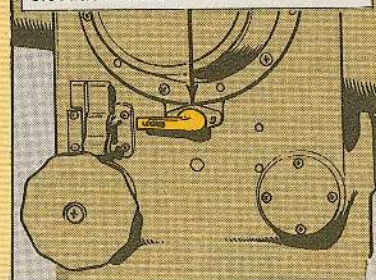
1. Install the optical sight and launch tube.



2. Do not install the missile simulation round (MSR).



3. Release the traversing unit elevation lock.



The launch tube end should drift slowly upwards if the counterbalance is OK. If it doesn't drift upwards, contact your DSU.

If the missile is fired from an out-of-balance launch tube, it can be wasted.

*SFC H.J. Mojeski
Fort Hood, TX*

(Ed Note—Thanks for passing the word along. Sounds like it can assure accuracy and save a lot of bucks worth of missiles.)

GROUND MOBILITY

Fire Off That SF 368—

New Gages Better



SHOWS THE POWER OF YOUR EIR's!



Who says EIR's don't pay off? You're getting improved instrument panel gages—oil pressure, temperature and fuel level—because a lot of people hit the headshed with SF 368's, reporting the short life of gages on their equipment.

They didn't put thru just one EIR and then sit back waiting for a rainbow. They've been battling out an SF 368 every time a bum gage shows up. It's been a flood!

Take a close look at that new gage made by Faria Corp. If it's got a red date stamp—B007, for instance—on the side of the plastic case, you've got the improved gage. These include oil pressure gages that come under NSN

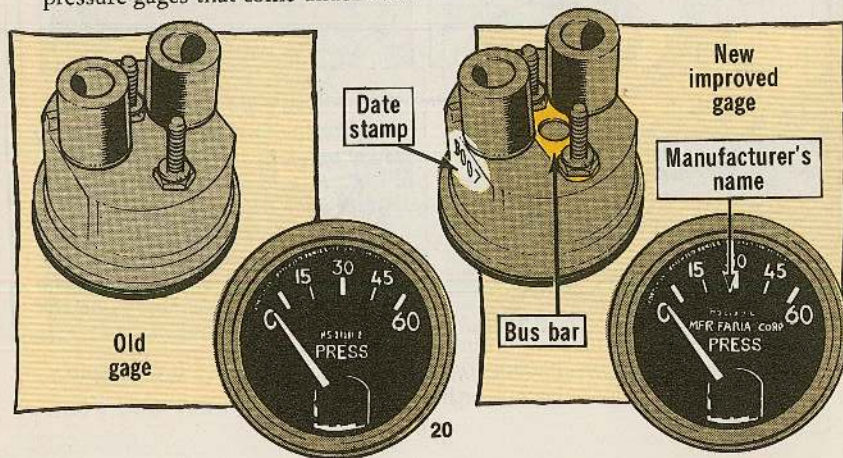
6620-00-938-8212, NSN 6620-00-115-9042 and NSN 6620-00-056-9584.

Also temperature gage, NSN 6685-00-936-2138.

And fuel level gage, NSN 6680-00-933-3600.

You can tell a new gage, too, by the bus bar connecting the 2 mounting studs on the back. And the Faria name appears right under the MS number on the face. (Gages from other manufacturers have not been reported as troublesome.)

Got a good one? Then you've got proof—right there in your hand—that your EIR's do pay off!



M887 1¼-ton...

Hourmeter Danger!

An exploding hourmeter!

That's what you get when you use Meter, running time, NSN 6645-01-037-9170, in your truck-mounted contact maintenance shop.

That meter's for a 12-volt system. It can blow up—and hurt you.

You need one for a 115-volt system. Ignore that NSN in your TM 9-4940-421-24P (May 78) and use NSN 6645-00-831-6826 for a 120-volt hourmeter.



M876 Telephone Maintenance Truck...

Brake Sensors Censored

YOU'RE NOT A REAR AXLE SENSOR!



NOPE, I'M FRONT JUST LIKE YOU!

Your TM 9-2320-269-20P (Apr 78) doesn't list enough sensors for your truck's anti-skid braking system. The sensors listed are for the front axle only...and they won't interchange from side to side.

There is one sensor for the rear axles. It'll fit any dual wheel.

HERE'S TH' RIGHT POOP FOR Item 1 in Fig 46...



Front Axle,
Left side

Front Axle,
right side

Intermediate rear
and rear-rear axle

NSN 2530-01-050-4120

NSN 2530-01-050-6069

FSCM 31007
PN 456997C91

Muffler Clamp

NSN's

Here's how to get the right clamps for the muffler of your M880/890-series trucks.

NSN 5340-00-358-5711 is for a 2½-in clamp that fits the inlet side of the M880 models.

NSN 5340-00-304-7393 gets you the 2¼-in clamp for the outlet side of the M880's and for both ends of the muffler on the M890's.

GOT YOUR INLET AND YOUR OUTLET CLAMPS FOR YOU, OLD FRIEND!

WONDERFUL! NOW, DON'T GET 'EM MIXED UP!



M876 Load Class

The M876 telephone maintenance truck has been classified as a 2½-ton vehicle with a payload of 8,000 pounds, minus the operator and crew. The load classification for bridge crossing is 16. Make a note in your FM 5-36.

2½-TON, EH?

YUP--PAYLOAD OF 8,000 LBS!

WITH THAT CREW... I SHOULD BE A 5-TON!



M172A1 Semitrailer Valve

AHA-- HERE'S THE NSN RIGHT HERE ON PAGE B-62 OF THE TM!

WRONG INFO! CHECK THIS POOP!



You won't get the relay-emergency valve for your M172A1 25-ton semitrailer's airbrake system if you use that NSN on page B-62, TM 9-2330-211-14 (Oct 69). Instead, order under NSN 2530-00-118-8589. This goes for Item 31, Figure B-18, in your TM.

Save Your Flaps

When you turn in a tire, save the flap. Your replacement tire will likely be a retread and you don't get new flaps with retreads.

Check the old flap for cracks, folds, tears and dirt like it says in para 2-14 of TM 9-2610-200-20 (Feb 77). If it checks OK, use it again.

IF IT'S SHOT, MAYBE YOU'LL FIND THE ONE YOU NEED ON THIS LIST...



TIRE SIZE	FLAP NSN 2640-00-
6.00 X 9	535-7509
6.50 X 10	472-8645
6.50 X 16	
7.00 X 16	696-0466
7.50 X 16	
7.00 X 10	799-0577
7.00 X 20	
7.50 X 20	451-8088
8.25 X 20	
7.50 X 15	895-5767
7.50 X 10	
9.00 X 10	861-3484
7.50 X 18	
8.25 X 18	797-0510
9.00 X 16	208-7541
9.00 X 20	147-5160
9.00 X 24	983-3827
10.00 X 20	
11.00 X 20	
12.00 X 20	158-5617
10.00 X 15	
11.00 X 15	421-9689
10.00 X 24	
11.00 X 24	138-8290
12.00 X 24	
13.00 X 24	
14.00 X 24	147-5082
16.00 X 16	01-017-4522
16.00 X 24	806-0488

M915 Tires & Tubes

Tires for the M915-series trucks come in 2 sizes.

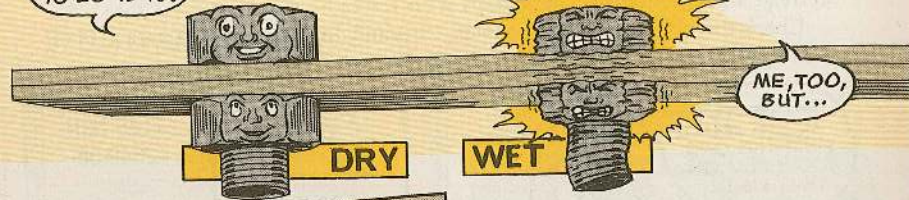
The M915 truck tractor uses 10x20 tires, NSN 2610-00-060-9960. NSN 2610-00-260-7345 gets the tube.

The M916 thru M920 trucks use 11x24 tires, NSN 2610-00-294-9483. NSN 2610-00-051-9578 gets the tube.



'Wet' or 'Dry' Torque?

I'M TORQUED
TO 20 lb-ft!



Dear Half-Mast,
What's meant by "Dry" and "Wet"
for standard torque values?
SP4 C. A. C.

Dear Specialist C. A. C.,
"Wet" torque values cover those cases in which the bolt threads have been lubed with oil—as specified in some TM's. This cuts down on the run-up friction between the nut and bolt. So the "wet" torque value is less than the "dry" torque value (no oil) for

the same size and grade of bolt. If a torque table does not give both "wet" and "dry" torque values, you can assume that the torque values listed are "dry". Wipe oiled bolts dry when you use a "dry" torque value.

Half-Mast

Goat Circuit Breaker

TM 9-2320-242-20P, Fig 39 lists wrong NSN's for Items 7 and 8. To get the 25-amp circuit breaker, Item 7, use NSN 5925-00-954-9289. NSN 5925-00-026-4767 will get you the 15-amp circuit breaker, Item 8.

Convoy "L" Markings

You need Ch 1 (Feb 73) to TM 55-312 to get the full story on those L-shaped symbols for the rear of your vehicles traveling in convoys in CONUS. If your vehicle doesn't have a clear, flat area—like a tailgate—for the symbols, the TM tells you to use plywood or sheet metal you attach to the rear of the vehicle.

Fuel Line Inspection...

Look, Sniff, 'n' Touch—Only

Too much muscle makes for fuel line leaks where you had none to begin with.

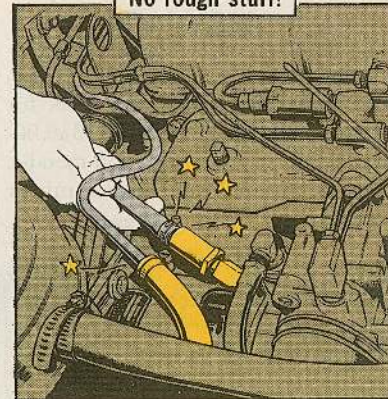
Lay off the rough stuff when you're going over your engine fuel system looking for leaks. Grabbing, twisting, pulling and pushing on a fuel line connection will make a leaker out of a perfectly good hookup.

Sniff for the odor of fuel.

