

Issue 363

PS

February  
1983

THE  
PREVENTIVE  
MAINTENANCE  
MONTHLY

Be a  
SWEETHEART...  
Let somebody  
else read  
this issue!



The time has come  
to tell it True  
And lay it on  
the Line --  
Your PM's Great,  
so why don't you  
Please be our  
Valentine?!

Windy  
Connie Half-Wast  
Bonnie Macon

MURPHY  
ANDERSON

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

MSG Half-Mast  
PS Magazine  
Lexington, KY  
40511

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Making Good Operators...

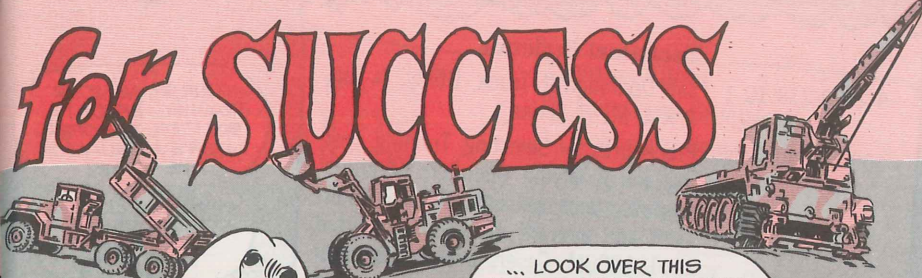
# A Formula for SUCCESS



IT'S NOT AS EASY AS 1+1=2!  
BUT THERE IS A FORMULA FOR MAKING GOOD EQUIPMENT OPERATORS...

BEFORE YOU SET UP A TRAINING PROGRAM...

... LOOK OVER THIS LIST OF PUBS FOR ONES THAT SUIT YOUR NEEDS...



- 58-1 w/C1**  
**Army Regulations**  
Management, Acquisition and Use of Administrative Use Motor Vehicles. Chap 10 will help you if you have admin-use (non-tactical) vehicles.
- 190-5 w/C2**  
**385-10**  
**385-40**  
**385-55**  
**600-55**  
Motor Vehicle Traffic Supervision  
Army Safety Program  
Accident Reporting and Records  
Prevention of Motor Vehicle Accidents  
Motor Vehicle Driver-Selection, Testing and Licensing
- 310-8**  
**DA Pamphlets**  
Index of Army Personnel Tests and Measures
- 611-125 w/C1**  
Test Procedures for Licensing Drivers of Army Vehicles
- 20-22**  
**21-6**  
**21-17**  
**21-60**  
**21-305 w/C2**  
**55-30 w/C1**  
**Field Manuals**  
Vehicle Recovery Operations  
How to Prepare and Conduct Military Training  
Driver Selection, Training and Supervision—Track Combat Vehicles  
Visual Signals  
Manual for the Wheeled Vehicle Driver  
Army Motor Transport Units and Operations (Chap 9 replaced TM 21-300)

### Technical Bulletins

- 9-2320-218-10-1 Safe Operation of Truck, Utility, ¼-Ton, 4 X 4, M151-Series
- 600-1 w/C2 Procedures for Selecting, Training, Testing and Qualifying Operators of Equipment/Systems (except selected watercraft and aircraft) managed/supported by TSARCOM. Covers gear like generators, compressors, water purification sets, pumps, truck-mounted mine detectors, MUST's, fire trucks
- 600-2 Procedures for selecting, training, testing, qualifying and licensing operators of construction, MHE, AVLB equipment
- 9-1200-209-10 Multiple Integrated Laser Engagement System (MILES)

### Technical Manuals

- 9-8000 Principles of Motor Vehicles
- 21-306 Manual for the Track Combat Vehicle Driver
- 38-600 Administrative-Use Vehicle Management
- 38-750 The Army Maintenance Management System (TAMMS)

Depending on your unit mission and equipment, other pubs should be added or used.

- FM 31-35 Jungle Operations
- FM 31-71 Northern Operations
- FM 90-3 Desert Operations
- TB 43-0239 Maintenance in the Desert
- FM 90-6 Mountain Operations
- FM 90-13 River Crossing Operations

'COURSE, ALL YOUR TRAINING EFFORTS BUILD ON THE OPERATOR'S MANUAL ON THE GEAR!

MAKE SURE YOUR OPERATORS ALL HAVE AN UP-TO-DATE COPY...

AND USE IT!

YOU'LL FIND SOMETHING ON ALMOST EVERY TYPE OF GEAR OR OPERATION!

FOR EXAMPLE...

- TF 9-3106
- TF 9-3107
- TF 9-3359
- TF 9-3381, -3382, -3383, -3384
- TF 9-6099
- MF 17-5934
- MF 20-5152
- TF 55-3707
- TF 55-4167, -4168
- TF 55-4247
- TF 55-4277

- TVT 55-102
- TVT 55-103, -104, -105, -106, -107

- 020-171-5802F
- 945-171-0100F
- 945-171-0101F

C 11-8-1

C 11-8-2

C 5-4-29-series

### Training Films

- DC Motors and Generators
- AC Motors and Generators
- Howitzers M108, M109
- Recovery Vehicle, M88
- Safe Operation of the Gama Goat
- Goer
- National Driver's Test
- Operation of M151-Series ¼-Ton Trucks
- Safe Military Vehicle Operator
- Truck, ¼-Ton M151A2
- Driving the Tractor and Semitrailer

### TV Videotapes

- Traction Aids and the Winch
- M911 (C-HET)

### Training Extension Courses (TEC)

- Combat Driving
- Varied Terrain Driving
- Reduced Traction and Hazards

### Graphic Training Aids

- Operating PU-617/M, PU-628/G, PU-625/G
- Operating PU-618/M and PU-619/M
- Operation of Rough Terrain Forklift Trucks

Your local safety office, driver's testing station or the MP's can tell you about any locally required training, like a defensive driver's course.

But other than the 2 training films on the M151-series, the headshed leaves training requirements up to your SOP.

So it's pretty much up to you to make sure your operators are trained and licensed and able to handle the equipment your unit's mission demands.

# Hammer Shows Up "LAZY" Tires



YES, PVT. BASHEM... THE HAMMER TEST IS GREAT FOR DETECTING AN UNDERINFLATED DUAL ...

... BUT A BALL-PEEN HAMMER IS ENOUGH FOR EVEN THE BIGGEST RIG!



If the PMCS for your truck or trailer is up to date, you find that you're no longer required to gage tire pressure as part of the "before operation" inspection. "Weekly" is enough.

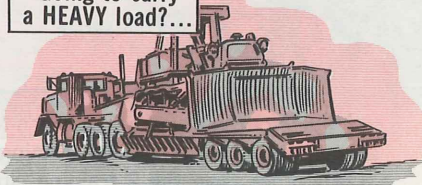
But you do eyeball the tires closely "before operation" for cuts and other damage—and for flats.

Trouble is, how do you spot an underinflated tire in a set of duals when its mate is carrying the load? A soft tire may stand up straight 'n' tall

when it's alongside a fully inflated tire—especially under a light load.

And if you're like a lot of drivers, you pull your "before operation" PMCS before the vehicle's dispatched to you—when it's empty—and that's the end of it. The load on that good tire is nothing compared

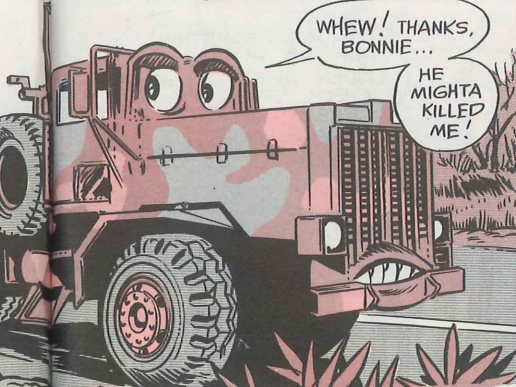
Going to carry a HEAVY load?...



to what it'll be when you take on a few tons of cargo—or when you roll a bulldozer or tank onto your lowbed semitrailer.



Underinflated? You can't tell just by looking!



WHEW! THANKS, BONNIE...

HE MIGHTA KILLED ME!

Those duals are a team—they've got to share the load. With an under-



Give every tire a good whack!

inflated tire goofing off, the other tire's not long for this world!

When your eyes can't spot a soft tire, a hammer can. As you do your "before operation" walk-around, give every tire a good whack with your hammer. "Pong" is good—your hammer will bounce smartly off a fully inflated tire.



A DULL, MUSHY "THUNK" MEANS YOU'D BETTER DOUBLECHECK WITH YOUR TIRE GAGE--AND INFLATE AS NEEDED!

M915-Series...

## Tires Differ Between Models

YUP! I'M AN OFF-THE-ROAD TIRE...

YER NOT AUTHORIZED...

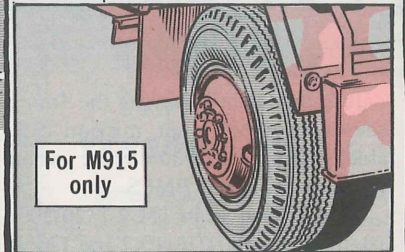
GET LOST!

SO WOT?



You can quit looking for off-the-road tires for your M915-series trucks—they're not authorized.

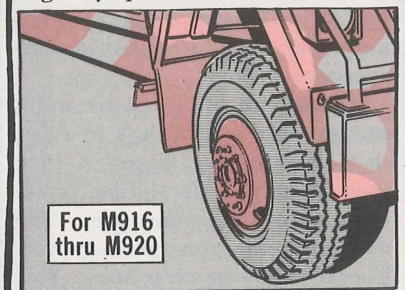
M915 truck-tractors use 10.00x20 size tires with a highway tread de-



For M915 only

sign. Use NSN 2610-00-060-9960 to order this tire.

Front-wheel-drive M916 thru M920 trucks take a larger tire—11.00x24—designed for both normal highway operation and limited use on



For M916 thru M920

secondary roads. NSN 2610-00-489-8040 gets this tire. It replaces NSN 2610-00-294-9483, a straight off-the-road tire.

# Loose Frame

# Rivets?

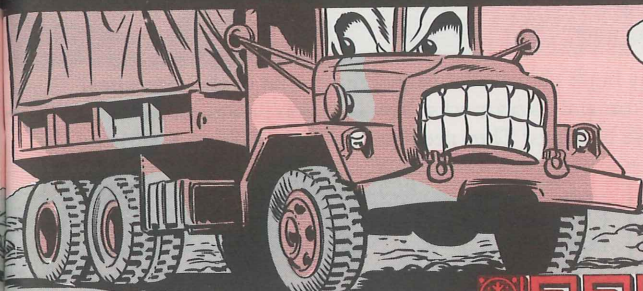
# NMC!

HMMM... SOMETHIN' RATTLING 'N' BANGING UNDER THERE! I'LL HAFTA CHECK YER FRAME RIVETS ONE O' THESE DAYS!



YOU BETTER CHECK 'EM RIGHT NOW!

MY CROSSMEMBERS ARE 'BOUT TO FALL OFF-- AND THAT'LL BE ALL SHE WROTE!



## Look, Feel

Just one loose rivet in the frame causes an NMC (not mission capable) rating for your truck when you're pulling your PMCS.

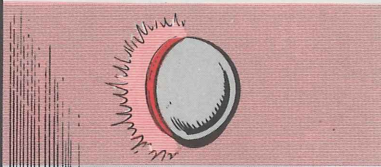
That's the word in TM 9-2320-209-10-2, TM 9-2320-211-10-2 and TM 9-2320-260-10-2. "Loose" is intended to apply to "bolts or rivets" as well as to "side rails" and "crossmembers".

So you've got to sharpen your eyes when you're making this monthly check of the UNDERBODY, FRAME. There're a lot of rivets under there—and you need to check every one of 'em.

A loose rivet is big trouble in the making—like a small leak in a dam that keeps getting bigger. A loose rivet allows a little shifting of the frame members at that point. This adds to the strain on the other rivets. They'll loosen or even break. Your frame will come apart!

When you find a loose rivet, report it—pronto. Your DS will take care of the repair.

One sign of a loose rivet is shiny metal on the frame around the rivet head. This means the rivet is moving and rubbing the frame.



The rivet's really a sloppy fit if you can wiggle it with your fingers.



Rust around the rivet head is a clue, too. If your truck sits still for a long time, the "shiny metal" around a loose rivet becomes rusted metal. You



## 'n' Whack

may not be able to wiggle the rivet because of rust buildup under the rivet head. But you can check with oil and a hammer...

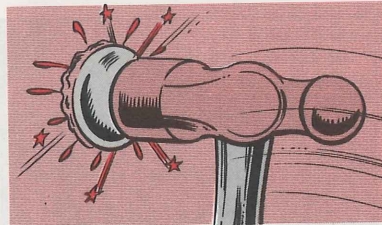
—Squirt some light oil around the rivet head.



—Let the oil soak in.

—Wipe the oil off with a rag.

—Give the rivet a good whack with a small hammer.



—Watch for oil to be squeezed out from under the rivet head.

If oil does show up, that rivet is probably loose. Report it!

## Windshield Washer: Act 2

There's been a lot of interest in the windshield washer kit mentioned in PS 355. But some people wonder why the kit's coded for Organizational Maintenance in the parts manual while being listed for DS in the MAC.

Here's the updated story:

The windshield washer installation kit, NSN 2540-00-279-8180, now in TM 9-2320-209-34P, will show up in the -20P with the same SMR Code—PAOZZ.

The MAC in the -20-1 TM will be changed to show installation of the kit as an Org Maint job.

The same info will show up in TM 9-2320-211-20-1 and -20P and in TM 9-2320-260-20-1 and -20P for the 5-ton trucks.

Instructions for installation come with the kit.

2½- and 5-Ton Trucks...

# Cork Protects Bearings & Brakes

IT'S A TRUCK'S BEST FRIEND!

REMEMBER THE ALAMO!

REMEMBER PEARL HARBOR!

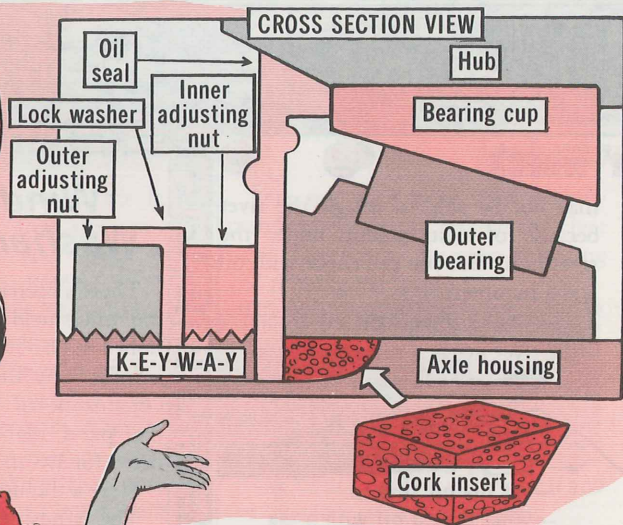
REMEMBER THE CORK INSERT!

CORK INSERT?

YUP!

Right, that itty-bitty hunk o' cork that helps keep oil out of the rear wheel bearings on your 2½-ton and 5-ton trucks. You sure don't want oil washing the grease out of those bearings. They need grease—they'll burn up without it!

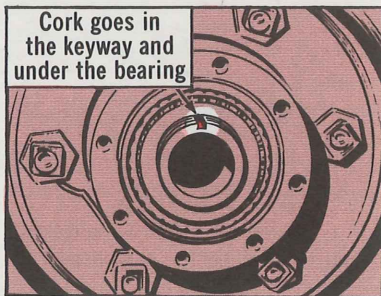
THESE PICTURES SHOW THE SET UP FOR 2½-TON TRUCKS... BUT THE CORK INSERT GOES IN THE SAME WAY ON 5-TON TRUCKS!



And you don't want oil in your brake drum. Oil on brake linings means no brakes! This can happen when the cork insert's missing and oil gets by a faulty inner seal.

