

Issue 295

PS

June  
1977

# THE PREVENTIVE MAINTENANCE MONTHLY



HIM?

HE MUST BE  
BUCKIN' FER A  
CHAPTER 16,  
CONNIE...

≡HAK≡

... SEZ HE WON'T  
COME DOWN UNTIL  
WE CLEAN UP THE  
AIR IN TH' MOTOR  
PARK...

≡WHEEZE≡

HEY,  
SOLDIER--  
≡KOFF≡KOFF≡  
GOT ROOM  
FOR ONE  
MORE UP  
THERE?

SGT, PUT  
OUT WORD  
THAT THE  
MITAI IS THE  
UNIFORM  
TODAY!  
≡COFF≡

??

YESSIR!  
≡HAK≡

MURPHY  
ANDERSON

Where There's Smoke . . .  
"THERE'S SOMETHING  
WRONG"

Pages 29-36





# KNOCKING *at* YOUR DOOR



The Army's Noncommissioned Officer Logistics Program (NCOLP) is an express elevator to the top for the right people.

There're hundreds of jobs open in the logistics field for maintenance and supply types in 37 MOS like 31W, 35H, 45K, 45L, 55B-Z, 63B, 63H, 63Z, 71N, 76J and 76D-Z.

The jobs are waiting and there're few **NCOLP**-trained people to fill them.

Sure, the jobs are demanding. Those slots operate at command HQ, major support units, depots, arsenals and commodity commands—even HQDA. But, a special course at Fort Lee gears you for the new jobs, and the reward\$\$\$ are great!

## SUCCESS

### 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 Maintenance Management Center, 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: Or call: AUTOVON 745-3503.

MSG Half-Mast  
PS Magazine  
Lexington, KY  
40511

Use of funds for printing of this publication has been approved by Headquarters, Department of the Army, 23 December 1975 in accordance with AR 310-1.  
DISTRIBUTION: In accordance with requirements submitted on DA Form 12-5.

If you're a really sharp E6 or higher, look into the **NCOLP**. Your CO can nominate you for the program.

After reading Chap 13 of AR 614-200, get answers to any questions by calling the **NCOLP HOTLINE—AUTOVON 221-8027**. Ask for the Professional Development NCO for **NCOLP**.

\*\*\*\*\*  
Next Month In PS  
ON MANAGING MAINTENANCE  
★  
YOUR HYDRAULIC MULE  
★  
MILVAN CONTAINER PM  
\*\*\*\*\*



## EXHAUST

THAT AIN'T  
LAUGHING GAS,  
OL' BUDDY!

LEMME  
OUTTA  
HERE!

≡KOFF≡

≡KOFF≡



A "gasser" was something funny—a joke—a few years back.

But there's never been anything funny about a leaky exhaust system in your M151A2 or other TM-218-series ¼-ton vehicle. A leaky exhaust is a killer! That's no joke in your TM 9-2320-218-10 (Sep 71), first page:



**WARNING**  
CARBON MONOXIDE POISONING CAN BE DEADLY



You've gotta watch your ¼-tonner closer than most other trucks. It's lower and lighter, so it suffers more when you go scramblin' through the

HMMMM! I'D SAY  
A ¼-TON TRUCK PASSED  
THIS WAY RECENTLY!

GOSH,  
HE'S GOOD--

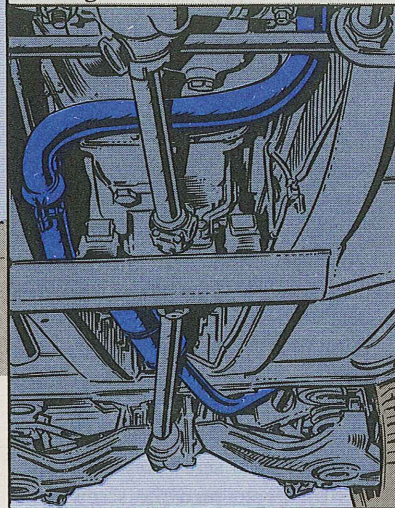
JUST LIKE  
ONE O' THEM  
OL' WESTERN  
TRACKERS!



brush and over rocks and stumps. Exhaust parts get loosened up—and even torn up. So watch for leaks where the pipes hook together.

## LEAK IS NO GASSER!

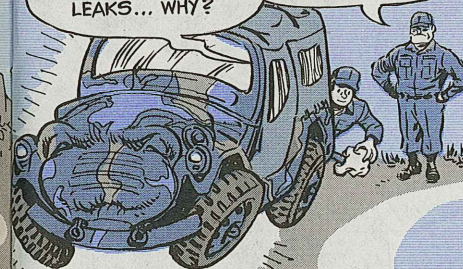
Use your eyes and your ears. Check the pipe joints for black smudges. Or for puffing sounds when the engine's running.



Never stop up the end of the tail pipe to check for exhaust leaks. You'll put a pressure strain on those pipe hookups—and make exhaust leaks where you didn't have any before.

I'M FIXIN' TO  
CHECK FOR EXHAUST  
LEAKS... WHY?

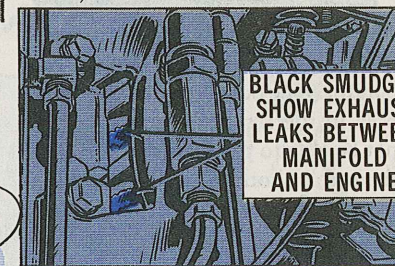
IF THERE WEREN'T ANY  
BEFORE, THERE SURE  
WILL BE NOW!!



Watch that exhaust manifold close, too. It's a lightweight job—not much more than a hunk of exhaust pipe with holes in the side that match up with the engine's exhaust ports. If the manifold's just a little out of shape, it won't fit tight against the engine—and then you've got an exhaust leak.

Fixing this leak calls for some special—and careful—work. If you've still got a copy of TB 43-0001-39-2 (Apr 74), you'll find all of the poop starting on page 18. This TB died in April 1975, but the same info shows up in TB 43-0001-39-4 (Jan 77) and will be in TM 9-2320-218-20.

The sealant specified for manifold-to-cylinder head mounting comes under NSN 9150-00-935-4018 (14-oz tube) and NSN 9150-00-754-2595 (1-lb can).



**BLACK SMUDGES  
SHOW EXHAUST  
LEAKS BETWEEN  
MANIFOLD  
AND ENGINE**

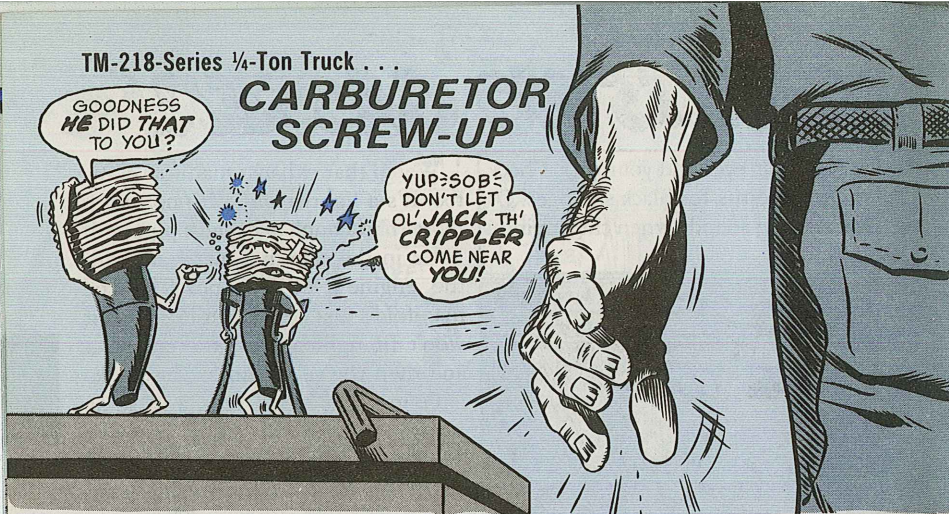
Important! Stick to the torque specs when you're installing exhaust system parts—para 2-40 and paras 2-56 thru 2-60 in your -20 TM.

OVER-  
TIGHTENING  
IS THE START  
OF A LOT OF  
EXHAUST  
LEAKS!





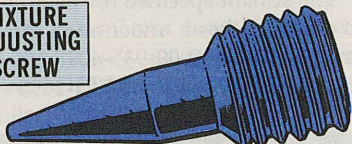
## CARBURETOR SCREW-UP



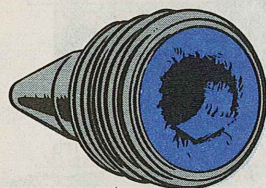
Sixty bucks for a tiny carburetor screw?

No, but that's about what a mechanic can blow when he tears up

### MIXTURE ADJUSTING SCREW



the mixture adjusting screw in the 1/4-ton truck's emission control carburetor. If he buggers up that little hex hole in the screw, even support may not be able to get the screw out. Then the carb's shot!



THIS SCREW FINALLY CAME OUT, BUT IT'S SHOT—HEX HOLE ROUNDED OUT!

Take it easy when you set out to make that carb adjustment spelled out in TM 9-2320-218-20 (Sep 71), Ch 4, page 10, para 2-45.1.

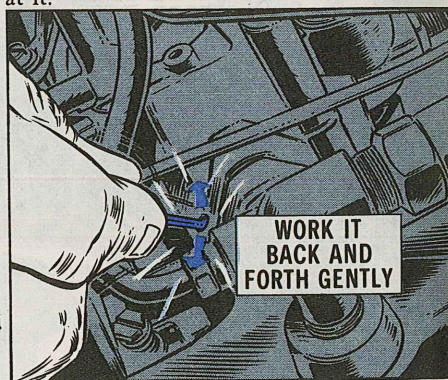
You may find that the mixture adjusting screw is stuck and is hard to budge.

Cool it! Trying to out-muscle the screw can leave you with a ruined carburetor.

First, make sure you've got the right size socket head screw key—5/64-in.

Gently try to turn the screw. If it won't go in the direction you want, try—gently—to turn it in the other direction. Work it back and forth easy-like until you've got it free.

But, if you can't work it loose the easy way, let your Support take a crack at it.

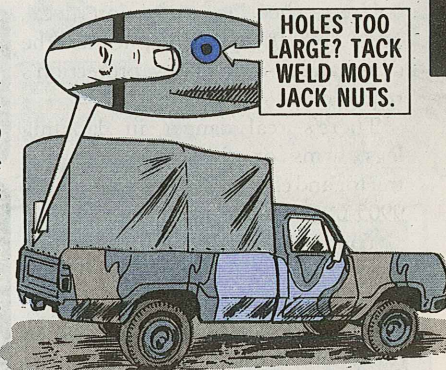


## M880 TAILGATE RAILS



Some M880-series 1 1/4-ton trucks may have a problem with loose forward and tailgate metal rails in the cargo box cover kit. Installation instructions in para 3-2a(4) and 3-2a(10) of Ch 1 to TM 9-2320-266-20 say to drill 1/2-in holes to install the rails, but 1/2 inch is too large. The holes should be drilled 7/16 inch instead.

If the holes are already drilled too large, you'll have to tack weld the moly jack nuts, P/N 12255566 (19207), to keep the metal rails snug.



## RADIATOR CAP TESTER

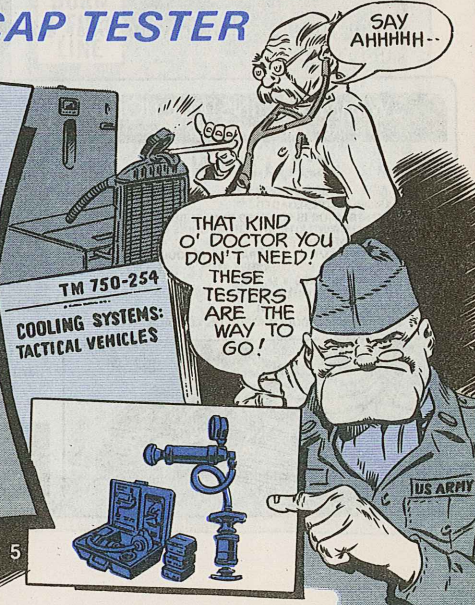
Dear Half-Mast,  
Is there an NSN for the radiator cap tester shown as Item 2, Fig. 2-1, TM 750-254 (Mar 72), Cooling Systems: Tactical Vehicles?

WO2 P.O.O.

Dear Mr. P.O.O.,  
NSN 4910-01-018-4373 gets the basic tester. Adapters come with NSN 4910-01-018-4374 and NSN 4910-01-018-0986.

This poop is in TB 43-0001-39-3 (Oct 76).

Half-Mast





## GAMA GOAT DECALS

¿GUB-GLUB?  
WAIT, FELLAS--  
I CAN'T KEEP  
UP ¿GLUB?

MEBBE  
YOU  
NEED A  
"SWIMMING  
INSTRUCTIONS"  
DECAL,  
GAMA!

Three decals for the Gama Goat give you safety and operating info. They'll pinpoint areas that need extra caution.

Use a hearing protection decal, NSN 7690-00-510-0365, to let the driver and co-driver know protection's required.

There's real danger in dangling legs, arms or objects between the tractor and carrier. A decal under NSN 9905-00-117-0248 gives the warning.

You get condensed swimming instructions on the decal under NSN 9905-01-023-7192. It's not on the Army Master Data File yet, so use an exception data supply request to order it.

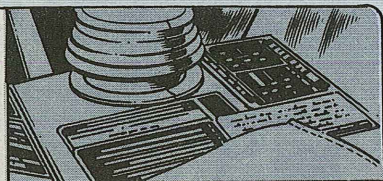
Put these decals on your Goat, for safety's sake.

### SWIMMING INSTRUCTIONS REF TM9-2320-242-10

#### CAUTION

DO NOT ATTEMPT SWIMMING WHEN:

1. CARRIER IS OVERLOADED.
2. WHEN TRACTOR IS EQUIPPED WITH THREE OR MORE OF THE FOLLOWING KITS: WINCH, MACHINE GUN, RADIO, WINTERIZATION, ARTIC.
3. CARRIER IS EMPTY, AND TRACTOR IS EQUIPPED WITH TWO OR MORE OF THE ABOVE KITS.
4. CURRENT EXCEEDS 4 M. P. H.
5. WAVES ARE OVER 6 INCHES.
6. WINDS EXCEED 20 M. P. H.
7. BODY DAMAGE COULD RESULT IN LEAKAGE



#### DO BEFORE ENTERING WATER:

1. BALANCE AND LASH LOAD SECURELY.
2. ASSURE TAILCAFE SEALS.
3. VERIFY BODY ACCESS COVERS, FUEL CAPS, PLUGS AND ALL WHEEL PLUGS ARE INSTALLED.
4. REMOVE AND STOW CANVAS.
5. PUT ON LIFE PRESERVER.

#### DO WHEN ENTERING WATER:

1. SELECT FIRST GEAR, 6 WHEEL DRIVE, LOW RANGE.
2. TURN ON BILGE PUMP.
3. ENTER SLOWLY 2 M. P. H. AND 25° MAX. SLOPE.
4. WHEN VEHICLE IS FLOATING SHIFT TO 3RD GEAR, THEN ACCELERATE TO 19 M. P. H. SPEEDOMETER READING.

#### CAUTION

##### DO WHEN OPERATING IN WATER:

1. AVOID SHARP TURNS.
2. AVOID CROSSING WAKE OF OTHER CRAFT.

##### DO WHEN LEAVING WATER:

1. BEFORE TOUCHING SHORE, SHIFT TO 1ST GEAR.
2. EXIT SLOWLY UP SLOPES OF 22° MAXIMUM.
3. TURN OFF BILGE PUMP.

#### CAUTION

HEARING PROTECTION IS REQUIRED  
FOR DRIVER AND CO-DRIVER  
(REF. T.B. MED. 251)

#### WARNING

DO NOT PLACE ARMS, LEGS OR OBJECTS  
BETWEEN TRACTOR AND CARRIER.  
ANY OBJECT OVERHANGING THIS  
BULKHEAD MAY BE CRUSHED WHEN  
VEHICLE ARTICULATES AS SHOWN.