Look close at all connections to spot wetness.

Run your finger around connections, where you can't see to check for wetness. Dry? Then leave 'em alone!

No rough stuff!



LOOSE
U-BOLTS,
HUH?

Front Spring U-bolt Torque

I'LL TAKE
CARE O' THAT!

GREAT!
BUT, ER...

... MAKE SURE
YOU TORQUE 'EM
TO 190-230 lb-ft !

Are you finding loose front spring U-bolts on your 2½-ton truck? Torque 'em to 190-230 lb-ft, just like for the rear spring U-bolts—para 2-151f(4), TM 9-2320-209-20-1 (Aug 78).

NO SWEAT,
BUDDY!

Water Tanker Pipe

I'LL ORDER
A NEW FLEX
EXHAUST PIPE
FOR YOU!

HOLD ONE--
TM'S WRONG!

NSN's listed for Item 15, Fig 44 in TM 9-2320-209-20P (Oct 76) are wrong. To get the flex exhaust pipe for the M50 tanker, use NSN 2540-00-040-2150. NSN 2990-00-004-4273 will get you the right part for the M50A1 and M50A2 models.

5-Ton NSN Fix

TM 9-2320-211-20P (May 73) lists on Page 2-172 the wrong NSN for Item 6, Fig 200. Use NSN 5330-00-483-2408 to get the non-metallic washer for the 5-ton truck's mirror brace rod.

M911: Filter NSN

Use NSN 2520-01-051-6687 to get the transmission internal oil filter kit. The oil pan gasket's included. You need the filter for the scheduled maintenance in Note 3 of LO 9-2320-270-12 (Oct 77). NSN 2940-00-580-6283 gets the external filter.

5-Ton Transfer Pump

Parts manuals for the TM-211-series 5-tonners do not list the tank-to-tank fuel transfer pump. Get it with NSN 2910-00-930-9367.

Bridge Truck

You can now get the rear fender splash shield for your M821 5-ton bridge transport truck without ordering the entire splash shield assembly. Use NSN 2510-00-378-9973 to get PN 8902-14-3, Item 5, Fig 18-18, TM 9-2320-260-20P (Nov 72). The "XA" SMR code is being corrected to PBOZZ.

Water Trailer

You won't get the 1/4-in plastic drain plug for your M107-series water tank trailer if you use NSN 4730-00-525-7160, page C-58, TM 9-2330-213-14 (Aug 72). Instead, order the plug with NSN 4730-00-883-2620.

Transfer Breather

The transfer breather has to be serviced—cleaned—quarterly. This is the same as for the transmission breather. Write it in at Task No. 48 in Table 3-5 on page 3-9 of TM 9-2320-270-20 (Nov 77).

Engine Oil

LO 9-2320-270-12 (Oct 77) tells you to use OE/HDO 40 oil in your M911 C-HET's engine at temperatures above 32°F. But you can use OE/HDO 30 if you can't get the 40 oil. That's the word in TB 43-0001-39-4 (Jan 80).

To Be Seen and Heard

Need a backup warning horn or truck bed marker lights for your IHC 20-ton dump truck? Order them by using these part numbers and FSCM:

For safety's sake, make sure your truck is seen and heard.

Item	PN	FSCM
Backup Warning Horn	T-1002	80420
Marker Lights, Truck Bed (red)	10512R	13548
Marker Lights, Truck Bed (amber)	10512Y	13548

PUBS



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, TM's, TB's, etc.; DA Pam 310-6, SC's and SM's; and DA Pam (C) 310-9, COMSEC pubs.



TECHNICAL MANUALS

C 5, TM 5-2420-213-12 May Tractor, wh'd, ind, Cat Model 830MB
C 3, TM 5-3810-289-20P Apr Crane-shovel, crawler mtd: 12½-ton, ¾-cu-yd; Bucyrus-Erie Mod 22BM
TM 5-3810-293-14 & P-3 Jun Crane, 25-ton (CCE) MT-250
TM 5-3810-300-10 May Crane, 25-ton (CCE) TM 5-300-5
TM 5-4310-363-14 May Compressor, 15-CFM, 175 PSI, Bauer Mod KAB-545-15
TM 5-4610-218-20P May Water purif unit 1500-GPH Mod EMC-1500S
TM 9-1425-473-24P Apr TOW/Cobra
TM 9-1425-473-L Apr TOW/Cobra
TM 9-2350-303-20-1 Apr M109A2 Howitzer
TM 9-4935-472-14-1 Jan TOW/Dragon
TM 11-5820-287-20P-9 Jun Antenna filter op OA-1395/GRC
C 5, TM 11-5820-348-15 May Antenna RC-292

TM 11-5855-238-10 Apr AN/PVS-5 and -5A night vision goggles
TM 11-5865-223-24 May AN/GLO-3B countermeasures set
TM 11-6130-413-12 Mar AN/USM-432 battery charger-analyzer
C 3, TM 55-1520-210-23P-2 May UH-1 (mod)
TM 55-1520-234-23P-2 Apr AH-1S (mod)
TM 55-1520-236-23-2 May AH-1S (Prod), AH-1S (ECAS), AH-1S (modernized Cobra)
TM 55-1520-236-23-3 May AH-1S (Prod), AH-1S (ECAS), AH-1S (modernized Cobra)
C 1, TM 55-1520-236-23P-1 Apr AH-1S (Prod) (ECAS) (MC)
C 7, TM 55-1520-237-23-4 May UH-60A
TM 55-1730-266-13 Apr Oxygen servicing unit
TM 55-1905-219-14-3 Jul LCU 1667-1670
TM 55-1905-220-14-1 Jul LCU 1671-1679
TM 55-1905-220-14-2 Jul LCU 1671-1679
C 1, TM 55-4920-328-13-1 May Modular engine test system (Mod LTCT10485-02)

MISCELLANEOUS

Interim C 1, AR 710-2 May 80 Supply LO 9-2350-258-12 Mar M48A5 tank PAM 310-3 Apr (liche) Index of training pubs
PAM 310-4 Apr (liche) Index tech pubs
PAM 310-7 Feb MWO index
PAM 310-99 Apr (liche) Obsolete pubs
SC 3433-99-CL-N03 Oct (liche) Torch outfit, cut and weld
C 1, SC 4910-95-CL-A73 Apr No. 1 Supplemental shop set
C 1, SC 4920-99-CL-A92 Nov Tool set, AVUM, Set No. 2
C 1, SC 4920-99-CL-A92-HR Apr AVIM Set No. 2
SC 5180-90-CL-N28 Feb Intrenching outfit, inf
SC 5180-90-CL-N36 Nov (liche) Tool kit, gen mech trans motor pool
SC 5420-97-CL-E29 Mar (liche) Bridge conversion set
SC 6230-90-CL-N01 Mar (liche) Light set, portable cmd post
TB 43-0143 Apr Spark gap tubes

AUDIO-VISUAL STUFF

Available at battalion or post Learning Center

TV tapes
TVT 6-107 TACFIRE
TVT 9-51 Safety, Main-

tenance shop
TEC LESSONS
030-051-6332-7 M4T6 float
bridge/raft

030-051-5334-F M4T6 float
bridge/raft
043-441-6026-F Nickel-cad
battery maint (Vulcan)
560-113-9522-A AN/FGC-26
TT
621-101-8110-A 50-GPM fuel
sys

TOW Battery Fastener

The NSN's listed for TOW system battery fasteners on Page 25 in PS 331 are really screwed up! TM 9-1425-470-24P has the right NSN's on Page 2-93.

Nickel-Cadmium Pubs

If you don't have the manuals you need to work on your nickel-cadmium batteries, chances are your pinpoint account needs a look. See your pubs clerk and go over Section IV, DA Form 12-36A. That form puts your unit on automatic distribution for manuals to be published.

If you need the current books, tell your clerk to drag out a DA Form 4569, look at the instructions in DA Pam 310-10-2 (Sep 79) and

order what you need from these:

TM 11-6140-203-15-1 (Dec 69) Aircraft and Nonaircraft Nickel-Cadmium Batteries (General).
TM 11-6140-203-14-2 (Mar 78) Aircraft Nickel-Cadmium Batteries.

TM 11-6140-203-14-3 (Nov 79) and TM 11-6140-203-20P-3 (Oct 77) Nonaircraft Nickel-Cadmium Batteries.

HELLO, SOLDIER...

WHO AM I, YOU ASK...

WELL, IF YOU DON'T KNOW...

IT'S FOR SURE TIME YOU LEARNED!



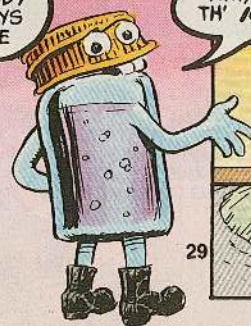
JOE'S
DOPE

Appointment
With
AOAP

Army Oil Analysis Program

THERE'S JUST NOBODY BUT NOBODY WHO PLAYS A MORE IMPORTANT ROLE IN ARMY EQUIPMENT PM THAN ME!

WHY, JUST THE OTHER DAY DOWN AT TH' 103rd ARMOR MOTOR POOL...



SGT. SNYDER WAS A BIT UNHAPPY...

THIS POWER PACK *STILL* DOESN'T SOUND RIGHT!

LEMME SEE IT'S DD 34, SPECIALIST BUMBLE...

? S-SURE, SARGE...

LOOK...

ONE MORE OIL SAMPLE AN' I'LL HAVE A FULL BOX...

... WHY SEND TWELVE PACKAGES TO TH' LAB WHEN YOU CAN WAIT A BIT AND SEND ONE!?

ARRGHHH!

HMMM! THIS SHOWS OIL SAMPLES WERE TAKEN ON SCHEDULE ... BUT WHAT WERE THE TEST RESULTS?...

WHERE'S TH' LATEST DD 2026 FROM THE AOAP LAB, BUMBLE?

:GULP: ... 'FRAID YOU'D ASK...

I KNOW MURDER AIN'T LEGAL BUT...

... LEMME AT HIM, CONNIE!

SIMMER DOWN, SARGE...

SPEC BUMBLE MEANS WELL... HE ONLY NEEDS MORE INFO ON AOAP!

EVERYBODY KNOWS THAT PARTICIPATION IN AOAP IS REQUIRED FOR ALL EQUIPMENT LISTED IN TB 43-0210 AND TB 43-0106 BUT...