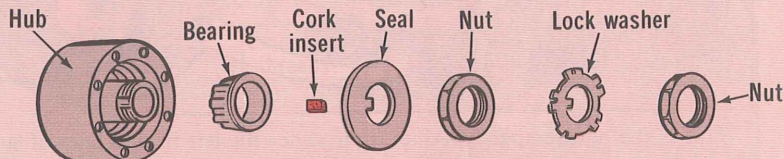
Oil in the axle housing is free to travel out the end of the axle housing spindle. The outer seal blocks this oil from getting into the hub —except where the spindle keyway offers a handy channel under the outer bearing.

This's where the cork insert stars. It's jammed in the keyway under the bearing. It's a plug. It stops oil from getting into the hub.



## Note for your -20 TM

You won't find this cork insert mentioned in your -20 TM—TM 9-2320-209-20-3-2, TM 9-2320-211-20-3-2 or TM 9-2320-260-20-3-2. It should be shown in Section III, Rear Wheel Assembly, along with the outer bearing, outer seal, adjusting nut, lockwasher and locknut.



The cork insert is jammed under the bearing by the seal keyway tang when pressure is applied by the nut

YOU WILL FIND THE CORK INSERT LISTED AS A REPAIR PART IN 2 OF THE 3 -20P TMs...

Item 7, Fig 110, TM 9-2320-209-20P, Cork, wheel bearing lock keyway, NSN 5330-00-348-8365.  
Item 3, Fig 13-2, TM 9-2320-260-20P, Insert, keyway oil seal, PN 8758266.

Or you can make a lot of inserts from a cork sheet, NSN 5330-00-350-9099.

## 2½- & 5-Ton Seats

HEY! HE'S GOT MY COMPANION SEAT!

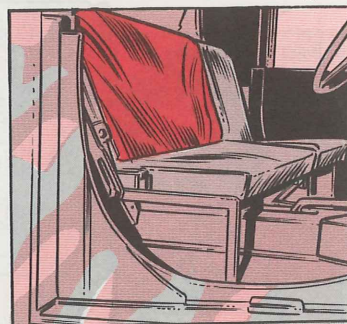
NO! IT'S MINE!

FITS YA BOTH!

The deuce-and-a-half's companion seat back cushion shown in Fig 162 of TM 9-2320-209-20P has been dropped.

Order the substitute, NSN 2540-00-737-3311. This is the same cushion that's used on the 5-ton trucks.

There are 2 interchangeable seat assemblies that you can use on any of these trucks, NSN 2540-00-407-2611 and NSN 2540-00-737-3307. They are both listed in TM 9-2320-209-20P.

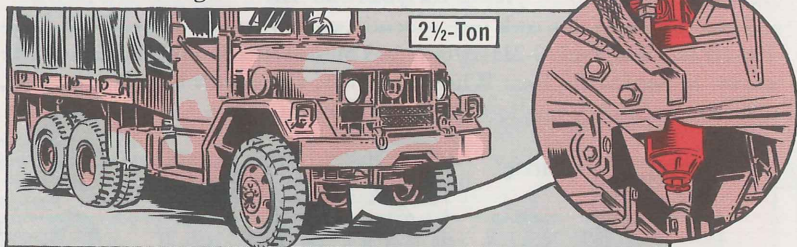


2½-Ton & 5-Ton Trucks...

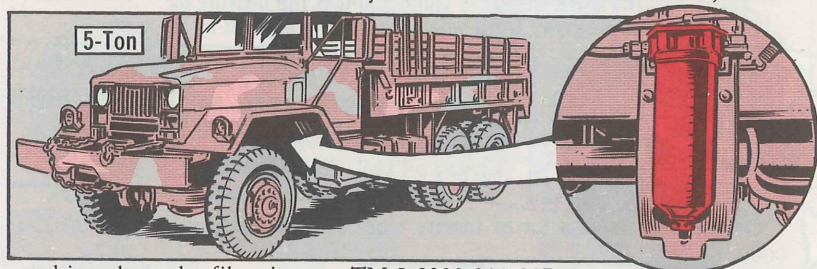
# Multifuel Fuel Filter Facts



The primary fuel filter on all 2½-ton multifuel engine trucks and on most 5-ton multifuel engine trucks is the same.



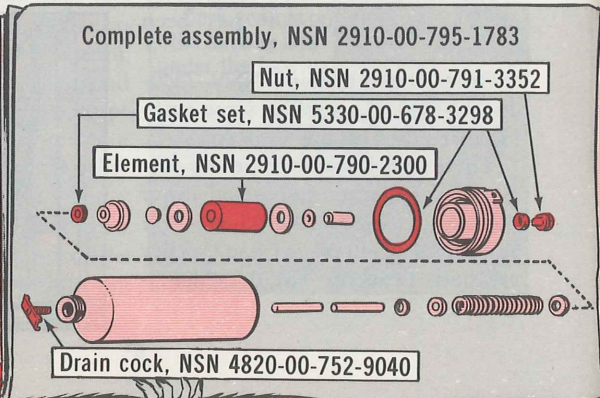
This is the non-scrap-er-type fuel filter under the left front fender of later model 5-ton multifuels covered by the TM 9-2320-211-series. But, there's



nothing about the filter in your TM 9-2320-211-20P.

Fig 34 in TM 9-2320-209-20P for multifuel deuce-and-a-halves is confusing. The "ghosting" of some parts leads you to think that you won't get 'em with the filter assembly.

SO KEEP THIS INFO WITH YOUR -20P UNTIL THE TMs ARE UP-DATED!

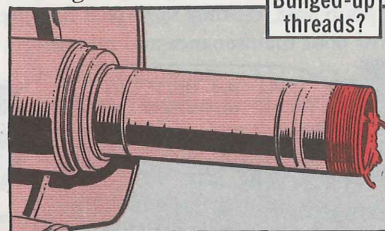


## Give Seals a Lift



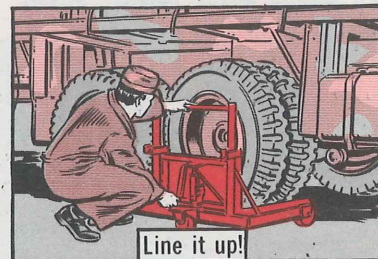
Are you tired of bunged-up axle threads, leaky axle seals and wheel bearings that don't last?

**Bunged-up threads?**



All these things can happen—at the same time—when you don't get everything lined up just right when you are putting the wheel and hub assembly back on.

The wheel lift picks up the wheel and hub assembly which makes it

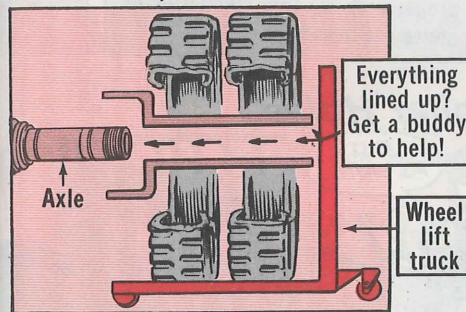


easier to line everything up. Getting everything straight heads off damage to the threads, bearings and seals.

Your wheel lift works best on a smooth, flat surface. When you use it in the field, use a piece of plywood under it.

Get a buddy to help when you install the wheels. An extra pair of eyes can make sure everything is lined up just right.

**Everything lined up? Get a buddy to help!**



There's an easy way to head off damage and save your back, too. It's your wheel lift truck, NSN 4910-00-554-5983 in the No. 1 Common shop set.







Air Cleaner Door Seals...

# Brittle Won't Do

**EMPTY!**

THE VALENTINE'S LOST!  
I WONDER IF SP4 JONES CHECKED  
TH' SEAL ON THIS ENVELOPE?

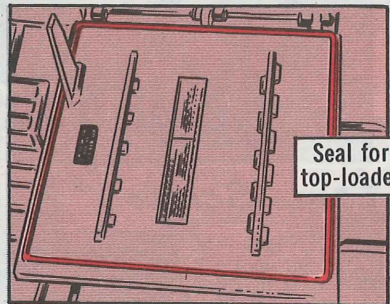
Ever try to seal an envelope when the glue has dried out?

You won't have much more luck protecting your tank's engine against dirt and dust if the air cleaner door seal is brittle.



Dirt in air cleaner box

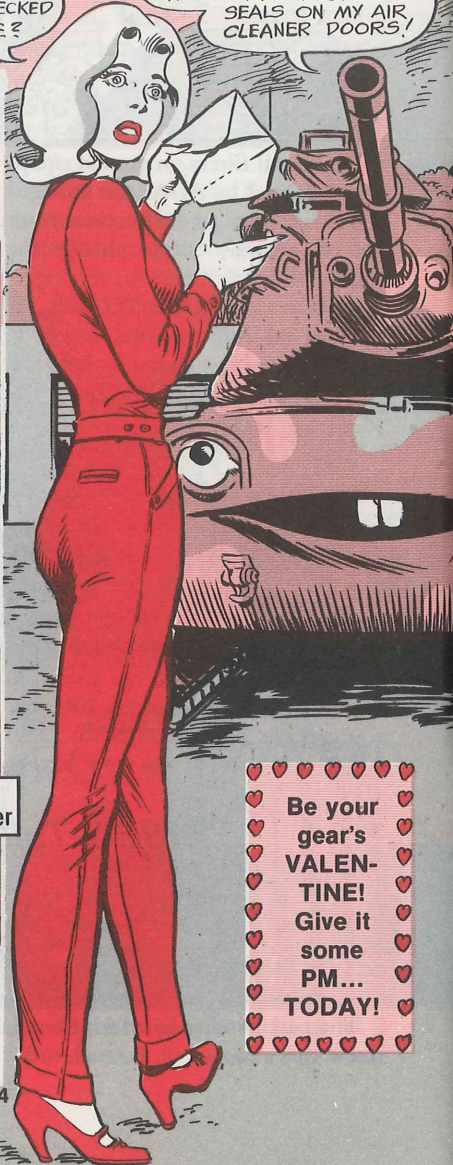
Next time you have the air cleaner element out for service, check the door seal. If it's brittle or has tears, cuts or gouges, replace it. It's worthless against dust and dirt.



Seal for top-loader

NSN 5330-00-259-0469 gets the seal for the aluminum top-loader door; NSN 5330-01-030-6807 is the seal for the steel top-loader door.

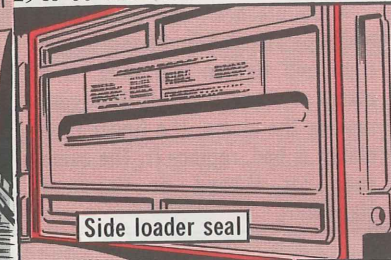
NOT LIKELY, CONNIE--  
HE NEVER CHECKS TH'  
SEALS ON MY AIR  
CLEANER DOORS!



THIS MAGNET  
WILL STICK TO  
STEEL -- BUT  
NOT TO ALUMINUM!

CAREFUL! I'M  
TICKLISH!

If you've got a side-loading air cleaner, the seal you need is NSN 2940-00-411-2060.



Side loader seal

Use the same adhesive on all 3 seals. Get a 2½-oz can with NSN 8040-00-152-0063 or a 6-oz can with NSN 8040-00-152-0067.

To keep the seals from sticking to the air cleaner housing, coat them with a thin film of silicone grease. NSN 6850-00-880-7616 gets an 8-oz tube and NSN 6850-00-295-7685 gets a 10-lb can. Never use GAA 'cause it'll ruin the seal.

♥♥♥♥♥  
Be your  
gear's  
VALENTINE!  
Give it  
some  
PM...  
TODAY!  
♥♥♥♥♥

M48/M60-Series Tanks...

## No Mix, No Match

HERE Y'ARE!

OH, NO!

HOLD ONE!

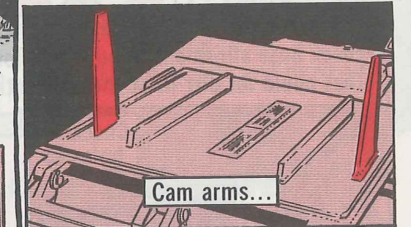


If you're getting ready to replace the door on your tank's top-loading air cleaner, hold one.

You'll cause as much damage to the air cleaner system as you're trying to prevent.

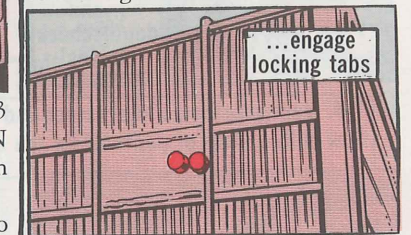
That's right, because the doors are not interchangeable.

Each door is matched to the air



Cam arms...

cleaner box so the cam arms engage the filter element locking tabs to form a tight seal.



...engage locking tabs

When they're not matched, dust and dirt will bypass the filter and KO your engine.

If the door is damaged enough to be replaced, you have to replace the entire air cleaner box assembly.

M48/M60-  
Series Tanks...

# Ah! Clean Air

Clean air for your tank's engine is a must. Everybody knows that.

But, there's more to providing that clean air than keeping the filter elements clean.

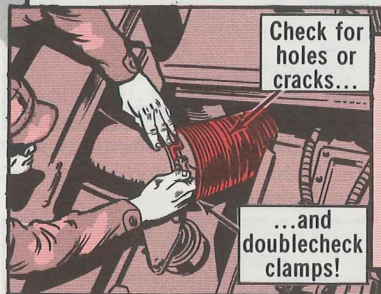
Air cleaner hoses and clamps must be in ship-shape order, too.



HERE'RE  
A FEW  
TIPS FOR  
YOU  
MECHS  
AT  
Q-SERVICE  
TIME...



• When you check air cleaner system hoses for holes or cracks, also check hose alinement. A hose that looks too short may be misalined. That could let dirt in at the connection points.



Check for  
holes or  
cracks...

...and  
doublecheck  
clamps!

• Doublecheck the hose connections. Seat clamps or bands right and tighten 'em snug. If a clamp or clamp screw is damaged, replace the clamp. If a finger-type clamp is bad, replace it. The same goes for V-band or flat-band clamps.

• Make sure the air inlet screen and inlet hose are clean. Also test the air flow with a strip of paper while the engine is running.



Air inlet  
screen  
clean?



'Course, the whole system must be working right for you to get the most out of your tank.

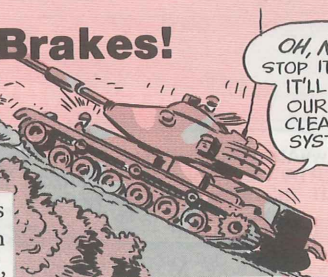
OVERLOOKING  
ANY PART OF THE  
SYSTEM COULD  
MAKE YOUR TANK  
CONK OUT ON THE  
BATTLEFIELD!

When a  
Tank Stalls...

# Hit the Brakes!

WHAT TH'--  
THIS HEAP'S  
ROLLING BACKWARD!!

OH, NO!!  
STOP IT QUICK!  
IT'LL FRY  
OUR AIR  
CLEANER  
SYSTEM!



If your M48A5 or M60-series tank stalls and rolls backward with the transmission in a forward gear, the engine reverses.

The exhaust becomes the air intake and the air intake becomes the exhaust.

So what kind of shape does that leave your air cleaner system in? Bad!

Seals and hoses get baked. Diesel exhaust fumes turn the inside of the air filter element black with carbon. Heat burns holes in the filter element.

Some air cleaner system damage can be repaired, but the filter element must be replaced. It cannot be cleaned and reused.

You can't avoid steep inclines, true. But you can save your air cleaner system lots of damage by hitting the parking brake before the tank begins to roll backward.

Hold the tank with the brakes until you can restart and move under power.

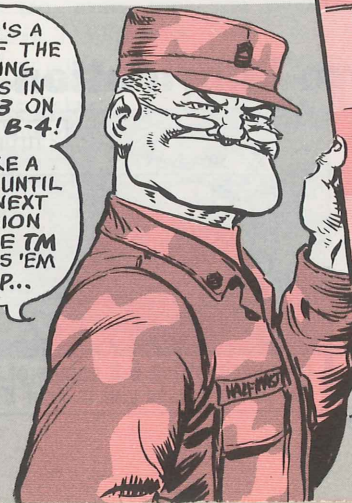
## M60A3 Tank...