## Battery Removal . . .

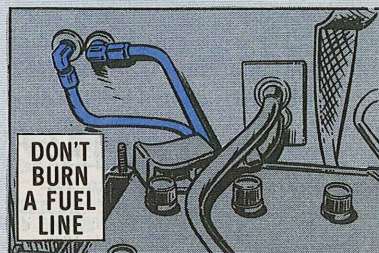
## SAVE THE FUEL LINE



Dear Editor,

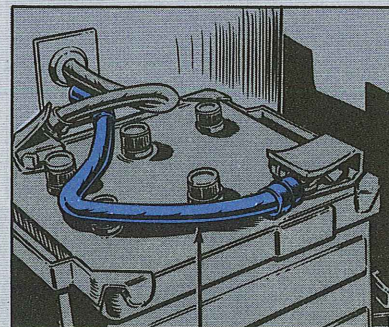
*Mechanics sometimes burn the fuel line that's located just inboard the left-side battery. These tips will help save that fuel line.*

*Before starting on the battery removal procedure given in para 2-73 of TM 9-2320-242-20, disconnect*



*the cable from the ground terminal clamp of the right-side battery. Doing this cuts the chance of the left-side ground cable end burning the fuel line if they touch. If the cable's long enough to allow contact . . . that cable end can burn into the fuel tank.*

*Also, mechs should be real careful when using a wrench on the right-side positive terminal clamp. If that box-end slips and hits the fuel line, it'll burn clear through.*



**DISCONNECT GROUND CABLE  
ON RIGHT-SIDE BATTERY!**

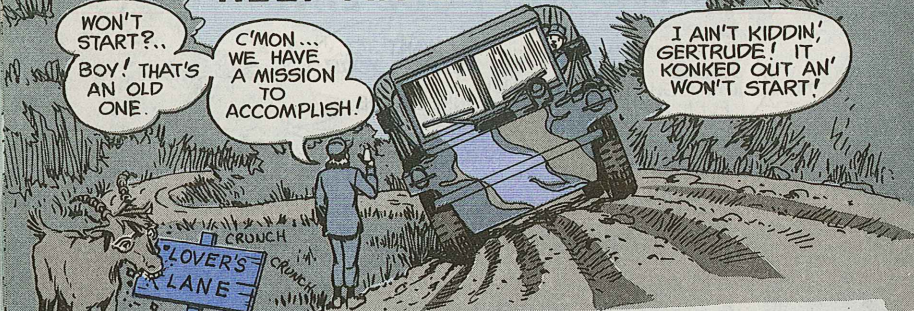
WO1 Robert Adams  
Ft. Campbell, KY

(Ed Note: Sounds good—keep that brain a'crankin'!)



Goat Fuel Tip . . .

## KEEP AN EVEN KEEL



Never park that Gama Goat with the right side down hill—if you can help it. Specially when you're hauling a quarter or less of the Goat's fuel tanks' capacity.

Why? The fuel in the left-side tank will drain into the right-side tank, causing the left-side fuel level to drop

below the intake end of the engine's fuel pick-up line. When cranked-up, the Goat'll burn the fuel, if any, that's in its lines and filters—then die. The Goat's engine won't budge till you fill the tank at least to the pick-up line, and prime the system by filling both fuel filters.

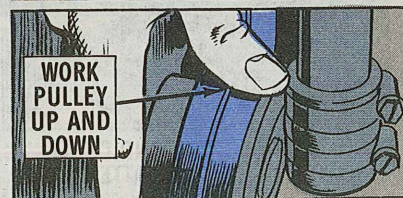
## WATER PUMP BELT SAVER



Sticky spring action on the Goat water pump belt idler assembly makes for belt wear and tear. Lack o' lube's the villain, usually.

So, as you do your before-operations service, push down and release the water pump idler pulley. Return sticky? Put some OE/HDO on the idler pulley spring, work the pulley up and down a few times, and check again.

Still stick? Tell your unit mechanic. He'll lube the pulley shaft like it says



in para 2-69 of TM 9-2320-242-20 (Sep 76). If lube won't fix it, he'll have to replace it.

TM-260-Series 5-Ton Trucks

## NSN's FOR SEAT CUSHIONS



Good news for you guys running TM-260-series 5-ton trucks. You no longer have to get a new seat assembly just because the seat cushions wear out or the shock absorber fails.

Order cushions like so:

Back, NSN 2540-00-460-5826;

Bottom, NSN 2540-00-460-5815.

The shock absorber comes under NSN 2540-00-489-7104.

CUSHIONS CAN BE ORDERED



TM-209-Series 2½-Ton Truck . . .

## LUBE FITTING IS REQUIRED



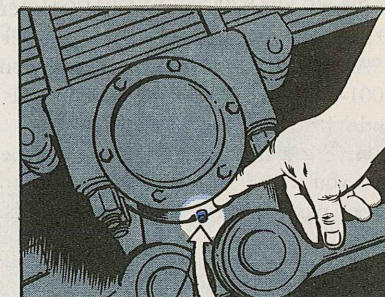
There're still some 2½-ton trucks running around without lube fittings for the rear spring seat bearing.

That's a no-no. TM 9-2320-209-20 (Apr 65) Ch 6, page 294, para 191b(2), says all deuce-and-a-halves must have these lube fittings.

Maybe what's throwing some people is the bit about "Improved Rear Spring Seats" that follows in para 191.1.

Do these "improved" jobs get lube fittings, too?

They sure do! All of the poop is in para 191.2.



NOT GOT? GET!

LUBE FITTING



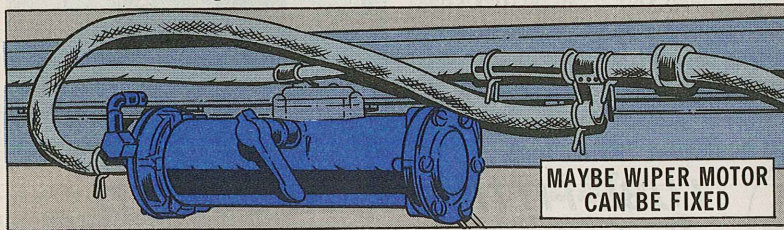
## MOTOR MAGIC—MAYBE

THEY SAY A SHIPMENT OF WINDSHIELD WIPER MOTORS JUST CAME IN!

WHY DON'T YOU FIX UP YOUR OLD ONES-- LIKE IT SAYS IN TB 43-0001-39-1 (JAN 75)?

Windshield wiper motors for 2½-ton, 5-ton and 10-ton trucks are being used up like there's no tomorrow!

This's the vacuum motor used on TM-209, TM-211, TM-260 and TM-206 series vehicles. It's identified in your parts manuals as NSN 2540-00-930-9102, but that's been changed to NSN 2540-00-391-4322.



MAYBE WIPER MOTOR CAN BE FIXED

Why such a high demand for this simple gadget? It's got only a few parts. It works on air—or vacuum, if you want to be picky—so there's nothing to burn out.

Rust is the villain. And lack of exercise does its bit, too.

But that can be beat—if your wiper motor's not too far gone.

A detailed rundown on preventive maintenance for the motor is in TB 43-0001-39-1 (Jan 75), page 39. This tells how you take the motor apart, clean it and lubricate it.

Give it a try. It may save your wiper motor.

If you're ordering a new wiper motor, use the new NSN—you'll save some paper-passing between the head sheds. And that'll help get your motor to you faster.

## CAMOUFLAGE LIMIT

No, camouflage painting of a vehicle does not include the weight classification sign carried on the front. The sign stays just like it was issued. If the sign has to be removed or covered—per TB 43-0209 (Oct 76), para 4f—your own command will give you the word.

## TORQUING FRONT SPRING U-BOLTS

Dear Half-Mast,  
We're supposed to torque the front spring U-bolts on our 5-ton trucks to 350-400 lb-ft. But our ¾-in drive socket won't reach the nut. How do we get a deep well socket to get at it?

L. L. F.

Dear L. L. F.,

The deep well socket you need for torquing those U-bolts is being added as a special tool to TM 9-2320-211-20P and TM 9-2320-260-20P. It's NSN 5130-00-540-0566. The word's in TB 43-0001-39-4 (Jan 77).

Half-Mast



YOU NEED THE NEW SPECIAL SOCKET FOR THIS JOB!

## HET TIRE NSN'S

TM 9-2320-258-20P (May 76) for the M746 22½-ton tractor-truck and TM 9-2330-294-24P (May 76) for the M747 60-ton semitrailer give you the wrong NSN's for tires. Truck tires are NSN 2610-00-142-5741. Semi-trailer tires are NSN 2610-00-177-7022. Jot 'em down in the TM's for your Heavy Equipment Transporter system.

## KEEP MANUALS

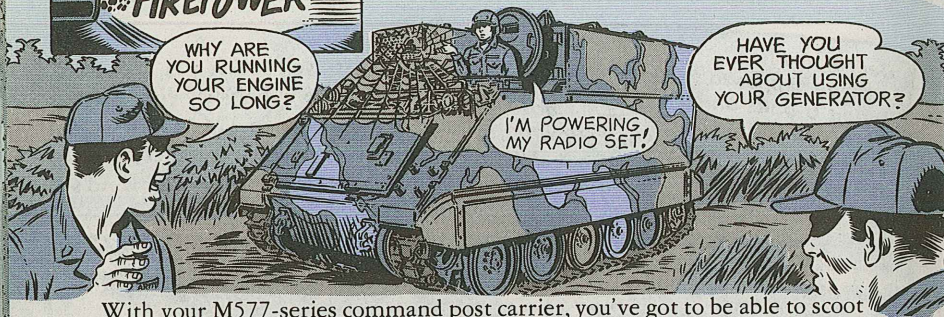
New TM 9-2320-209-series manuals are on the way for the 2½-ton trucks. Watch 'em tho, they're only for the multifuel engine trucks. They're marked with a /1 . . . like so: LO 9-2320-209-12/1, TM 9-2320-209-10/1, and TM 9-2320-209-20/1. Keep your old manuals. You'll need 'em to support the gasoline engine vehicles. Changes will be published when necessary to both sets of manuals.

44-26 Jan 77-NATICK 20000000 10  
Standard 3" in 10000 10000 10000  
POM 25 a AR 760 58  
POM 25 a AR 760 58





## THE IDLE THREAT



With your M577-series command post carrier, you've got to be able to scoot and communicate—both!

You don't sacrifice one to achieve the other.

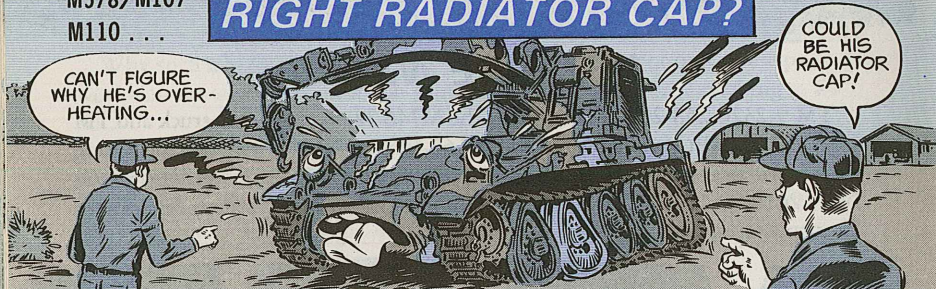
Which is exactly what happens when you idle your vehicle's engine to power your communications.

Idling is sure and certain slow death for your engine.

Which is why you're authorized generators to run your commo equipment... and why you should always use 'em to cut down wear and tear on your big horsepower.

M578/M107  
M110...

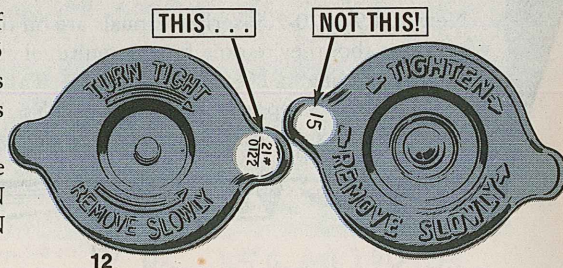
## RIGHT RADIATOR CAP?



If your vehicle's running hotter than it should, could be it's got the wrong radiator caps.

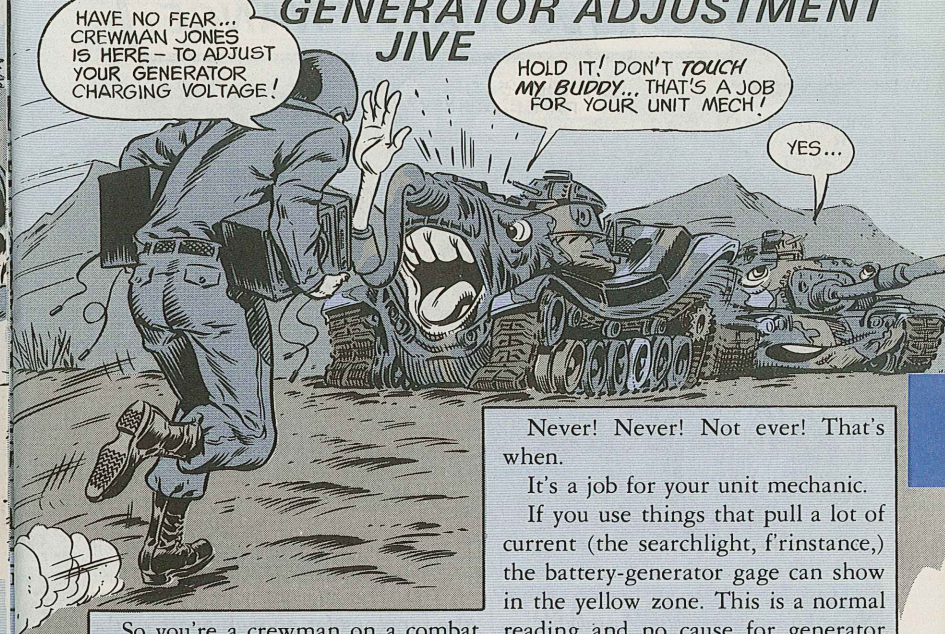
Check both caps to see if somebody has slipped you 15 or 16 pound pressure caps instead of the 21 pound caps you should have.

The caps you need are listed as caps, radiator, NSN 2930-00-950-0740 P/N 10925255 (19207).



TANKS... SP ARTILLERY... M578... M728...

## GENERATOR ADJUSTMENT JIVE



Never! Never! Not ever! That's when.

It's a job for your unit mechanic.

If you use things that pull a lot of current (the searchlight, for instance,) the battery-generator gage can show in the yellow zone. This is a normal reading and no cause for generator regulator adjustment. When the electrical load is reduced, like when you turn off the searchlight or stop running the turret electricity, the charging current should show in the green on the gage.

If the needle stays in the yellow when you're not pulling much current, then it's time to yell for the mechanic. He has the equipment to adjust the rheostat.

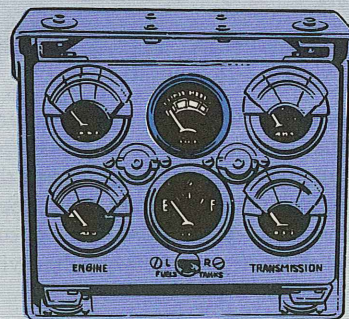
If you try to make this adjustment yourself without the right equipment you could damage turret electrical components as well as lights, batteries and the generator itself.

So lay off! Let the mechanic do his job.

So you're a crewman on a combat vehicle that has the old carbon pile generator voltage control box.

When do you adjust the generator charging voltage?

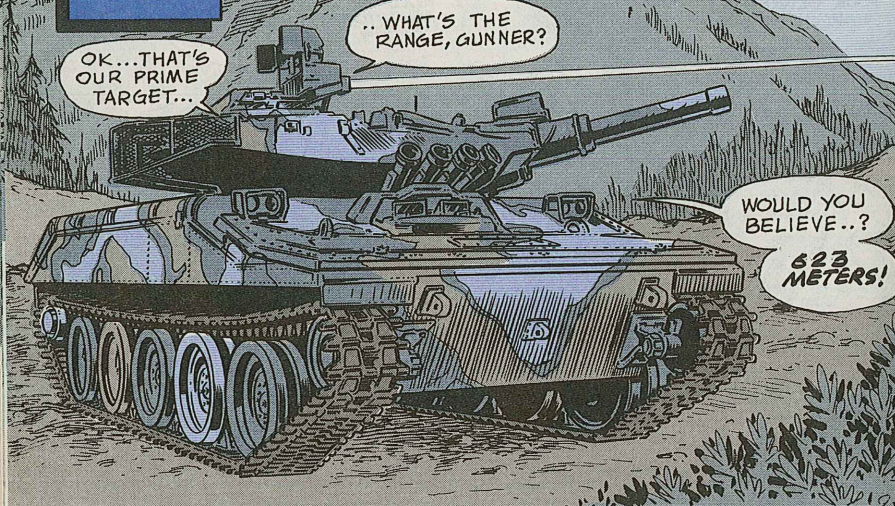
### ADJUSTING THIS IS JOB FOR UNIT MECHANIC





M551A1  
Sheridan

# ASER RANGEFINDER MAINTENANCE

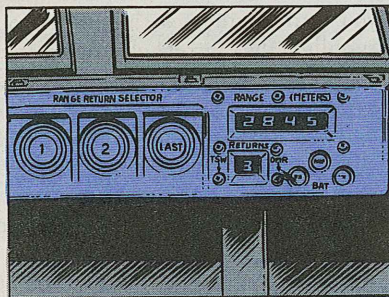


How far is it from here to there?  
Your laser rangefinder knows!