T-THERE :GULP: ISN'T ONE, SARGE...

WHA--?

'COURSE THERE'S NOT!...

THAT'S WHY YOUR AOAP PEOPLE ASKED ME TO STOP BY...

CONNIE RODD!

THEY'VE RECEIVED NO OIL SAMPLES FROM THIS UNIT IN MONTHS...

SOME UNITS AREN'T FOLLOWING THE RIGHT PROCEDURES FOR HAVING THEIR OIL ANALYZED...

... SUCH AS TAKING SAMPLES WHEN THEY'RE DUE, FILLING OUT THE NECESSARY FORMS AND SENDING THEM TO THE AOAP LABS IMMEDIATELY!

... AOAP LABS CAN'T ANALYZE SAMPLES THEY DON'T GET!

?!!! BUMBLE, WHAT'S TH' MEANING O' THIS?

DIDN'T I TELL YOU THE IMPORTANCE OF THE ARMY OIL ANALYSIS PROGRAM... AND HOW IT'S USED TO DETECT THE CONDITION OF EQUIPMENT BY SCIENTIFICALLY ANALYZING OIL SAMPLES?

YUP!

IT'S IMPORTANT THAT YOUR UNIT KEEP RECORDS OF ALL AOAP ACTIONS, INCLUDING WHEN THE SAMPLES WERE TAKEN, THE RESULTS AND WHEN THE NEXT ONES ARE DUE!

...AND SO CONNIE LAID IT ON 'EM!

BY NOW YOU'VE FIGURED OUT WHO I AM, HUH?

OIL SAMPLE

DIDN'T I ALSO SAY IT HELPS PREVENT EQUIPMENT LOSS BY DETECTING COMPONENT FAILURES IN EARLY STAGES... WHILE THERE'S STILL TIME TO DO SOMETHING ABOUT IT?

THAT YOU DID, SARGE -- BUT I'VE ALSO COME UP WITH AN IDEA TO SAVE UNCLE'S BUCKS...



Dope Sheet



TB 43-0210

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

NONAERONAUTICAL EQUIPMENT

ARMY OIL ANALYSIS PROGRAM (AOAP)

Headquarters, Department of the Army, Washington, DC

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SET 'EM
STRAIGHT,
BUDDY!

If your equipment is in these TB's
There's a big PM tool you can seize!
Fire off an oil sample
(Make sure that it's ample)
You'll get back expert analyses!

***TB 43-0106**

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

AERONAUTICAL EQUIPMENT

ARMY OIL ANALYSIS PROGRAM (AOAP)

Headquarters, Department of the Army, Washington, DC

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1-10-90

1-10-91

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1-10-93

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1-10-98

1-10-99

1-10-100

THANKS,
PAL!

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.



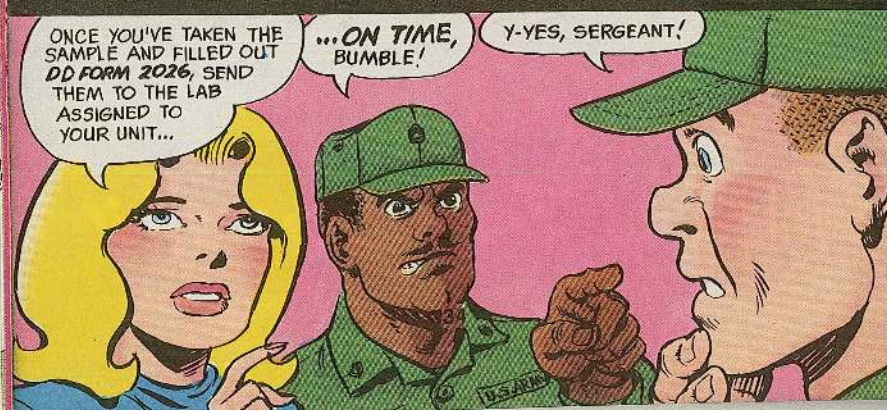
You use DD Form 2026 to get your equipment's oil analyzed.

OIL ANALYSIS REQUEST		REPORTING CODE
TO: OIL ANALYSIS LABORATORY		1-3
FROM: MAJOR COMMAND		4-10
OPERATING ACTIVITY (UNLESS OTHERWISE SPECIFIED)		11-14
EQUIPMENT MODEL/APPLICATION		15-20
EQUIPMENT SERIAL NUMBER		21-24
END ITEM MODEL/HULL NUMBER		25-28
DATE SAMPLE TAKEN (DAY, MO, YR)	LOCAL TIME SAMPLE TAKEN	29-32
HOURS/DAYS SINCE OVERHAUL		33-36
REASON FOR SAMPLE: ☐ LAB ☐ REQUEST ☐ OTHER (SPECIFY)		37-38
OIL ANALYSIS SINCE LAST SAMPLE (DAY, MO, YR)		39-42
ATTENTION YARD		43-46
QUANTITY PART		47-50
HOW FOUND: ☐ LAB REQUEST ☐ AIR OR GROUND CROW		51-54
HOW TAKEN: ☐ TUBE ☐ VALVE ☐ OTHER (SPECIFY)		55-58
REMARKS		59-62
HOW LABORATORY USE ONLY		
SAMPLE RESPONSE TIME		63-66
PEAKS: AD 41-43 AL 44-46 CR 47-49 CU 50-52 MD 53-55		67-70
LAB RECOMMENDATION		71-74
SAMPLE NO.	SIGNATURE	DATE
DD FORM 2026	PREVIOUS EDITIONS WILL BE VOID	

There are two ways you can get the samples—by tube or by valve. Make sure you follow the dope on sampling in Section IV of TB 43-0210 and TB 43-0106.



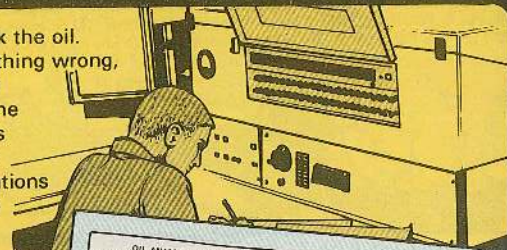
Keep the sample bottles and tubes clean. Dirt and crud ruin oil samples. Also use a new tube to take each sample.



OK--WHEN YOUR SAMPLES AND FORMS REACH THE AOAP TECHS...



The lab will check the oil. If they find something wrong, like a lot of metal wear, they'll phone your installation's monitor and give him recommendations for correcting the problem.



The lab will also send the monitor a written request to investigate and report the cause of the problem and a copy of DA Form 3254-R Oil Analysis Recommendation and Feedback.



Repair the equipment based on the lab's recommendations. If your equipment has to be overhauled by support, send them a copy of DA Form 2407 and DA Form 3254-R.



After the equipment is repaired, complete DA Form 3254-R and send it back to the AOAP lab along with a copy of DA Form 2407.



This lets the lab know what repairs you made on the equipment...



OIL ANALYSIS RECOMMENDATION AND FEEDBACK		RECOMMENDATION CONTROL SYMBOL
TO: MAJOR COMMAND		1. OIL ANALYSIS RECOMMENDATION SYMBOL
FROM: OIL ANALYSIS LABORATORY		2. OIL ANALYSIS RECOMMENDATION SYMBOL
Commander		3. OIL ANALYSIS RECOMMENDATION SYMBOL
1st Bn, 1st Tng Bde		4. OIL ANALYSIS RECOMMENDATION SYMBOL
ATTN: Bn Maintenance Officer		5. OIL ANALYSIS RECOMMENDATION SYMBOL
Ft Knox, KY 40121		6. OIL ANALYSIS RECOMMENDATION SYMBOL
Installation Maintenance Officer (AFB-PM)		7. OIL ANALYSIS RECOMMENDATION SYMBOL
Petroleum Analysis Laboratory		8. OIL ANALYSIS RECOMMENDATION SYMBOL
Building 7164		9. OIL ANALYSIS RECOMMENDATION SYMBOL
Ft Campbell, KY 42223		10. OIL ANALYSIS RECOMMENDATION SYMBOL
Do not operate. Oil sample contains high concentration of iron, copper and lead wear metals. Suggest bushings and thrust washers as well as the bands be checked.		
James E. Liskal, Physical Science Technician		
24 Dec 79		
Worn servo bands, defective high range and steering clutch, and worn thrust washers replaced. Returned to service		
3 Dec 79		
Don Houston, Ft. Knox, KY		
4 Dec 79		
See #2 above.		
DA FORM 3254-R		

DON'T FORGET TO SCHEDULE YOUR AOAP SAMPLES ON DD FORM 314!



TM 38-750 DOESN'T SPECIFY WHICH SYMBOL TO USE TO SCHEDULE YOUR SAMPLES, SO UNTIL IT DOES YOU CAN USE "T" FOR TEST UNLESS YOU'RE USING IT FOR ANOTHER SERVICE!



IN THAT CASE, ADOPT A SYMBOL OR SYMBOLS NOT LISTED IN para 3-3c (3) OF TM 38-750!

SEE YOUR INSTALLATIONS MONITOR WHENEVER YOU NEED HELP WITH YOUR AOAP AND KEEP THESE POINTS IN MIND...



- Keep only the current lab-sent DD Form 2026 on file behind DD Form 314.
- If you received a DA 3254-R, be sure maintenance actions were entered and the form returned to the lab.
- Have your NCOIC recheck all entries.
- When in doubt, check TB 43-0210 and TB 43-0106.

GEE, CONNIE... I REEL-IZE NOW THAT I SHOULD SENT THESE SAMPLES TO TH' AOAP LAB SOON AS I TOOK 'EM... BUT...



...SO THEY GET THERE SOONEST... COULD YOU TAKE 'EM BACK WITH YOU...



...BUT WAIT 'TIL I GET ONE MORE SAMPLE... TO FILL MY BOX...



HOW D'YA LIKE THAT?

SOME PEOPLE CAN NEVER LEARN...



HUH?

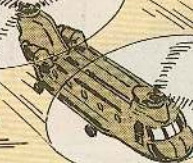
HERE Y'ARE, CONNIE... ONE FULL BOX!!



AIR MOBILITY

Hand Pressure Only!

