

Issue 253

PS

1973 Series  
December

THE  
PREVENTIVE  
MAINTENANCE  
MONTHLY



SORRY, SANTA --  
BUT EVERYONE'S BEEN BUSY  
PRODUCING TOYS -- *NOBODY*  
REMEMBERED *DAILY*  
MOTOR STABLES!



MURPHY  
ANDERSON

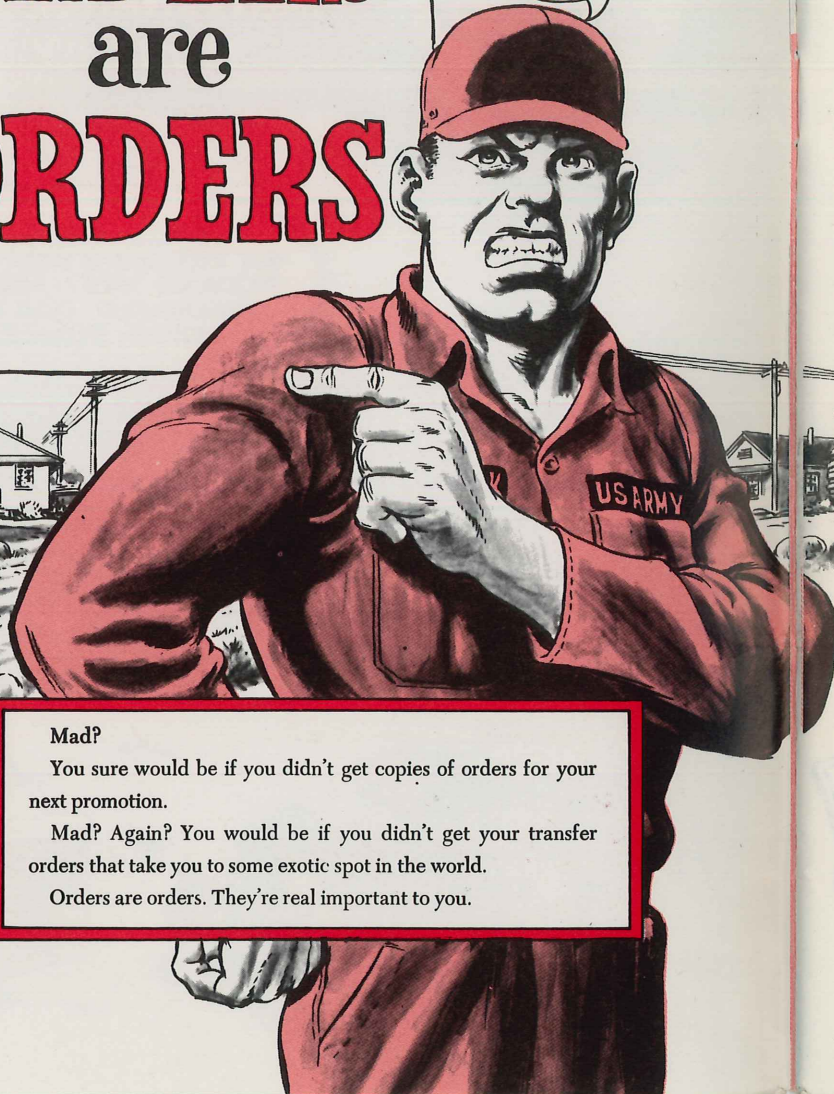
SEE  
MOTOR STABLES  
ARTICLE  
Pages 21-28



SOME ARE TECH MANUALS-

# ORDERS are ORDERS

YA MEAN  
I WAS SUPPOSED  
TO HAVE BEEN  
A SPEC-4...  
6 MONTHS  
AGO?



**Mad?**

You sure would be if you didn't get copies of orders for your next promotion.

Mad? Again? You would be if you didn't get your transfer orders that take you to some exotic spot in the world.

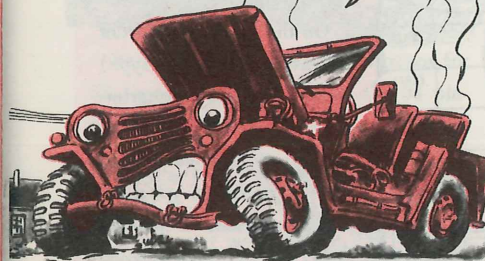
Orders are orders. They're real important to you.

WHAT  
HAPPENED  
TO MY  
ORDERS?

**LOST?**

**I'LL  
SUE!**

RIGHT ON,  
BUSTER! BUT  
HOW ABOUT MY  
"ORDERS"--  
THE TM'S THAT  
YOU NEGLECTED  
TO GET FOR  
ME?



Also, there are orders on your equipment. They're real important to you and to your equipment. These orders are tech manuals, tech bulletins, supply catalogs, regs, field manuals, pamphlets and lots of other publications.

You need 'em to be sure you operate and maintain your gear right. But, how do you make sure you get the ones you need?

**TELL ME! HOW  
DO I MAKE SURE  
I GET THE  
"ORDERS" FOR  
MY GEAR?**



**PS MORE**

**PS**

**THE  
PREVENTIVE  
MAINTENANCE  
MONTHLY**

Published by the Department of the Army for the information of organizational maintenance and supply personnel. Distribution is made through normal publication channels. Within limits of availability, older issues may be obtained direct from Editor, PS Magazine, Lexington, KY 40507.