Treat it right and it'll give you the  
correct target range.

You treat it right when you space  
the rangings far enough apart so the  
laser has time to cool off.

If you thumb the range button too



HERE'S YOUR GUNNER'S  
"BOTTOM LINE" INFO

How do you know when you're  
treating it right? You sure can't pet its  
ruby head.



6-2-3 IS YOUR KEY—TC!

fast you'll damage the equipment and  
either the high voltage power supply  
or the flash tube will fail. Spacing the  
rangings correctly is your best  
protection—but there is also a circuit  
that shuts off the laser when the cavity  
overheats.

You may hate figures but these are worth looking at even if they're not  
in a bikini:

## 6-2-3

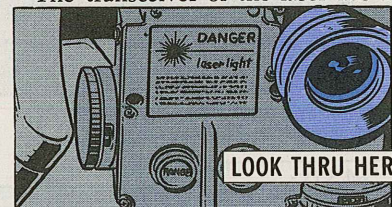
Maximum ranging shots: 6 per minute for a 2-min period, after which  
you need a cooling period of 3 minutes before you start another cycle.

You can use a sustained rate without rest periods of not more  
than 3 lasings per minute.

Your laser rangefinder has all its  
shine on one line. The amplified light  
it shoots out is all on one wave-length.  
This makes the light get to the target  
and back in straight lines but this  
amplified light is dangerous to the  
human eye.

Never look at a target ranging  
through an unfiltered optical instru-  
ment or with the naked eye.

The transceiver of the laser has a

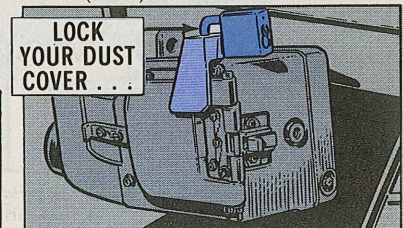


built-in filter so you can look through  
it. Likewise, the M127A1 telescope is  
safe if you have the safety filter in  
position (full clockwise) before you  
lase. If the safety filter is not on, either  
don't look or wear laser safety glasses,  
NSN 4240-00-258-2054. (They're \$80  
a pair and well worth it.)

Before you operate your laser  
rangefinder, read Laser Warnings and

Para 2-46 of TM 9-2350-230-10 (Jun  
76). This'll clue you in for the  
AN/VVG-1 rangefinder.

You need to make sure the safety  
locks or safety plates are in place at all  
times unless you're ready to use the  
rangefinder. The transceiver dust  
cover (door) must be locked shut with



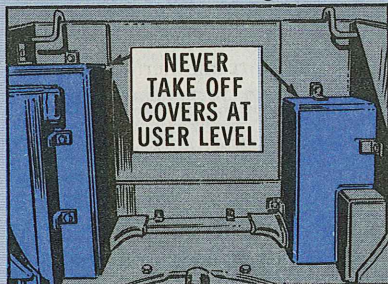
a padlock. The laser mode switch on  
the display unit must also be padlock-  
ed shut.



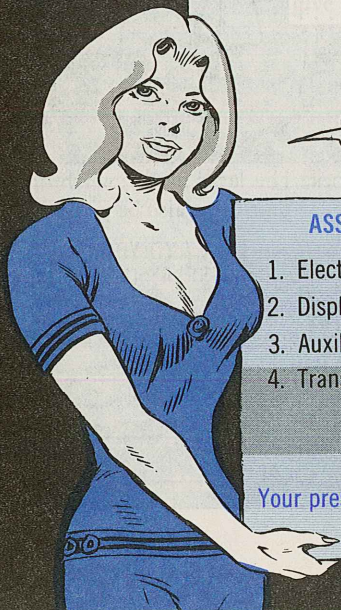


## DANGER! WARNING!

The covers on the major components of this rangefinder are never taken off at crew or organizational



level. Why? Because some components can hold electrical charges of up to 3500 volts and 1000 amperes—enough juice to kill you.



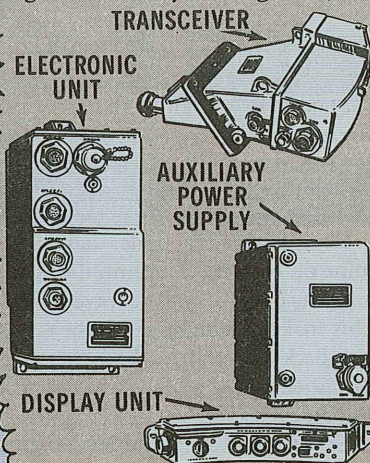
HERE'S THE TIME AND PRESSURE INFO ON THE ASSEMBLIES THAT GET PURGED.

ASSEMBLIES	TIME & PRESSURE
1. Electronics unit	} 10 minutes at 7 PSI
2. Display unit	
3. Auxiliary power supply	
4. Transceiver	10 minutes at 7 PSI if unit is unopened. 30 minutes at 7 otherwise.

Your pressure can be as much as 2 PSI under or over.

## HOW TO

Four of the 5 big assemblies of the AN/VVG-1 on the M551A1 are sealed units which the turret mechanic purges with dry nitrogen. (The

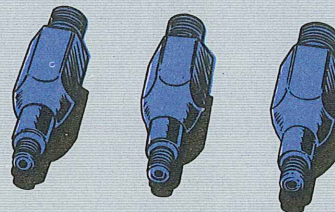


control unit is the exception. It is not purged.)

This is done every 90 days or more often if moisture condensation keeps the units from working right.

## PURGE

For the first 3 assemblies, the 3-piece adapter kit NSN 4931-00-936-



4283 gives you everything you need.

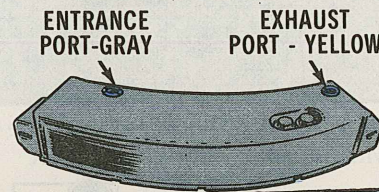
For the transceiver you'll need valve extension NSN 4931-00-222-9056



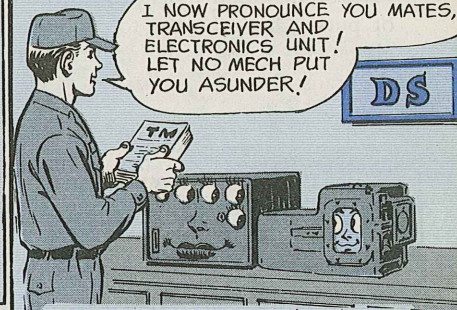
because the entrance port to the transceiver is countersunk under armor.

Supply Catalog 4931-95-CL-J54 (Jul 75) lists purging sets and parts even though TM 750-116 (Oct 71) says nothing about purging the laser rangefinders.

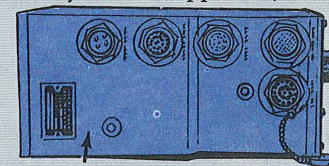
You don't need to take the assemblies out of the vehicle to purge them. Remember the color coding—fill valve (entrance port) is color coded gray and the relief valve (escape port) has a yellow ring around it.



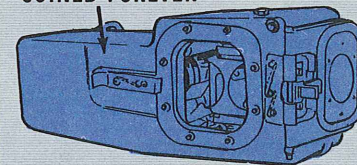
## KEEP SOUL MATES TOGETHER



The transceiver (receiver/transmitter) and the electronics unit are mated by a direct support adjustment.



### JOINED FOREVER



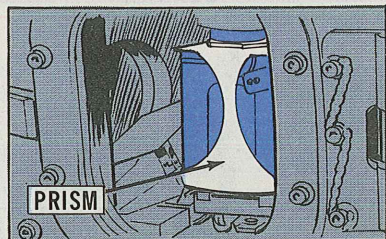
If you turn one in for repair the other must go with it. Be 'specially careful when you have several pairs of them so there is no mate swapping. Mismatched pairs just won't work right together because they are not calibrated for each other.





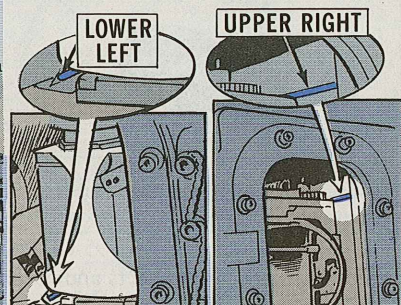
# TRANSCEIVER PRISMS

Every time the turret mechanic takes off the commander's control unit or puts it back, he has to check the alinement of the scanning prism in the transceiver.

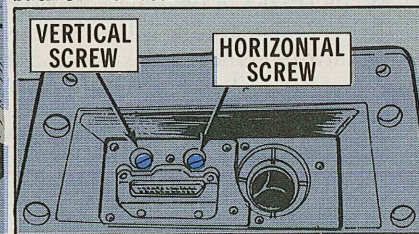


...BEFORE MOUNTING  
CONTROL UNIT TO  
TRANSCEIVER.

The prism has to be lined up both horizontally and vertically. This means the lower left and the upper



right edges must be parallel to the 2 white lines (witness marks). This is done by turning the 2 screws in the back of the receiver transmitter to line



the edges of the prism up with the witness marks.

THE  
COMMANDER'S  
CONTROL UNIT  
AZIMUTH AND  
ELEVATION KNOB  
SEALS MUST BE  
AT ZERO (0)...



## GET BACK ISSUES

Many PS Magazine back issues from 1973 are available... for free. Write to Connie, c/o PS Magazine, Lexington, KY 40511

# M113-SERIES TOWING

Dear Half-Mast,

We need to have the air cleared on disconnecting the propeller shafts on M113-series APC's for towing.

TM 9-2350-300-10 (May 76) para 2-7, says that the vehicle should not be towed more than 200 feet unless we remove the prop shaft between the transmission and differential.

TM 9-2300-257-10 (Dec 73) para 2-133b, says that if we tow the carrier less than 30 miles at a speed less than 10 MPH, we don't have to disconnect any universal joints.

Could you give us the right poop?

CW2 A. T. B.

Dear Mr. A. T. B.,

Sure thing.

The headshed (Tank-Auto Command) says the information in TM 9-2300-257-10 on towing M113 series vehicles is right. TM 9-2350-300-10 is being changed.

Half-Mast

NO NEED TO REMOVE  
THE PROP SHAFT IF YOU'RE  
ONLY TAKING A SHORT TRIP.

# M113A1 FAMILY PROBLEM

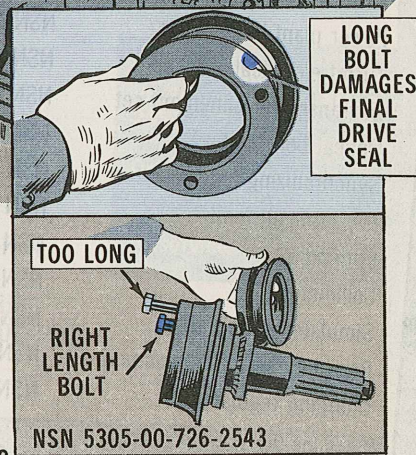
WOW!  
WOT HAPPENED  
TO YOU,  
BUDDY?

I WUZ  
DONE IN BY  
A 2" BOLT!!



If you mount the sprocket wheel to the final drive with bolts that are too long, you'll damage the final drive seal NSN 2520-00-679-9626.

The right bolts are 1 1/4 inches long and they're listed in your TM 9-2300-257-20P as Item 5 (fig 123) NSN 5305-00-726-2543.





# M60A2 TANK **Q** UARTERLY SERVICE

Doing a quarterly ("Q") service on your M60A2 tank is a pretty rough go but this guide can make it lots easier.

Before you start Q-ing, you should lay out the things you'll need in the way of pubs, tools, repair parts, and POL items.

So here's what to have on hand before you even start to Q...

## PUBLICATIONS

Operator's Manual	TM 9-2350-232-10 with Ch 3
Maintenance Manuals	TM 9-2350-232-20-1 (Hull) TM 9-2350-232-20-2 (Turret)
Parts Manual (Turret)	TM 9-2350-232-20P with Ch 1 and Ch 2
Parts Manual (Hull)	TM 9-2300-378-20P-1
Log Book	
Lubrication Order	LO 9-2350-232-12 with Ch 1

## TOOLS & EQUIPMENT

Offset screw driver	NSN 5120-00-287-2130
Gen Mech-Auto tool kit	NSN 5180-00-177-7033
Turret mechanics tool set	NSN 5180-00-695-0139
Power plant lifting sling	NSN 4910-00-919-2884
Turret electrical test set	NSN 4933-00-489-7398
IR transmitter alinement set	NSN 4935-00-045-9864
Optical boresight	NSN 1240-00-941-9409
Synchronizing fixture	NSN 4931-00-087-2053
*Dry nitrogen tank	NSN 6830-00-292-0131
Purging kit	NSN 4931-00-065-1110
Collimator	NSN 4931-00-163-0477
Simulator switch ass'y	NSN 4933-00-103-2960
Proximity switch adjustment set	NSN 4933-00-489-7417
Charging regulator	NSN 4910-00-861-2086

\* not for fire control purging

SO HERE'S WHAT  
YOU HAVE TO HAVE ON  
HAND BEFORE YOU EVEN  
START TO Q.

**CAUTION**  
EYE AND HEARING  
PROTECTION REQUIRED

## REPAIR PARTS

Engine oil filter parts kit	NSN 2940-00-884-4801
Main oil filter gasket (Primary)	NSN 5330-00-678-3278
Oil filter drain gasket (2)	NSN 5330-00-678-3279
Primary fuel filter kit (for -2A engines)	NSN 2815-00-808-2407
Primary fuel filter kit (for -2D engines)	NSN 2910-00-410-1964
Fuel/water separator kit	NSN 2910-00-801-1152
Transmission oil filters (2)	NSN 2520-00-407-6752
Oil filter cover gasket	NSN 5330-00-770-7232
Air compressor gear box oil filter gasket	NSN 5330-00-446-8791
Chemical dryer repair kit	NSN 4440-00-117-0259
Repair kit, filter element (hydraulic power supply)	NSN 1025-00-478-0770
Kit, filter element (servo mech) (2)	NSN 1025-00-489-7431
Air compressor "O" ring	NSN 5330-00-702-5643
Weatherproof sealer	NSN 8030-00-234-9300

Lubricating oil	PL-S
Lubricating oil	PL-M
Lubricating oil	LSA
Lubricating oil	LAW
Weapons lubricant	
Aircraft lube oil	
Silicone compound	
Grease	GAA
Grease	GIA
Rifle bore cleaner	RBC
Paint thinner	
Hydraulic fluid	FRH
or	
Hydraulic fluid	HB
Engine transmission oil	OE/HDO
Corrosion preventive compound	

NSN's for these items are  
in Section III of TM 9-  
2350-232-10.

Order the quantity you  
need for the number of  
M60A2 tanks you have  
to service.



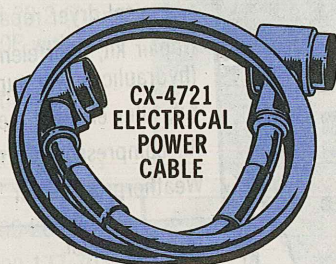
# UNTANGLING

I'LL SAVE YOU  
THIS TIME!

BUT YOU CAN SAVE  
YOURSELF NEXT TIME  
BY ORDERING THE  
RIGHT CABLE!

MACON'S RIGHT! IT'S EASY  
WHEN YOU GO TO YOUR PUB  
SOURCES... LIKE  
THIS...

Say you need a CX-4721/VRC electrical power cable replacement for your carrier mounted AN/VRC-47 radio set in your M561 truck. You'll find the nomenclature, NSN and part number on page 4 in TM 11-2300-372-14-6 (Dec 73).



TM 11-2300-372-14-6

## DEPARTMENT OF THE ARMY TECHNICAL MANUAL

INSTRUCTIONS FOR INSTALLING INSTALLATION KIT,  
ELECTRONIC EQUIPMENT MK-1253/VRC IN TRUCK,  
CARGO, 1 1/4 TON, 6X6, M561

CARGO, 1 1/4 TON, 6X6, M561

Table 2-1. Items Comprising Installation Kit, Electronic Equipment MK-1253/FRC (FNN 5820-493-7530)

Item	Quantity	Length	Remarks
Electronic Equipment MK-1253/FRC	1		
Installation Kit, Electronic Equipment MK-1253/FRC	1		
...	...	...	...