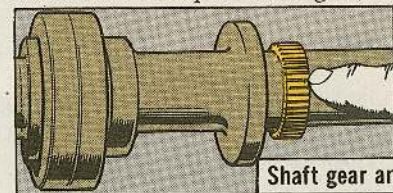
!!*!@!! OVERSPEED!!
GOTTA SHUT 'ER DOWN, DICK!



When you pull a hot-end inspection on your T-55 engine, "easy does it" when you install the power output shaft.

Sure, it's standard operating procedure to use force on the impact puller to remove the shaft.

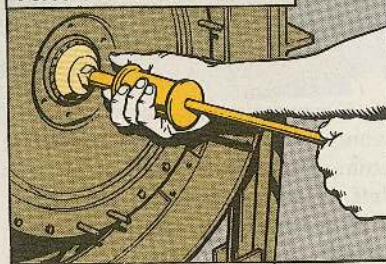
contact the overspeed drive gear, as



Shaft gear and...

indicated in Fig 9-8B of TM 55-2840-234-24/2 (Aug 71).

Force OK on shaft removal

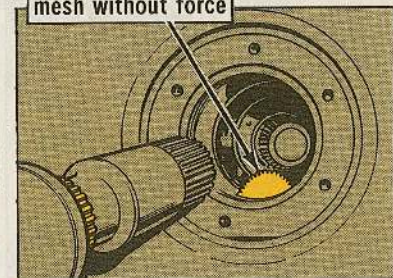


You also use the puller to aline and install the shaft. But never use force when the output shaft gear teeth don't mesh with the overspeed drive gear teeth. A lot of cracked or bent drive gears have been thrown away at engine overhaul because the shaft was hammered into position.

'Course, if a damaged drive gear were to let go in flight, you would have an overspeed and the engine would have to be shut down.

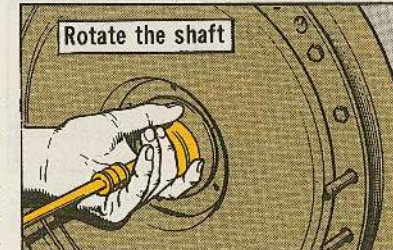
The idea is to guide the shaft into place. Make sure that the torque-meter sleeve or shoulder also does not

...drive gear must mesh without force



When the overspeed drive gear doesn't mesh with the shaft, rotate the shaft for an easy engagement.

Rotate the shaft





The
Black Hawk
Engine...

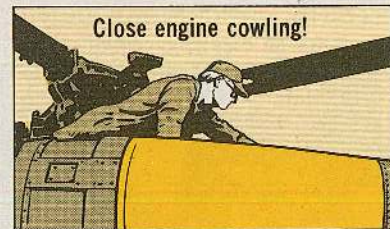
Dryclean *ONLY!*



One way to ruin the crease in your dress greens is to toss 'em in the washer—wool can't stand up to hot water!

Any water—hot or cold—in the electrical connectors of your T-700 engine is bad news, tho. Electrical problems have been cropping up because of moisture in those babies.

So when you wash your aircraft close the engine platform—for real!



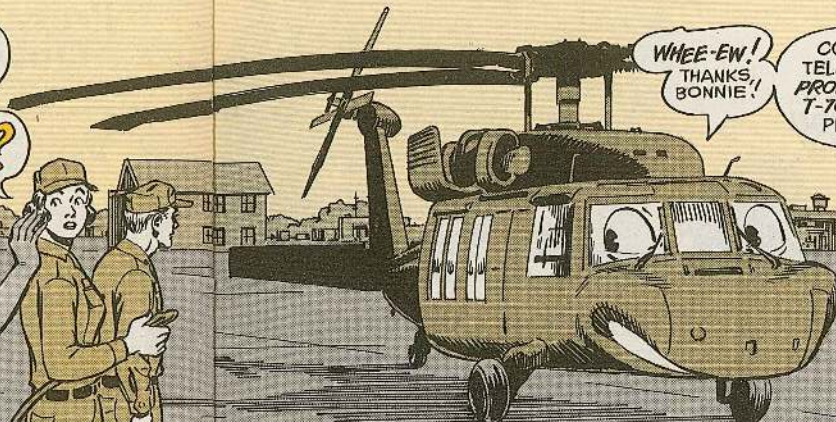
When the engine is oily or dirty, make with some hand action and dryclean the external parts.

NO, NO!
HOLD IT! DON'T EVEN
GO NEAR THAT BIRD WITH
WATER WHEN AN ENGINE
PLATFORM IS DOWN!



Never use a waterbased cleaning compound on the engine. Never use compressed air or steam to clean dirt off the engine, either.

Instead, use Drycleaning Solvent P-D-680, Type II. NSN 6850-00-274-5421 will get you a 5-gal pail. When using the solvent, be sure you follow the safety precautions outlined in Para 2-15 of TM 55-1500-333-24 (Oct 74) on cleaning aircraft.



COULD YOU
TELL 'EM TO
PROPERLY CLEAN MY
T-700 ENGINES,
PUH-LEEZ?

Latch onto a wiping cloth or sponge to apply the solvent and let it remain a few minutes to loosen the dirt. Remember, however, plastic and rubber parts can be damaged by the solvent if you walk away without removing it.



Remove the solvent with clean Wiping Cloths, DDD-R-30. NSN 7920-00-205-1711 will get you a 50-lb bale. Dry the area as much as possible with the cloth. Blowers and low-pressure air—10-15 PSI—can be used to speed evaporation of the solvent, especially in the engine bay.



Clean Bay Carefully

CAREFUL!
NO EXTERIOR CLEANING
COMPOUND ON THAT ENGINE!

GOTCHA,
BONNIE!

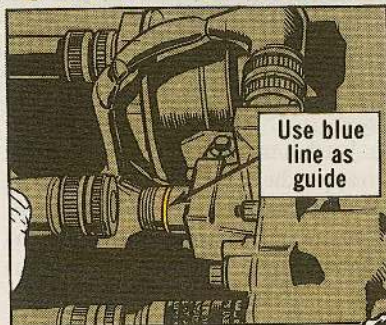
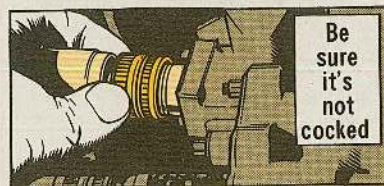
If the engine bay needs scrubbing, keep the cleaning compound used on the exterior of your aircraft off the engine.

Critical areas that must not be sprayed are the firewall, top of the engine—front and rear of the accessory gear box—and the bottom of the engine at the electrical control unit.

About Those

The new-type knurled nut electrical connectors used on the engine and airframe save a lot of time when you're removing parts from your Black Hawk.

But the plug and receptacle keys must line up right or moisture will get in there and short out the works. Be sure the connection is not cocked at an angle when you mate the parts.



ONCE THE
PLUG AND RECEPTACLE
ARE ALIGNED WITH A
GENTLE PUSH--

NO FORCE,
PLEASE--

IT'S EASY TO START
THE PIN AND THREAD
ENGAGEMENT.

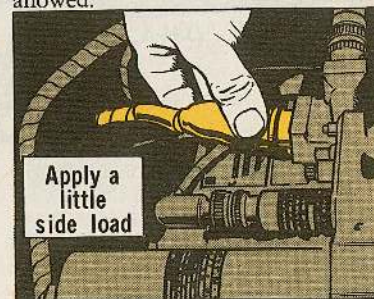
Connectors

Complete the hook-up by alternately pushing the plug and rotating the coupling nut clockwise until the plug is firmly seated. Use hand pressure only. Never use tools on the coupling nut.



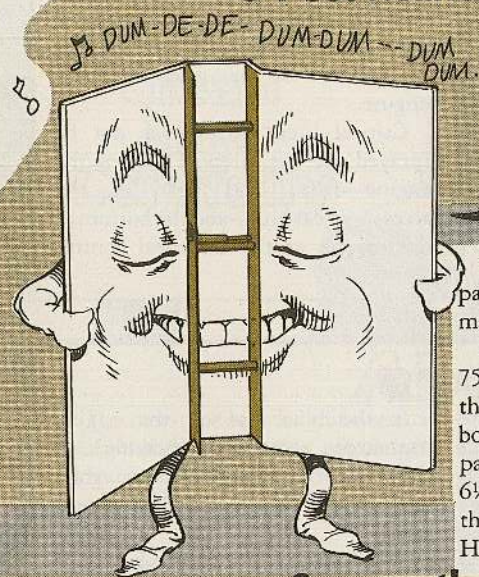
Is the blue line on the engine connector receptacle showing? It shouldn't be if you have a good connection. The blue line is only a guide.

To make sure the connector is seated right, place a hand on the back shell of the plug and apply a side load. If you have motion between the plug and the receptacle, handtighten the nut further because no movement is allowed.



Never back off on the coupling nut to make future removals easier. The connector is designed for tight performance.

3-Post Manual Binder



If you're having trouble keeping pages in some of your aircraft manuals, do this:

Latch onto Loose Leaf Binder, NSN 7510-00-889-3520. It has 3 posts, with the center one acting as a lock to hold both halves of the binder—and the pages—together. It also expands to 6½ inches and will hold, for example, the thick TM 55-1520-210-23 on a Huey.

Secure the Belts



When you're a passenger in the OH-58A/C helicopter, always refasten the seat belt before you leave the aircraft.

The honeycomb paneling takes a costly beating if you close the door with the belt hanging out.

Prevent damage...
...secure belts



Aviation Messages



If your unit has not received these messages, check with your next higher headquarters.