ISSUE No. 253 DECEMBER 1973

### COMBAT SUPPORT/SUPPLY

|                     |     |                  |       |
|---------------------|-----|------------------|-------|
| Ordering Manuals    | 1-5 | High-Pressure    |       |
| Cold-Weather Starts | 16  | Hosing           | 18-19 |
| Tank Generator      | 17  | New Publications | 20    |
|                     |     | Tractor Filters  | 48    |

### FIREPOWER

6-15

|               |      |               |        |
|---------------|------|---------------|--------|
| M16A1 Rifle   | 6-7  | M551 Sheridan | 12, 13 |
| M60 MG        | 6-7  | Hawk Talk     | 14, 15 |
| M102 Howitzer | 8-11 | Chapparral    | 15     |

### GROUND MOBILITY

29-35

|                 |    |              |       |
|-----------------|----|--------------|-------|
| Blackout Lights | 29 | 2½-Ton Truck | 30-31 |
| ¼-Ton Truck     | 29 | Gama Goat    | 32-35 |

### COMMUNICATIONS

36-39

|                       |       |          |    |
|-----------------------|-------|----------|----|
| Teletypewriter Topics | 36-39 | AN/PTM-7 | 39 |
|-----------------------|-------|----------|----|

### AIR MOBILITY

40-47

M28/M28A1 Subsystem

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

**M S G Half-Mast  
PS Magazine  
Lexington, KY  
40507**

Use of funds for printing of this publication has been approved by Headquarters, Department of the Army, 17 July 1973.  
DISTRIBUTION: In accordance with requirements submitted on DA Form 12-4.



## KEEP UP-TO-DATE

You have to keep your subscriptions up to date. Any time your need for a publication changes, you have to change your subscription at the pubs center. If your unit's M151A1 quarter-tons are exchanged for M151A2, you'd send in a Form 12-38. You'd mark the M151A1 blocks with 0 and the M151A2 blocks with the quantity of manuals you need. You make entries in the revised subscription form only in the blocks where you want changes made.

OOPS! RELAXED TOO SOON - BETTER CHECK OVER ALL MY FILE COPIES OF THE FORMS AT LEAST EVERY 6 MONTHS.

AND SEND IN NECESSARY CHANGES.

### THESE 0'S CANCEL YOUR ORDERS FOR THE M151A1 MANUALS.

|        |         |       |       |       |
|--------|---------|-------|-------|-------|
| M151A1 | (449)   | 0     | (450) | 0     |
| M151A2 | M151A1C | (453) | 5     | (454) |
| M274A3 | M274A4  |       |       | 1     |
|        | M274A5  |       |       |       |

THAT'S RIGHT! THE -A1'S WERE SWAPPED FOR -A2'S LAST WEEK.

LET'S SEE-- THAT'S ZERO COPIES FOR THE -A1 AND 5 COPIES FOR THE -A2.

### THESE SET UP YOUR NEW ORDERS FOR M151A2 MANUALS.

RIGHT, FILL IN THE BLOCKS ONLY WHERE THERE ARE CHANGES.

AND KEEP YOUR FILE COPIES OF THE 12-SERIES FORMS PERMANENTLY. OR, AT LEAST, UNTIL THE AG COMES OUT WITH A NEW VERSION OF THE FORM AND YOU HAVE TO SEND IN A COMPLETELY NEW ORDER.

LET'S SEE, BALTIMORE GAVE US 2929 OR WAS IT 34-22-34?

OR DID ST. LOUIS GIVE US THE 34-22-34?

Be sure to use your unit's account number with the right publications center. Baltimore will give you one number; St. Louis will give you another.

## ORDER REPLACEMENTS

You may need replacements for lost or damaged manuals. Just send in an order for replacements to the pubs center that distributes the pubs you need. Use DA Form 17 for this kind of order.

WE NEED 2 MORE COPIES OF THE 1/4-TON MANUAL.

EASY, I'LL FILL OUT A DA FORM 17 AND FIRE IT OFF TO ST. LOUIS.

MARK IT "SPECIAL!"

Who takes care of all the 12-series pin-point forms for your company? There's no TOE slot for this job right now, so your CO has to put out an order to give the job to a particular guy. He has to

YEAH, WHOSE JOB IS IT? PUBS ARE REAL IMPORTANT. THEY'RE ORDERS!

THE FIRST SHIRT IS OUR PUBS MAN!! WOW! HE'LL KEEP IT STRAIGHT!

THE UNIT CLERK IS HIS RIGHT-HAND MAN. THAT'S 1ST CLASS SERVICE.

get all the forms and then make sure he sets up subscriptions for all the publications your unit needs. He orders replacement manuals for everybody in your company. And, he makes sure everybody gets the manuals they need to do their jobs.

THANKS. THAT IS THE TM I NEED RIGHT NOW.

Your outfit's address or unit number changed? Your clerk notifies the pubs centers right now. That way your pubs will keep coming.

## PIN-POINT FORMS

SEND THESE FORMS TO BALTIMORE PUBLICATIONS CENTER.

### DA FORM:

- 12 Establish Publications Account
- 12-4 Administrative (except Regulations, Circulars)
- 12-8 Allied Communication
- 12-9A Regulations, Circulars, Pamphlets (Unclassified)
- 12-9B Regulations, Circulars, Pamphlets (Classified)
- 12-11 Instruction Sheet for 12-11 Series
- 12-11A Doctrinal Publications (FM)
- 12-11B Doctrinal Publications (FM)
- 12-12 TOE, Training Publications

AND ALL THE REST GO TO ST. LOUIS.

### DA FORM:

- 12 Establish Publications Account
- 12-21 Supply Catalogs
- 12-21A Supply Catalogs
- 12-25 Instruction Sheet for 12-25 Series
- 12-25A Mobility Support Equipment
- 12-25B Construction Equipment
- 12-25C Environmental Equipment
- 12-25D Elec Generating, Rail, Marine, Amphib Equipment
- 12-28 Chemical Equipment
- 12-31 Aviation Equipment and Avionic Configuration
- 12-32 Missile, Rocket, Air Defense Fire Distribution Systems
- 12-34 Supply Bulletins
- 12-34A Tech Bulletins
- 12-34B Non-Equipment TM's
- 12-35 Nuclear Weapons
- 12-36 Avionics Equipment
- 12-36A Avionics Equipment
- 12-37 Combat Vehicles (Organizational)
- 12-37A Combat Vehicles (DS, GS, Depot)
- 12-38 Trucks
- 12-39 Dolly, Trailer, Semi-Trailer
- 12-40 Artillery, Small Arms and Conventional Ammo
- 12-41 Sighting and Fire Control Equipment
- 12-43 COMSEC Equipment
- 12-50 Radiac, Fixed Radio Equipment
- 12-51 Field Radio Equipment

Does your outfit have orders in on all of these? At least, on those that list your equipment? If not, grab that subscription form!