PSN	Item	Quantity	Unit	Commercial
5035-882-8931	Accessory Assembly, Bendix, Scintilla No. 10-229935-225, or equal	1		
5035-886-8426	Ptng Assembly, Bendix-Scintilla No. 10-229935-2P, or equal	1		
58-0-856-9165	Audio accessories, support kit (table 2-2)	1	108 inch	SM-D-415563
3520-752-4753	Clamp strap kit (table 2-3)	1	60 inch	SM-D-415563
5995-823-3074	Cable Assembly, Radio Frequency CG-1773D/U	1		SC-C-446400
5995-823-3074	Cable Assembly, Radio Frequency CG-1773B/U	1		SM-D-415551
5995-823-3098	Adapter assembly	1		SM-D-415552
5820-483-2943	Cable Assembly, Power Electrical CX-4121/VRC	1	108 inch	SM-D-415552
5905-832-2725	Cable Assembly, Special Purpose Electrical CX-4122/VRC	1		
5905-832-2872	Cable Assembly, Special Purpose Electrical CX-4122/VRC	1	1-2	2

22

# Cable ID

HOWEVER, NOT ALL CONFIGURATIONS  
ARE COVERED BY THE TM 11-2300  
SERIES--SO WORK WITH YOUR

**SB 11-131 !!**

SB 11-131

# THE ARMY SUPPLY BULLETIN

**3-1. Vehicle Nomenclature and Model Number.** The following radio configurations by type of vehicle are described in this section:

Truck, Cargo, 2½ ton, 6x6, M34, M35, 24V	3-2
Truck, Cargo, ¾ ton, 4x4, M37, M37B1	3-3
Truck, Ambulance, ¾ ton, 4x4, M43, M43B1	3-4
Truck, Utility, ½ ton, 4x4, M151, M151A1 or M151A2	3-5
Truck, Utility, ½ ton, 4x4, M151, M151A1 or M151A2 (with Xenon Searchlight)	3-6
Truck, Cargo, 1¼ ton, M561	3-7
Truck, Cargo, 1¼ ton, M715	3-8
Truck, Utility, ½ ton, 4x4, M825 (with 106-MM Rifle)	3-9

First, you look up the M561 in the table of contents on page 3-1 which'll refer you to para 3-7 where the radio set and installation kit are listed. Then, you can

3-7. Truck Cargo, 1 1/4 Ton, M561.

## SINGLE INSTALLATIONS

Radio set	Basic unit FSN	Installation kit	Installation kit FSN
AN/VRC-46(cab mtd)	5820-223-7433	MK-1252/GRC	5820-493-7526
AN/VRC-47	5820-223-7434	MK-1253/VRC-47	5820-493-7530
AN/VRC-47(cab mtd)	5820-223-7434	MK-1245/VRC	5820-469-6689
AN/VRC-49	5820-223-7437	MK-1254/VRC-49	5820-493-7531
AN/VRC-53	5820-223-7467	MK-1246/GRC	5820-469-6690

track down the kit by NSN in Table 5-1 on page 5-53. There, you'll find the cable listed in the kit.

5820-182-5756	CABLE STRAP	EACH	1
5995-926-0834	CABLE ASSY	EACH	1
5995-823-2725	CABLE ASSY	EACH	1
5995-823-2887	CABLE ASSY	EACH	1
5995-889-1059	CABLE ASSY	EACH	1

If you're still not sure of the cable ID, you can ask your support to verify the NSN for the cable on the Master Cross Reference List (MCRL) microfiche which also lists the cable by length.

This info also applies if the cable you're after is in the accessory kit or in the installation harness.

X4721VRC1-6	80058 2	5995-00-823
X4721VRC10FT	80058 2	5995-00-823-291
<b>CX4721VRC2-6</b>	<b>80058 2</b>	<b>5995-00-823-2725</b>
X4721VRC3-6	80058 2	5995-00-926-339
X4721VRC3FT	80058 2	5995-00-823

23



I'M TRYIN' T' KEEP IT COOL-- THAT'S WOT I'M DOIN'!

## KEEP ANGRY-103 COOL

YOU'LL GET BETTER RESULTS IF YOU REPLACE ITS AIR FILTER!

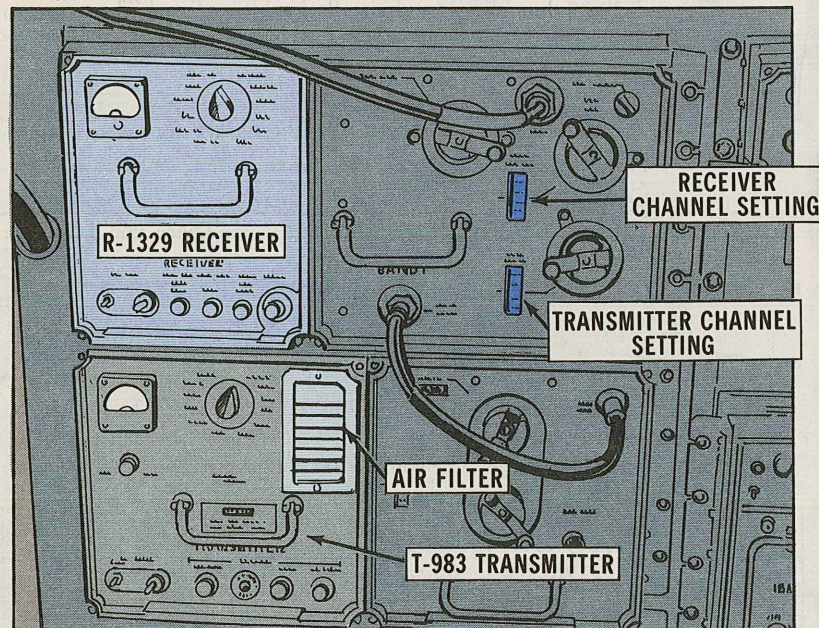
Your AN/GRC-103 radio set can do a real hot job for you if you keep it cool.

The best way to do that is to keep the air flowing freely through the T-983 transmitter by replacing the air filter with a spare, like it says in para 5-6 in TM 11-5820-540-12 (Dec 67). Dirt can gang up on your set fast, so keep your set clean and cool.

If you're using the new type air filter

assembly NSN 4130-00-879-2280, the frame holder is part of the filter. You'll have no need for the metal frame used to secure the old type filter.

While you're keeping that set cool, steer clear of setting those channel frequencies too close. Setting 'em closer than 50 channels apart will damage the 2A1AR1 RF amplifier in your R-1329 radio receiver.



## CREATE RADIO CRYSTAL NUMBER

BUT HOW, MS. STATICK?

THIS WAY, YOUNG MAN!

YOU NEED CR-81/U CRYSTAL?

YOUR FREQUENCY - 42.25 MHz  
SUBTRACT 10.7  
YOU GET 31.55

PUTTING IT TOGETHER,  
YOU HAVE:  
CR81U 31-550000 MHz

Are you freqed out 'cause you're having trouble coming up with the right crystal for your AN/PRT-4() and AN/PRR-9 portable radio?

Flip no more!

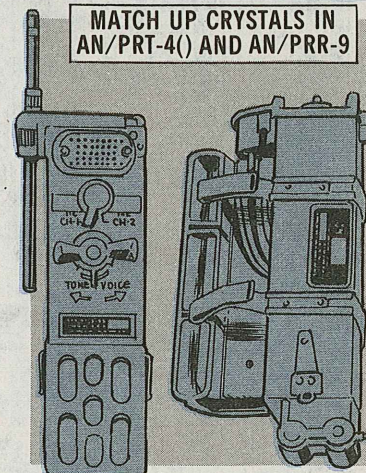
There are a couple or three ways to get the right CR-81/U crystal for the frequency assigned.

If the crystal you need's in your outfit's crystal kit, you have it made. Get it and go.

If not, create a part number you have at your fingertips and you can get the crystal NSN. Be sure to subtract 10.7 mc before computing your crystal frequency, like it says in Ch 8 to TM 11-5820-549-12 (Oct 66).

Like, you know you need a CR-81/U crystal and you know what the frequency assigned you'll be using—say, 42.25 MHz, minus 10.7 = 31.55. Put this info together and you come up with the part number—like this—CR81U31-550000MHz. Sometimes there's a period (.) in place of the dash (-).

MATCH UP CRYSTALS IN AN/PRT-4() AND AN/PRR-9



Ask your supply support to match the part number to the stock number on their MCRL (Master Cross Reference List). For additional technical info your support contacts:

Defense Electronic Supply Center  
ATTN: DESC-STG  
Dayton, OH 45444

or call AUTOVON 850-5165/-5746.



# NO LOSS ON GAIN

☆!!@\*!!☆  
LOST MY GAIN  
ADJUSTING  
SCREW DRIVER  
AGAIN!

HERE'S A FIX THAT'LL  
END THAT PROBLEM FOR  
GOOD, SOLDIER!...

CAUTION  
REPLACE THIS COVER  
BEFORE OPERATING UNIT

SCREWDRIVER USED  
HERE ON CHANNEL  
MODEM PANEL

CAUTION  
WEIGHT 22 POUNDS  
NEW 1177-CARDS

OPEN FOR AUDIO GAIN ADJUST

1 2 3 4 5 6 7 8 9 10 11 12

5CH  
10-12CH-T1

Dear Editor,

The TD-660() multiplexer gain adjusting screwdriver, NSN 5120-00-079-8979, gets lost—often.

This tool has a special flexible business-end so it won't damage/channel modem panels. Substitute tools will cause damage. Here's how I save the screwdriver and, therefore, the panel.

Add a screw-eyellet to the screwdriver handle, and attach a length of weldless chain NSN 4010-00-262-3123. Fasten the free end of the chain with a convenient panel screw. Be sure the chain's out of the operator's way.

SSG Lowell Welsch  
Ft. Campbell, KY

(Ed Note: Thank you, Sarge.)

TD-660  
Panels ...

# HANDLE WITH CARE

HEY!!  
THIS PANEL  
WON'T GO IN!

NO WONDER  
YOU'VE BENT  
TH' PINS!

LOOK!...  
THAT'S MACON SPARKS  
OVER THERE...

SEE IF HE'LL  
HELP US...

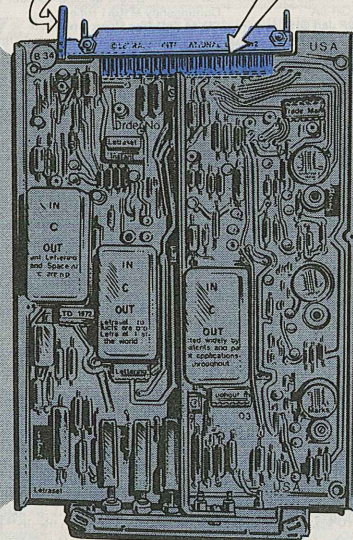
Pulling and pushing panels can put your TD-660()/G multiplexer's multi-channel signal out of business.

So, you have to take care when it comes to handling the printed circuit card.

If you're unseating the card, pull it straight out. This'll keep you from getting bent pins.

LINE UP  
SQUARE KEY

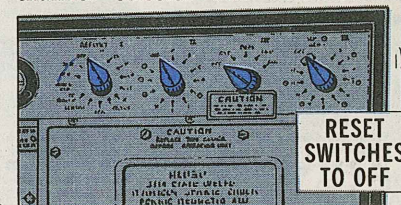
EASY ON  
THE PINS



When you're plugging in a card, line up the square key before pushing the

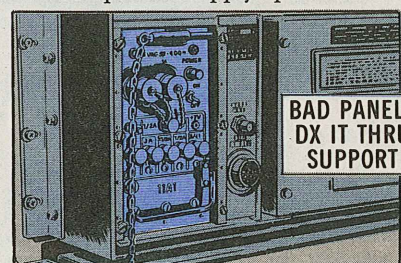
card in place... gently. If a pin does get bent, straighten it with your fingers or a pair of needle-nose pliers.

After the cards are snugged in place and you have set the test switches to verify card contact, be sure to reset the channel selector and talk-monitor



switches to OFF. Leaving 'em on cuts your circuits' power level in half. This can head you for the maintenance shop when it's not needed.

When it comes to replacing a bad 11A33 power supply panel NSN



5805-01-012-5444 in your B-model multiplexer, DX it through your support so you can get a one-on-one turn-around depot replacement.



# 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 (Nov 74), and Ch 3 (Oct 75), TM's, TB's, etc.: DA Pam 310-6 (Jul 76) and Ch 2 (Dec 76), SC's and SM's and DA Pam (O) 310-9 (Aug 74), COMSEC pubs.

## TECHNICAL MANUALS

TM 5-5420-200-12 Feb M48A2 Tank Bridge Launcher  
TM 5-6115-465-24P Feb Generator Set, DED Tactical Skid Mtd., 30-KW, 120/208, 240/416 V DOD Mod MEP-005A, MEP-104A, MEP-114A, MEP-005AWF, MEP-005AWE, MEP-005ALM, MEP-005AWM  
Ch 5, TM 9-1005-224-24 Feb M60 Machine Gun  
Ch 1, TM 9-1015-203-20P Feb M101/M101A1 Towed Howitzer  
Ch 2, TM 9-1300-251-20 Feb Artillery Ammo for Guns, Howitzers, Mortars, Recoilless Rifles, 40-MM Grenade Launchers  
TM 9-1345-201-12 Jan Aircraft Mine Dispers Subsys M56  
TM 9-1345-203-12&P Jan Land Mines  
TM 9-1400-461-20P Sep M-22 Antitank Helicopter Missile Sys  
TM 9-1425-473-24P Sep TOW Airborne System  
TM 9-1430-528-24P Jun Improved HAWK  
TM 9-1430-532-14P Sep Improved HAWK  
Ch 2, TM 9-2320-260-20P Feb M809-Series 5-Ton Trucks  
TM 9-2350-256-20 Jan M88A1 Recovery Veh

TM 11-5805-387-24P-1 Jan MO-552 Radio Teletypewriter Modem  
TM 11-5820-552-24P Jan AN/PRC-64A Radio Set  
Ch 3, TM 11-5820-800-12 Mar AN/PRC-90 Radio Set  
Ch 5, TM 11-5821-261-20 Feb AN/ARC-116 Radio Set  
TM 11-5855-213-10 Dec AN/PVS-4 Night Vision Slight  
TM 11-5855-214-10 Dec AN/TVS-5 Night Vision Slight  
TM 11-5855-249-23 Mar Driver's, Night Vision Viewer AN/VVS-2(V) 1  
Ch 5, TM 11-5895-262-15 Feb AS-1729/VRC Antenna  
TM 11-6130-238-14 Feb PP-1659 (I/G) Battery Charger  
Ch 1, TM 11-6625-2631-14 Mar TS-2530 (I) Battery  
Ch 7, TM 55-1500-328-25 Jan Aeronautical Maint Mgt Policies, Procedures  
Ch 3, TM 55-1500-333-24 Jan Maint for Cleaning Procedures, Aircraft  
TM 55-1510-209-10-1 Feb RU-21A/D Aircraft  
TM 55-1510-214-10 Mar RU-21b, RU-21C Aircraft  
TM 55-1510-215-10 Mar U-21G Aircraft  
TM 55-1520-210-PM Dec UH-1D/H Phased Main Checklist  
TM 55-1520-214-23 Dec OH-6A  
Ch 1, TM 55-1520-214-23P Jan OH-6A  
Ch 7, TM 55-1520-221-20 Feb AH-1G, AH-1Q, TH-LG  
Ch 14, TM 55-2840-229-24 Jan T-53 Engines  
Ch 8, TM 55-2840-234-24/1 Jan T-55 Engines

## MISCELLANEOUS

AR 190-11 Mar Physical Security of Weapons, Ammunition, Explosives  
DA Cir 310-94 Feb Notice to Users of Fed Supply Cat, MCRL  
DA Cir 708-5 Jan Management Info Research Assist Ctr (MIRAC)  
DA Pam 310-8 Dec Index of Personnel Test & Measures  
DA Pam 621-71 Dec Ordnance School Apprenticeship for Welder  
DA Pam 621-73 Jan Ordnance School Apprenticeship for Heavy Duty Equip Mechanic  
DA Pam 621-74 Jan Ordnance School Apprenticeship for Artillery Repairer  
DA Pam 703-1 Jan Accounting for Bulk Petroleum  
DD Form 1348-6 Mar Non-Nsn Requisition (Manual)  
FM 10-76D1/2 Jan 76D, Materiel Supplyman  
FM 10-76D3/4 Jan 76D, Materiel Supplyman  
FM 10-76P/CM Jan Stock Control Supplyman MOS 76P  
FM 10-76Y1/2 Jan 76Y Unit and Organization Supplyman  
FM 10-76Y3/4 Jan 76Y Unit and Organization Supplyman  
FM 42-5-4 Dec Planning Guide for Contingency M16A1 Rifle  
FM 44-16D Dec Hawk Crewman  
SB 700-20 Mar Army Adopted/Other Items Selected for Authorization/List of Reportable Items (Microfiche)  
SC 5180-91-CL-R52 Feb Tool Kit KT-168/GT  
TC 11-6 Sep Grounding Techniques