# Laser Rangefinder Filter NSN's

The NSN's for some of the LRF filters are missing from your TM 9-2350-253-10, but not to worry.

HERE'S A  
LIST OF THE  
MISSING  
NSN'S IN  
ITEM 13 ON  
PAGE B-4!

MAKE A  
NOTE UNTIL  
THE NEXT  
REVISION  
OF THE TM  
PICKS 'EM  
UP...



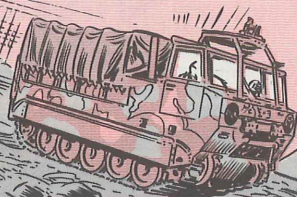
Filter	NSN
Green laser safe (TTS and M35E1)	1240-01-114-9502
Green laser safe (M105)	1240-01-115-1082
Green laser safe (M36E1)	1240-01-117-3750

If you need the bracket for the filter box, the NSN is 1015-01-077-6058. The washer NSN is 5310-00-982-6580.

M548  
Cargo  
Carriers...

## Inspect Air Brakes Now

WHADDAYAMEAN IT'S  
OUTTA CONTROL? DIDJA CHECK  
OUT TH' BRAKE AIR COMPRESSOR  
LIKE SARGE SAID?



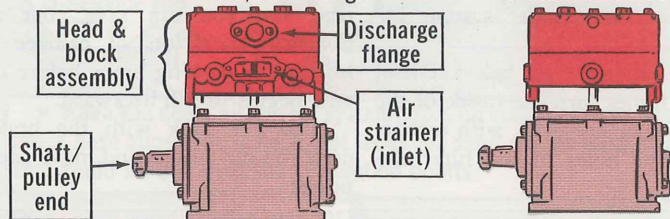
WELL...  
ER...  
UH...  
I...

Inspect all your M548's equipped with air brake kits to see if the air compressor is installed right.

The head and block assembly must be mounted so the air strainer and discharge flange face to the left, looking from the shaft/pulley end of the compressor.

If your compressor looks like this, it's wrong...

...it should be installed like so:



Otherwise, there may be interference between the compressor and the accelerator linkage. That could cause a linkage hang-up and temporary loss of control.

Para 3-8 of TB 43-0001-39-4 (Jan 81) has the word on installing the compressor. The TB item is for 2½- and 5-ton multifuel vehicles, but the compressor's the same one used in the M548.

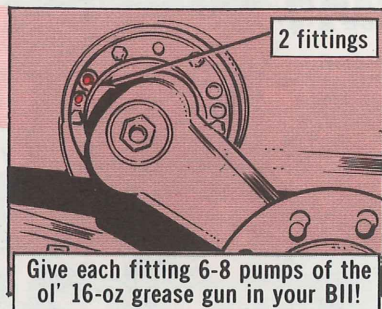
M110/M578 Vehicles...

## Roadwheel Arm Lubrication



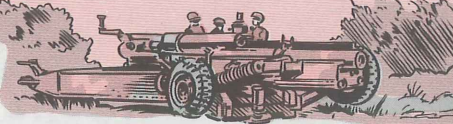
So how much grease do you put in the roadwheel arms of your vehicle?

The LO doesn't help, for sure. Plus, there're 2 fittings on the arm that are real close together. So what do you do?



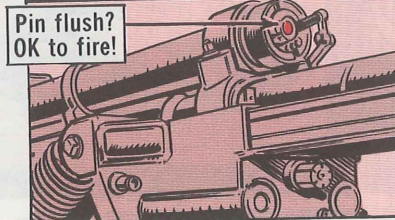
Reading  
the Pin...

## An Indicator of Reserve



Checking the oil index indicator on your M102 towed howitzer's recoil mechanism is pretty simple—if you know which recoil mechanism you've got.

You check the old style M37 by looking at the index pin. If the pin is flush with the face of the control



assembly, or doesn't extend 3/16 inch or more, the oil reserve is OK and you can fire the howitzer.

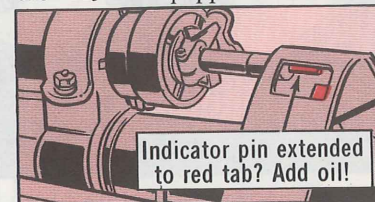
You must add oil before you fire if

the pin extends 3/16 inch or more.

The oil indicator housing on the new style M37A1 has been extended to increase the oil reserve.

Plus, there is a guard over the pin end of the housing.

The red tab inside the guard is the key to reading the pin. You can fire the M37A1-equipped howitzer as



long as the indicator pin does not extend to the red tab.

Add oil before firing if the pin extends to or past the red tab.

T130/  
T130E1  
Track...

## A Winning Angle

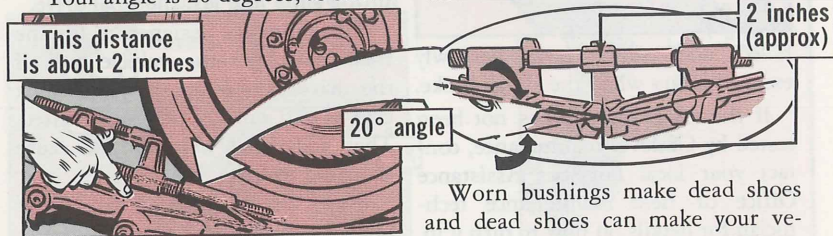


Everybody plays the angles at one time or another. You need to play one too, every time you connect T130 or T130E1 track.

Your angle is 20 degrees, as shown

pin's flat surfaces match up with the flat surfaces of the track bushings.

Otherwise, the bushings take a beating and wear out long before their time.



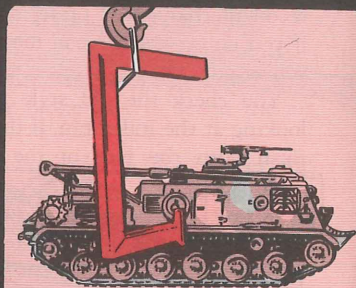
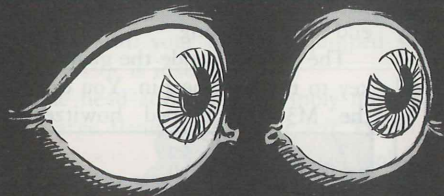
on Pages 3-20 thru 3-22 of TM 9-2300-257-10.

You need that angle so the track

Worn bushings make dead shoes and dead shoes can make your vehicle Not Mission Capable (NMC).

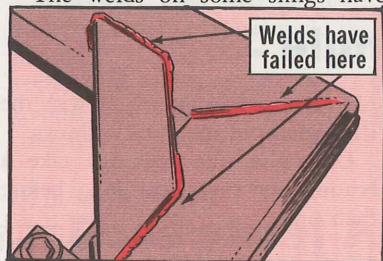
Play the angle and come out a winner. You can't lose.

# Watch that Sling!



Never use your final drive lifting sling, NSN 4910-01-046-8944, until it has been load-tested by your GS-level maintenance unit.

The welds on some slings have

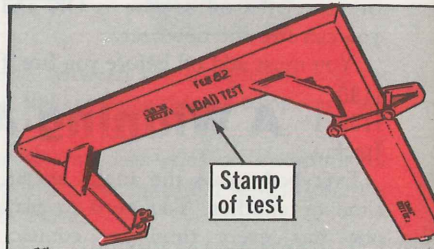


failed, and people have narrowly escaped injury when the slings broke.

If the sling you use has not been tested by GS-level maintenance, contact your local Logistics Assistance Office or field maintenance technician for details on how to turn it in.

You can tell if your sling has been tested. It'll have a stamp or mark on it indicating the date of test.

Be sure to follow the final drive removal procedures in TM 9-2350-

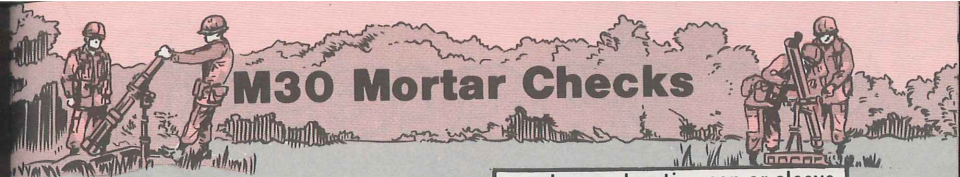


256-20. In particular, make sure the lifting sling lifts just the final drive.

The sling was designed to lift the final drive, not the vehicle hull. If the drive sags as it's pried loose, it could catch on the hull as it's lifted. That additional weight could cause the sling to fail.

Make sure the final drive doesn't catch on the hull during the removal.

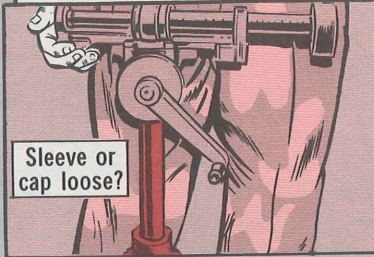
Never stand under or near the sling when the final drive is being lifted.



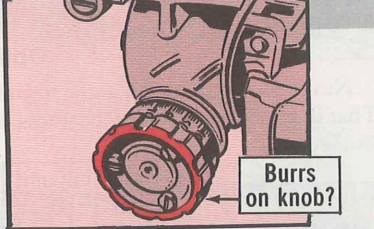
# M30 Mortar Checks

WANNA BEAT THE HEAT WHEN INSPECTORS COME 'ROUND TO CHECK OUT YOUR M30 MORTARS? HERE ARE SOME OF THE MOST COMMON FAULTS THEY WRITE YOU UP FOR...

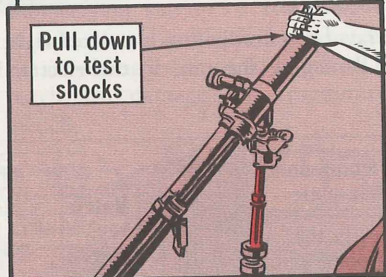
• Loose elevating cap or sleeve in elevation and recoil group.



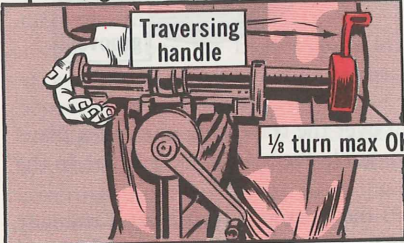
• Burrs on sight mount knob.



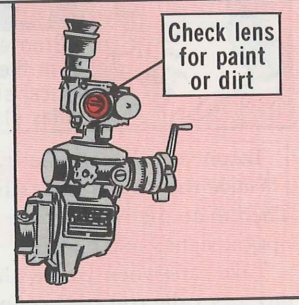
• Loose or weak shocks that need to be repaired or replaced.



• Too much play in the traversing handle (1/8 turn allowed).

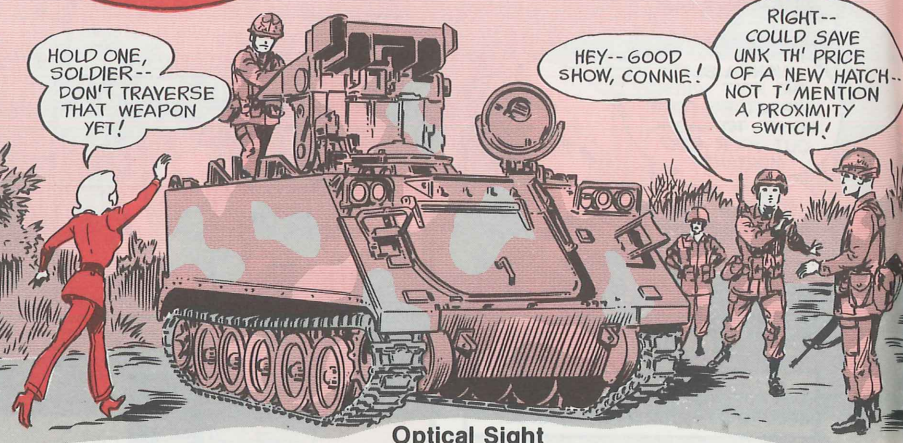


• Paint on lens of M53 sight-unit (and other sightunits). Watch with the spot painting...and remove unwanted spots.



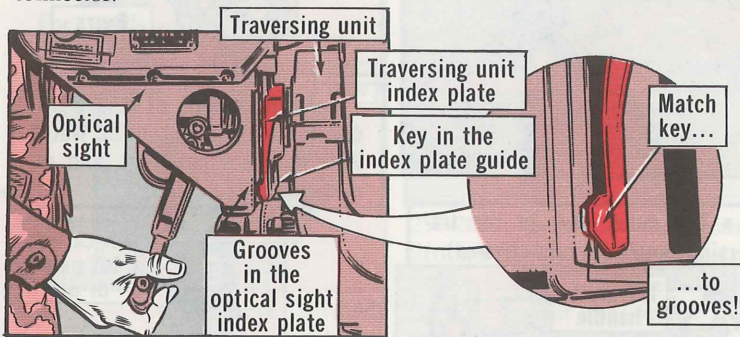
Tables 3-1 and 3-2 of TM 9-1015-215-12 clue you on the preventive maintenance you've gotta do to avoid deficiencies.

# Successful Mating



## Optical Sight

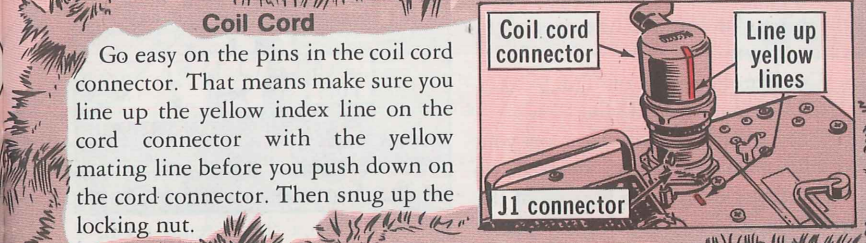
Never lock the optical sight to the traversing unit before it's seated right. That'll knock you out of business by damaging the pins in the electrical connector.



To prevent damage, do this:

Guide the optical sight's hook mount over the traversing unit index plate. Then mate the "key" in the index plate guide flush with the grooves in the optical sight's index plate.

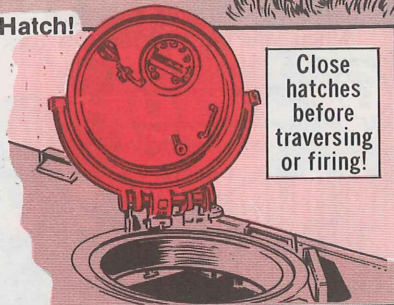
Take care when you're plugging into the missile guidance set. Clean any dirt from the coil cord connector. Dirt won't let the connector make good contact with the J1 connector. A bad contact means the difference between a "hit" and a "miss."



Go easy on the pins in the coil cord connector. That means make sure you line up the yellow index line on the cord connector with the yellow mating line before you push down on the cord connector. Then snug up the locking nut.

## Latch the Hatch!

You M901 drivers better say goodbye to the sky before the gunner fires a missile. Close the driver's and gunner's hatches before traversing the weapon station or launching a missile. If you don't shut the hatch, the revolving turret could knock off a hatch or damage the proximity switch.



## TOW/Dragon Target Board



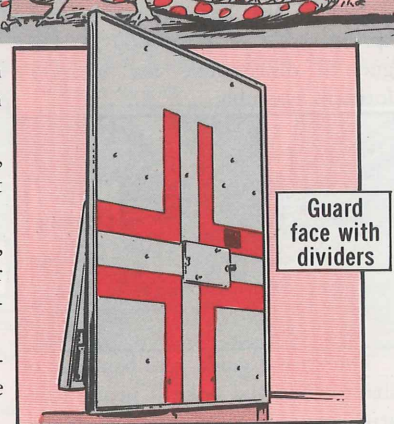
Save a box, save a board.

That's as simple as it can be when you stow your TOW/Dragon system target boards.

Save the box the boards come in, as well as the styrofoam divider that separates the 2 boards.

When you store 1 or both boards, put them in the box with the divider covering the front. That saves expensive damage to the face.

If you don't have the box, put cardboard, canvas or whatever over the face of the boards.