Does something crimp your style when you're firing blank ammo in the M16A1? Heed this hint — they'll improve your smooth move blank firing.

# M60 MACHINE GUN CLUES

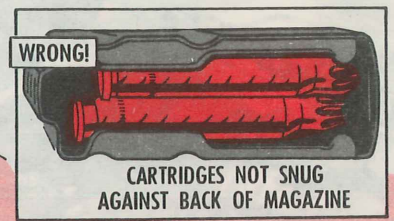
Dear Half-Mast,  
We're having a rough time getting our M60 machine guns to fire more than one round at a time. We think the problem is dirt or gum in the works, but why won't they operate after they're cleaned? Are we doing something wrong?  
SFC H.E.H.

IT'S LIKELY, SERGEANT H.E.H., YOU GET ONLY ONE SHOT, 'CAUSE THE GAS PISTON'S BEING INSTALLED BASSACKWARDS!

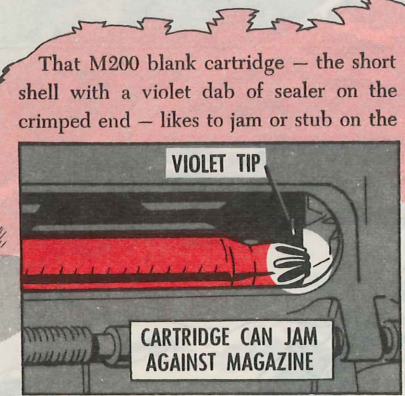


# BLANK AMMO

the rap by making sure all the cartridges are snug against the back of the magazine.

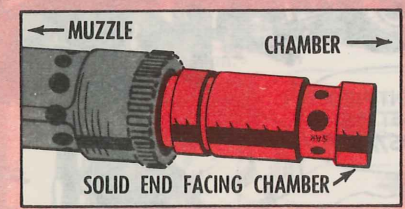


A good way to snug 'em up is this: lightly rap the back of the loaded magazine against the palm of your hand, like so . . .



front of the magazine when it's feeding into the chamber. But you can usually beat

Take a peek at Fig C-3, TM 9-1005-224-24 (May 71). The solid end of the piston — Item 7 — goes in the gas cylinder facing toward the chamber.



When it's in backwards, the gun fires only one time because there's no recoil, the bolt stays forward, and the empty case remains in the chamber.

Now about the gum and gunk biz. You should be using the latest combination tool



— FSN 5120-461-1075 — to clean the gas orifice. It has a flat reamer that's less likely to break off in the orifice. The old drill bit style reamer broke too often, and it took a punch with a 1/8-in long shank to get the broken piece out.

These tips should get that 7.62-MM beast back in business, Sarge.

Half-Mast

CANNONEERS-

# M102 HOWITZER CHECK

YOUR M102 HOWITZER CAN DROP SUDDEN-LIKE IF ITS WHEEL ACTUATOR ASSEMBLY IS DAMAGED!

NO! NO!

HOLD IT!

STOP!

WE'VE IDENTIFIED THE TARGET AS NON-HOSTILE!

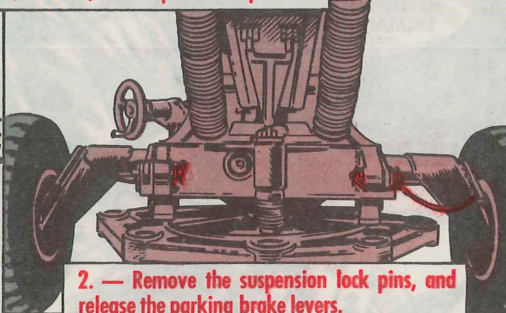
But even if it has a brand new actuator assembly—when you're emplacing the weapon or preparing it for travel, always stand clear of the barrel and keep your feet out from under the firing platform.

FROM AN OLD PRO WITH THE M102, GENTS... A WORD OF ADVICE...

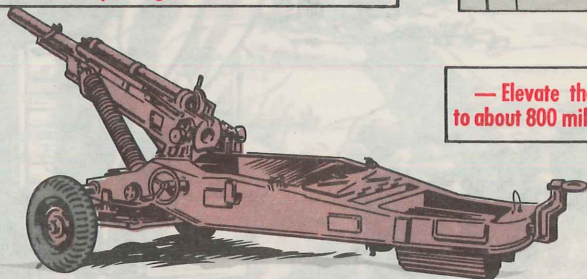
Forget this safety tip, and more'n one body in the gun crew can end up a bit mangled.

PULL THIS CHECK SOONEST TO SEE IF YOUR M102'S ACTUATOR ASSEMBLY IS OK!

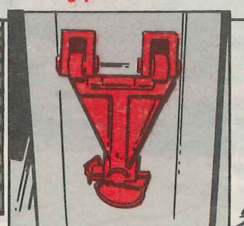
1. — Put your weapon in fire position.



2. — Remove the suspension lock pins, and release the parking brake levers.

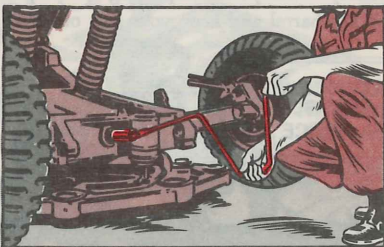


3. — Remove the travel lock pin and lock the travel lock in firing position.



— Elevate the weapon to about 800 mils.

— Insert the actuator crank and turn the crank counterclockwise. (Never turn the crank clockwise when you're emplacing the weapon. You'll bust the crank's shear pin.)



— Keep turning the crank counterclockwise until the wheel support assemblies are parallel to the ground. The firing platform should then be about 4 inches from the ground.

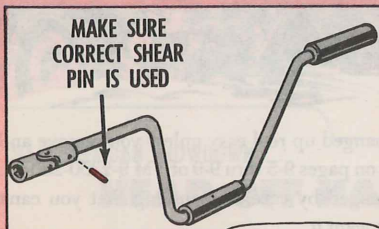
— Then give the crank just 1 full turn clockwise.