## AUDIO-VISUAL STUFF — Available at Your Local TASC (Training and Audiovisual Support Center)

**MOVIES, GTA**  
GTA 3-4-8 ABC M-24  
Chemical-Biological Mask  
MF 17-5934 GOER

**TEC LESSONS**  
043-441-5912-F Vulcan  
System Daily Checks, Parts

1,2,3  
043-441-5933-F Loading,  
Downloading Vulcan (Sp),  
Part I  
043-441-7814-F Chaparral  
Weekly Maint Check, Part I  
043-441-7819-F Chaparral  
Weekly Maint Check, Part 6  
551-101-7901-F Intro to PLL

Procedures (DLOGS)  
551-101-7902-F Replacing a  
PLL Item (DLOGS)  
551-101-7903-F Requesting  
High Pri Items (DLOGS)  
551-101-7904-F Requesting  
Nonstock Items (DLOGS)  
551-101-7905-F Turning in  
Excess Items (DLOGS)

551-101-7906-A Processing  
Material Receipts (DLOGS)  
551-101-7911-A Validating  
Suspense File, Updating Due-  
Out Listing (DLOGS)  
551-101-7912-A Requesting  
Follow-up (DLOGS)  
551-101-7913-A Requesting  
Cancellation (DLOGS)

## See for Miles and Miles . . .

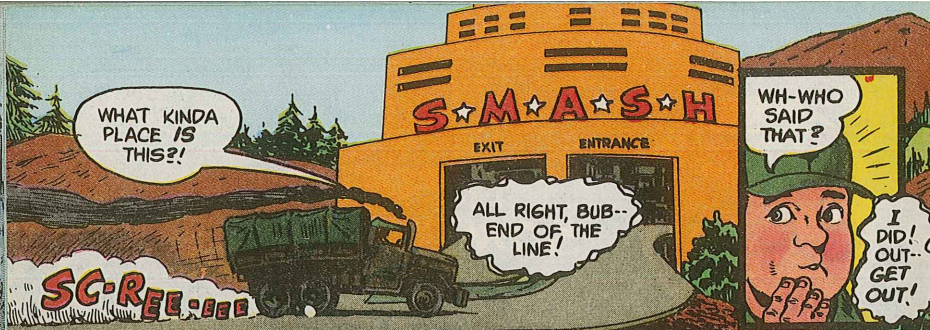
Of the several cleaners for use on aircraft transparent plastics, there is one that will really make bird windshields and windows sparkle. It's authorized, for example, in the maintenance supplies section of TM 55-1520-214-23P (May 76) on the OH-6A. NSN 6850-00-570-9355 will get you an 8-oz bottle of the cleaning compound for only \$1.56.

## Overprint OK

If you're tired of writing the same entries on the same forms for the same inspections time after time, read para 1-7a(6) of TM 38-750. That para OK's overprinting of forms like the DA Form 2404 ESC. Just make up a stencil for the entries that stay the same each time you pull a certain check or service or whatever, and run the form through on the stencil.







WHAT KINDA PLACE IS THIS?!

SMASH

ALL RIGHT, BUB--  
END OF THE LINE!

WH-WHO SAID THAT?!

I DID!  
OUT-GET OUT!



OK--OK!! B-BUT WHO AND WHERE ARE YOU??

JUST FALL IN  
OUT FRONT!



GULP: YOU--  
MY 2½-TON  
ARE TALKING?

YEAH-- AND  
I'VE BEEN TRYING TO  
GET THRU  
TO YOU FOR  
WEEKS!



Y-YOU HAVE?  
H-HOW?

WITH ALL  
THIS BLACK  
SMOKE...

I'VE BEEN TRYING  
TO TELL YOU I'M  
SICK-- BUT YOU  
DIDN'T DO ANYTHING  
ABOUT IT...

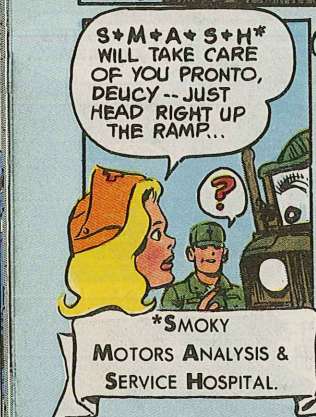


SMASH

...SO I  
TOOK OVER AND CAME  
HERE...

S\*M\*A\*S\*H?

WAY TO GO,  
AND WELCOME,  
DEUCY...



S\*M\*A\*S\*H\*  
WILL TAKE CARE  
OF YOU PRONTO,  
DEUCY-- JUST  
HEAD RIGHT UP  
THE RAMP...

NURSE RODDCLIPS  
IS THE NAME,  
SPECIALIST!

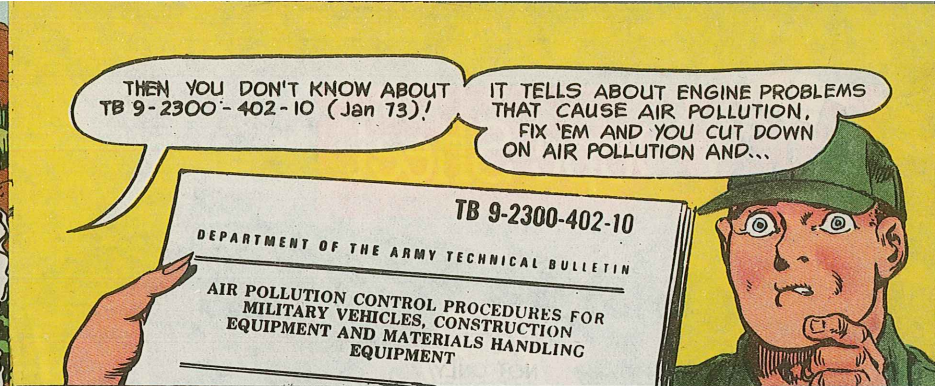
COME ALONG... I'LL GIVE YOU  
A TOUR OF S\*M\*A\*S\*H!...  
JUDGING FROM THE  
CONDITION OF YOUR  
DEUCE-AND-A-HALF,  
YOU NEED IT!



LIKE  
BLACK EXHAUST  
SMOKE SIGNALS  
3 THINGS...

...YOU'RE WASTING FUEL,  
YOU'RE WEARING OUT YOUR  
ENGINE TOO FAST AND  
YOU'RE POLLUTING THE AIR!

GULP: I  
DIDN'T  
REALIZE...



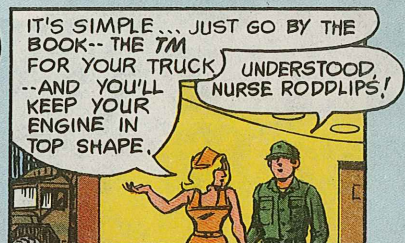
THEN YOU DON'T KNOW ABOUT  
TB 9-2300-402-10 (Jan 73)!

IT TELLS ABOUT ENGINE PROBLEMS  
THAT CAUSE AIR POLLUTION,  
FIX 'EM AND YOU CUT DOWN  
ON AIR POLLUTION AND...

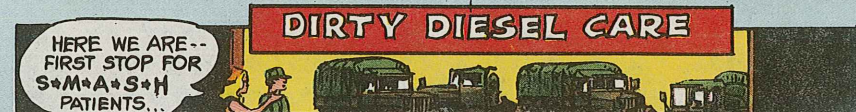
TB 9-2300-402-10  
DEPARTMENT OF THE ARMY TECHNICAL BULLETIN  
AIR POLLUTION CONTROL PROCEDURES FOR  
MILITARY VEHICLES, CONSTRUCTION  
EQUIPMENT AND MATERIALS HANDLING  
EQUIPMENT



YOU GET TWO BIG BONUSES...  
--MORE POWER OUT OF  
YOUR FUEL, LONGER  
LIFE FOR YOUR ENGINE!



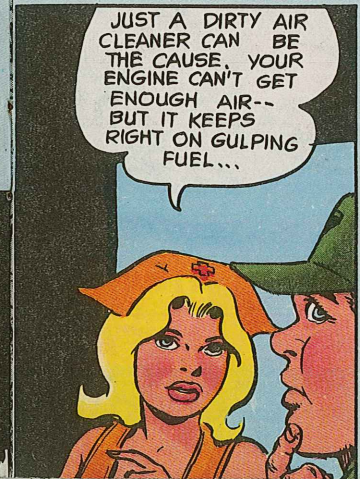
IT'S SIMPLE... JUST GO BY THE  
BOOK-- THE TM  
FOR YOUR TRUCK UNDERSTOOD  
--AND YOU'LL  
KEEP YOUR  
ENGINE IN  
TOP SHAPE. NURSE RODDCLIPS!



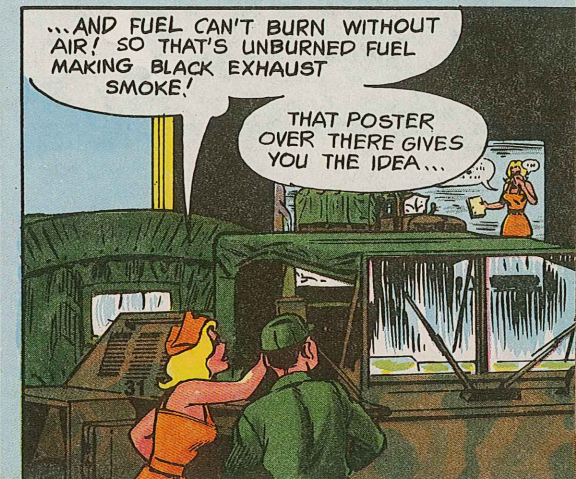
HERE WE ARE--  
FIRST STOP FOR  
S\*M\*A\*S\*H  
PATIENTS...



OUR INTERNS USUALLY NEED  
ONLY 2 HANDS AND ABOUT  
5 MINUTES TO STOP  
BLACK SMOKE!



JUST A DIRTY AIR  
CLEANER CAN BE  
THE CAUSE, YOUR  
ENGINE CAN'T GET  
ENOUGH AIR--  
BUT IT KEEPS  
RIGHT ON GULPING  
FUEL...



...AND FUEL CAN'T BURN WITHOUT  
AIR! SO THAT'S UNBURNED FUEL  
MAKING BLACK EXHAUST  
SMOKE!

THAT POSTER  
OVER THERE GIVES  
YOU THE IDEA...



# Joe's Dope Sheet

HALP!...  
NOT ONLY AM  
I POLLUTING...  
I'M  
DYING!!

Sick engines are not hard to spot!  
Most often they smoke quite a lot!  
A driver who's keen  
Should keep filters clean!  
His engine will stay hot to trot!

☹KOFF☹

• TB 9-2300-  
402-10 (Jan 75)  
Air Pollution Control  
Equipment for  
Heavy Equipment  
Engines and  
Machinery  
Operating in  
Polluted Areas

P-U!!  
GLAD MY  
MITAI IS IN  
GOOD  
SHAPE!

## 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.

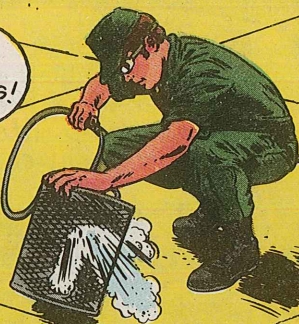


WHEN YOUR AIR RESTRICTION INDICATOR STARTS TO SHOW COLOR, IT'S TIME TO CLEAN THE ENGINE AIR CLEANER.



THEN YOU'LL STAY AHEAD OF MOST EXHAUST SMOKE PROBLEMS!

COOL!



DIRT IS LIKE A SAND-BLAST IN YOUR ENGINE-- AND WORN PARTS MAKE FOR BLACK EXHAUST SMOKE, TOO!

SO... NEVER RUN YOUR ENGINE WHILE YOU'VE GOT THE ELEMENT OUT OF THE AIR CLEANER HOUSING!

USE LOW PRESSURE TO CLEAN YOUR ELEMENT---

USE ANOTHER TRUCK'S AIR!

WATCH FOR LEAKS IN YOUR ENGINE'S AIR INTAKE SYSTEM:

--GOUGES OR HOLES IN THE ELEMENT

--MISSING, TORN OR TWISTED GASKETS

--LOOSE OR DAMAGED TUBING!

I DIG, NURSE RODDIPS!

GET LEAKS FIXED FAST!

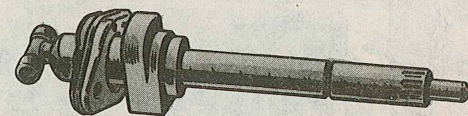
34

NOW... STOP 2...

## DIRTY FUEL DOES IT, TOO

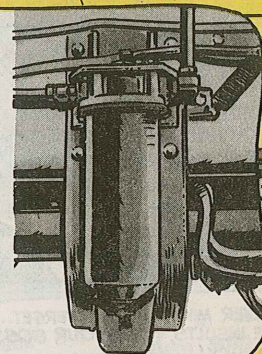
A SPECK OF DIRT CAN FOUL UP A FUEL INJECTOR NOZZLE.

DIRT MAKES THE NOZZLE DRIP. THE FUEL WON'T BURN RIGHT... SO IT COMES OUT YOUR EXHAUST AS BLACK SMOKE!



BUT YOU CAN HEAD OFF THIS DIRT!...

DRAIN YOUR FUEL FILTERS BEFORE EVERY OPERATION. CHANGE FUEL FILTER ELEMENTS BY THE BOOK-- YOUR TM. OR CLEAN 'EM, IF YOU'VE GOT METAL ELEMENTS.

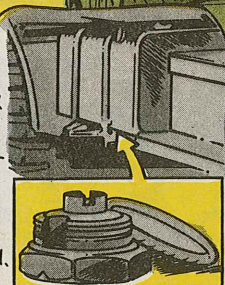


AND KEEP DIRT FROM GETTING INTO THE FUEL TANK WHEN REFUELING.

YOU MAY HAVE TO DRAIN SOME FUEL OUT OF THE TANK TO GET RID OF THE JUNK ALREADY IN THERE, IF THERE'S NO ON-OFF DRAIN ON YOUR TANK, YOU MAY HAVE TO DRAIN ALL OF THE FUEL.

YOU CAN DRAIN AS MUCH AS YOU WANT IF YOU'VE GOT A GAMA GOAT. IT'S GOT A DRAIN VALVE ON EACH FUEL TANK.

THERE'RE SPECIAL DRAIN PLUGS ON THE M809-SERIES 5-TON TRUCKS, AND THE GOER VEHICLES ARE GETTING 'EM TOO. YOU CAN DRAIN THE FUEL WITHOUT TAKING THE PLUG ALL THE WAY OUT. KEEP DRAINING UNTIL THE FUEL COMES OUT CLEAN.



35



HERE WE HAVE  
S\*M\*A\*S\*M'S  
DS SPECIALISTS...

## SUPPORT CAN HELP

THEY DIG INTO  
YOUR ENGINE TO FIND AND  
FIX THE CAUSE OF BLACK  
EXHAUST SMOKE!

THE ENGINE TM'S  
TROUBLESHOOTING  
SECTION GIVES 'EM  
A STEER!

IT COULD BE  
WRONG  
INJECTION  
PUMP TIMING  
OR A BUM  
THERMOSTAT  
MAKING THE  
ENGINE RUN  
TOO COLD!

## DRIVERS CAUSE BLACK SMOKE

AH, THERE'S YOUR  
2½-TON... READY  
TO LEAVE...

DEUCY,  
OL' BUDDY,  
LET'S GO...

HOLD ONE!  
MUCH OF MY  
BLACK SMOKE  
WAS CAUSED  
BY YOUR  
LUGGING ME...

HEY!  
WATCH  
YOUR  
FLAPPIN'  
TONGUE,  
TRUCK!

HE'S RIGHT, SOME DRIVERS  
"LUG" OR OPERATE IN A  
HIGH GEAR WHEN THEY SHOULD  
BE IN A LOWER GEAR!

RIGHT ON!  
TELL HIM TO  
STICK TO RIGHT  
GEAR FOR OUR  
SPEED!

NEVER MIND  
THE INSULTS,  
TRUCK!...

...YOU FERGET...  
I'M YOUR BOSS!

HEY!... WOT TH!...

YOU STILL  
NEED ONE MORE  
LESSON, SO...

COUGH!  
KOFF!

THOSE FUMES...  
I'M BLACKIN' OUT!...