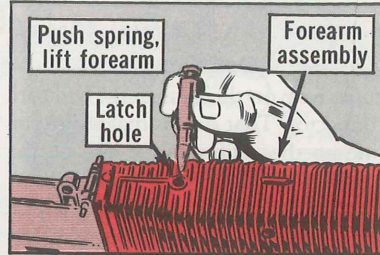
## M60 Forearm Fix

Want to save damage to the forearm assembly catch on your M60 machine gun ...and maybe loss of the catch spring?

Do like Page 46 of TM 9-1005-224-10 (Mar 81) tells you.

Use a dummy cartridge or your combination wrench to push in on the spring through the bottom of the forearm. When the spring's depressed, lift the forearm up and off.

When you put the forearm back

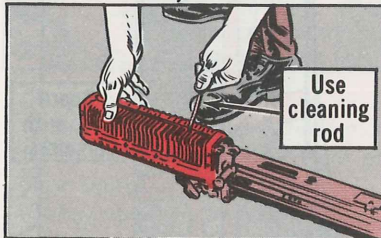


on, do it with a slow, steady push. If you snap or slam it on, you can damage the catch.



## Spring Guide(line)

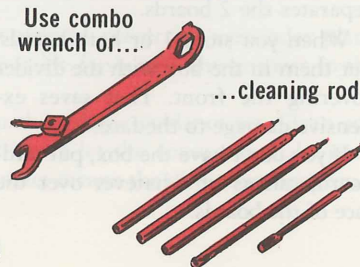
Never use the operating rod's spring guide of your M60 machine gun to disassemble the weapon's forearm assembly.



The spring guide gets bent out of shape when you poke it in the forearm assembly to release the spring.

A bent guide causes feeding problems, like sluggish operation.

The bottom line? Use a dummy cartridge, a cleaning rod or the combination wrench that comes with your weapon.



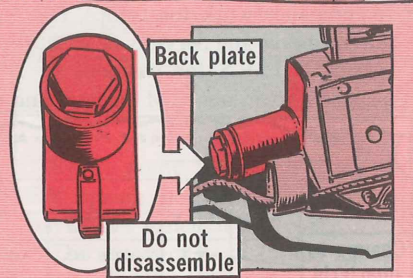
## M240 MG Cleaning



### Back Plate

It's not necessary to take apart the back plate for cleaning. Fact is, it's not authorized.

For instance, if you do take it apart and lose or forget a buffer washer, the back plate will take a beating from the bolt and operating rod. The buffer needs all 11 washers to handle the shock ...and they must be installed in the right order.

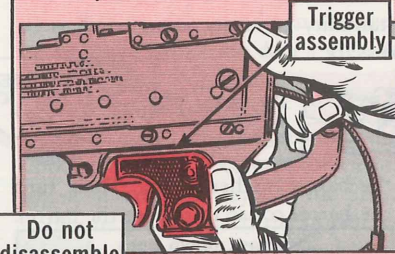


### Trigger Assembly

Also, stay away from the trigger assembly.

You never take it apart to clean or lube it. Best advice is to stay out and let support do any necessary trigger disassembly.

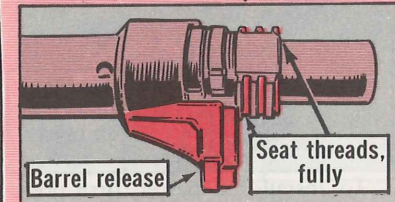
Crewmen and armorers take it apart and can't get it back right. When you assemble the trigger wrong, you might not be able to move the safety, the weapon won't fire...or you could set up a runaway gun.



### Barrel

One thing you can do is to make sure the barrel is fully seated in the

receiver before you try to lock the barrel release to lock.



receiver before you try to lock the barrel release. That saves stripped threads, usually in the receiver.

When the barrel's seated, you



If you can lock the release with fewer than 2 clicks, or it takes more than 7 clicks, have your support check it out. Something's wrong.



## Small Arms Get **RCM** Nod

Reliability Centered Maintenance, the Army plan to cut out unneeded maintenance work for troops, has tapped small arms Preventive Maintenance Checks and Services (PMCS) for a big cutback.

Weekly PMCS for weapons of .50-cal and under will be extended to quarterly when new TM changes and revisions come out.

Table 3-3. Preventive Maintenance Checks and Services

Item Number	Interval Operator				Item to be Inspected	Procedure	Reference
	B	D	A	W			
Change to quarterly	X			X	Machine Gun	Assure conformance to lubrication instructions. Field strip to insure that all moving parts are clean, lightly oiled and function freely. Assure gear	Table 3-2

B—Before operation  
D—During operation  
A—After operation  
W—Weekly

It'll take awhile for the pubs to get out. Meanwhile, your command can make weapons' PMCS's quarterly right now.

However, weapons stored in high humidity or dusty areas need to be cleaned and lubed more often when necessary.

## M3A1 Barrel Nicks



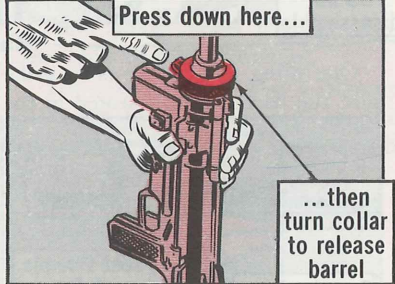
Next time you take your M3A1 submachine gun down for cleaning, eyeball the chamber end of the barrel for nicks and burrs.



Nicks and burrs can make the gun jam. They should be checked and possibly smoothed off by your support.

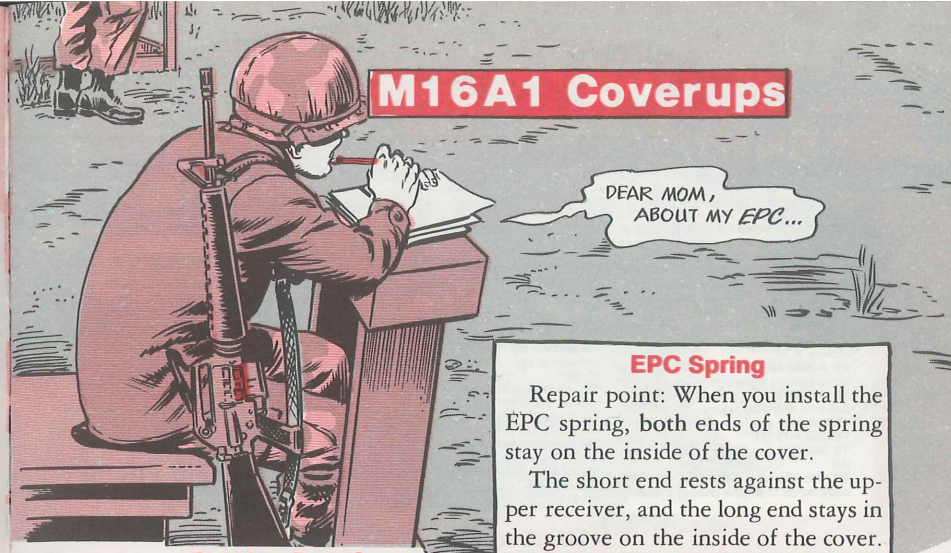
A reminder: First, press down on

the barrel ratchet spring. Then, turn the barrel collar to release the barrel.



To install the barrel, first press down the spring. Then, turn the collar.

That saves chewing up the notches on the collar and the receiver.



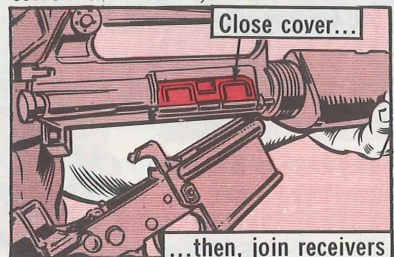
## M16A1 Coverups

### Ejection Port Cover

The ejection port cover (EPC) of your M16A1 rifle can do an armorer or rifleman good...or do either one dirty.

It all depends on you. For instance, after you separate the upper and lower receivers for cleaning or maintenance, eyeball the EPC.

Before you re-attach the upper receiver to the lower, be sure the EPC is



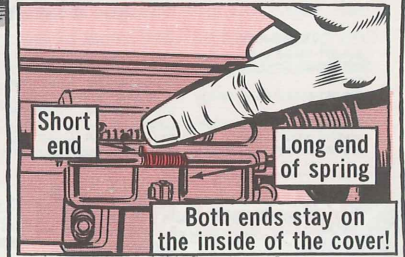
closed. Otherwise, the lower receiver will jam into the EPC, bend it and maybe even damage the receiver itself.

Close cover, put receivers together.

### EPC Spring

Repair point: When you install the EPC spring, both ends of the spring stay on the inside of the cover.

The short end rests against the upper receiver, and the long end stays in the groove on the inside of the cover.



If you install it wrong, you'll have trouble keeping the cover open...or in closing it. You may even break the spring.

### Flash Suppressor

Never remove the flash suppressor for cleaning or repair. Installing or removing it the right way takes special tools. That's a support job.



# POBS

This is a selected list of recent pubs of interest to organizational maintenance personnel. This list was made from a computer printout provided by the Adjutant General.

## Miscellaneous

AR 385-95 Nov Aviation accident prev SC 6720-95-CL-A02 Apr Camera set, still picture: EOD  
 TB 9-2300-420-20-1 Nov M48 and M60 tanks parking brake sys maint  
 TB 9-2350-257-20-1 Aug Troubleshoot 650-amp charging system, M60A1 RISE  
 TB 380-40-1 Jan Security TSEC/KY-65, TSEC/KY-75 (V)  
 TB 380-40-5 Jan Security TSEC/KG-45 (U)  
 TB 750-651 Jan Antifreeze, cleaning compounds in engine cooling systems.

## Technical Manuals

TM 5-2805-261-13-HR Nov AAL: Out-board motor, gas, OMC Mod AM-40A  
 TM 5-4610-215-10 Oct Water purif unit, reverse osmosis; 600-GPH Mod ROWPU 600-1  
 TM 9-1425-484-10-HR Oct Dragon M47  
 TM 9-1430-655-20-7-2 Oct AN/TSQ-73  
 TM 10-8110-201-14&P Feb Drums, fabric collapsible non-vented; 500-gal, 250-gal, 55-gal  
 TM 11-5805-638-12-HR Nov Bli: Multiplexer TD-1069/G  
 TM 11-5805-711-24P Nov Multiplexers AN/FCC-98 (V) 1, AN/FCC-93 (V) 1X  
 TM 11-5820-894-14 Aug Terminal, radio AN/TRC-151 (V)  
 TM 11-5821-285-12-1 Sep Comm centrals AN/ASC-15A (V) 1, AN/ASC-15A (V) 2  
 TM 11-5895-824-12 Aug Interrogator set AN/TPX-46 (V) 7  
 TM 11-5895-1124-24P Nov Converters, freq electronic CV-3655/G, CV-3654/G  
 TM 11-5985-334-20P-1 Nov Mast antenna AB-621A/G, extension kit MK-2044/G  
 TM 11-5985-362-13 Sep Antenna gp OE-317/TSC-99  
 TM 11-6625-2954-24P Nov Signal generator SG-1144/U  
 TM 11-6625-2974-10-HR Nov Radar test set gp OO-270/APS-94F  
 TM 11-6940-211-10-HR Oct Simulator, radar signal SM-674/UPM, test adapter, radar signal MX-9848/APR-39 (V)  
 TM 11-7440-306-12-1 Oct CRT terminal systematics gen Mod T-51456 and Hewlett-Packard graphics terminal 2648A  
 TM 55-1520-240-CL Nov CH-47D  
 TM 55-1520-240-PM Aug CH-47D

## AUDIO-VISUAL STUFF

Available at battalion or post Learning Center

### TEC Lessons

030-051-6446-F Bailey bridge  
 030-051-6453-F Bailey bridge  
 Part II  
 030-051-6454-F Bailey bridge  
 Part III  
 030-051-6457-F Assemble medium girder bridge  
 030-051-6460-F Assemble

single story medium girder  
 030-051-6468-F Load, secure medium girder bridge: Part II  
 030-051-6469-F Load medium girder bridge pallets  
 030-051-6497-F Assemble tactical raft  
 030-051-6498-F Install tactical raft deck and filler panels

043-441-1066-J FAAR data link system monthly, quarterly checks  
 043-441-5552-F IBCC scan servo gear train alignment, Part II  
 600-011-6630-F Rig engine controls for N1 RPM  
 644-093-7094-A Periodic in-

spect LANCE warhead sect, Part II  
 644-093-7109-A Inspect Pershing warhead  
 644-093-7114-A Inspect Pershing warhead  
 644-093-7194-A Safety wire procedures  
 945-171-0003-F Track vehicle recovery

## Replacement Strap NSN

Use NSN 5340-01-114-7712 to get a safety strap that's long enough for your 2½-ton or 5-ton cargo truck. This replaces NSN 5340-00-536-0186 and NSN 5340-00-594-8032.

## Missile Readiness Criteria

Looking for readiness rating criteria for components of missile systems? The word's in AR 750-40, Army Missile Materiel Readiness Report.

## Award for Maintenance Excellence

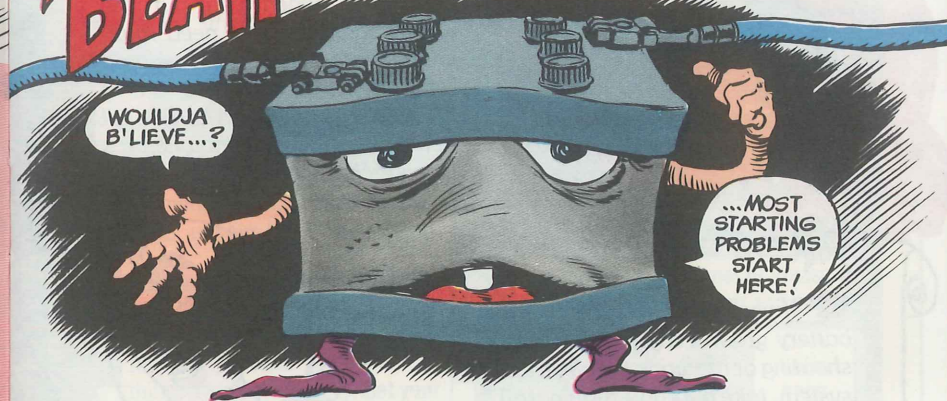
Winners of the Chief of Staff's first annual Army Award for Maintenance Excellence will be announced 29 Mar 83 at Aberdeen Proving Ground.

The word will be put out at the Total Army Worldwide Maintenance Conference to be held at the Army Ordnance Center and School 28-30 March. Theme for the conference will be "Maintenance—Master Plan for the Future". Attendees will be from major Army commands, divisions and Reserve Forces.

Information on the maintenance conference can be had by calling AUTOVON 288-5118/5222.



# BEAT Terminal Illness



More engine starting trouble comes from bum battery hookups than anything else! Right there—where the cable terminal, battery clamp and battery post come together—is the first place to look when you're troubleshooting for starting trouble.

On the civilian side, towtruck operators make a fortune just cleaning and tightening bum battery hookups when engines won't start.



There's no good reason for starting trouble caused by loose or dirty battery hookups.





## Battery Hookups...

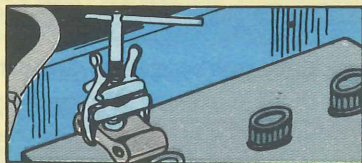
IT'S REAL SIMPLE...

**1** If you've got to take off the battery ground cable for troubleshooting or repairing the electrical system, take the cable terminal off



the clamp—not the clamp off the post. Then you won't upset a good clamp-to-post connection.

**2** If there's some reason for taking the clamp off the post, use the lifter tool, NSN 5120-00-944-4268, in your No. 1 Common Shop

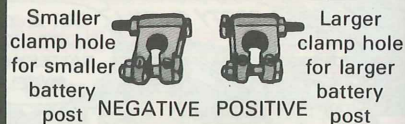


Equipment. Never try to pry the clamp off with a screwdriver or some other tool. You'll most likely bust a hole in the top of the battery.

Make sure you've got a good connection when you put the clamp back on. You need maximum contact between the clamp and post to get full power out of the battery—and also to get full power into the battery when it's being recharged by the generator or alternator.