If the weapon holds its position, the actuator assembly is OK. But, if it slips or drops . . . call support. Your actuator assembly is shot.

... AND REMEMBER THESE TIPS TO PROTECT YOUR HARD-WORKING ACTUATOR.

1. Use only the authorized shear pin on the actuator crank. It's FSN 5315-999-1573. See page 12, TM 9-1015-234-20P (Dec 71).

With any other shear pin in the crank you'll bust the actuator quicker'n you can yell goof.



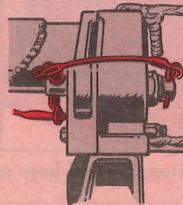
2. Memorize your emplacement SOP. That way you'll not goof when you're scrambling to get off the first round in record time.

HOW CAN I GET OFF IN RECORD TIME...?



WHEN I CAN'T LET GO?

3. Always pull out the wheel suspension locking pins. If you start cranking with the suspension locked — you'll damage the actuator gear assembly.



4. Remember — turn the actuator crank counterclockwise to emplace the weapon.



TURN COUNTER-CLOCKWISE

If you go clockwise you'll bust the crank shear pin.

5. Memorize your preparation-for-travel know-how. Like: always lock the wheel suspension assemblies before your weapon's moved. If the locking pins aren't in, the wheels can drop, and the actuator assembly will be busted. This can cause other damage to the weapon . . . not to mention vehicle accidents, if you're on a road.

STAY CLEAR OF THE BARREL AND THE FIRING PLATFORM WHEN YOU'RE SETTING UP OR BUGGING OUT WITH YOUR M102.



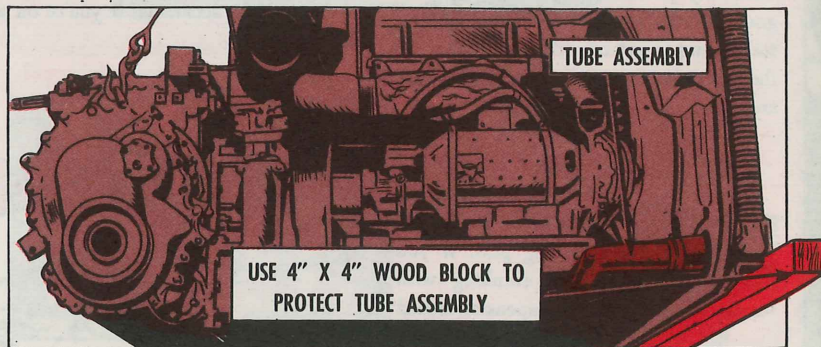
# SHERIDAN RADIATOR RELIEF



Your M551 Sheridan's radiator can get banged up real easy unless you remove and install the power plant exactly the way it says on pages 9-5 thru 9-9 of TM 9-2350-230-12.

So many of these radiators have been damaged by careless handling that you can't always get a new one from supply when you want it.

When you pull the power pack put it on a stand or support. Have a 4-in by 4-in wood block under the radiator support so the tube assembly won't get damaged. When you group hop the power pack, watch carefully and shut off the power if the pack starts to vibrate off the block.



Another thing — to make this radiator cool right, give it careful attention and keep it free of mud, leaves and gunk.

## M551 SHERIDAN SHOWDOWN ...

### HEAD OFF HANGER HANGUPS

The hanger on the M119 gunner's telescope can be installed either of 2 ways, and it sure makes a difference which way you choose.

Do it with the slant cuts on the inside of the fork angled up, and you've got no problems.



Do it the wrong way, with the slant cuts angled down, and the link can snap if you raise the gun more than a few degrees. 'Nuff said?

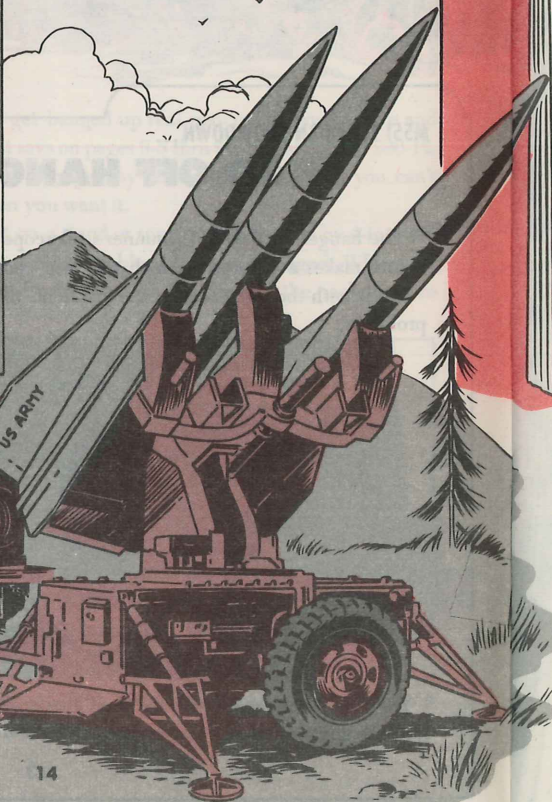
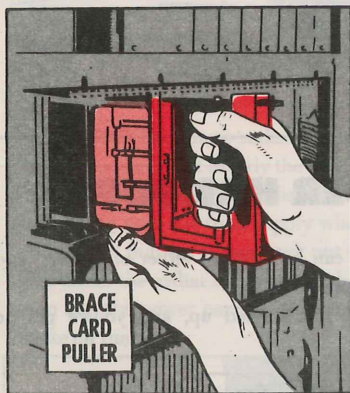


# IP HAWK TALK

Modules in the Information Coordination Control (ICC) of the Improved Hawk system have a long fall to the deck . . . if you get forgetful for a minute while you're pulling them out.

So, instead of putting your faith in the spring-loaded card puller, slip a supporting hand under the card **before** you remove it completely from the module deck.

That way, you protect the card and prevent hundreds of dollars worth of damage (there are no low-cost cards, friend).