UH-1-80-08 Maint advisory—Illum in special mission MWO 55-1510-210-30-57 mod for night hawk/night vision goggles (UH-1D/H) 051910Z May 80

UH-1-80-09 C 1 to SOF Msg (urgent with limit)—Inspect attach hardware of lever assys 061510Z May 80

AH-1-80-11 Maint advisory—Mod of AH-1S (ECAS) inverter control wiring 011411Z May 80

AH-1-80-12 Maint advisory—Retirement sched/firing transfer assy P/N 814562-2 011400Z May 80

AH-1-80-13 C 1 to SOF (urgent with limit)—Inspect attach hardware of lever assys 061510Z May 80

AH-1-80-15 Change in emergency start proced for AH-1S (Prod), AH-1S (ECAS), AH-1S (MC), AH-1S (G-MC) 141505Z May 80

CH-47-80-05 Safety-of-flight—CH-47 A, B&C cargo hook beam tracks 091630Z May 80

CH-47-80-06 Safety-of-flight—Inspect CH-47 ABC rod end bearings 232130Z May 80

CH-47-80-07 Safety-of-flight Amend Msg CH-47-80-06 301905Z May 80

GEN-80-09 Maint advisory—Clarif AR 95-16 weighing new Army aircraft 011425Z May 80

GEN-80-10 Maint info—All Army aircraft lap seat belt integrity 061505Z May 80

GEN-80-11 Safety of Personnel & Eqpt—Inspect intervals for survival kits, survival vests 121919Z May 80

GEN-80-12 Safety of flight—Helicopter slings 231355Z May 80

GEN-80-13 Maint advisory—Paint, aircraft, crew, interior black, NSN 8010-01-042-9438 231915Z May 80

GEN-80-14 Maint advisory—Helicopters op in a volcanic ash environment 271505Z May 80

GEN-80-15 Safety of Personnel & Eqpt—Inspect intervals for survival kits, vests 301810Z May 80

GEN-80-16 Maint advisory—Retrograde of engines, dynamic comps 301830Z May 80

OV-1-80-07 Safety of flight—Inspect all OV-1B/C/D, RV-1D-series fuel systems for contamin 152145Z May 80

OV-1-80-08 C to SOF inspect—OV-1B/C/D, RV-1D series fuel systems for contamin 231505Z May 80

OH-58-80-06 Maint advisory—OH-58 A/C passenger seat cushions 091910Z May 80

OH-58-80-07 Maint advisory—OH-58A/C fuel filter pressure switch inspect 141515Z May 80

UH-60A-80-22 Safety of flight—Inspect UH-60A Black Hawk main rotor head assy 131750Z May 80

UH-60A-80-23 Maint info—UH-60A Black Hawk main rotor spindle assy 131505Z May 80

UH-60A-80-24 Safety of flight—Inspect UH-60A Black Hawk drag beam/axle assy 162045Z May 80

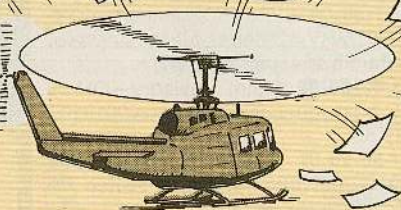
UH-60A-80-25 Maint advisory—UH-60A Black Hawk engine overtemp removal limits 201905Z May 80

UH-60A-80-26 Maint advisory—UH-60A Black Hawk main rotor spindle inner race 201910Z May 80



Enough, Now!

You Huey types no longer have to send in an Equipment Improvement Recommendation (SF 368) on Pressure Switch, NSN 5930-00-646-3495. The head hangar (TSARCOM) has the word on that faulty hydraulic flight control part. When tech supply runs out, use: Pressure Switch, NSN 5930-00-939-7584, with Packings, NSN 5330-00-805-2966 and NSN 5330-00-804-5695, and Bushing, NSN 5365-00-804-7915.



Regulator Adjustment

It's a fact that if you have carbon-pile voltage regulators in your aircraft, they are checked weekly or every 25 flight-hours—whichever comes first. For the new, solid-state regulator, the check is every 120 days or 100 flight-hours. The word's in Para 3-4c of TM 11-6140-203-14-2 (Mar 78) on aircraft nickel-cadmium batteries.

Vented Caps Out

Some bogus 42-degree gear box filler caps for UH-1 and AH-1 choppers are in supply. Four vent holes were mistakenly drilled in the center section of these caps. You can't use a vented cap or you'll get oil leakage. So give Cap, NSN 1615-00-690-7602, the once-over in tech supply.

Keep Tabs on Blades

Any time you change a new, non-metallic main rotor blade on your AH-1S, make sure both blades are the same type. Blade, NSN 1615-01-034-6906, has a trim tab while Blade, NSN 1615-01-087-1611, doesn't. Never mix 'em because they won't fly (track) right.

Still 12 Months

Continue to inventory your aircraft every 12 months, in addition to the other times you pull the on-board equipment check spelled out in Para C-8, Appendix C of TM 55-1520-210-23 (Feb 79). That's the word on Page 1-91 of the maintenance pub.

Save the Slider!

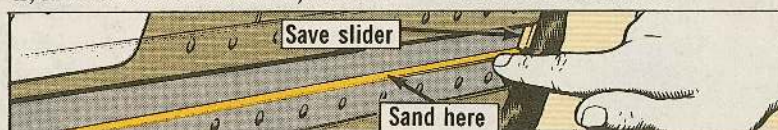


If support just spruced up your Huey with an infrared paint job, focus on the cargo door track—right away! That paint is as rough as a cob. Fact is, it'll wear out the slider in just a few

trips down the rail.

So, just take some sandpaper and go down the top edge of the bottom rail...each side of your aircraft.

That'll save the slider.



"Man, That's Rough!"

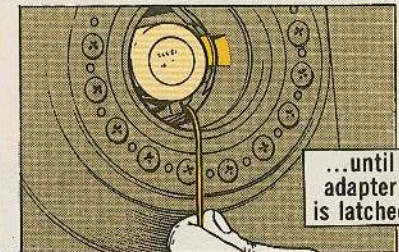
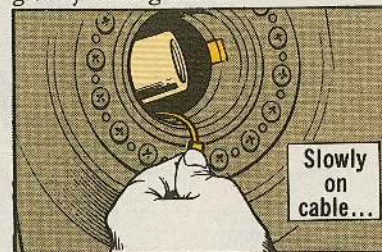


"Here's mud in your eye" may be the word at happy hour—but skip any sudden action when you fill up your Huey.

Never flip the locking cover closed or you'll splash JP-4 right in your eyes...smarts somethin' awful and means a trip to the dispensary.

Talkin' about latching the closed circuit refueling receiver after a gravity fueling chore.

S-l-o-w-l-y does it when pulling the adapter cable—until the adapter is closed.



COMMO

Without PM,
Portable FM's
Are...

Going, GONE

You don't have to be a magician to keep your AN/PRC-77 or -25 radio set on the air. But it'll take more than a modern-day Mandrake to bring 'em back after weeks of bad maintenance.



NO USE, CONNIE!

...EVEN MY MAGIC WON'T BRING HIM BACK!

RIGHT, OH!! HIS OPERATOR SHOULD O' DONE PM HOCUS-POCUS WHEN IT WAS CALLED FOR...

?

HERE ARE A FEW TIPS THAT WORK BETTER THAN MAGIC!



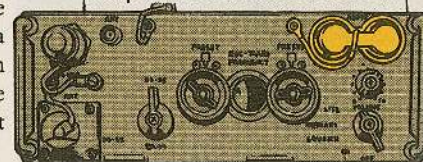
Receiver/Transmitters

Keep all knobs and switches snug. When you use 'em, stop turning when you feel the knob stop. If you go further, something inside or outside will break.

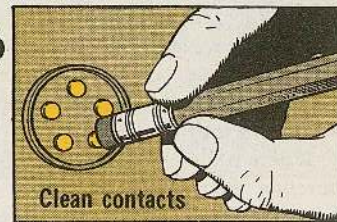
The RF antenna connector needs special care. It doesn't take much force to twist it too far around. That'll do a number on inside wiring. So when hooking up the antenna cable or the protective cap, go easy. Turn it 'til it stops, then stop!

Keep audio connectors covered when not in use. The rubber "dumbbells" keep moisture out and contacts clean. 'Course, if you're using only one connector, cover the other one.

Keep audio connectors covered



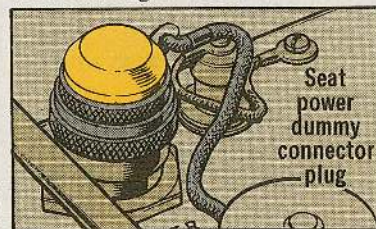
If contacts are tarnished, shine 'em up with a soft rubber eraser.



Clean contacts

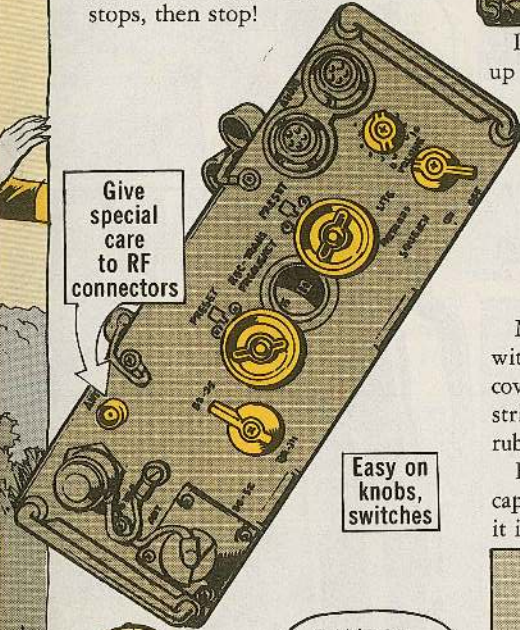
Missing dumbbells can be replaced with NSN 5935-00-973-1732. Gotta cover connectors right now? Use a strip of waterproof tape. Order new rubber covers ASAP, tho.

Finally, be sure the power connector cap's in place. The radio won't operate if it's missing or loose.



Seat power dummy connector plug

Give special care to RF connectors



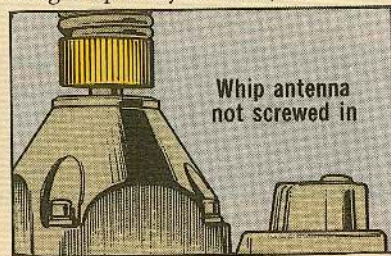
Easy on knobs, switches

IF KNOBS OR CONTROLS ARE LOOSE, SNUG 'EM UP!
IF THEY BIND, HAVE SUPPORT CHECK 'EM OUT!

Antennas

Good panel PM also calls for a couple of antenna tips.

Be sure your whip antenna is screwed snugly onto the mount. If it's not, it can snap or crack when vibrations set the antenna wobbling. Snug it up every so often, too.