CHECK THESE POINTS...

• The taper of the battery post and the taper inside the clamp



must match. The positive (+) battery post is a little bigger than the negative (-) post, so you've got to have the right clamp for each post to get max contact.

• Replace a clamp that's broken or so badly bent out of shape that it won't fit on the post right.

No good—replace it!



• Clean the inside of the clamp and the outside of the post so they're bright 'n' shiny. Use the



cleaning tool, NSN 6140-00-831-3449, in your No. 1 Shop Equipment.

• Get the clamp all the way down over the post. But never hammer it down; you'll bust up things inside the battery. Get your



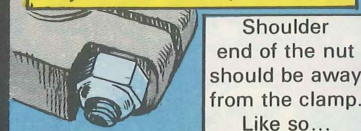
support to make you a tapered spreader tool from 1-in diameter bar stock. Use the tool to spread the clamp so it'll fit easily on the battery post.

• Use 2 wrenches of the right size to tighten the clamp bolt and nut. Never—but never—use an adjustable wrench. It'll slip off and



punch a hole in the battery top. When the nut's just snug, give it only a ¼-turn more. If the clamp takes a self-locking shoulder nut,

make sure the shoulder end is away from the clamp. You need



full nut pressure on the clamp. Besides, the shoulder end will dig into—and tear up—the clamp.

• Smear a light coat of grease (GAA) all over the clamp and post



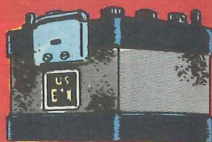
to head off corrosion. Some people think the GAA goes on the post before the clamp goes on. Wrong! That makes for mighty poor contact between the clamp and post.

**3** When you mount a cable to a clamp, put the cable terminal under the bolt head. If it's under the nut, cable bounce will loosen the nut. If 2 cables go on the



clamp, you can put the second cable under the nut. Then use plastic hanger straps, NSN 5975-00-074-2072, to keep the cable from bouncing.

# Let's Stop



# Battery Abuse!

2 OUT OF EVERY 3 LEAD-ACID BATTERIES IN THE ARMY WILL BE KILLED BY ABUSE AND NEGLECT!

UNLESS, OF COURSE, WE END THIS MINDLESS DESTRUCTION AND STAGGERING COST!

WITH YOUR COOPERATION, WE CAN STOP THIS WASTE OF RESOURCES, MONEY, TIME AND EFFORT!

About one-third of those are destroyed through physical abuse!

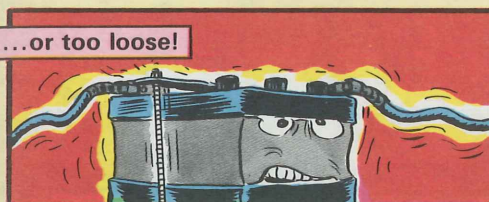
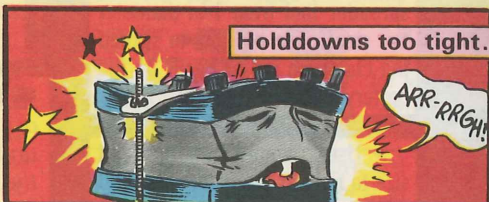
Dropped on hard surfaces!



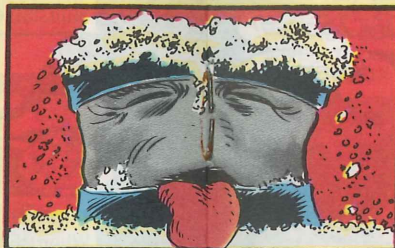
Posts ruined by hammering or prying on the clamps!



Holddowns too tight... ...or too loose!



Another third die of plate sulfation—plain ol' neglect!!!



Batteries are left undercharged with no electrolyte over the tops of the plates!

HALF-MAST, BONNIE AND I WILL BE DOING ALL WE CAN TO HELP YOU WIN THE FIGHT AGAINST BATTERY ABUSE!

THE QUESTION WE MUST ALL ANSWER IS THIS...

IF WE CAN'T TAKE CARE OF OUR BATTERIES, HOW CAN WE POSSIBLY TAKE CARE OF A MISSION?



# JOE'S DOPE

## The Case of The Castoff Cable

I SAY, OLD FRIEND... WHERE ARE WE?

AH--MY DEAR WATSON, WE ARE CLOSE BY AN IMPORTANT CLUE...

INDEED... THERE... JUST AHEAD...

FOR THIS CUT, WATSON...

START LOOKING FOR A COMMO SITE WHERE CABLES CRISS-CROSS THE GROUND!

A FEW TRIPS BY A TRUCK OR TANK CUT EVEN THE TOUGHEST INSULATION!

OF COURSE! BUT HOW COULD THEY HAVE AVOIDED THIS CABLE CRIME?

EASILY, WATSON! PUT THE CABLE OVERHEAD OR UNDERGROUND...

...A SHALLOW TRENCH OR CULVERT SAVES MANY A CABLE!

...AND OVERHEAD?

FM 24-20 HAS CLUES ON STRAIN RELIEF AND SUCH...

SAG IS IMPORTANT, TOO...

String cables at least 18 ft above roads

MY RESEARCH HAS ESTABLISHED THE SAG PER FOOT ANY CABLE NEEDS...

Span in feet	100	125	150	175	200
Sag in inches	16	24	36	48	72

DEVILISHLY CLEVER, HOLMES!

HALLO! LOOK HERE, WATSON ... THE CABLE'S BEEN MASHED!

DASTARDLY, HOLMES!

THE RADIO CABLES WERE UNPROTECTED AS THEY CROSSED CARGO AND SEATING AREAS!

FOUL PLAY HERE, WATSON! ANOTHER EXAMPLE OF MAN'S INHUMANITY TO CABLE!

JUST SO, HOLMES! ANY CLUES TO THE CULPRIT'S IDENTITY?

YOU DISAPPOINT ME!

CLUES ABOUND!

OBSERVE, MAN, OBSERVE!!

EXACTLY RIGHT, WATSON! A QUICK READING OF SB 11-131, VEHICULAR RADIO SETS AND AUTHORIZED INSTALLATIONS\* ALONG WITH THE INSTALLATION KIT PUB (TM 11-2300 SERIES) GIVES TROOPS THE SHIELDS AND GROMMETS THEY NEED TO SAVE THEIR CABLES!

HERE'S ANOTHER VICTIM...

HMMM-- PRETTY CAMOUFLAGE, ISN'T IT!

Shields help

Grommets can save cables

\* Ed Note: This pub's not up-to-date. If you need info on an installation kit not covered in SB 11-131, write to:

US Army Communications-Electronics Command  
ATTN: DRSEL-ED-SM  
Ft Monmouth, NJ 07703

INDEED! PAINT'S SURE DEATH FOR A CABLE! THE INSULATION SOON BECOMES BRITTLE AND CRACKS!

SURELY THEY COULD REMOVE CABLES OR MASK THEM BEFORE APPLYING THEIR PAINT.

YES... AND IF THEY DO GET PAINT ON THEM, THEY SHOULD WIPE IT OFF IMMEDIATELY OR LEAVE IT!

A PETROLEUM-BASED CLEANER WILL DO MORE HARM THAN GOOD!

EH? WHAT'S THAT, WATSON?

CONNECTOR'S GONE HERE, HOLMES!

IT'S SAD, WATSON...

WE CAN NOW LOOK FOR UNITS IN A HURRY TO PACK UP...

WHEN REELING IN CABLE, THEY FORGET TO SLOW THE REEL DOWN WHEN NEARING THE END!

THE SUDDEN STOP IS OFTEN TOO MUCH FOR THE CONNECTOR OR CABLE!

SNAP

OR THEY DON'T USE STRAIN RELIEFS ON POWER CABLES FEEDING SHELTERS! AN ND-0104 WIRE GRIP (NSN 5975-00-400-2630) OR WEAVE OF WD-1 CAN TAKE THE SUDDEN TUG, RATHER THAN THE CONNECTION!

OF COURSE, KEEPING CONNECTORS CLEAN AND SAFE ALSO MEANS ALWAYS USING THE PROTECTIVE CAP WHEN THE CABLE IS UNHOOKED. DIRT OR MOISTURE GETS THE CONTACTS IF DAMAGE DOESN'T.

WITH ALL THESE CLUES, IT SHOULD BE EASY TO TRACK DOWN THE GUILTY PARTY!

YES, THE GAME IS AFOOT, WATSON. LET'S BE ON OUR WAY!

JUST ONE MORE QUESTION, HOLMES...

WHY ARE WE IN THIS "ADVENTURE" ANYWAY?

ELEMENTARY, WATSON! WE WERE INVITED...

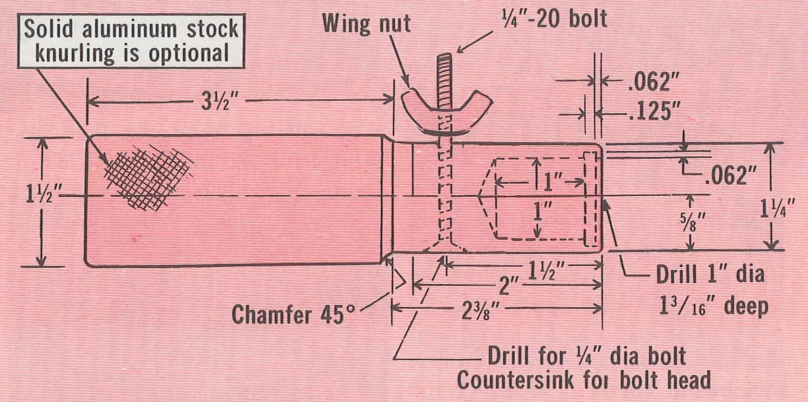
AS I TURNED THE FOGGY CORNER TO 221-B LATE ONE NIGHT, I WAS STOPPED BY A MOST MYSTERIOUS STRANGER...

36

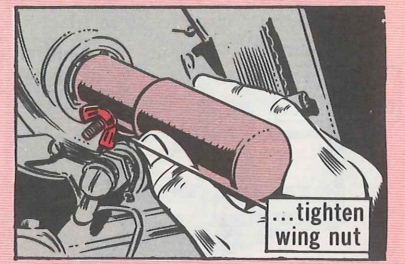
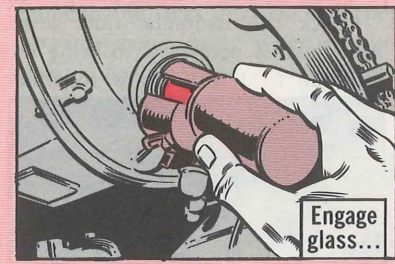
36



Dear Editor,  
We made a fail-safe puller for removing the plastic sight gage glasses on all Bell choppers. The one shown on Page 43 of PS 332 has a tendency to slip, and there is no puller in our tool kits.



We made our puller from 1 1/2-in aluminum round stock, about 6 inches long. It's real easy to make and will prevent glasses from being damaged from using other removal methods...saves on replacement costs.



To use the tool, just insert it over the sight glass, tighten the wing nut, and p-u-l-l. That's all there is to it!

SGT Jerold L. Fry  
Ft. Bliss, TX

(Ed Note—Your tool looks like a winner, Sarge!)

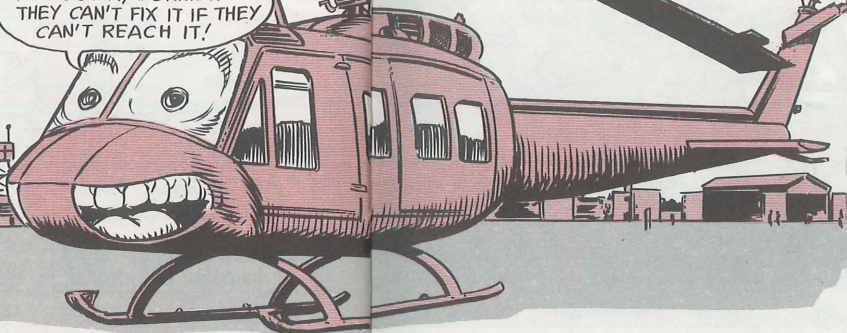
## Maintenance Platforms...

FACE IT, BIRD MECHS... NO. 1 MAINTENANCE STARTS WITH YOUR TOOLS... AND YOUR B-1 PLATFORM IS YOUR NO. 1 TOOL!

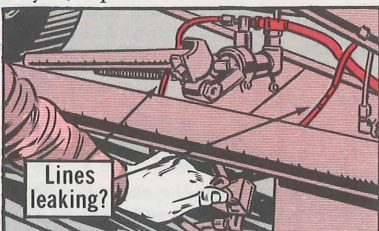


# Front 'n' Center!

YOU GOT IT, BONNIE!! THEY CAN'T FIX IT IF THEY CAN'T REACH IT!



Eyeball the hydraulic lines and fittings for leakage. A loose line or fitting can easily be tightened to stop a leak. If a line is blistered, cut or frayed, replace it before it fails.



Lines leaking?

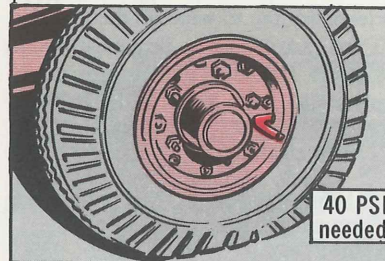
Check the hydraulic fluid level. Add fluid, if necessary, to bring the level up to 1 inch below the filler



Fluid level OK?

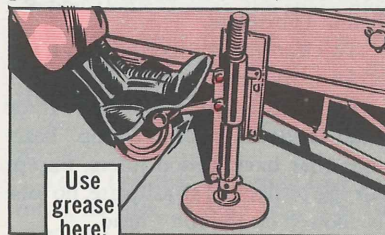
neck. Use hydraulic fluid, MIL-H-5606, NSN 9150-00-252-6383.

If there's no tread on the tires, or if they're cut, replace them. The tire pressure should be 40 PSI.



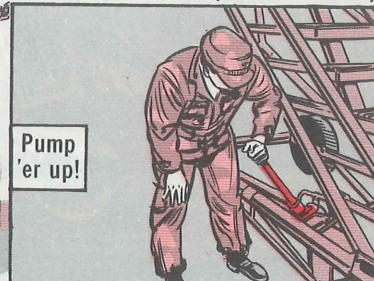
40 PSI needed!

Plant your brogans on the 2 immobilizing jacks to make sure the platform won't move when it's in place. If foot pressure doesn't easily set the jack pads, grease the pivot points on the mechanical jack.



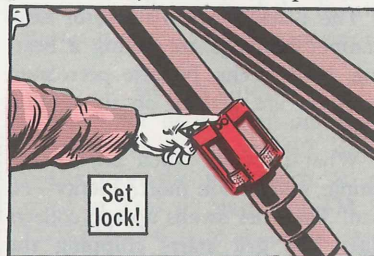
Use grease here!

Pump up the platform to make sure you get the lift you need. Always



Pump'er up!

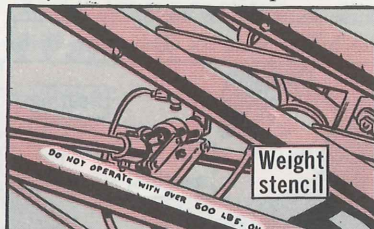
set the hydraulic cylinder lock in place after you raise the platform.



Set lock!

Otherwise, a hydraulic failure will give you a sudden letdown.

Eyeball the base of the platform to



Weight stencil

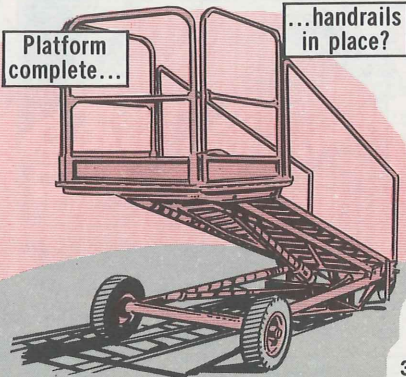
make sure the stenciled 500-lb weight limitation is readable.