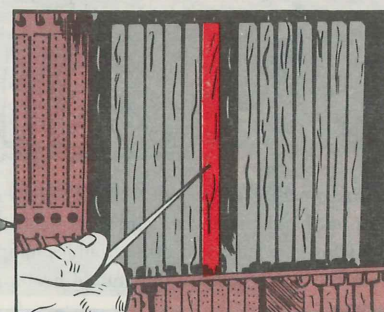
While the drawers are pulled, be careful around the exposed pins. Knees, tools, clothes and such reach out for the pins as though they were magnets . . . and the pins can't take much punishment.

A48, A76 and A110 card locations are marked wrong on DTO Drawer #2 doors of units with serial numbers from 300,001 thru 300,010.

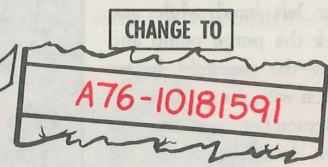
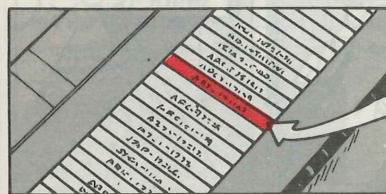
Correct markings should be: **A48-10181557 A76-10181591 A110-10181575**



THE SIXTH CARD ON DECK E IS 10181591!



If the door on your unit is marked incorrectly (10181577, 10181581 or 10181585) remove the wrong numbers and restamp the correct ones with the SB 9-185 stamp kit. Coat the corrected numbers with varnish.

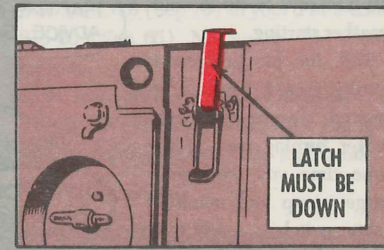


## SAVE A LATCH



NATCH!

Getting ready to lower the hatch (blast cover) on your Chaparral track? Be sure the latches (overcenter and bolt fasteners) are retracted. If they're not, you can shear off the latch retainers . . . and damage the bolt fasteners.



# COLD-WEATHER STARTING TIPS



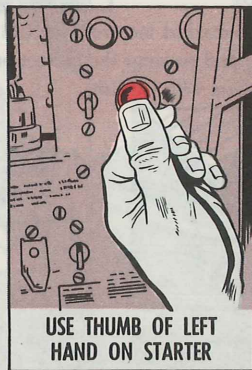
Cold-weather starting an AVDS 1790-2A diesel engine is no trick, provided you let your left hand know what your right hand is doing.

Hydrostatic locks and other troubles happen to drivers who use the right hand to work the purge pump and manifold heater switch but don't do anything with the left hand.

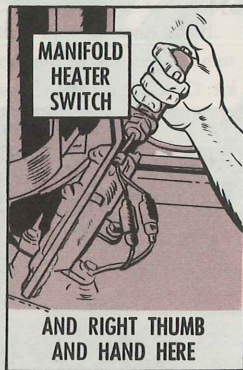
The correct way is to hold down on the starter switch with the thumb of your left hand while you work the purge pump and press the manifold heater switch with your right hand.

Remember, you have to work both hands at the same time. Do that and you've got the problem knocked. 'Course, you'll also do the other things your -10 TM says to do in cold-weather starting.

Still, the big problem is getting your 2 hands coordinated so you have the starter turning over at the same time you work your purge pump and manifold heater switch.



USE THUMB OF LEFT HAND ON STARTER



MANIFOLD HEATER SWITCH AND RIGHT THUMB AND HAND HERE



**TANK GENERATOR SAVER**

**TANKERS BAR**

Madam FUTURA HOROSCOPES-MASSAGE

THE MEDIUM IS THE MESSAGE

NUTS!

SO MUCH FOR OUR CULTURAL PLANS!

OFF LIMITS FOR M60/M60A1 GENERATOR MECHS

\$662.00 COVER CHARGE

The generator in your M60/M60A1 tank costs a nice piece of change — \$662 or so.

You can waste it in a second, though, if the tanker's bar you use to remove or install the generator slips and bends the air intake grill. The bent grill can short out the armature. Then, the first time you turn on the current — WHAMBO! — a burned-out generator and a \$662 bill for somebody.

**USE WRENCH FSN 5120-789-4881**

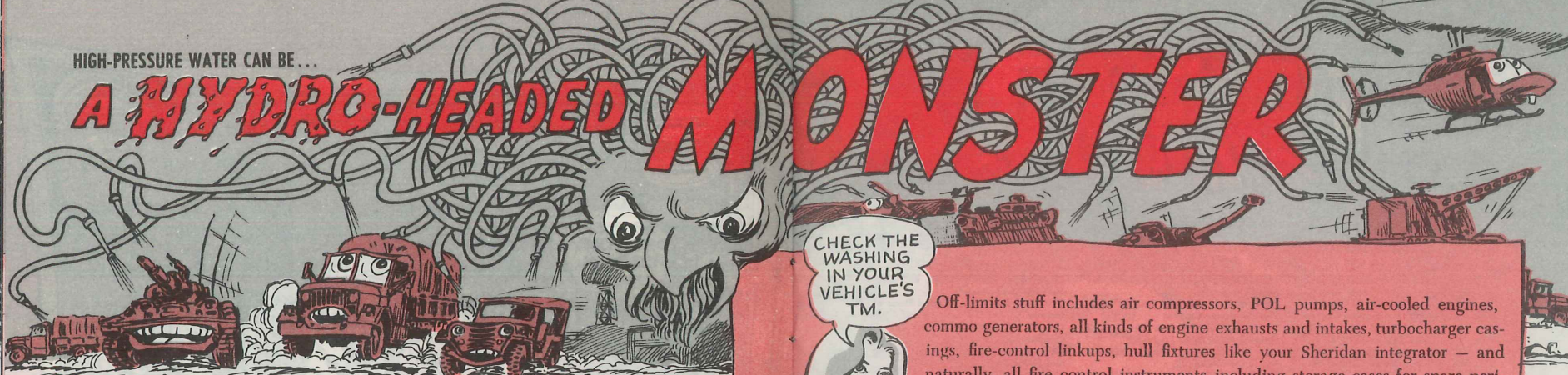
**BE CAREFUL OF AIR INTAKE GRILLE**

exactly like it says on pages 2-336 thru 2-338 of Ch 6 (Sep 70) to your TM 9-2350-215-20 (Feb 65). No tanker's bar should be used.