Having trouble snugging it? Maybe you need a replacement. But, first try adding a sliver of rubber band or pencil eraser on the threads before you screw 'em into the receptacle.

When you're putting the AT-892 antenna away, fold it toward the



concave, or scooped, side. Bending it the other way can break it, or leave it too limp to stand tall.



THERE -- THIS NEW CORD MAKES YOUR AT-271 GOOD AS NEW!

THANKS, MR. MAGICIAN!

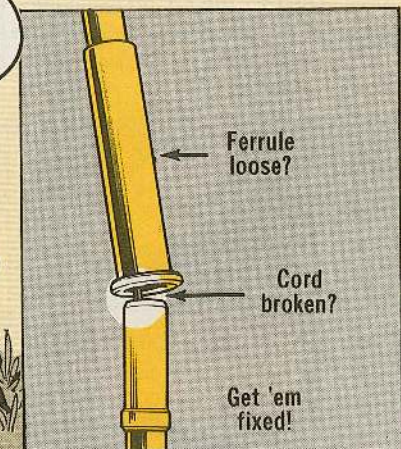
Y' KNOW... THERE'S SOMETHING FAMILIAR ABOUT YOUR PM TECHNIQUE!



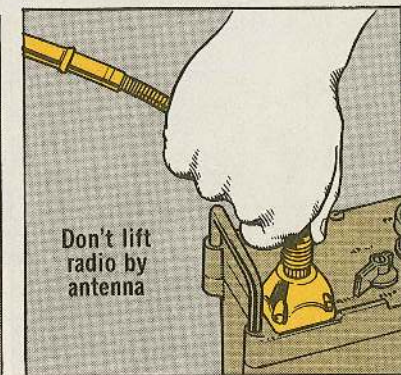
A broken AT-271 isn't worth much, either. You can fix a couple items. Missing a cap? Get one with NSN 5999-00-259-5009.



The cord that holds it up kaput? Replace it with NSN 4020-00-281-8439. Use Appendix A, CTA 50-970 (Jun 79) as your authority for this 11-ft nylon cord. Loose ferrules are repaired by your support.



A final warning: Don't pick up or carry the radio by the antenna. Either it or the RT will suffer.



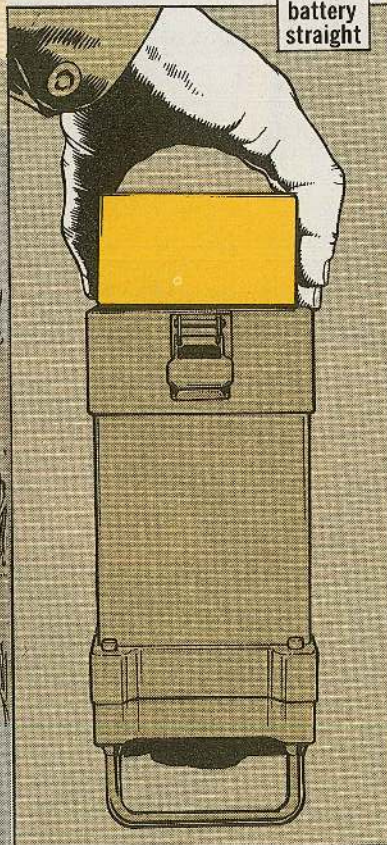
BA-4386

Battery and battery box PM start with putting the BA-4386 into service.

Sloppy work can break the battery, the connector or give you a bad fit which lets hydrogen gas build up in the box.

Step one is to take out the old power pack. Then set the RT on its handles. Holding the battery parallel with the case, mate the BA's receptacle with the box's connector.

Keep battery straight

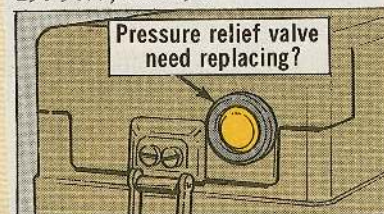


Then, lower the battery into place. When you feel it fit flush, seat it firmly. Replace the cover and continue the march.

Battery

Talking about gas—is your pressure relief gear in place and working?

Maybe the pressure relief valve for the CY-2562 case needs replacing. You can order one with NSN 4820-00-296-9677, RIC S9C.



If by bad luck your radio hasn't been modified yet by MWO 11-5800-211-30-1 (Sep 72), get your DS shop to do it. They can still get the mod kit (the MWO's been rescinded) with NSN 5820-00-110-0714. That brings enough stuff for 5 radios.

The valve lets dangerous hydrogen gas out before it builds up in the case. If it does build up, it can cause a minor blast, injuring you or your set.

CORROSION WILL KILL YOUR COMMO IF YOU DON'T!

Give It Air!

If you use a plastic bag or other covering to protect your AN/PRC-77 radio set from rain, cut a hole in the bag at the vent in the battery case. You've gotta have an opening to prevent battery gas buildup in the bag.



Finally, be sure you take the battery out when the set won't be used for a day or so, and before it goes vehicle-mounted.

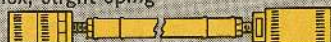


Trying to match the NSN's and components of the bearing lubricator kit, and the -9496 mechanical puller kit in your organizational maintenance shop sets—SC 4910-95-CL-A72 and -A74—is a puzzle.

FRET
NO MORE!...

Lubricator Kit NSN 4930-00-357-6301

ADAPTER, GREASE GUN COUPLING:
flex, strght cplng



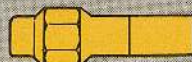
NSN 4930-00-288-1511 1

ADAPTER, GREASE GUN COUPLING:
strght, hyd type fttng; push type
(zerk) w/lckng sleeve; rigid



NSN 4930-00-204-2550 1

COUPLING, GREASE GUN: hyd,
strght; fmle w/o check valve; 1/8-in
27NPT



NSN 4930-00-377-6820 1

ELBOW, PIPE: 45°



NSN 4730-00-278-4216 25

ELBOW, PIPE: 90°



NSN 4730-00-278-4814 25

FITTING, LUBRICATION: hyd



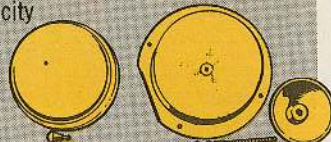
NSN 4730-00-050-4208 100

GUN, FLUID, DIRECT DELIVERY: 11-
oz; w/flex spout; 1 rigid, bent spout



NSN 4930-00-222-2680 2

LUBRICANT, PACKER BEARING: 5/8-in
ID; 6-in OD; 2-in thick bearing
capacity



NSN 4930-00-704-1852 1

LUBRICATING GUN, HAND: 14-oz
cap; w/rigid bent ext 6 1/2-in lg



NSN 4930-00-253-2478 2

LUBRICATION FITTING TOOL:
7/16-in



NSN 5120-00-246-2311 1

OILER, HAND, PUMP: 1/4-pt nom sz;
w/o handle



NSN 4930-00-274-5713 2

PADLOCK: pin tumbler; br, w/o
chain; 2 keys



NSN 5340-00-582-2741 1

TOOL BOX, PORTABLE: S, tote tray



NSN 5140-00-315-2758 1

Hocus Po cus Pictures

YEAH!
NO MORE
MYSTERY!

HERE'RE THE ITEMS
AND THEIR NUMBERS...

WOW!

LEMME
SEE!

HEY--
GREAT!

Puller Kit, Mechanical NSN 5120-00-313-9496

CROSSARM PULLER: 6-in lg



NSN 5120-00-313-9502 1

JAWS, INSIDE: 3 13/64-in lg



NSN 5120-00-313-9504 3

JAWS, INSIDE: 4 9/16-in lg



NSN 5120-00-313-9505 3

JAWS, OUTSIDE: 4 19/32-in lg



NSN 5120-00-313-9506 3

JAWS, OUTSIDE: 7 23/32-in lg



NSN 5120-00-313-9507 3

JAWS, SINGLE: 2 15/16-in lg



NSN 5120-00-313-9508 1

JAWS, SINGLE: 4 43/64-in lg



NSN 5120-00-340-2010 3

JAWS, PULLER: 3 1/2-in lg



NSN 5120-00-357-6278 3

NUT, KNURLED: 2 1/2-in dia



NSN 5120-00-313-9499 1

PINS:



NSN 5120-00-313-9501 3

SLIDE HAMMER: 4-in lg



NSN 5120-00-313-9498 1

ROD: T-handle; 24-in lg



NSN 5120-00-313-9497 1

YOKE: 2 1/2-in dia

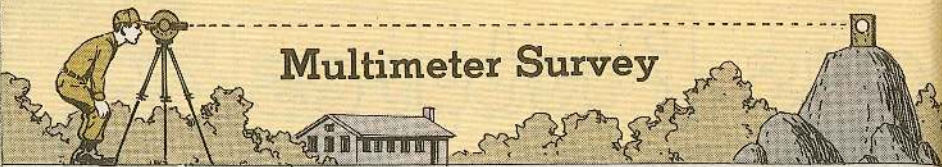


NSN 5120-00-313-9500 1

YOKE: 2 1/2-in w



NSN 5120-00-357-9244 1



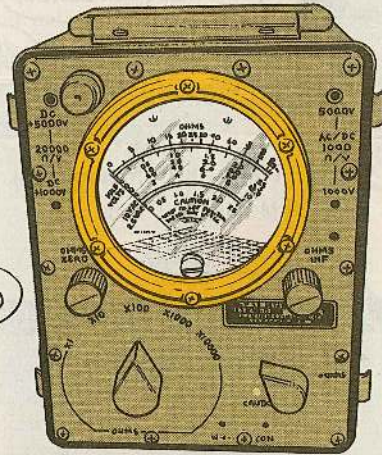
Multimeter Survey

The AN/USM-223 multimeter is now being issued to replace your TS-352 multimeter.

The new set doesn't check semiconductor devices like transistors or diodes, tho. If you need to check semiconductor junctions, and are not OK'd any other test gear but the -223 to do it, let the headshd know.

SEND YOUR UNIT IDENTIFICATION CODE (UIC) TO...

Commander
USACERCOM
ATTN: DRSEL-LE-ST
Ft Monmouth, NJ 07703



Storage Cabinets

KNEW WE SHOULD A GOT A STEEL CABINET FOR FLAMMABLES!