IF YOU HAVE THE NEW B-1 PLATFORM, NSN 1130-00-529-6235, FOLLOW THE INSPECTION INFO IN TM 55-1130-223-13!



Platform complete...

...handrails in place?



## Save the Bearings!

DID YOU FINISH YOUR PMS?

YES, SIR -- AND I CLEANED THE BIFILAR WEIGHTS AND TH' DAMPER BEARINGS WITH ONLY A CLEAN, DRY CLOTH -- OUR NEW SOP!

The Black Hawk main rotor head damper bearings are taking a beating, bird mechs, because petroleum products are getting on the Teflon liner.

What happens when oil, for example, and Teflon meet? Plenty—all bad! The liner swells up and collects dirt. The grit starts chipping the Teflon and the bearing soon becomes unserviceable.

The bearings are being ruined because some mechs are spray-cleaning the bifilar weights. The spray drifts



down onto the damper bearings, which are right under the weights.

Instead of an aerosol can, use a clean, dry rag to wipe off dirty grease. Then, according to Sequence 6.8 in TM 55-1520-237-PMS-1, use Lubriplate 630-AA on the weights. NSN



9150-00-663-1770 will get you a 5-gal pail of Lubriplate.

To clean the damper bearings, use a clean, dry cloth.

Remember—your UH-60A rotor head is loaded with "lollipop" bearings that have Teflon liners. Except for the bifilar and swashplate, no lube is allowed on the rotor head.

I BROUGHT TH' ENGINE STARTER OIL LEVEL UP TO TH' BRIM!

...AN' I ADJUSTED TH' APU START NOZZLE, CHIEF!

## Fill It to the Brim!

Be sure you crew chiefs check the oil level in the Black Hawk engine starter during your 7-day, 10-hour Preventive Maintenance Service.

If that baby is low on oil, the internal clutch assembly will fail and shear the drive shaft.

To prevent a starter change, add MIL-L-23699 oil to the point of

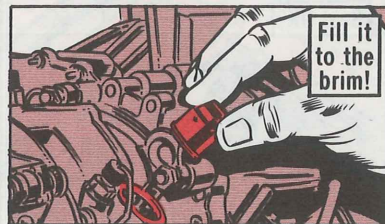
overflowing. The word on servicing the installed starter is on Page 20, Sequence 6.19, TM 55-1520-237-PMS-1.

The overflow level is required because the filler neck of the installed starter is at the 11 o'clock position.

### Bench Check

The filler neck on an uninstalled starter, tho, is at the 12 o'clock position on the workbench. So the word in Task 5, Step 1 of TM 55-1520-237-23-6 is to drain the reservoir and add 190-210cc of oil. You don't fill it to the brim.

Either way, you want the right oil level in the engine starter.



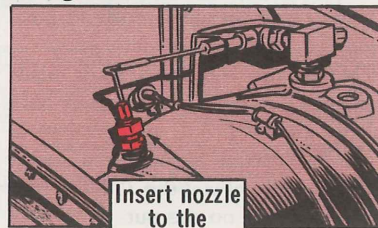
## The Right Pattern

The fuel spray pattern into the Black Hawk auxiliary power unit has to be just right, knucklebusters, to fire up that baby.

If the start nozzle is inserted too far (or not far enough) into the combustion chamber, the spark plug won't ignite the fuel.

For the right pattern, insert the nozzle until it just bottoms in the chamber. Then, back it out 2 to 2½ turns. Torque the jamnut to 35-40 lbs-in.

You'll find that important info, and more, in Task 20, Step 14 of TM 55-1520-237-23-6.



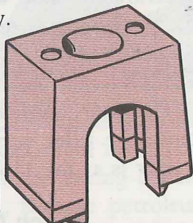
## Adapter Here



If you've been looking for the new adapter and socket wrench to use on the OH-58A/C main rotor mast nut, it's now in supply.

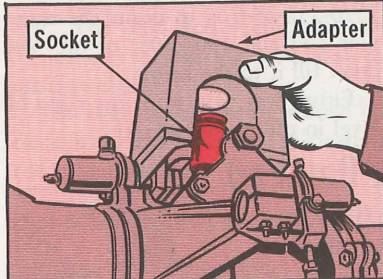


Socket, NSN  
5120-01-098-4475



Adapter, NSN  
5120-01-098-4541

To use the special tools, insert the socket over the nut, add the adapter,



insert the drive bar, and place your Power-Dyne torque wrench in position.

Make sure the main rotor blade tiedown has been removed so both blades are level.

A little hand action on a socket wrench will get you the 250-270 lb-ft torque needed on the nut.

## Make the Seal



If the foam rubber seal on top of the OH-58A/C oil cooler has had it,



Kiowa mechs, you can't get one by ordering from the parts pub. The Source, Maintenance and Recoverability (SMR) code says you have to make it.

You'll find seal dimensions and the material to make it in Figs D190, D191, and D192 of TM 55-1520-228-23.

Also, Fig 52, Items 33A, 33B, and 33C in TM 55-1520-228-23P, is being corrected to show the right location for the seal.

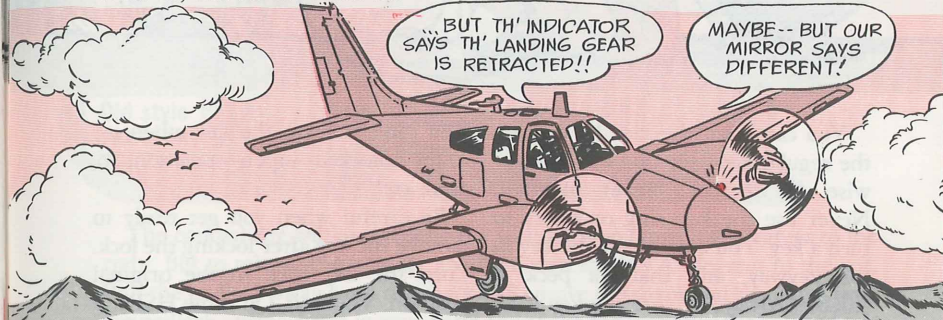
For U-21, U-8 Aircraft...

## Gear Down and Locked?



If the landing gear indicators on a T-42A indicate the wheels are not down, maybe only the indicators are faulty.

If so, Cochise pilots have a backup system. It's a wide-angle (convex) mirror on the inboard portion of an engine nacelle. It's shown in Fig 2-1 as Item 11, TM 55-1510-208-10.



U-21 and U-8 airplane drivers can also use a mirror, positioned to show the gear from the cockpit.

Mirror, NSN 2540-01-079-3327, has an adhesive backing. Put it on an engine nacelle where you can get a good bond and a look if a gear emergency arises.

## Aviation Messages

Cat 1 EIR Phone:  
AUTOVON 693-2086  
(24 hours)

If your unit has not received a message in which you have an interest, check with your next higher headquarters.

AH-1-82-11 Maint Advisory—Flatplate canopy removal detonation transfer 051930Z Oct 82

AH-1-82-12 Maint Mandatory—Wiring clearance of AN/ALQ-144 IR jammer AH-1S (Modernized Cobra) 061300Z Oct 82

UH-1-82-05 Maint Mandatory—replace safety relief valve with plug UH-1B/H/V, EH-1X 011600Z Oct 82

UH-1-82-06 Emergency technical—connecting link, rigid, left, right cyclic 072230Z Oct 82

UH-1-82-06 Revision to emergency—technical connection link, rigid, left, right cyclic 082100Z Oct 82

CH-47-82-13 Maint mandatory—CH-47A/B/C/D engine fire extinguisher cartridge 221430Z Oct 82

CH-47-82-14 Technical—status of op capability of CH-47-fleet 232000Z Oct 82 UH-60-82-18 Maint mandatory—main rotor spindle droop stop 272105Z Oct 82

UH-60A-82-19 Maint mandatory—Yaw trim and roll trim servos improved seal 221430Z Oct 82

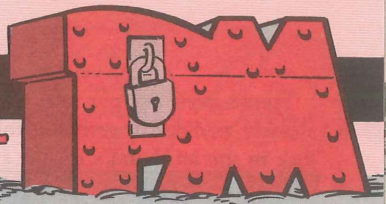
OH-58-82-03 Maint mandatory—anti-icing valve poppet seat screw T63-A-5A1 700 and T63-A-720 engines 071530Z Oct 82

GEN-82-07 Maint mandatory—airworthiness directive (AD) 82-20-01, 19 Sep 82 272110Z Oct 82

AH-1-82-10 Maint mandatory—maint inoperative 10-KVA alternator, 051925Z Oct 82



# High-Security Padlock



More 'n' more you're seeing the shrouded shackle padlock, NSN 5340-00-799-8248, on arms room doors.



HERE'S THE PM HOW-TO THAT'LL KEEP 'EM SERVICE-ABLE FOR YEARS!

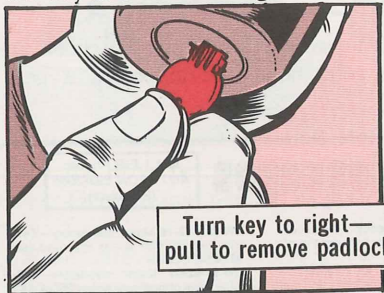
OH, THAT'S ANGUS, CONNIE --SAYS HE'S A BROWNIE EXPERT ON LOCKS!

## Shrouded Shackle PM

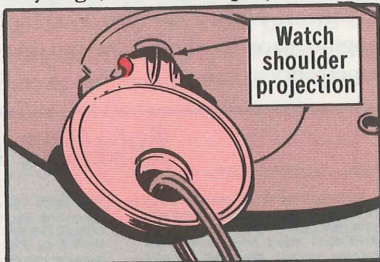
You can open the lock by turning the regular key only one way—clockwise 45 degrees. Never force it. Never use the key ring or pliers to turn a key. You'll break off the key in the keyway, and that's a peck o' trouble. Always be sure the key is all the way in before turning it.

You can't remove the key when it's in the unlocked—open—position. So, don't try!

Be careful when you get ready to remove the key after locking the lock. Turn the key back to the original position. Watch it. On some HSP's if you turn 'em to the left as far as they'll go, a shoulder projection will



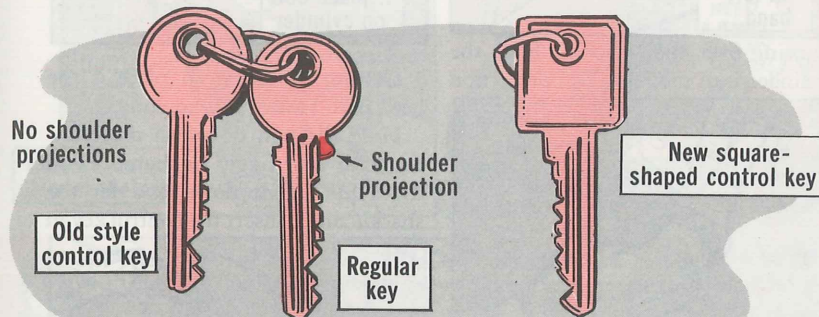
Turn key to right—pull to remove padlock



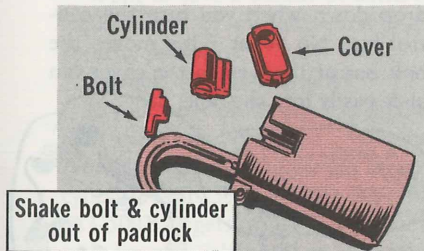
Turn the key to the right. When it stops, pull the padlock away from the shackle. It won't spring open because it has a dead bolt shackle.

catch on the base of the padlock case. You won't be able to pull the key out. This won't happen on the newest locks.

So, ease the key to the right a smidgen till the shoulder projection is clear, then pull the key straight out. No bending, please. Never use the control key unless you want to service the cylinder, bolt and inside of the case.



The control key will also unlock the padlock if you turn it 45 degrees to the right. But to release the cylinder and bolt, turn the key 45 degrees to the left. Pull the padlock away from the shackle. Remove the cover and key. Now hold the padlock upside down in your hand and shake the lock until the bolt and cylinder drop into your palm. The shackle will not come loose from the case.



Shake bolt & cylinder out of padlock



Tight? Tap lock with mallet

If the cylinder doesn't come out, rap the lock gently with a plastic, rawhide or lead mallet. Use holder, inserted hammer face, NSN 5120-00-903-8546, with the medium plastic flat face insert, NSN 5120-00-293-3003, for this job. Hammer and face insert are in your Small Arms Repairman's Tool Kit.



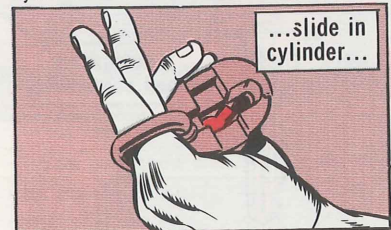


**Now, Together**

Here's how to put the shrouded shackle padlock together. Hold the lock in the left hand with the shackle



curving over the knuckles. Slide the cylinder into the lock. The projection



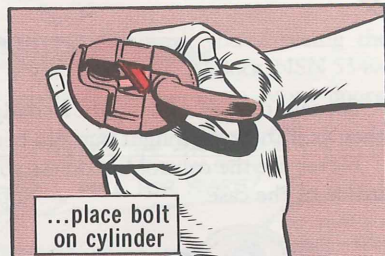
on the cylinder faces the side away from the shackle, and fits into a recess in the side of the case.

Now for the bolt. Lift the shackle with the thumb as high as it'll go. Use



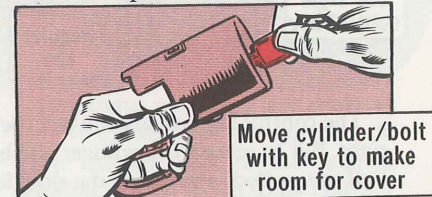
round-nose pliers to place the bolt—with the nipple on top facing the

shackle—in the lock and let it rest on the cylinder.



Getting the cover in place is the hard part. Here's how to do it:

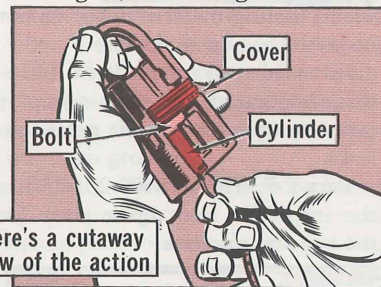
Hold the bolt down on the cylinder with your finger or thumb. Hold the HSP upside down and let the shackle drop. Insert the control key in



the keyway and turn counterclockwise 45 degrees. The shackle will drop down when you turn the control key. No sweat. This moves the bolt out of the way so the cover can slide easily into the hole.



Slide the cover into place. Hold it there with your thumb and turn the HSP upright. Now pull up the shackle as far as it'll go, swing it counterclockwise and drop it into the lock. Turn the control key to its original position and pull it straight out. Again, no bending.



**HSP, MSP Repair**



Want to save a bundle of bucks on replacement of medium- and high-security padlocks?

Replace the cylinder only!

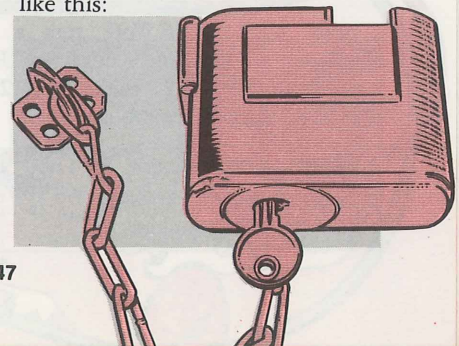
If your keys are broken or lost, or the cylinder's damaged, you can rebuild your locks with a new cylinder. NSN 5340-01-127-0989, PN S23-500X2, gets you a replacement cylinder and 2 keys on an exception data request. Cost is \$13.45.

The NSN is not on the AMDF.

The cylinder fits high-security padlock, NSN 5340-00-799-8248, and

medium-security padlocks, NSN 5340-00-799-8016 and 5340-00-492-1993.