In fact, even with your little wrench, FSN 5120-789-4881 (10935476), you have to be careful so it won't slip and bend the grill.

HIGH-PRESSURE WATER CAN BE...

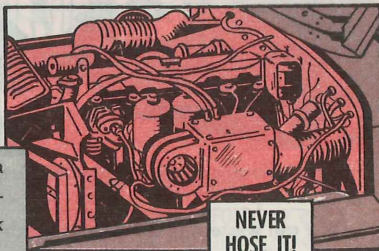
# A HYDRO-HEADED MONSTER



Sure — tactical vehicles can swim.

But that kind of waterproofing doesn't mean Army stuff generally is high-pressure-hose proof. Wash water at 400 to 900 PSI can bring on disaster.

A high-pressure hose can cut like a chisel, take grease out of seals, wreck insulation . . . and worse, hide its dirty work inside and unseen.



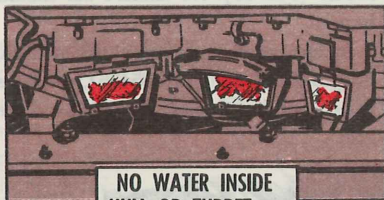
**NEVER HOSE IT!**

Hours or days or weeks after a high-pressure hosing, hidden damage goes on and on. Rust gnaws within. Optical cement decays and optical elements fall apart. Fog spreads across glass surfaces. Mildew hits fabrics. Electrical connections corrode. Cushioning foam collapses.

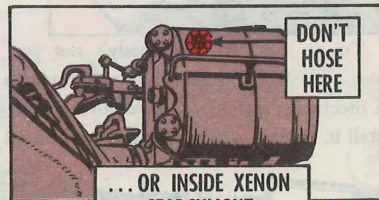
And worst, you never know it's happening. The damage goes on out of sight. Your compressor or pump or vehicle or weapon seems to be plugging along just fine . . . until the boom falls.

There's no need to trap yourself that way. It's easy to keep water out of hot spots.

You just avoid turrets, hull interiors, driver's and gunner's hatches, searchlight vents, commo cases, electrical hookups, gun tubes, mortar shock absorbers, hydraulic systems, optical fire control instruments and artillery instruments and dials.



**NO WATER INSIDE HULL OR TURRET...**



**DON'T HOSE HERE**

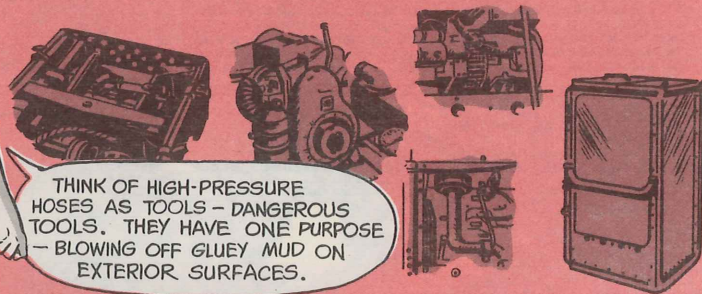
**...OR INSIDE XENON SEARCHLIGHT**

CHECK THE WASHING IN YOUR VEHICLE'S TM.



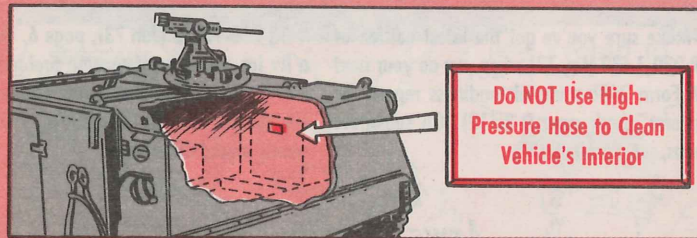
Off-limits stuff includes air compressors, POL pumps, air-cooled engines, commo generators, all kinds of engine exhausts and intakes, turbocharger casings, fire-control linkups, hull fixtures like your Sheridan integrator — and naturally, all fire control instruments including storage cases for spare periscope treads and binoculars.

Combat stuff isn't the only endangered species. Other gear gets clobbered, too. High-pressure hosing wrecks items like crane generators, field ranges, on-vehicle pumps, radar rigs and FADAC.



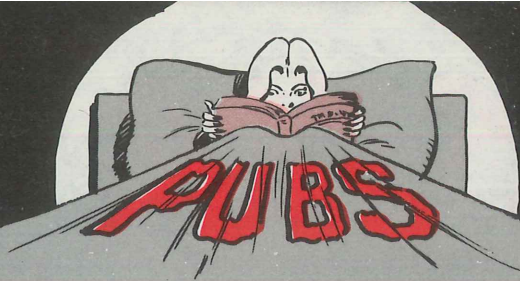
THINK OF HIGH-PRESSURE HOSES AS TOOLS — DANGEROUS TOOLS. THEY HAVE ONE PURPOSE — BLOWING OFF GLUEY MUD ON EXTERIOR SURFACES.

One division painted this red-lettered sign in its mortar carriers:



**Do NOT Use High-Pressure Hose to Clean Vehicle's Interior**

You can do your equipment a favor with a similar caution. Get your CO's OK and put out the word for all to see. You could save yourself a good deal of pain and your favorite Uncle a bunch of bucks.



This is a selected list of recent pubs of interest to organizational maintenance personnel. This list is compiled from recent AG Distribution Centers Bulletins. For complete details see DA Pam 310-4 (June 72), and CH 4 (Apr 73). TM's, TB's, etc., DA Pam 310-6 (Jul 73), SC's and SM's; and DA Pam (C) 310-9 (Mar 73), COMSEC Pubs.