HEY SOLDIER...  
SNAP OUT OF IT!!

HUH!  
WHA--?

NURSE  
RODDLIPS?...  
ER, I MEAN...  
CONNIE  
RODD?

?

WHAT  
HAPPENED  
?

YOU RAN INTO THE  
DITCH-- MUST OF BEEN  
OVCOME BY THE  
BLACK SMOKE...

I HAPPENED BY AND  
PULLED YOU OUT... BUT  
YOUR TRUCK GOT A  
BAD SMASH!

SMASH...  
??

GAAH!!

HUH?  
NOW HE'S  
FAINTED!!!

FIRE  
POWER

# M219 MACHINE GUN

## SOLENOID TROUBLE- SHOOTING

HMMMMM...  
A SEVERE  
CASE OF CHRONIC  
SOLENOIDITIS!!

HERE-- GET  
THESE FILLED  
AND HE SHOULD  
BE GOOD AS  
NEW!

THANK,  
DOC!

Next time the solenoid on your  
M219 machine gun gets stubborn or  
jams when you fire electrically, have  
your unit armorer give the following  
checklist a workout:

**Rx** Check the voltage in your  
tank's electrical system with a  
multimeter. The tank should be  
putting out at least 18 volts DC.

**Rx** Check for burned-out solenoid.

**Rx** Check the adjustment of the  
trigger sear. Page 49 of TM 9-1005-  
233-24 tells you how.

**Rx** Check the solenoid connector.  
The female connector in the pig  
tail may be broken.

CHECK  
TRIGGER  
SEAR

INSPECT  
CONNECTOR



Chaparral PM Rumble . . .

**ONE  
AND  
ONLY  
ONE!**

NO!  
NO!

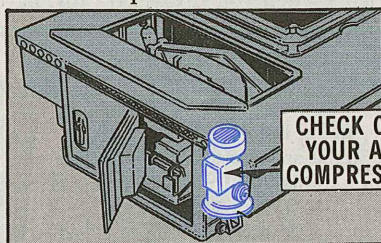
WAIT--

YEH, CONNIE--  
AIR COMPRESSOR  
OIL LEVEL IS LOW,  
SO HE'S ADDIN'  
SOME MOTOR  
OIL--

THERE'S ONLY  
ONE LUBRICATING  
OIL AUTHORIZED  
FOR YOUR  
**CHAPARRAL'S**  
AIR COMPRESSOR--  
AND THAT'S  
THIS SPECIAL OIL  
**BMS 3-7A!**

IT'S A SPECIAL FORMULA LUBRICATING  
OIL THAT'LL HELP THE AIR COMPRESSOR  
OPERATE BETTER! THE LO IS BEING  
CHANGED TO SPECIFY THIS OIL!

So, right now, how 'bout eyeballing  
that air compressor. If it's lubed with



**CHECK OUT  
YOUR AIR  
COMPRESSOR**

any oil except BMS 3-7A, drain and  
refill the reservoir ASAP!

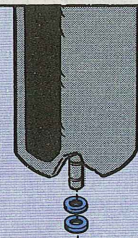
Fill with ½ pint of this special oil.  
NSN 9150-00-753-4667 gets a quart.

Never mix BMS 3-7A oil with any  
other kind.

## LUBE LIGHTLY, PLEASE

Those 2 plunger O-rings that're  
part of the Chaparral's air purifier  
desiccant cartridge assembly get a

**LUBE  
PLUNGER  
O-RINGS**

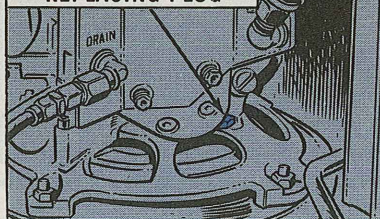


Watch it! Overfill is overkill. Just  
pour in enough of this special oil to  
bring it up to—or near—the dipstick  
mark . . . never above it.

If you're already using the special  
oil, but need to fill the reservoir, be  
sure the lube is not contaminated.  
Those air compressors don't come at  
bargain basement prices!

Before you put in the filler plug, be

**CHECK GASKET BEFORE  
REPLACING PLUG**



sure the copper gasket is clean,  
undamaged and in place.

Note this important LO poop in  
your copy of Table 3-1, TM 9-1440-  
585-10 (Sep 74) with Ch 2 (Dec 76).

light lube treatment with a dab of  
general purpose grease, NSN 9150-  
00-754-2760, before reassembly.

If you use dry O-rings, they're likely  
to get pinched or torn when the  
cartridge is inserted into the air  
purifier. This means a leak and loss of  
air pressure.

EASY  
DOES IT--  
OVERLUBING  
THE O-RINGS  
WILL  
CONTAMINATE  
THE AIR  
PURIFIER  
SYSTEM!



## CHAPARRAL PARTS

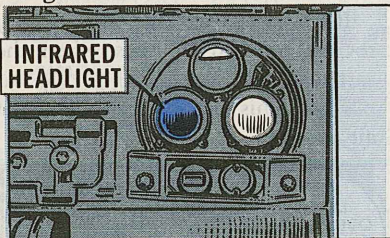
HEY!  
WHAT'RE  
YOU UP TO,  
JONES?

I'M  
TIRED O'  
NOT BEIN'  
ABLE TO  
SEE...

YOU  
SHOULD'VE  
BEEN USING  
PLEXIGLAS  
POLISHING KIT  
NSN 1560-00  
624-0175!

If your requests for the infrared headlight on the M730 Chaparral carrier have been kicking back with "out of stock," "reorder," or whatever, hang in there.

INFRARED  
HEADLIGHT



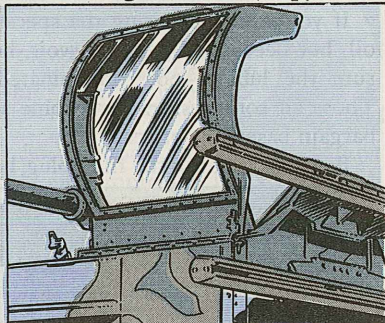
The headlight, NSN 6220-00-984-5180, will be getting back into the system quick-like. It'll be around for a good while.

If you're in a crunch and need a substitute soonest, you can get a headlight with NSN 6620-00-766-4712. First, though, try again for 6220-00-984-5180. It holds up longer.

The headlight's listed in TM 9-1450-585-20P.

## PLEXIGLAS CLEANER

Reminder to strong-arm types:  
The Plexiglas on the canopy of the



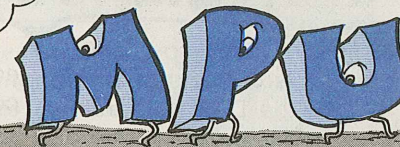
launch station can be scratched or clouded by the wrong cleaner. That's why substitutes are out (your pal inside must see out, if he's going to be effective).

The cleaning procedure is in TM 9-1440-585-10 . . . and the only authorized cleaner is Plexiglas polishing kit NSN 1560-00-624-0175. That, too, is called out in the -10 TM.

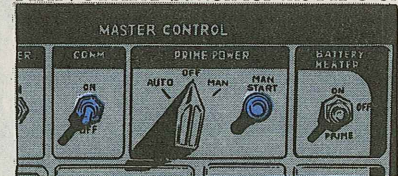
Chaparral . . .

NO! NO! DON'T HIT TH'  
SWITCH. THE  
COMMO'S ON!

RADIO OFF!



Next time you're about to punch the  
MAN START button for the MPU of



your Chaparral missile system, be sure  
the COMM switch is OFF.

And, keep the COMM switch off for

at least a minute after the MPU has  
been running.

Both cautions are important . . . off  
before starting, and keep the switch  
off until the MPU settles down (a  
minute or so).

Otherwise, you'll damage and lose  
your communications from the MPU  
power surge.

The switches are on the master  
control panel of the launch station.

## ZEROING THE M16A1

Dear Half-Mast,

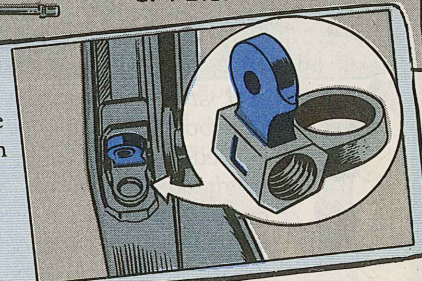
I've got an M16A1 rifle with the Promethium low-light level sight. Which rear sight setting do I use for zeroing—the 2-MM or the 7-MM?

SP4 B.S.



Dear Specialist B.S.,  
Use the 2-MM peephole. That's the  
one marked "L". The word on this is in  
para C-5(2), page 152 of FM 23-9.

GOT IT!





# KEEP THE TOW LAMP GLOWING

The glow lamp (target source lamp) in the TOW M70 trainer is going out more often these days.

Eager gunners stand transfixed, waiting for a lamp which never comes on.

Angry sergeants wave heavy clubs in the air, seeking gremlins which scurry from sight.

They all wail at the frailty of electronic equipment . . . and wonder where the next replacement lamps will come from.

Within its devilish little mind, a glow lamp, about to burn out, too, knows all but says nothing.

A crafty Spec 4 hits an electronic trigger, and the glow lamp spews its secret into a computer.

Here's a printout of the tape:

"I started dying the first time somebody left my cover on and started up the target source. I overheated quickly . . . and would have burned out, but the trooper remembered the cover, shut off the target source, and removed it.

REMOVE COVER BEFORE STARTING UP TARGET SOURCE!

"Then, another time, the jeep driver started up his engine when the target source was on. The battery voltage dropped . . . and took a little bit of my life away. That happened a couple of times.

TARGET SOURCE ON?

DON'T START ENGINE!

"The target source cable and connector at my end (glow lamp) is corroded. The cable arcs . . . and they've got to try over and over again to start me. If they'd only inspect the cable once in awhile . . .

LOOK FOR CORROSION

"Right now, I'm hot and I'm suffocating. My target source inlet filter is clogged with dirt. The flow of air is low, and the heat is killing me. I'm too young to go. I want to glow. If only they'd have checked that filter . . .

IS FILTER DIRTY?

BEFORE REMOVING COVER INSURE UNIT IS INOPERATIVE

And how is your glow lamp today?

The tape faded away to silence.

"Or checked my outlet filter while they were at it . . . G-g-gak . . . CLACK . . . click click click click click . . ."

OUTLET FILTER



# EASY ON THE PUMP!

OOOOH! TOO LATE, SGT MUSSELS!

OOPS! SORRY 'BOUT THAT, BONNIE!

HMMMM! WONDER HOW MANY PSI IS NEEDED HERE!



Go easy on the pumping when you use the gas pump handle on your M49 Redeye trainer.

If you pump out too much pressure from the low pressure reservoir to the high pressure reservoir, you can suck in the diaphragm and make a repair job. Watch the low-pressure gage meter on the trainer. When you get down to the yellow band (20 PSI or less), you've got plenty of expansion space to do the job.

**YELLOW**

**20PSI**

**PUMP IT DOWN**



Reminder to new guys: You're building up pressure in the HP reservoir by moving gas to the LP reservoir when the needle goes toward "0" on the low-pressure gage. The other end of the scale, toward "100", means you're running out of room in the LP reservoir.

And, let the gyros run down before you start pumping.

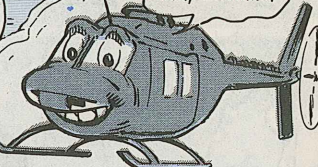
Remember, too, that the M49 should be turned in quarterly to support maintenance for a freon check and tracking and sight alinement.

**AIR MOBILITY**

# SAVE THE COOLERS!

UNLESS YOU CAN SEE AND FEEL METAL PARTICLES, DON'T CHANGE THE OIL COOLER!

YOU TELL 'EM, CONNIE!



A lot of engine oil coolers are being changed when they shouldn't be, running up the tab and causing extra sweat and elbow grease.

The coolers are changed along with the engines when there's a report from the oil analysis lab of high metal wear readings in an oil sample.

Resist the temptation, lads! There's a big difference between metal particles you can see and feel and metal molecules that only the lab can detect.

Metal particles in the Kiowa oil cooler, for example, are listed in para 5-25 of TM 55-1520-228-34 (Nov 72) as being the reason for scrapping an oil cooler. No sweat!

But a high metal wear reading from the lab means the oil is contaminated with metal molecules in parts-per-million—not metal chips.

So, unless you find chips in an oil system, do not change the oil cooler. Just drain the oil system and fill 'er up again.



Alter Needle With . . .

## A FLIP OF YOUR WICKI!

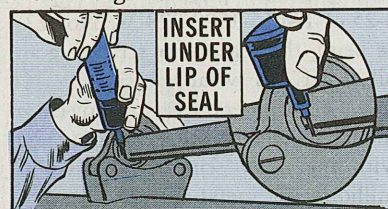


A "hitch" has developed in the requirement to lube the Number 1 and Number 2 tail rotor drive shaft bearings on your Kiowas, birdmen.

'Course, all the bearings get 1 cubic centimeter of grease at 2 places, 180 degrees apart, every 25 flight hours. That's the word in AVSCOM Msg DRSV-FEL 311839Z Aug 76.



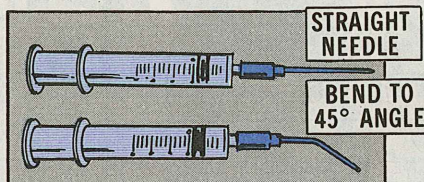
The idea is to lube with an 18-gage needle and a hypodermic syringe, inserting the needle under the lip of the bearing seal.



The straight needle fits fine on bearings, Numbers 3 thru 8. But you have to alter the needle to fit it into the 2 forward bearings.

So, latch onto a piece of lock wire and insert it into the needle. This will keep the needle open when you bend it.

In a shop (away from aircraft) hold the needle with a suitable tool and flip your wick. Heat the needle and bend it, with a pair of pliers, to about a 45-degree angle. That's all there is to it.



Now you can shoot the works to those hard-to-reach bearings.



# KEEP 'EM FLYING!



Dear Windy,  
We have a question about aircraft status when an armament subsystem on our AH-1Q is on a red X.

The Cobra is basically a gun ship, so does the aircraft also go on a red X?

CW3 D. L. T.

Dear CW3 D. L. T.,

Nosir-e-e-e!

Para 4-12c(3) (g) in TM 38-750 says a status symbol in the electronic or armament column block 7, DA Form 2408-13, will indicate whether mission-essential equipment is operational. A status symbol in those columns doesn't indicate aircraft status.

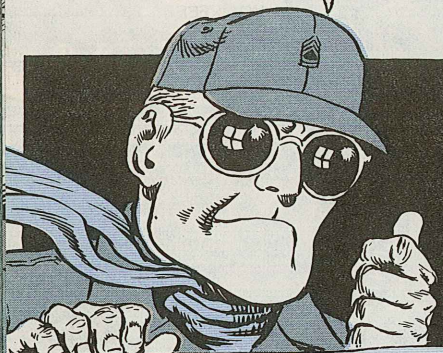
The clincher, tho, is in AR 95-33 (Sep 76) on aircraft inventory, status

and flying time reporting. You do have a reduced materiel condition (RMC) in column 10f of the DA Form 1352. But the bird is operational ready when at least one of the mission-essential subsystems is operable.

SO, YOU CAN FLY THE BIRD ON ALL MISSIONS THAT DO NOT REQUIRE THE RED X'ED SUB-SYSTEM



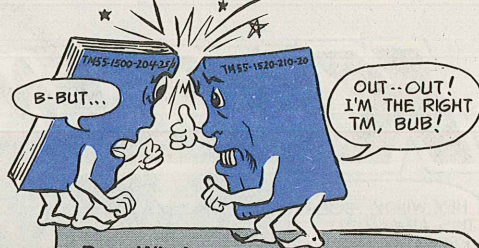
## FOLLOW THE BIRD PUB



Dear Specialist S.C.B.,

The individual bird manual—in this case TM 55-1520-210-20—has the word.

The General Aircraft Maintenance Manual is just that—general. TM 55-



Dear Windy,

My T1 and I are butting heads about what size lock wire to use on Huey tail rotor speed rigs.

TM 55-1520-210-20 (Sep 71), the Huey manual, page 9-23, para 9-16h(6) says .032 wire is used. TM 55-1500-204-25/1 (Apr 70), the general manual for aircraft, says in para 3-176 that .041 wire is used on  $\frac{3}{16}$ -in cable.

We'd appreciate your help on this.

SP4 S. C. B.

1500-204-25/1, para 1-4, says that its instructions are general, and that specific info to be followed is listed in the birds' own pubs.

Windy

## NO PLACE FOR MUSCLE



When you Cobra types climb in and out of the pilot's seat, go easy on the door, OK?