The cylinder won't fit the new medium-security padlock, which looks like this:





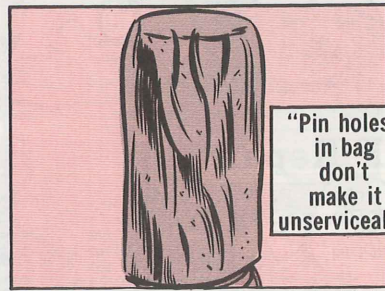
A lot of clothing bags and non-insulated pneumatic mattresses are being turned in as unserviceable when they're still perfectly good.

Waterproof clothing bags—NSN 8465-00-261-6909—have been turned in with pinhead-size areas that

waterproofing material. They do not make the bag unserviceable.

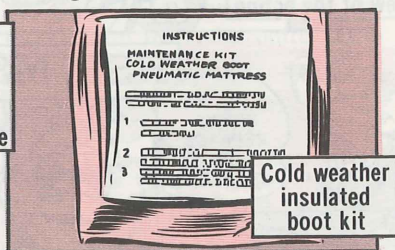
Insulated and uninsulated pneumatic mattresses are showing up at property disposal with repairable leaks.

Para 2-7, TM 10-8400-201-23 has the inspection and repair poop for the bag and mattress.



are visible when the bag is held in front of a light. Troops think these are holes, and that the bag is a leaker.

Not so. These thin areas in the bag are gaps in the synthetic rubber



Use the cold weather insulated boot maintenance kit, NSN 8465-00-753-6335, to repair small rips and holes in these 2 items.

## Jumper Cable Clamps

NSN 5999-01-046-9397 gets a pair of 800-amp rated, heavy-duty clamps—1 positive and 1 negative. Use them to replace missing or damaged clamps on the jumper cable, NSN 2920-01-027-0125, that's in your No. 1 and No. 2 Common shop sets.

Order them on DD Form 1348-6 and add in the Remarks Block that the clamp number is on the AMDF, but with some missing information. The RIC is S9E, price \$10.95.

NEED 'EM? THEN JUST...

Mobile Field Kitchen...

## Take the 'Sink' Out

WHERE'S TH' SINK IN THIS KITCHEN?

UNDER TH' LEVELING JACKS!

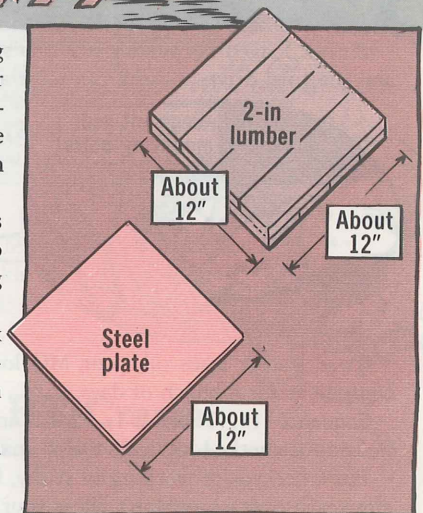


Do you have that "sinking" feeling when the leveling jack pads on your MKT-75 trailer-mounted field kitchen sink into soft ground? Are the jacks too short to level your kitchen on rough ground?

You can head off these problems by making up a set of 12-in or so square pads to use under the leveling jacks.

Make them out of a ½-in thick steel plate, like NSN 9515-00-294-9916, or out of 2 layers of 2-in lumber nailed together.

Use the pads when you set up on uneven or soft ground.



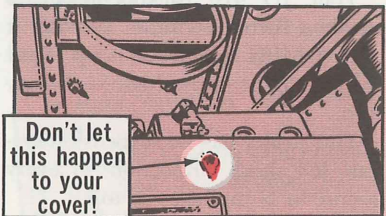
## Kitchen Trailer

If a cold, slick floor is a problem in your trailer-mounted field kitchen, the answer is in C3 of TM 10-7360-206-23P. NSN 7220-00-034-7225 gets you a roll of rubber floor matting.

## Battery Cover Care

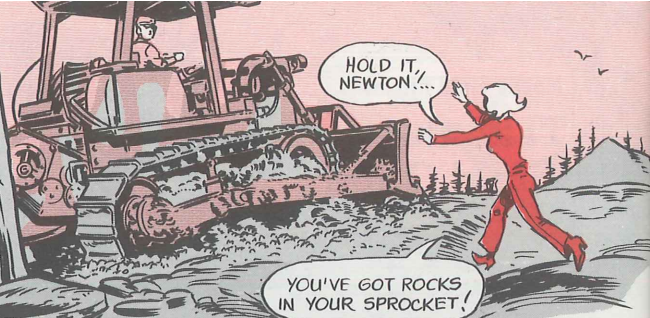
Never step on the battery box cover when you get in or out of the 27-ft bridge erection boat cockpit.

You'll bend the hold-down bolts and push the cover down until it hits a positive terminal post. Then, the battery will arc and burn a hole in the cover.

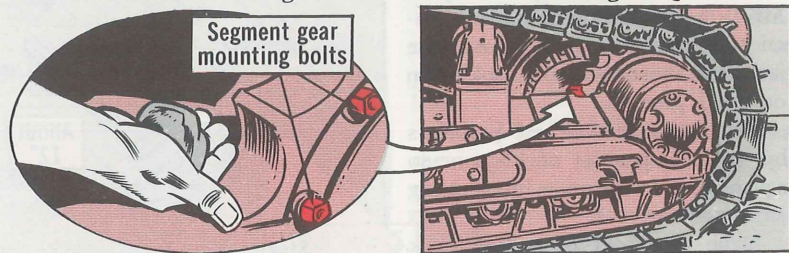


D7E/F Caterpillar...

## Check for Rock Damage



A rock lodged between your Cat's sprocket segment gear mounting bolts and the final drive housing can wear a hole in the housing PDQ.



Your tractor loses oil, your MO loses his cool, and your unit loses the equipment for a bunch of days.

Sequence 11, Table 2-1, PMCS in TM 5-2410-233-20 says the final housing is checked for leaks every quarter.

But when you're working in sticky, heavy stuff, clean out this area shortly after each operation. Don't allow your Cat to sit around idle until packed-in mud, rocks and debris harden in place.

Also, when operating in heavy mud or clay, with very few rocks, don't use roller guards. While they keep rocks out, they keep a lot of mud and clay in that would otherwise fall by the wayside.



## JD 410 Backhoe

Your JD 410 backhoe-loader is hardly a Formula 1 racer. Driving it over 5 MPH will crack it up faster than a smash into a high-bank Indy turn.

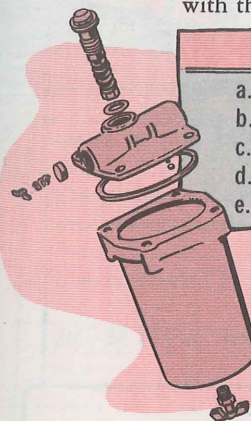
This loader has no suspension system for shock protection so every bounce 'n' bump takes its toll.

Soon the vehicle's rear axle retaining bolts are loose and damaged, the axle comes loose and slides out of its



## H100C Scoop Loader... Alcohol Injector Kit

Stop brake system freeze-ups on your 4½- and 5-cu-yd IHC scoop loaders with this alcohol injector kit and attaching hardware:



PN	Item
a. 890062C93	Alcohol evaporator kit
b. 3-8X1 N	Bolt (2)
c. 3-8 R	Washer (2)
d. 3-8 X	Nut (2)
e. 55916R11	Elbow

USE DD Form 1348-6 AND FSCM 29510 FOR THESE ITEMS! THE RIC IS 59C!!

Section 13 of TM 5-3805-255-14&P has the injector kit installation info. Page 2-28 of TB 43-0001-41-6 (Jul 81) authorizes the kit.



## 20-Ton RT Crane

Use NSN 4720-00-459-5945 for the coolant line elbow, Items 24 and 26, Fig 146, TM 5-3810-232-20P.

## Plumber's Antiseize Tape

Use NSN 8030-00-889-3534 (¼-in) or 8030-00-889-3535 (½-in) for a 260-in roll of antiseize and sealing tape for pipe threads on liquid and gaseous oxygen systems of 2,000 PSI or less.

## Safety Tips

housing. Your high-speed run has damaged the axle, bearing, seals, housing, planet pinion housing gears and differential!



Connect the brake pedals with the brake pedal bar at high speeds—

- Make turns at very slow speeds.
- Read 'n' heed the safety rules in the Operator's Manual CJT-26116B.



Antifreeze...

## Stencil No More!

NO, NO, MERVIN!  
YOU ONLY REFRAIN  
FROM STENCILLING  
ANTIFREEZE  
INFO!



AW  
SHUCKS!!



The Supply and Maintenance Assessment and Review Team (SMART!) message on the DA Form 2408-1 told you to stencil antifreeze info on your gear.

But there's been some re-thinking on that! The antifreeze check is part of a scheduled service in most equipment TM's and in TB 750-651, Use of Antifreeze Solutions and Cleaning Compounds in Engine Cooling Systems. Also, you now change the antifreeze only when it fails the test.

So you need no special record of antifreeze testing—usually!

Forget the stencil requirement on antifreeze.

In fact, forget any special record of testing and degree of protection of antifreeze except when your equipment is under warranty or you're using:

- Commercial antifreeze
- Arctic antifreeze

If you put commercial or arctic antifreeze in your gear or the gear's under warranty, keep up with the test results and protection in the Remarks Block of the DD Form 314.

Hold it! There's 1 more "special case"! PS 354, Pages 26-27, tells you about extending the antifreeze by boosting the rust protection. That's a one-time deal. Add that action to your DD Form 314 Remarks!

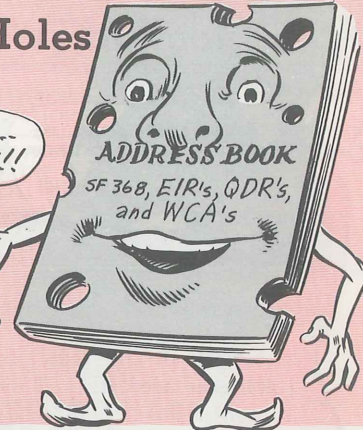
Appendix B  
of TM 38-750...

## Fill in the Holes

GOOD NEWS, BUDDY! WE  
CAN FILL IN SOME OF  
YOUR HOLES NOW!



AHHHHH--  
GREAT!!



Fed up with holes in your address book for SF 368 Equipment Improvement Recommendations (EIR's) or Quality Deficiency Reports (QDR's) and DA Form 2407 Warranty Claim Actions (WCA's)?

FSC's are the first 4 numbers of NSN's.

Well, grab a pencil. Turn to Section II, Appendix B of TM 38-750 and fill in some holes!

Add these Federal Supply Classes (FSC's):

1070-1080	6210-6350
3210-3230	6670-6675
3455-3470	7105-7720
5410-5411	8305-8475

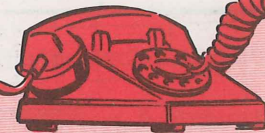
NOW MAKE A NOTE  
TO SEND ALL YOUR  
SF 368's AND WCA's  
ON ITEMS WITH THOSE  
FSC's TO...



Commander  
US Army Troop Support and  
Aviation Materiel Readiness  
Command  
ATTN: DRSTS-MPSD  
4300 Goodfellow Blvd.  
St. Louis, MO 63120

## Troubles? Tell Half-Mast

Got maintenance or  
supply troubles?  
Let Half-Mast know.  
Just jot a note to:  
MSG Half-Mast  
% PS Magazine  
Lexington, KY  
40511



## Supply Hotline

Got some hot questions on supply regs or policy?

The Logistics Evaluation Agency (LEA) has a 24-hour hotline to help you.

Give 'em a call on AUTOVON 977-6842 or commercial (717) 782-

6842 if you have questions on these  
regs:

- AR 710-2
- AR 735-5
- AR 735-11
- AR 735-11-1
- AR 735-11-3
- AR 735-17
- AR 735-20
- AR 735-72
- AR 750-1

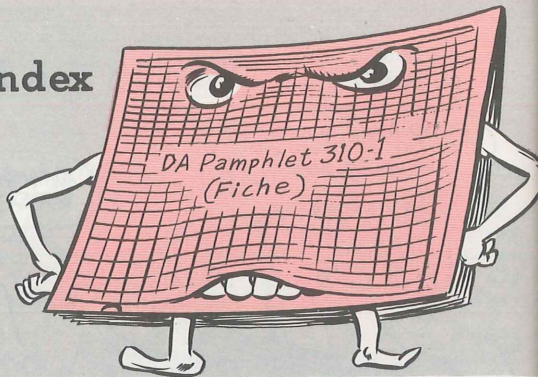
HAVE THIS INFO READY WHEN  
THEY ANSWER THE PHONE...



- Your Name
- Your Rank
- Your Telephone Number
- Your Unit Address
- Regulation Number and Paragraph in Question

## 1 Block for 1 Index

I MAY LOOK LIKE A PUNY WEAKLING, BUT I PACK A WALLOP LIKE THE BIGGEST PUB!



Almost all the pubs and forms you'll ever need are in 1 index: DA Pamphlet 310-1, Consolidated Index of Army Pubs and Forms (Fiche).

For now, you get as many copies of the consolidated index as you marked for any of the indexes it replaced. That is, you'll get as many DA Pams 310-1 as you marked for

DA Pam 310-1, -2, -3 and -4 on the DA Form 12-4.

But in the future, your copies will be based on how many you've marked in Block 17 of DA Form 12-4—for the DA Pam 310-1 alone.

Make sure your unit keeps up with the times—and pubs—and for enough copies to meet your needs!

## Re-View the UIC

WISH WE'D GET OUR NEW BIRD SOON...

THURMOND, YOU SURE YOU BEEN FILLIN' OUT BLOCK 6 ON OUR DA FORM 1352 CORRECTLY?



BLOCK 6?  
ER... I ...

You aviation types know a lot rides on the monthly DA Form 1352, Army Aircraft Inventory, Status and Flying Time Report.

But do you know how important a good Unit Identification Code (UIC) in Block 6 is? The experts use the UIC to figure flying hour costs for each unit and to keep tabs on where the birds are. It also helps tell them who needs new birds.

A slipped digit in your UIC could mean you lose your place in line for newer aircraft. Doublecheck the UIC before you send in the DA Form 1352.

## Generator Operator Training

WANT TO SET UP A PROGRAM TO TRAIN GENERATOR OPERATORS?

HERE'RE THE BASIC PUBS YOU NEED TO GET THE CLASS STARTED...



### Publications

### Title

AR 700-72	Mobile Electric Power
AR 385-30	Safety Color Code Marking and Signs
DA Pam 750-1	Maintenance Guide for Leaders
FM 20-31	Electric Power Generation in the Field
FM 43-1	Organizational Maintenance Managers Guide
FM 43-1-1	Organizational Maintenance Managers Guide Indicator List
TB MED 501	Noise and Conservation of Hearing
TB 385-4	Safety Precautions on Electrical and Electronic Equipment
TB 43-0125	Hookup of Electrical Cables to Mobile Generator Sets (commo- electronics)
TB 750-651	Antifreeze and Cooling Systems
TC 11-6	Grounding Techniques
TM 9-6140-200-14	Lead-Acid Batteries

Use these publications along with the generator TM's and LO's of the specific generator sets in your unit. Don't forget the pubs that support the Mil Std engines on the generators.

You can also get some good information from TEC Lessons. You'll find a list of these in Extension Training Material Status List. Your Training NCO can steer you to this publication, as well as others listed in "A Formula for Success," Page 1.

COMMO

On Your New AN/UGC-74A (V) 3...

# Stop Terminal Illness

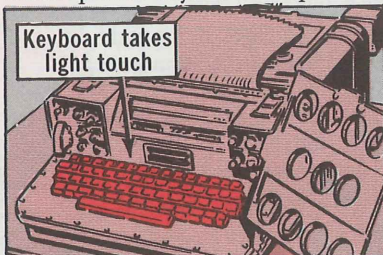
MAKING LIFE MORE COMFORTABLE FOR YOUR NEW COMMUNICATIONS TERMINAL (AND YOURSELF, OF COURSE) MEANS DOING THE LITTLE THINGS!

## Be a Smooth Operator

Sure, your terminal is rugged. But a little TLC and common sense can help.