#### TECHNICAL MANUALS

TM 5-5420-210-12 Jul Transporter, Mobile Flooding Assault Bridge Model 2270  
 CH1 TM 9-207 Aug Operation and Maint in Cold Weather (0° to -65°F)  
 TM 9-1340-222-20 Jun, 2.75-In FFAR, 66-MM Light Antitank Weapon Systems; 3.5-In Rockets; and M3A2E1 Rocket Motor (JATO)  
 TM 9-1425-381-10-9 May Pershing  
 TM 9-1425-382-10-2 Mar Pershing  
 TM 9-1430-385-20P Jul Computer Assembly Pershing  
 TM 10-500-8 Aug Airdrop Rigging 1½-Ton Trucks  
 TM 11-5805-306-24P Jun SB-66(i)/FGC Switchboards  
 TM 11-5820-247-24P Apr AN/FRC-15 Radio Set  
 TM 11-5820-554-24P Jul AN/FRC-93 Radio Set

TM 11-5820-629-14P Jul AN/TRA-8 Antenna Group  
 TM 11-5830-214-20P Jul PP-31(i)/TIQ-2, Vibrator Power Supplies  
 TM 11-5830-224-24P Jun SB-449/GSO Patching Panel Radio Frequency  
 TM 11-5855-239-23 May AN/PAS-6 Metascope  
 TM 11-5895-578-20P May AN/APS-94D Radar  
 TM 11-6625-240-20P Jul TS-27B/TSM Test Set  
 TM 11-6625-390-20P Jul TS-712(i)/TCC-11 Telephone Test Sets  
 TM 11-6625-495-20P Jun AM-1842(i)/USM Preamplifiers

\*TM 32-5895-200-15 Sep Receiving Set, Panoramic Data AN/URR-62  
 \*This pub available only from US Army Security Agency, Materiel Support Command, Vint Hill Farms, Warrenton, VA 22186

#### MISCELLANEOUS

SB 3-30-2 Jul Chemical-Biological Containers and Filter Elements: Serviceability Lists

SB 5-113 Jul Storage Cages and Steel Shelving Components  
 SB 700-20 Jun Army Adopted Items of Materiel  
 Ch4 TB 55-1500-307-25 Aug Aircraft Components  
 Ch4 AR 746-1 Aug Marking, Packing and Shipment

#### NEW MOVIES

TF 7-4584 M16A1 Rifle  
 TF 7-4585 M60 Machine Gun  
 TF 7-4586 Pistol, Auto, Cal .45, M1911A1  
 TF 7-4587 M67 Fragmentation Grenade\*  
 TF 7-4588 M18A1 Claymore Mine  
 TF 7-4589 M203 Grenade Launcher  
 TF 11-4533 Radio Set AN/GRC-106, AN/GRC-106A  
 TF 46-4532 Aircraft Ground Safety  
 TF 55-4571 LARC Commo Equipment  
 TG 10-4-14 Care and Use of Sleeping Bags  
 TG 17-6-4 M60-Series Tank Ammo  
 TG 17-6-5 Tank Gun Malfunctions  
 TG 17-6-8 M60-Series Tank Turret Inspection, PM  
 TG 17-6-9 Night Vision Devices (tank gunnery)

## Readiness Report

Make sure you've got the latest edition of AR 220-1 (30 May 73) when you do your next DA Form 2406 materiel readiness report. On systems, check para D-3c(12). On substitute items, see para D-3b(2).

## Moist Chaparral?

TB 750-922-2 (Jun 73), page 6, authorizes a fix for easing condensation problems in the master distribution box of your Chaparral missile system. The fix consists of a couple of neatly placed drain holes.

## Arms Security Checklist

How does your arms room lock-up stack up? Look up the security inspection checklist in DA Cir 20-34 (1 Jun 73). Security and preventive maintenance go hand-in-hand.





PFC. DEKKER Z. HALZ REPORTING, SIR... WITH THE ANSWER TO ALL YOUR SLEIGH AND REINDEER MAINTENANCE PROBLEMS!

...DAILY MOTOR STABLES!

Y'SEE, SIR... I GOT THIS HERE GREAT IDEA WHILST OBSERVING COMPANY B, 406th S+T Bn OF THE U S ARMY!

THEY'VE GOT A SETUP THAT COULD HELP YOUR SLEIGH AND REINDEER MAINTENANCE.

REEMARKABLE! JUST HOW WOULD IT HELP, PRIVATE?

WELL, SIR, IF YOU'LL JUST LET ME SHOW YOU THESE SLIDES!



THEY FOUND THAT "BEFORE OPERATION" INSPECTING WASN'T GETTING DONE -- NOT LIKE IT'S S'POSED TO BE DONE, ANYWAY...

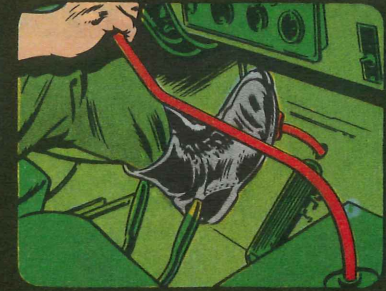
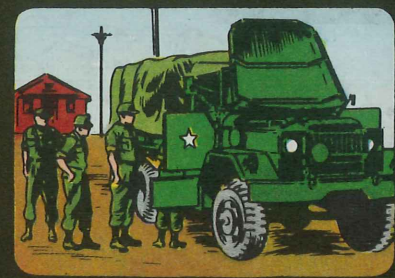
SO THEY WORKED OUT A "MOTOR STABLES STANDING OPERATING PROCEDURES". THIS MAKES TIME FOR REGULAR, COMPLETE DRIVER INSPECTION OF VEHICLES.



NOW, HERE'S THE FIRST SLIDE!