Dear Half-Mast,
DA Pamphlet 385-3 (May 76) Protective Clothing and Equipment says we should have steel cabinets to hold small quantities of paints, solvents and other flammable stuff for our shop. The pamphlet does not list an NSN for the cabinets or source of supply.

Do you have a good NSN?
MSG A. M.

Dear Sergeant A.M.,
Try NSN 7125-01-035-3023 or NSN 7125-01-044-2590. GSA is the supply source.
They're not on the AMDF. In the pub block of your request form cite your outfit's safety SOP and DA Pam 385-3.

On the reverse side of the request tell your support unit to get the cabinets under GSA Contract Schedule 71, Part 25, Special Item 305-1.
Your authority is Para 2-18j (1) AR 710-2 and your CO's signature. Estimated cost: \$500.

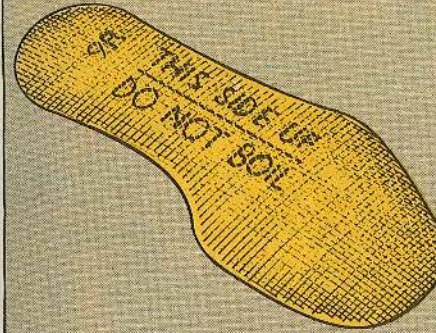
Half-Mast

Combat Boot Insoles



AAAAHH!!
FEELS GOOD--
BUT INSOLES
WOULD BE
BETTER!

Dear Half-Mast,
How can we get replacement inserts for our DMS leather combat boots?
1LT A.O.



Dear Lieutenant A.O.,

Those plastic ventilating-type insoles are not stocked or issued thru normal supply channels.

Overseas outfits use RIC S9T and send their exception data type supply requisitions—DD Form 1348-6—to DPSC, ATTN: DPSC-TPS, 2800 South 20th St., Philadelphia, PA 19101.

CONUS commands go the local purchase route to Haverhill Industries, P.O. Box 179, Ward Hill, MA 10830.

The cost is about 22 cents a pair.

Half-Mast

Visible Index File Pockets

SAYS HE NEEDS INVISIBLE FILE POCKETS, SARGE!

Use NSN 7460-00-369-5087 to get 100 visible index file pockets with 1/4-in exposures to hold your 5-in x 8-in forms. NSN 7460-00-621-1840 gets 100 pockets with 1/2-in exposures.



Take a look at the auxiliary generator mounted on your M577-series command post carriers right now! You could be riding herd on a safety hazard!

Here're some tips that'll prevent tank damage. Focus in on the PMCS check list for your generator set—Table 3-1, TM 9-6115-202-14 (Dec 68).

WHEN YOU GET TO SEQUENCE NO. 5, DO THESE...

FACE IT! A LITTLE SCHEDULED GENERATOR PM MAY SAVE A LIFE--YOURS!!

A 1-in long machine drive key—NSN 5315-00-990-2630—holds the belt pulley on the engine shaft. Another key holds the belt pulley on the starter-generator's drive shaft.

Vibrations can cause either of these keys to work out of its groove...and come to rest against the side of the fuel tank. Continuous rubbing of metal against metal wears a crack or hole in the fuel tank. Fuel splashing on a hot generator set could mean an explosion and fire!!!

Loose drive key here causes problems

• Be sure both drive keys, bushings, pulleys and belts are tight and lined up right.

• Be sure you have approximately 1/2-in clearance between each pulley assembly and the fuel tank.

1/2-inch clearance from fuel tank

Drive key flush

• Make sure the drive key does not stick out beyond the end of either shaft.

• After every 100 hours of continuous operation—or monthly if the set is not run on a regular schedule—check the keys, bushings, pulleys and belts for tightness and right alignment.

• After 600 hours—or 6 months—of operation, eyeball these items for looseness/alignment. If none of 'em are loose or out of line, make a note to check 'em again just every 6 months.

• Any looseness of the belts gets the adjustment treatment like it says in Para 4-13, TM 9-6115-202-14. If the drive keys, bushings or pulleys are loose or out of line, get help from your DSU.

Save Those Starters

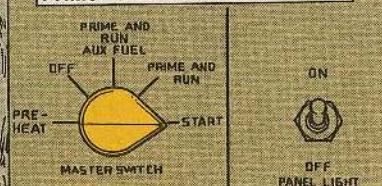
WHY DON'T YOU START?
YOU'RE IN YOUR PRIME!

OH, YEAH?

THAT'S MY PROBLEM! YOU NEVER PRIME ME!

Burned-out starters stop 5- and 10-KW diesel generators sets c-o-l-d! Be sure you prime the set before you turn the master switch knob to START.

Prime—then turn knob to start



Follow the poop in Para 1-10a (2) (b)—Operating Instruction Plate—in TM 5-6115-584-12 (Jul 77) and TM 5-6115-585-12 (Jul 77) for the start-up story. Read it...and save yourself a bundle of bucks and downtime.

For sure, you never start or run the sets at idle speed. Start 'em up—and shut 'em down—at 1,800 RPM. After the sets are running, use the speed control to get the exact generator frequency output you need.

M-532 Trailer-Mounted...

Laundry Unit CLEAN-UP

Laundry units normally operate under electrical surge overload condition at the initial start of the extraction cycle. This is why it's important to keep the unit—with its 10-KW generator set—in tick-tock-like-a-clock condition.

F'RINSTANCE...

WHERE'S
TH' DETERGENT
VENDOR?

AN' HOW
MUCH DOES
A LOAD
COST?

?

HAH! YOU GOT
CUSTOMERS,
JONES!

WELL--AT LEAST
THEY'RE WILLING TO
PAY FOR TH' SERVICE!

?

You have to keep the generator's engine putting out 3600 RPM when the extract cycle starts. Keep your Mil Std engine TM 5-2805-259-14 (May 69) handy when checking the generator set. Double up on PM if you see, feel or hear any change in the engine during operation.

Careful

Never run the engine at idle. If you do, the frequency drops below 60 cycles and the exciter field voltage increases. This causes the voltage regulator to operate at maximum output. It overloads the power transistor.

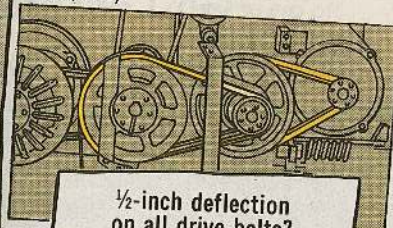
You might have to adjust or replace the carburetor (Fig 3-13) or the governor (para 3-29a, b, c, d) or time the magneto (para 3-31) to keep the RPM steady at 3600.

• Keep the motor base guide rod clean and well lubed. Any binding here stops the washer motor base from moving into the extract position. That motor base has to travel $\frac{1}{4}$ inch during extraction.



Keep guide rod
clean and lubed

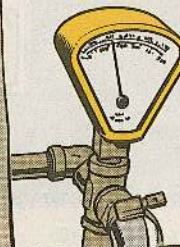
• Keep all washer extractor main drive belts adjusted for $\frac{1}{2}$ -in deflection between pulleys like it says in para 3-12 a,b,c, TM 10-3510-208-12 (Sep 77).



$\frac{1}{2}$ -inch deflection
on all drive belts?

• Never overload your washer. Follow the poop in Table 2-2 of the TM to get the exact and maximum load limit of 60 pounds. 'Course, there's no word that says you can't decrease the washer load to give the generator some overload relief during the extract cycle.

• Keep the right amount of hot water in the washer. Tables 2-3 and 2-4 have the water level and temperature limits. Follow 'em.



Stay
within
temperature
limits

• When you operate the unit manually, follow every step in para 2-3d(1) (b) to the last letter.

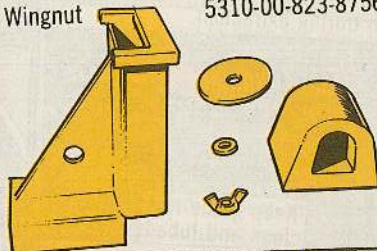
• Finally, whenever possible, use electrical power from sources other than the generator.

New Bogie

New bogie lockout replacement parts for your improved float bridge are now in the supply system. They'll help stop damage to the steel bays during high bank operations.

HERE'RE THE PARTS—
YOU GET TWO
OF EACH—

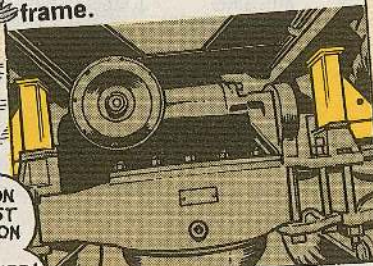
Item	NSN, P/N
Bogie lockout bracket	13219E4284
Washer	13219E4298
Rubber bumper	13219E4299
Lock washer	5310-00-003-4094
Wingnut	5310-00-823-8756



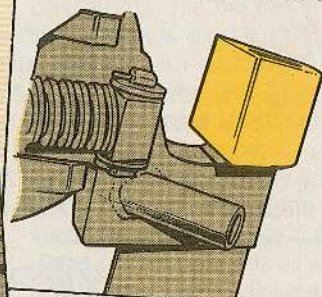
Lockout Parts

1. Place a new bogie lockout bracket on each side of the transporter between the rear spring hanger and the frame.

USE 'EM ON
THE LATEST
PRODUCTION
BRIDGE
TRANSPORTER!



2. Put a rubber bumper—with the long side to the rear—on each aft tie-down lock.

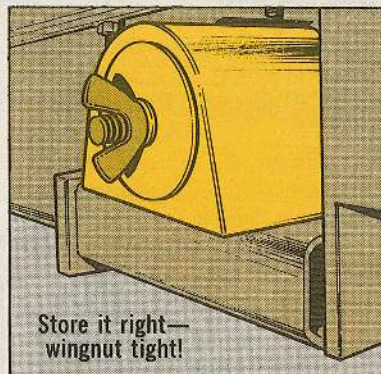


After the lift job, put the bogies back in place—on each side of the transporter frame. Be sure the washer and wingnut are on real tight. Losing the rubber bumper or bogie won't do you any good the next time you do a high bank launch job.

Use RIC B17 and FSCM 97403 to get these new replacement parts.

The headshed OK's using the new bogie lockout brackets in place of the lockout screws per Para 2-8c (4) (m) in TM 5-5420-209-12.

Store it right—
wingnut tight!