If you use force—especially when opening the door—you'll go past the support stops and crack the door frame.

Course, the damaged door has to go to support for repair and that sidelines the bird until you get a replacement installed.

Easy does it!

EASY-NO FORCE



## KEEP EYELETS IN

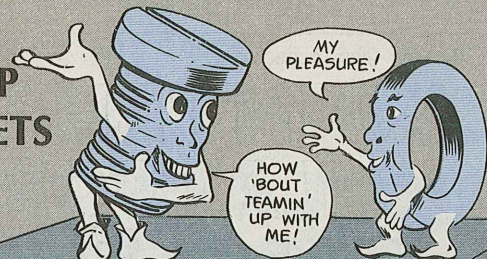
If your SPH-4 flying helmet was made before 1976, it may need a fix. Eyelets in the nylon straps of the ear cup retention harness may pull out unless you do this:

Remove the post nut (NSN 8415-00-490-1201).

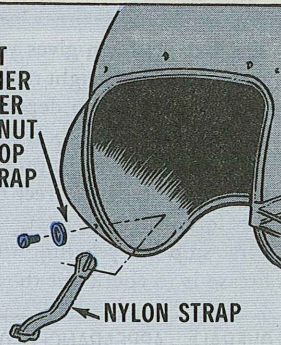
Place a  $\frac{1}{2}$ -in washer, NSN 5310-00-205-8924, under the post nut on top of the nylon strap.

Replace the post nut.

Defense Industrial Supply Center, RIC S9I, is the supplier of the washers.



PUT WASHER UNDER POST NUT ON TOP OF STRAP



NYLON STRAP

## THE PROPER CHANNEL

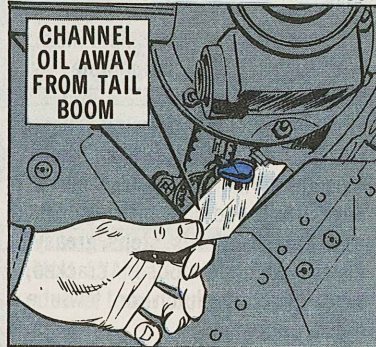
WHEE!



JUST LIKE ADVENTURELAND--NO SPILLS!

Here's how it can be made and used:

CHANNEL OIL AWAY FROM TAIL BOOM



Oil's not the best thing to have slopping around your aircraft.

So, when you get ready to drain an unhandy place like the gear boxes in the tail rotor drive systems of your Huey and Cobra, make a channel. The kind of channel you need you can shape from a thin piece of aluminum. Use it to make the oil flow away from the tail boom.



Be-Your-Own-Inspector . . .

# MAINTENANCE PLATFORM, TYPE B-1

The B-1 platform gives you a safe, portable, variable height maintenance roost. Your safety, tho, depends on the quality of PM you do on it.

The most important problems are in bold face type. Correct or report 'em before using the nest.

First step in eyeballing this rollin' staircase is to check out the . . .

**OVERALL APPEARANCE**—Out of line, leaning to one side; frame bent, members missing, broken; assembled wrong, incomplete; **handrails missing, insecure**; greasy, dirty (Note: clean all metal parts with P-D-680 solvent).

**HYDRAULIC SYSTEM**—Lines, hoses, fittings leaking; fluid level more than 1 inch below filler neck; fluid mixed with solvents; **lock inoperable**.

**FRAME**—Sections missing, bent, rusted, not painted, broken (Note: Smooth down all sharp points, edges); nuts and bolts missing, bent; work area, **handrails, steps, greasy, dirty**; handrails **loose, cracked, bent, pinched**; hitch or towtube cracked, dented.

**WHEELS AND CASTERS**—Tires worn, wearing unevenly; not 40-PSI, cuts, flat spots; bearings not lubed; rims cracked, bent.

YOUR B-1  
PLATFORM  
WILL KEEP YOU  
SAFE AND SECURE  
IF YOU GIVE IT  
REGULAR, CAREFUL  
PM!

**CONTROLS**—Jacks stuck, levers missing, broken, bent; hand pump

handle missing, broken; by pass

valve broken, stuck; cylinder lock

missing, broken, cracked, won't

lock; snap fasteners missing, not working.

**FINAL EXAM**—Platform stuck, **won't raise or lower**, does so at abnormal rate.




## "TURN OFF TURN-INS"



RUNNING A  
SUPPLY OPERATION  
CALLS FOR A LOT  
OF HEADSPACE.



YOU MUST STAY ON TOP  
OF PARTS, PUBS AND REQUESTS--  
WHILE KEEPING EVERYBODY  
HAPPY!



LOOK OVER YOUR  
OPERATION FOR THESE AREAS  
THAT CREATE TURN-INS OF  
SERVICEABLE ITEMS...

While you're juggling all that, time spent on turn-ins of serviceable parts becomes critical.

Sure, most serviceable item turn-ins are necessary: MTOE changes, command recall of parts, or you get an unordered part or unuseable substitute.

Some turn-ins, tho, result from just plain ol' sloppy supply practices.

Those boondoggles cost you time, work and money. And, this escalates for each stop between you and the person managing the item for the Army. When you multiply that total by the number of repair parts, you get a sizeable chunk of the Army budget—which comes right back to you in the column marked taxes on your payslip.

You put the bite on yourself every time you collect excess, forget to cancel a no-longer-needed item or let a bad NSN slip through.

Parts with 3 demands do not go automatically on PLL. Parts with 3 demands in 180 days (3 demands in 360 days for USAR) qualify for PLL stockage, but that shouldn't be an automatic addition to your PLL. You and your CO decide if those demands will continue or if they were just a one-shot (actually 3-shot!) deal. There's no sense in putting a part on the PLL—with required stockage and more paperwork—if you know the part'll come off a year later from lack of demand.

Keep an eye out for changes in MTOE or substitute end items. If replacements or new gear comes in, go over the document register for open requests on parts to fix the old gear. Cancel the ones you no longer need.

Compare the storage location on the DA Forms 3318 or PLL printout with the part's actual location. Current, easy-to-find storage locations insure you against ordering parts you already have.

CLASS IX REPAIR PARTS  
PRESCRIBED LOAD LIST

77 MAY 04 PAGE NO 1

UAAC ACTAAL

NSN	NOUN	A/M	U/I	AUTH	ON-HAND	EXP CODE	DIST STOCK	END ITEM	UNIT PRICE	EXTENDED UNIT PRICE	LOCATION
5305 000018153	SCREW MA		EA	004	004	X	1		\$ .03	\$ .12	4B-22
5315 000156626	PIN BAR		EA	002	002	X	1	M274	\$ .51	\$ 1.02	4B-18
2040 000198087	FILTER E		EA	002	001	Y	1	TRK M561	\$ 1.62	\$ 3.24	3D-13
							1	TRK M274	\$ 14.10	\$ 28.20	7A-09

DA FORM 3318

## RECORD OF DEMANDS - TITLE INSERT

REPLACES DA FORM 1948, 1 MAY 62 AND  
DA FORM 2587, 1 MAR 62, WHICH ARE  
OBSOLETE.For use of this form, see AFM 72-54, the Department Agency  
in Office of the Deputy Chief of Staff for Logistics.

## RECORD OF DEMANDS

STOCK NUMBER

ORGANIZATION DOCUMENT NUMBER	QUANTITY DEMANDED	CUMULATIVE QUANTITY DEMANDED	BALANCE ON HAND	ORGANIZATION DOCUMENT NUMBER	QUANTITY DEMANDED	CUMULATIVE QUANTITY DEMANDED	BALANCE ON HAND	ORGANIZATION DOCUMENT NUMBER	QUANTITY DEMANDED	CUMULATIVE QUANTITY DEMANDED	BALANCE ON HAND
6351-0009	①		1								
7031-0004	①		1								
7067-INV			2								

DETACHED FROM 3318, 1 Mar 68

TITLE INSERT

REMARKS

TRUCK, M561 UI-EA  
TM9-2320-242-20P (Sep 70) RC-

STOCKAGE CODE

DATE

QTY

DS 5251 1

STOCK NUMBER


ITEM DESCRIPTION

AUTHORIZED STOCK LEVEL (see period)

LOCATION

13

2940-00-019-8087 Filter Element



THE STORAGE  
LOCATION OF YOUR DA FORM  
3318 OR PLL PRINTOUT SHOULD  
MATCH THE NUMBER - LETTER  
LOCATION CODE OF THE PLACE  
WHERE YOU ACTUALLY KEEP  
THE PART. CHECK BEFORE  
YOU REQUEST.



Treat your requests like your paycheck. Go over each entry—each number, each code—at least twice.

**DLOGS** USERS KEEP ON-HAND  
COLUMN ON THE LATEST  
PLL PRINTOUT.

... ..

NSN	NOUN	A/M	U/I	AUTH	ON-HAND
5305 000018153	SCREW MA		EA	004	004
5315 000156626	PIN BAR		EA	002	002
2940 000198087	FILTER E		EA	002	001
2590 000337760	WIRE ROP		EA	002	002

**RECORD OF DEMANDS — TITLE INSERT**  
(AR 735-35)

STOCK NUMBER 2940-00-019-8087

RECORD OF DEMANDS				STOCK NUMBER 2 110 000 000			
ORGANIZATION DOCUMENT NUMBER	QUANTITY DEMANDED	CUMULATIVE QUANTITY DEMANDED	BALANCE ON HAND	ORGANIZATION DOCUMENT NUMBER	QUANTITY DEMANDED	CUMULATIVE QUANTITY DEMANDED	BALANCE ON HAND
a	b	c	d	a	b	c	d
6351-0009	①		1				
7031-0004	①		1				
7047-INV			2				
7084-0010	①		1				
7111-0003	①		1				

SO LET SOMEONE ELSE CHECK THE FORM WHILE YOU CALL OUT THE NSN, UNIT OF ISSUE, QUANTITY OR ANY CODES YOU'VE ADDED.

54

**ORDER  
1 PG  
FOR EACH  
50 BOLTS  
YOU NEED**

**PS MORE**



Keep your document register current. Write up each request immediately. Unlisted requests lead to duplicates—and one more item to turn in.

Use your reconciliation lists and status cards to the max. As a list or a card comes in, check it against the document register. Ask the maintenance types if the item is still needed. Yes? Update your records. No? Cancel now!



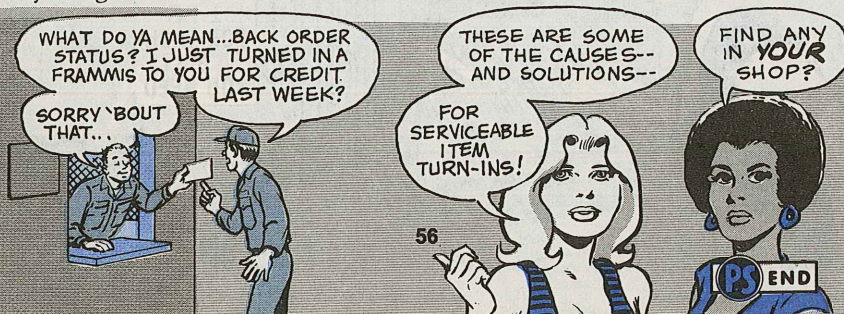
Always compare NSN's on status cards and reconciliation lists with the NSN on the document register and your prepunched/preprinted request cards for that item. If the numbers do not match, check 'em out. If there's a change, line out the old NSN on your document register and write the new NSN above it. Correct the info on your DA 3318, too. Then, trashcan any unused preprints. Support should send you new ones with the new info.

Work with the maintenance supervisor or motor sergeant. They're quick to tell you when they need a part so they should tell you just as quick when they no longer need a part.

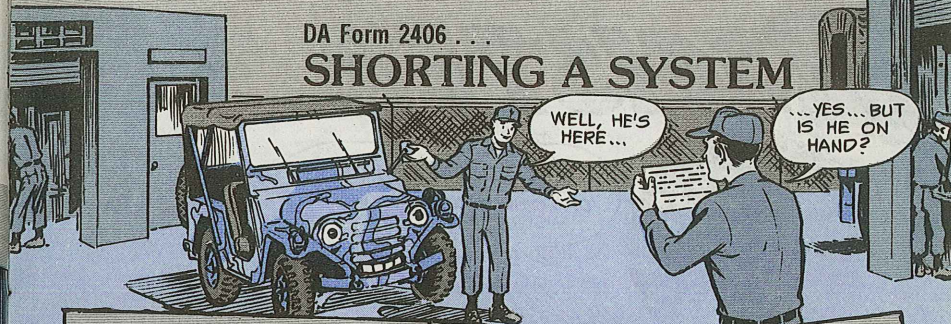
You should have an open request for each DA Form 2404 or 2407 they hold for parts. If they close out a work order, you should close out (as received or cancelled) the request you had for that part.

If you operate under a local financial system like COLEX or checkbook accounting, stay within the rules. If you're short of cash, talk to your CO. Maybe the CO can talk support or another unit out of a part temporarily—or command out of extra money. NEVER turn in authorized parts to get credit so you can buy other parts you need, tho.

When you turn in authorized parts for credit to buy other parts, you may be buying some grief. The turned-in item goes back into the system. It doesn't just lie around waiting on your next request. So, next time you need it, could be you'll get back order status instead of the item.



## DA Form 2406 . . . SHORTING A SYSTEM



Dear MSG Half-Mast,

We have 8 M151A1's authorized, 8 on hand. We have 2 AN/GRC-106 reportable radios authorized to be mounted on 2 of those trucks. The

radios are on order. None on hand. How do we report the trucks on the DA Form 2406?

CW3 G. C. W.

Dear Mr. G. C. W.,

The 2 trucks authorized to carry the reportable radios become subsystems of the AN/GRC-106 communication systems. Those trucks would not be listed separately on the DA 2406.

So, you report 6 M151A1's authorized, 6 on hand. Two

AN/GRC-106 systems authorized, 0 on hand.

If necessary, use the back of the form to explain that the 2 subsystems (M151A1's) are available.

Half-Mast

## CLOSE FORM ON OPEN REQUEST

Dear MSG Half-Mast,

If you have not received an item listed on a DA Form 3318 in the non-stocked item demand file, do you still toss the form out as it says in para 2-42b of AR 710-2?

WO 1 H. T.



Dear Mr. H. T.,

Yes. Those DA 3318's in the non-stocked item demand file just keep track of demands. You use the DA Form 2064 Document Register to keep tabs on supply actions.

So, an open request has no effect on the DA 3318 review. Only the number

of demands you made during the last 180 days affects it.

If you show no demands for a non-stocked item in the last 180 days, toss out the DA 3318 even if a request over 180 days old is still open.

AR 710-2 IS ON TARGET!!





# REGISTER YOUR EQUIPMENT!

IF YOU THOUGHT TM 38-750 COVERED EVERY USE OF THE DA FORM 2408-9, YOU'RE MISSING SOMETHING!

AR-710-3

CONTROL NO. <b>271951</b>	1. ORGANIZATION	2. LOCATION
6. NOMENCLATURE	7. MODEL	8. F
11. YEAR OF MFG	12. MANUFACTURER (MFG Code)	13. CONTRACT NO
16. TYPE REPORT	17. REPORT CODE	18. USAGE
a. ACCEPTANCE AND REGISTRATION		a. HOURS
b. USAGE		b. MILES
c. TRANSFER		
d. LOSS		
e. GAIN		
f. OTHER		
21. REMARKS		
22. INSPECTOR'S SIGNATURE		
EQUIPMENT CONTROL RECORD		
For use of this form, see TM 38-750; the proponent agency is the Office of the Deputy Chief of Staff for Logistics.		
REPLACES DA FORMS 2408-7, 1 JAN 64, AND 2408-8, 1 JAN 64, WHICH ARE OBSOLETE.		
DA FORM 1 OCT 72	2408-9	

THE ARMY'S VEHICLE REGISTRATION PROGRAM—AND THE DA FORMS 2408-9 REQUIRED—FALL UNDER AR 710-3 NOT TM 38-750

Table 7-1. Positions 1 and 2 of the US Army Registration Number

C (Alpha except I, O, Q, X, & Z)

JA	Tank, Combat, M48 Series
JC	Tank, Combat, Flame Thrower
JD	Tank, Combat, 76 MM Gun M41 Series
JE	Tank, Combat 152 MM XM803
JF	Tank, Combat, 120 MM Gun
JG	Tank, Combat, 90 MM Gun M47
JJ	Tank, Combat, 105 MM Gun, M60 Series
JK	Tank, Combat, 152 MM Gun, M60 Series
JP	Combat, Eng Vehicle, M728
JQ	Armored Reconnaissance Airborne Assault Vehicle 152 MM M551
JT	Recovery Vehicle, M51/M74/M88
JU	Gun, FT 90 MM M56
JV	Recovery Vehicle, M578
JZ	Miscellaneous Tanks
KA	Gun, Anti-Aircraft, SP, 40 MM M42 Series
KB	Howitzer, SP, 105 MM, M7 Series
KC	Howitzer, SP, 105 MM, M52 Series
KD	Howitzer, SP, 8-IN, M110; Gun, 175 MM M107
KE	Howitzer, SP, 105 MM, M108
KG	Howitzer, SP, 155 MM, M109
KH	Howitzer, SP, 8-IN, M155; Gun, 155 MM M53
KL	Gun, Anti-Aircraft, SP, 20 MM, M163 (VADS)
KN	Howitzer, SP, 155MM, XM179
KZ	Miscellaneous Combat Vehicles
MA	Armored Carriers
MP	XM491-XM597-XM598 Configuration M113 Configuration

## Commercial Vehicles

### Tanks

## Combat Vehicles

## Armored Carriers

Section III, Chap 7 of AR 710-3 on Asset and Transaction Reporting System (Sep 72) directs the Army Vehicle Registration Program. This program requires DA Forms 2408-9 on certain equipment that has—or should have—registration numbers. You keep DA 2408-9's on those vehicles whether or not they're listed in Appendix E of TM 38-750.