Take it easy on the keyboard. Those plastic keys will snap off if

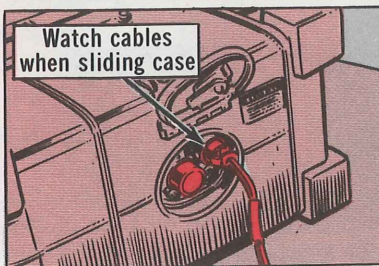
Keyboard takes light touch



hooked by a sleeve or mashed too hard.

At the other end, watch cable connections and insulation when sliding the terminal from the rear case.

Watch cables when sliding case

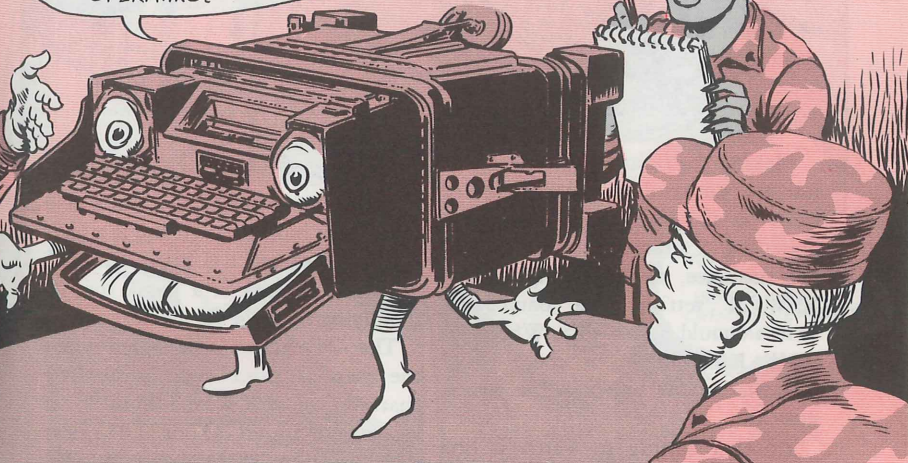


Those plugs need special—and careful—handling, anyway. They are not soldered and will break easily if roughly handled. Plug and unplug with care.



YOU KNOW IT, SPARKS!

OPERATORS AND REPAIR-TYPES DOING THE LITTLE THINGS CAN MAKE A BIG DIFFERENCE IN KEEPING EVERYONE ON-LINE AND OPERATING!

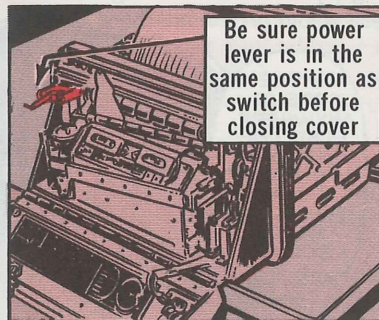


## Cut the Power

Turn power OFF when you're making or changing switch settings. Same goes for plugging or unplugging the print control or print drum motor speed plugs. The driver card module can blow if you have power ON.

Watch the switch when you're ready to close the dust cover, too. The power switch should be in the same position as the switch lever. If it's not, when you latch the cover, the switch can break.

Be sure power lever is in the same position as switch before closing cover



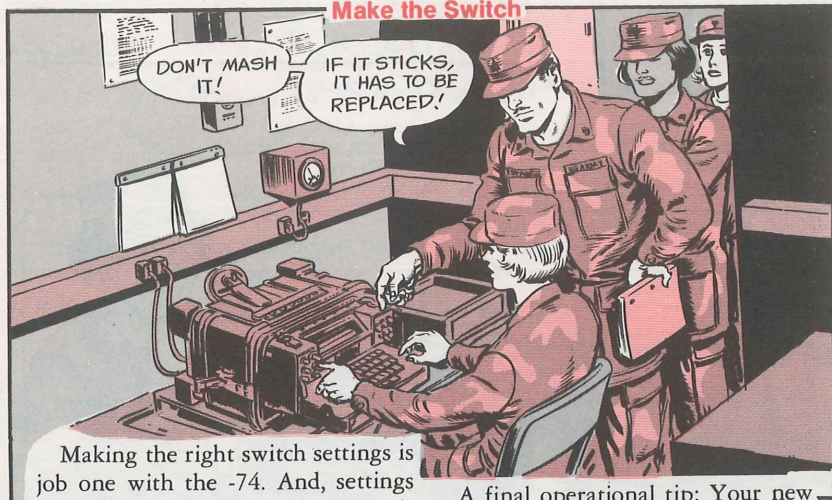
So, when you replace the cover, hold the switch in the position—ON or OFF—that terminal is operating in.

Cards firmly seated?



Be sure all cards and plugs are firmly seated. If they're not, it won't make any difference what position the power switch is in. Something won't operate when you expect it to.

## Make the Switch



Making the right switch settings is job one with the -74. And, settings must be the same on all terminals operating in a radio net.

For instance, if you're going to use a 60-WPM setting, the Baud rate switch should be on 45.5. When the LINE lamp is on, it could mean someone in the net is in the wrong position.


Another setting to watch is line length. If you're using ICT state, and in a net with a radio teletypewriter set still using the old TT-98 teletypewriter, set your line length at 69 with the line subcommand.

A button to keep an eye on (and a heavy finger off) is PARITY RE-SET. That's the button you hit during a self-test of your set.

The spring-loaded button is meant to pop back each time you hit it. Hitting it too hard, tho, or holding it too long, can make it stick. You can't unstick it. Your org repair shop will have to replace it before the terminal will operate again.

A final operational tip: Your new machine is built to warn you if a high priority message has been received. You have to give it a hand, tho, by modifying message format a little.

The -74's alarm is activated when the message precedence is the first character of the second line. So, if you're sending an "O" or "OP" message, you should rearrange the format to put precedence there.



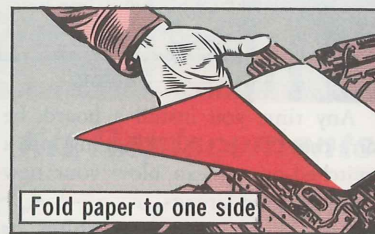
IF THE CODE IS ANYWHERE ELSE, THE WARNING LIGHT WON'T LIGHT AND THE ALARM WON'T SOUND!

## Paper, Ribbon

Changing the ribbon on your machine is a delicate task.

If your ribbon is short a leader, make one for it. Take a length of adhesive tape and cut it in half lengthwise. Wrap it around the bottom spool several times and then attach it to the tape. Now wind the new leader onto the takeup reel.

Adding paper has taken a new shape, too. C1 to TM 11-5815-602-12 says to put the point to one side, instead of in the middle. Makes it easier to thread through the machine.



Once you have the paper showing out the front, you can release the pressure lever and pull the paper up.

Add paper when you need it. Keep an eye on the PAPER LOW light. If you wait, or think you can get by with your old roll, you risk running out. That locks up your machine and stops traffic.

Finally, remember any time you work with the dust cover down—to change paper or a ribbon, for example—watch rings and jewelry. You can short out a circuit easily with a touch on exposed connections.

## Now, a Word for Repairmen

The word is light, as in touch.

When making adjustments, too much muscle is trouble. Like when you make the ribbon slip clutch adjustment. Overtightening will mash the spring. Then the ribbon won't turn.

Hook the spring gage in the top ribbon spool. With the motor running, let the spool pull the gage. When you get between 10 and 12 ounces of tension, the spool will stop. If yours doesn't, the slip clutch needs adjustment.



Then, when you tighten the ribbon sensing lever, give it no more than 3 or 4 ounces of tension.

A light touch is also needed when you're through setting the timing. Overtightening the mounting screw can break the microprocessor's plastic case.

Finally, when you're sliding the ribbon mechanism back into place, never set the drive gear too tightly against the intermediate gear it meshes with. The metal gear can grind down and damage the plastic one.

You'll hear a whining noise during operation if the two are too tightly meshed.



Make TD-660 a Winner...

# Practice Panel PM

GOOD BOARD-WORK IS YOUR KEY TO KEEPING STRONG SIGNALS COMING THRU YOUR MULTIPLEXER!

EVERYTHING'S OK AT THIS END! BONNIE AND I CHECKED IT OUT!



It starts with proper handling of the pluck-out panels that carry the printed circuit boards.

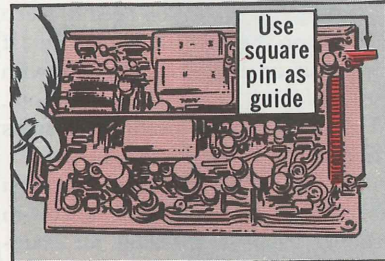
First things first, tho. Be sure you're using the right boards. A mix of old (11A2 through 11A8) and new (11A23 through 11A29) circuit boards creates static on the -660's channels.

Use same with same. That means all old or all new style. No mixing.



Any time you install a board, be sure the -660 is OFF. Plugging into a switched-on set can blow your new card's printed circuits.

Easy does it when pushing or pulling a board too. Those pins are fragile. Rough handling can bend or break 'em.



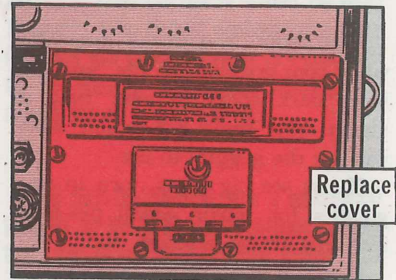
Always push and pull straight. Use the board's square key to guide your actions.

If you do bend a pin, don't turn in the board yet. First, try to straighten the pin with needlenose pliers.

So, cards are straight and snug. You've tested 'em to verify contact. Be sure to reset the channel selector and talk-monitor switches to OFF. If you don't, you cut the power level in half. That could lead you to turn in your set for repair when it's really OK.

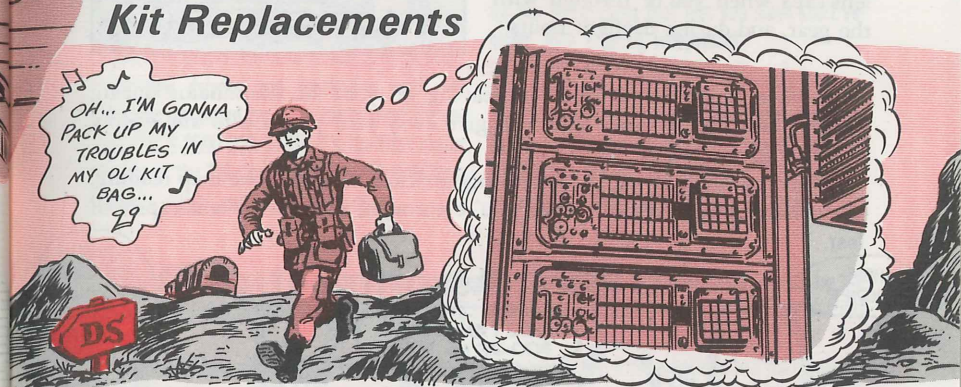
Finally, be sure to replace the set's card cell cover. Without it, cards can

jiggle loose. Then you've got bad contact or none at all. It can also let in dirt and dust to short you out.



## Kit Replacements

OH... I'M GONNA PACK UP MY TROUBLES IN MY OL' KIT BAG... ♪

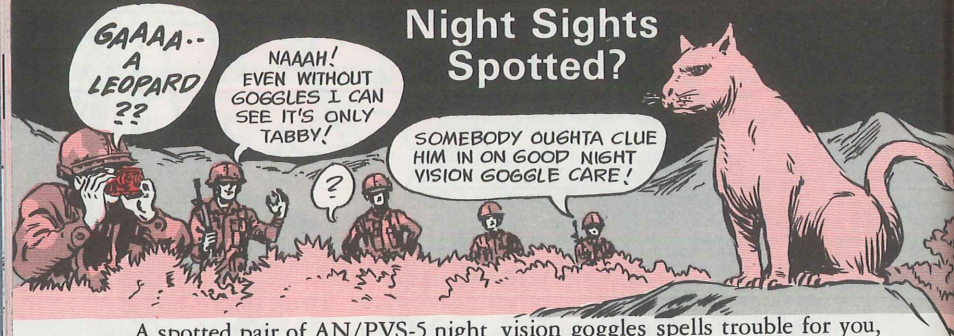


Order the parts, not the whole kit, when you need replacements for MK-1823 or MK-1885 kits. The complete kits are initial issue only items.

The MK-1823 maintenance kit for an SB-3614 switchboard is broken out only in TM 11-5805-695-34P, tho. Get with your support for the NSN's.

Parts for the AN/TTC-41 telephone central's MK-1885 installation kit are in a new Chap 5 to TM 11-5805-693-12. C1 added the info.

## Night Sights Spotted?



A spotted pair of AN/PVS-5 night vision goggles spells trouble for you, operator.

### Before Your Eyes

You "spot" the image intensifier tube by leaving off the lens caps when your goggles are idle. Sunlight, or strong artificial light, can burn large dark spots in your field of vision. That spells big trouble when you put the goggles to use.

If you see big spots, turn in your goggles for repair. Small pin-hole-size dots are no problem, tho.

Head off spots by always using the lens caps when you're through with the gear, and during daylight hours.



### Before the Enemy's Eyes

Another "spotting problem" is leaving on your IR illuminator during normal use. The infrared light will give away your position to any enemy observer in the area.

Protect yourself by using the IR only for close-in work, like map reading, when natural light is bad. When you're through, replace the lens caps real fast.



An assortment of 300 O-rings is now available under NSN 5330-00-966-8657. Sizes range from 1/8-in to 1 3/4-in inner diameter. The kit comes with a sizing gage so you can determine which O-ring to use.

## Connie's Mini Minis



### Metal Gage OK for 1/4-Ton

If you need to readjust the Prestolite distributor in your M151-series truck, you can use the metal feeler gage in the No. 1 Common tool kit. It'll work OK in adjusting the sensor—Para 5-6, Step 11, TM 9-2320-218-20-1-1. Or, save the plastic gage that comes with the distributor.

### New Cooling System TB

Make sure you're up to date on use of antifreeze solutions and cleaning compounds in engine cooling systems. The latest TB 750-651 is dated 20 Jan 83. It's got some important info that wasn't in the old TB.

### Tank-Mounted Dozer TM

All you drivers and mechanics with M9 bulldozers mounted on your tanks need the revised TM 9-2590-209-14&P. It's the first major revision of the TM since 1963. The TM contains a complete PMCS and a new lube chart.

### M872 Trailer Hazard

Temporary operating restrictions are in effect for all M872 34-ton semitrailers made by the Southwest Truck and Body Company. Some M872's have developed frame cracks forward of the front axle.

The restrictions deadline vehicles with known frame cracks and limit all others to a maximum of 17 tons. No ammo or armored personnel carriers are to be hauled on the trailers.

Restrictions will apply until individual trailers, including those without frame cracks, are repaired or strengthened.

Details are in TACOM Messages DRSTA-MVA 011530Z and 081530Z Oct 82. Look for other messages with more word on the problem.

\* U.S. GOVERNMENT PRINTING OFFICE: 1983-659-007/3

*right now*  
**Would You Stake Your Life on the Condition of Your Equipment?**

### Filter Washing's OK Again

Air cleaner filter elements on M48A5- and M60-series tanks can now be washed. For about 18 months, filter element washing was a no-no. Check out your tank's -20 TM or TB 9-2300-378-14 for washing instructions. Cleaning with compressed air is also still OK.

### NATO SP Cable

NSN 5935-00-258-9156 gets a replacement terminal for the NATO special purpose cable kit that's part of your No. 1 Common shop set. NSN 5935-00-322-8959 gets a 3-part, 2-prong adapter for the NATO cable that lets you slave start vehicles with 2-prong receptacles.

### Clean Air for Tanks

It's here—the latest info on how to keep your tank's air cleaner system in top shape! Check out TB 9-2300-378-14, Air Induction System Maintenance for M48- and M60-series tanks.

# PACK

# PM

WITH  
EVERY ITEM  
YOU SEND  
FOR REPAIR

**1** Use original boxes or "Fast Pack"

**2** Pack **all** parts!

**3** Use padding!

**4** Pack it snugly!

**5** Tag NSN, item and destination!

**6** Inclose records! (if required)