Loader-Backhoes...

Go Low and

Y'MEAN THAT
LITTLE PILE O' GRAVEL
FLIPPED HIM OVER?

B'LIEVE
IT!



Slow

ON EITHER
THE **JD 410** OR
THE **SMALL CASE**
LOADER-BACKHOE,
HERE'S SOMETHING
YOU SHOULD KNOW...



When you have to move, keep both buckets—the loading and the digging end—close to the ground. If you can, carry a little load along in the loader bucket.

Otherwise, a little pile of dirt or gravel can roll your 2-ended mud-biter over on its side.

So swing low, sweet chariot—stay right side up!

Missing Instructions

Change 3 to TM 38-750 goofed on the DA Form 2407.

Para 3-9—with its instructions for filling out Column 20a through 20n and Blocks 21 and 22 of the DA Form 2407—was deleted by mistake.

MAKE A
NOTE OF THESE
MISSING
WORDS IN YOUR
TM 38-750 ON
page 3-36.1...

There's a hole in
TM 38-750's instructions
for filling out this part
of the DA Form 2407

DA FORM 2407

• Column 20a. Enter the appropriate action code from Table A-5 in Appendix A.

• Column 20b. Enter a failure code from Tables A-1 or A-2.

• Column 20c. List the service performed and/or the nomenclature of parts, components, assemblies or other items replaced or on which work was done. For aircraft, show the exact PM service. If you're complying with a TB, put the TB number in that block. Do not list common hardware and bulk material items like nuts, bolts, screws, tube patches and paint.

• Column 20d. For aircraft systems, use the subsystem code designator in the CB column, as listed in Table A-10, Appendix A. Use code "00" when the line entry applies to the entire aircraft. For other equipment, leave blank.

• Column 20e. Enter the reference designator—of the parts that need replacing—under "Reference Designator". If the item has no reference designator, write the noun nomenclature. For selected missile items, write in the reference designator for each item being replaced, repaired or adjusted. Routine peaking adjustments need not be recorded. (Use only 1 reference designator and action code per line.)

• Column 20f. For DA-directed sampling of missile items, use the abbreviated name or code of the manufacturer of the item being replaced or repaired. If unknown—or if it has none—write "0". Leave blank for all other uses.

• Column 20g. The number of manhours, in hours and tenths of hours, used for each maintenance action. (Table A-8 of Appendix A tells you how to convert to tenths of hours.)

• Column 20h. Enter the NSN or part number for each component, assembly or part listed in Column 20c, d or e for items with an action code of A, L, R, S, or U in Column 20a.

• Column 20i. Enter an "X" when the part source was from cannibalization. Otherwise, leave blank.

• Column 20j. Enter the number (quantity) of the part you used to repair the item.

• Column 20k. For DA sampling items, enter Julian date at the time of maintenance completion. Leave blank for all other purposes.

• Column 20l. Enter total manhours, adjusted to nearest whole hour.

• Column 20m. Leave blank.

• Column 20n. Leave blank.

• Block 21. If a delay occurred during the time the equipment was in for repair, put a "✓" or an "X" in the appropriate block. Otherwise leave blank.

• Block 22. Put either a ✓ or an X in the space if info has been recorded on an equipment historical record. Otherwise leave blank.

A Pain in the Rear Pocket

*AR 735-11

ARMY REGULATION

No. 735-11

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, 15 October 1978

PROPERTY ACCOUNTABILITY

ACCOUNTING FOR LOST, DAMAGED, AND DESTROYED PROPERTY

Effective 1 January 1979

This comp
guidance
property,
and respon
approval of

CHAPTER 1.

provides
destroyed
untability
except upon

Paragraph	Page
1-1	1-1
1-2	1-1
1-3	1-1
1-4	1-1
1-5	1-2
	1-2
1-7	1-2
1-8	1-5
1-9	1-6
1-10	1-6
1-11	1-6
	2-1
	2-1
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	2-4
	2-4
	2-6
	2-7
	2-7
	2-7

Requisition of forms.

There are pains and then there are pains. But one of the worst pains is one that hits your rear pocket...smack in the middle of your wallet.

And there's a reg that could hit you there hard. AR 735-11 Accounting for Lost, Damaged and Destroyed Property (Oct 78) really cut down on the paperwork hassle and confusion on a Report of Survey.

That reg says if Army equipment or property is damaged or lost—because you were careless or negligent in caring for that gear—you may pay for it in \$\$\$.

Negligence is an act or omission that a reasonable person would not commit under similar circumstances. (That means you won't pay for normal

wear and tear, but your CO's gonna look hard at any unusual damage or loss.)

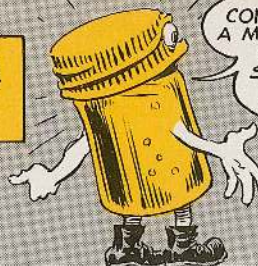
If you do lose or damage your gear through negligence, the bill can run into big bucks. For most equipment, the bill can only go as high as one month's pay.

But for personal equipment—some handtools, flashlights, binoculars and gear you sign for on a DA Form 3645—and individual arms like your rifle—you'll get a bill for the full amount!

So keep a close and careful eye on your equipment and make sure it gets all the care it needs. Explaining why that gear's missing or damaged can give you a real pain in the rear...pocket!

* This regulation supersedes AR 735-11, 1 May 1974, including all changes.

Connie's Mini Minis



CONNIE, I CONTAIN PROOF OF A MAINTENANCE PROBLEM-- BUT HE PUTS OFF SENDING ME TO THE AOAP LAB!



1/4-Ton Heater Hose

You won't get the bulk heater hose you need if you order NSN 4720-00-006-4007, page 289, TM 9-2320-218-20P. That's the hose needed to fabricate Items 5 and 7, Fig 120. The right bulk hose is NSN 4720-00-958-0339. Figure on a long wait when you order; its Acquisition Advice Code on the Army Master Data File is "J".

Volcanic Ash?

If you do any flying in the area where Mt St Helens blew its top, any volcanic ash on your aircraft has to be removed upon landing. You'll find the special cleaning bit in TSARCOM Msg DRSTS-MEA (2) 271505Z May 80.

DD 1348-6 With Carbons

The DD Form 1348-6 Non-NSN Requisition (Manual) now comes with the carbons already included. When you run out of the single DD Forms 1348-6 on hand, your forms shop will order the new pads. You get the new forms—50 to a pad—from the AG Publications Center in Baltimore.

Tent Pin Talk

Save yourself some heartburn and frostbite this winter.

Order 12-in steel tent pins—NSN 8340-00-823-7451—to use instead of the regular 9-in aluminum ones when you have to drive stakes in frozen ground. Use Appendix A, CTA 50-970 as your authority for the steel pins.

Volcanic Ash Hazard

Dust damage is a real threat to equipment operating in certain parts of Washington, Oregon, Idaho and Montana. Ash from the Mount St. Helens eruptions can plug up engine air cleaners in as little as 50 miles of operation. Under extreme dust conditions, clean or replace your air cleaner element frequently. Change engine oil and clean brakes at 50-100 mile intervals. Shorten intervals for chassis lubrication. Wash out the engine compartment as needed. Get you mech to blow dust out of the alternator winding. Head off dust problems by traveling at low speed and keeping a long distance from other vehicles stirring up dust.

Lifting Sling Caution

Powerpack Lifting Sling NSN 4910-00-084-0790 for the M109-series vehicles can let you down and get you hurt. The I-beam in the sling is too lightweight for the job. It bends...and you could drop your load. Use it only in an emergency and be very careful.

The sling you need is NSN 4910-00-295-8074. It has PN 11652649 stamped on it and the main I-beam is 6½ to 7 inches high. Replace your old sling with this new one as soon as possible.

Your command got the word in TARCOM Msg DRSTA-MCC 071600Z Jul 80.

60-KW Breaker Goof

Reverse the word on page 5, PS 332, on I HAWK 60-KW generator shutdown. OPEN the breaker to turn off the generator before you disconnect power cables.

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

Antifreeze OK?

Freeze Protection



Corrosion Protection



Cleanliness



*TB 750-651

MENT OF THE ARMY TECHNICAL BULLETIN

OF ANTIFREEZE SOLUTIONS AND
CLEANING COMPOUNDS IN
ENGINE COOLING SYSTEMS

Headquarters, Department of the Army, Washington, D.C.

REPORTING OF ERRORS

Use this bulletin by recommending improvements using DA Form 2028
Changes to Publications and Blank Forms and mail the form direct
U.S. Army Tank-Automotive Material Readiness Command, ATTN:
Warren, MI 48090. A reply will be furnished direct to you.

... provides instructions to
maintainance.
2. Scope. a. The condition
inhibited.

... contained herein are
in military design
strategic volume
visions of AR 364
ation contained
other published
il.

... numbers and
ed materials;
ed. Inhibited
galvanic. 683a
can. 683a.

ing O.A.-48a, Type Ia (rubber), and when
used will not require addition of corrosion
inhibitor. Use in the Antifreeze solution.

(3) Antifreeze, Arctic Type. 683a. 171-1800;
MIL-A-11755, 5-gal. drum.

(4) Inhibitor, Corrosion, Liquid Cooling System
683a. 722-1907, 6.1-120, 6 oz. can.

(5) Cleaning Compound and Conditioner and In-
hibitor for Engine Cooling Systems. 683a. 508-
7228, MIL-C-10397, Pkg.

(6) Tester, Antifreeze and Battery. 683a. 508-
102-1118.

(7) Test Kit, Reserve Alkalinity. 683a. 508-
102-1118.

(8) Tester, Antifreeze, "Cold Cup" (for Arctic
Type Antifreeze). 683a. 508-12-5217.

3. Requirements. a. Antifreeze inhibited solution,
Paragraph 2b (1) or (2), may be retained in engine
cooling systems for an extended period of four
years from fill date.

(1) Cleanliness and protective quality of the
coolant must be maintained.

... ethylene Glycol, Inhibited.
MIL-A-10157, 1 gal. 683a. 508-181-7929;
683a, 5 gal. 683a. 181-7940, MIL-A-10157, 5-gal.
NOTE:
This single package antifreeze is replaced.

NOTE

This single package antifreeze is replaced.

... TB 750-651, 753 30 1 1975

If so, Don't Drain It!