Registration numbers serve as license plate numbers for government vehicles.

When you receive equipment listed in Table 7-1 of AR 710-3—including commercial design vehicles—you should also get a DA Form 2408-9 Acceptance and Registration report with it.

If your equipment arrives without the forms—or with missing or unreadable registration numbers—tell your property book officer. Missing DA 2408-9's should be replaced. You can request a registration number to replace a missing or unreadable number from USAMMC, Lexington, KY 40511. Para 7-15c of AR 710-3 tells you how.

As you transfer that equipment to other units—or it's lost or destroyed—fill out DA 2408-9 transfer or loss reports.

Get a copy of AR 710-3 and keep Table 7-1 handy. The equipment in that table including commercial design vehicles adds up to a lot of equipment—not covered by Appendix E of TM 38-750—needing DA 2408-9's.



# HYDRAULIC OIL FILTER

## PM

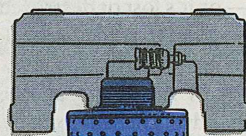
Mobile assault bridge operators take note. Para 3-18, TM 5-5420-204-12 (Oct 73) and sequence No. 20 in the PM Checks 'n' Services table clue you in when to take care of hydraulic fluid filters. Figure 3-5 tells you what to clean and replace when you PM the high pressure discharge line filter on FMC Model BF-FMC-1 transporters.

Trouble brews, tho, if you don't put the whole 9 yards back together right after changing the filter, NSN 4330-00-406-9016.

F'rinstance, if you don't use 12 good, clean bolts ... and torque 'em just right, you'll damage the internal threads in the aluminum filter head.

So-o-o-o, be PM-wise when you replace the filter and O-ring and do it like so:

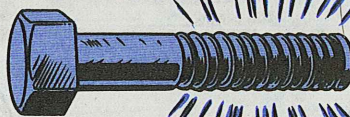
① Follow the poop in the NOTE, and Steps 1 and 2 of Fig 3-5. When you put in the new filter and O-ring, screw the filter in place by hand tightening it  $\frac{1}{3}$  to  $\frac{1}{2}$  turn past the point of initial contact with the gasket.



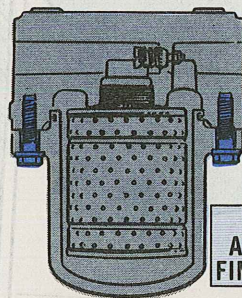
SCREW  
IN PLACE  
BY HAND

② Be sure the filter retaining bolt threads are clean 'n' smooth. This means no smashed, burred, bent, or wrinkled threads.

BOLT THREADS CLEAN



③ Put in all 12 bolts and run 'em up fingertight. If a bolt won't thread into the filter head real easy, get a new one ... or chase the threads in the head with a  $\frac{1}{2}$  x 13 tap.



RUN IN  
ALL BOLTS  
FINGERTIGHT

Use an exception data supply type request to get new bolts—MS35295-114 (96906). These bolts are also called hex head cap screws. If you need the lock washers that go under the cap screws, use MS35339-48 (96906).

C'MON, DUPLEY...  
WHAT'S THE  
SCOOP?

HYDRAULICS ARE  
INOPERATIVE, SARGE...  
FILTER'S CLOGGED...



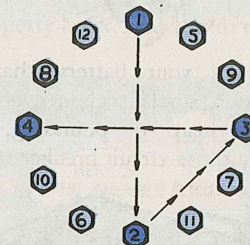
DID HE  
EVER  
HEAR  
OF  
FILTER  
PM?

WHAT'S  
TH' HOLDUP?

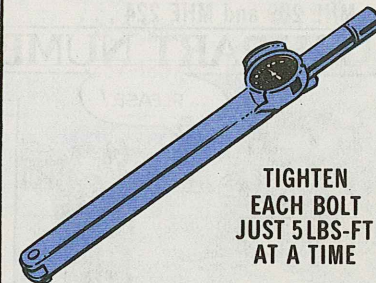
SEEMS  
THE  
FOXTROT  
MAB  
CREW  
CAN'T GET  
THEIR  
BRIDGE  
UP!

THERE'S  
ALWAYS  
ONE IN  
EVERY  
CROWD!

④ Torque the bolts in sequence to 65-75 lbs-ft ... like this: Top, Bottom, Right, Left. Tighten the remaining bolts in the order shown.



Hold one! Just tighten each bolt 5 lbs-ft at a time. This means you use the torque wrench on each bolt 12-14 times every time you change the filter in the high pressure hydraulic discharge line.



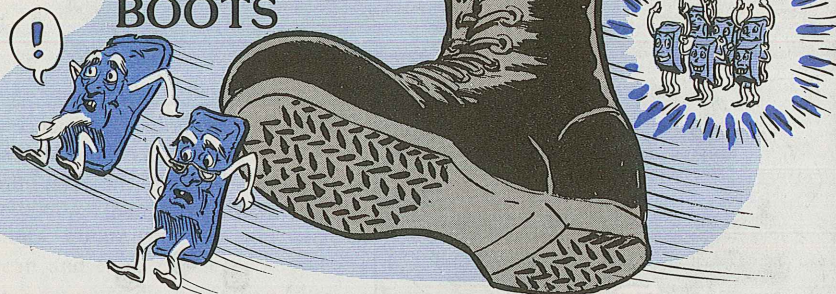
TIGHTEN  
EACH BOLT  
JUST 5 LBS-FT  
AT A TIME

Use torque wrench NSN 5120-00-640-6364 from your No. 1 Common Shop Set for this very important job.

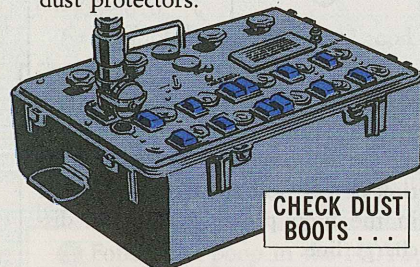
⑤ Check for leaks; add oil if you have to.



## BOOT BUSTED BOOTS



You use your battery charging distribution panel just about every day. Takes a heap o' pounding, too, 'specially those circuit breaker rubber dust protectors.



For MHE 209 and MHE 224 . . .

## USE PART NUMBER FOR ROTOR

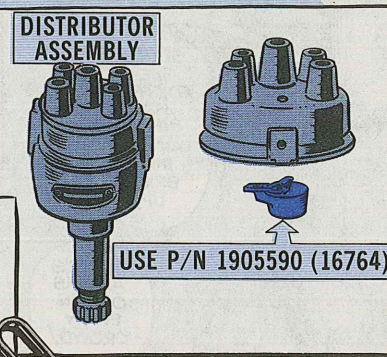


The rotor NSN for Item 8, Fig 48 of TM 10-3930-621-20P (Sep 73) is wrong. Use the P/N 1905590 (16764) and order by exception data supply request. RIC is S9C.

So they wear out. No need to mess around with bum boots. Boot 'em. Use PN 06-10028(74193) and an excep-



tion data supply request to save some more expensive repair parts . . . like maybe a circuit breaker



## COMPLETED DA 2064'S

For units hung up over completed DA Forms 2064, AR 340-2 (Sep 69) on Maintenance and Disposition of Records in TOE Units rules on how long you keep them.

The nonreportable expendable items document register is considered a reference paper file. When you no longer need that DA 2064, destroy it. That could be the day the form is finished or a year later. Para 2-17 of AR 710-2 discusses that option.

The nonexpendable and reportable expendable items document registers fall under file 14-01.2 Document Register Files. That file covers paperwork on supply actions that affect entries to the property book. Hold on to those DA 2064's for 2 years after they're completed.

SORRY, BABY... I DON'T KNOW HOW TO ORDER A RIBBON FOR YOU!

## RIBBON ROUNDUP

HERE'S THE ANSWER!

If it's time to change the ribbon on your electric typewriter, here's some help. IBM models 875 and 895 use the following ribbons, with FSCM 30874 and RIC G O:

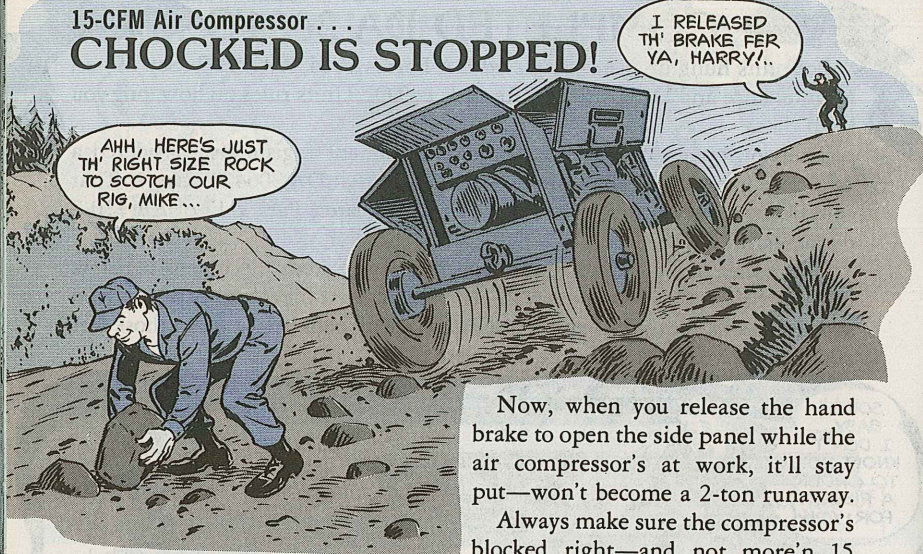
TYPE OF RIBBON	IBM PART NO.	NSN 7510-00	
1. Correctable film	1136432	-241-5364	
2. Lift-off tape for #1	1136433	-275-8558	
3. Tech III	1136391	-009-5004	
4. Tech III coverup tape	1136435	-357-4857*	
5. Carbon film	1136390	-083-3951*	
6. Fabric	1136138	-134-8208*	

\* THESE ITEMS ARE NOT IN THE AMDF. ORDER THEM BY EXCEPTION DATA REQUEST.

If you need IBM 752 carbon paper, order it by exception data request. Use IBM Part No. 1023763 (30874) for 8½ X 11½-in paper or 1023764 (30874) for 8½ X 14½-in paper.



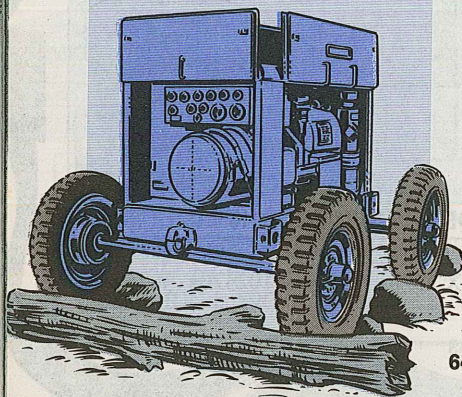
## 15-CFM Air Compressor ... CHOCKED IS STOPPED!



And STOPPED is how you want your 4-wheel Ingersoll-Rand Model P4R15G-J air compressor when you release the hand brake.

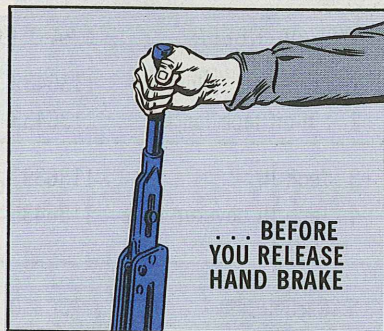
So, when you set up for operations, find a clean, level, solid spot for your compressor ... and block the wheels. Para 2-3, TM 5-4310-341-14 (Jun 72) has the word.

### ALWAYS BLOCK WHEELS ...



Now, when you release the hand brake to open the side panel while the air compressor's at work, it'll stay put—won't become a 2-ton runaway.

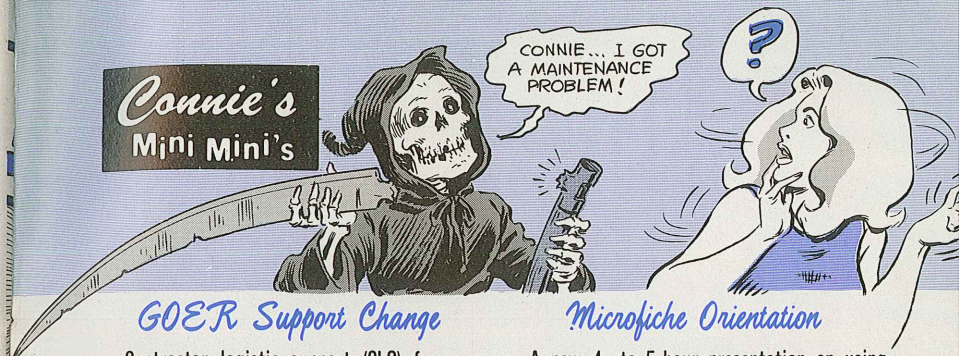
Always make sure the compressor's blocked right—and not more'n 15 degrees off level—before you release the hand brake.



A field fix that lets you open the door without touching the hand brake is authorized in TB 43-0001-11-4 (Jan 77).



## Connie's Mini Mini's



### GOER Support Change

Contractor logistic support (CLS) for your Goer is out 1 Jul 77. Total Army support is in. All parts will be supplied through the Army supply system. Every item marked CLS in the parts manual will have an NSN. Your unit should already have received a cross reference list from P/N to NSN to supplement the present -20 TM. Parts manuals are supposed to be available not later than September 1977.

### Microfiche Orientation

A new 4- to 5-hour presentation on using microfiche products is available. Your command can set up a presentation by contacting USA DARCOM Catalog Data Activity, ATTN: DRXCADS, New Cumberland Army Depot, New Cumberland, PA 17070. Or call Autovon 977-6644/6603.

### 5-Ton Air Cleaner Decals

Want ID and instruction decals for your TM 260-series 5-ton truck's air cleaner? Order the ID decal with NSN 9905-00-197-5962. Get the instruction decal with NSN 9905-00-197-5957.

### Paystar Battery Payoff

Your IHC Model F5070 20-ton dump truck battery doesn't have an NSN ... yet. So, use PN (19728) 1424X to get this Prestolite 6-V, 208-amp power package for your Paystar. It's the only one authorized.

### Tooth Tool Clean-Up

The right size weld rod bits for the sprocket removal tool on page 37, PS 292, is 1/8-in diameter. Quarter inch rod is too large—won't fit between the sprocket teeth.

### PMS Card Clean-Up

Page 65, PS 292—on saving old PMS cards—is misleading. You only hold on to the bird's old PMS card for daily inspections till you receive the bird's new PMS card.

### 106-MM RR Barrels

Did you do a double take on that 106-MM recoilless rifle article on Page 3 of PS 293? Para 4 should have ended: "the barrel and vent assembly can no longer be used together (1250 rounds)." Barrel life is 2500 rounds. Vent assembly life is 1250 rounds.

### 1/4-Ton Trailer NSN

Make a note in TM 9-2330-251-14 (Oct 70) for your M416 or other 1/4-ton trailer. That FSN 2510-732-8325 for the right hand rear shackle bearing should be NSN 2510-00-769-7598.

☆U.S. GOVERNMENT PRINTING OFFICE: 1977 - 757-002/8

Would You Stake Your Life <sup>right now</sup> on  
the Condition of Your Equipment?



# CUT UNNECESSARY IDLING

## CHOP:

- FUEL WASTE
- POLLUTION
- OIL WASTE
- FOULED-UP ENGINES