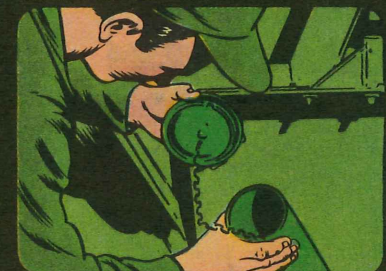
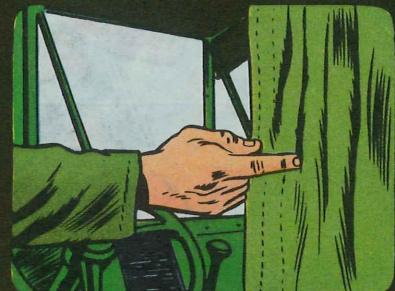
NEW DRIVERS GET SPECIAL COACHING TO SEE HOW IT WORKS. THEN THEY CAN JOIN IN WITH EVERYBODY ELSE . . .

IS EVERYTHING WORKING OK IN THE CAB? BRAKES? CLUTCH? GEAR SHIFT?



HOW ABOUT THE CANVAS? ANY RIPS OR TORN SEAMS?

FUEL UP TO FULL MARK? GASKET ON FUEL FILTER CAP IN GOOD SHAPE? STRAINER IN FILLER NECK OK?



CHECK THE COOLING SYSTEM — ENOUGH COOLANT?

TO HELP DRIVE HOME THE POINT, SANTA, SIR... HERE'S A LITTLE PIN-UP.





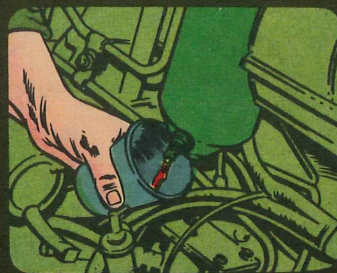


**HARRUMPH!** VERR-RRY INTERESTING! SARGE, POST THIS PIN-UP... BUT SOME PLACE MRS. CLAUS WON'T SEE IT.

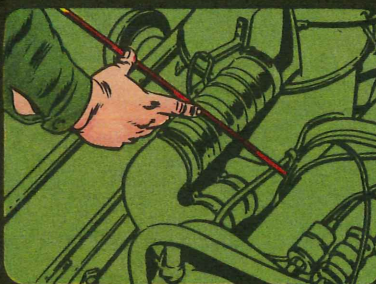
CONTINUE, PRIVATE.

RIGHT ON, SANTA.

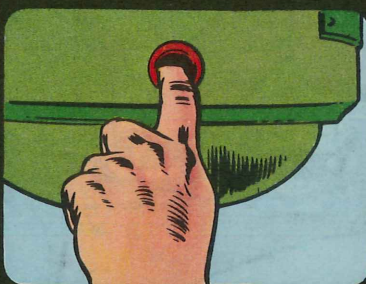
THEN, A CHECK UNDER THE HOOD FUEL FILTERS DRAINED?



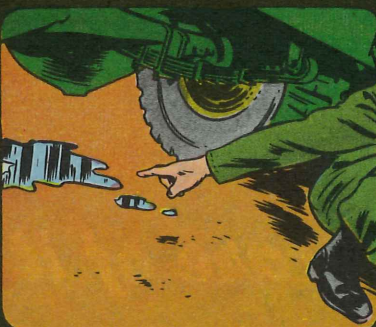
AND HOW'S ABOUT THE ENGINE OIL? DIPSTICK INDICATE OIL LEVEL OKAY?



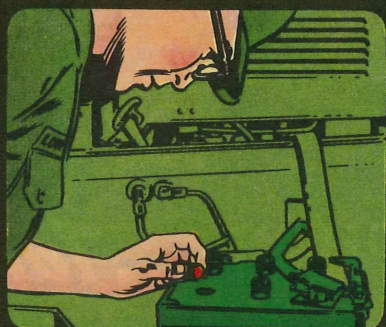
ALSO, REMEMBER TO LOOK UNDERNEATH LUBE LEVEL UP TO SNUFF IN GEAR CASES?



ANY SIGNS OF LEAKS ON THE GROUND?



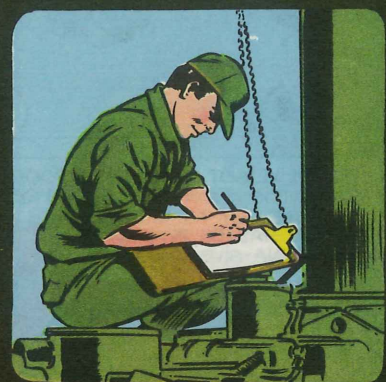
DON'T FORGET THE BATTERIES... ELECTROLYTE LEVEL UP OVER TOPS OF THE PLATES?



IF NEEDED, A MECHANIC SHOULD BE ON HAND TO ASSIST THE OPERATOR...



WHEN THE INSPECTION IS FINISHED — WRAP IT UP BY USING DA FORM 2404 TO REPORT ANY FAULTS YOU CAN'T FIX YOURSELF.



SO THERE YOU HAVE IT, GENTLEMEN -- THE ANSWER TO YOUR MAINTENANCE PROBLEMS --

**DAILY MOTOR STABLES!**



**SHARP LAD!**

TELL ME, HALZ, HAVE YOU **DONE** A MOTOR STABLES **YOURSELF?** YOU SURE TALK IT GOOD.

AH... WELL, NO, I HAVEN'T... NOT EXACTLY. BUT I KNOW THE ROUTINE.



WELL, THE FACT IS, WE'VE ALREADY GOT A MOTOR STABLES **SOP**. A DARNED GOOD ONE, TOO... ON PAPER ANYWAY. WE USE APPENDIX **P** OF FM 29-2 FOR A GUIDE. AND THEN...

... WE ADDED SOME THINGS TO WHAT'S ALREADY CALLED FOR IN THE OPERATOR'S - 10 TM TABLE OF PREVENTIVE MAINTENANCE CHECKS AND SERVICES...

... LIKE SOME HINTS FROM PS MAGAZINE AND FROM TB 750-981-SERIES --THE TANK-AUTOMOTIVE EIR DIGEST.

BUT WE'VE GOT PROBLEMS -- POOR SUPERVISION! AND I THINK YOU'RE JUST THE GUY TO WHIP OUR MOTOR STABLES INTO SHAPE. WANNA GIVE IT A TRY?

WELL, I HAD HOPED TO IMPRESS SANTA WITH MY 'GREAT' IDEA AND MEBBE GET SOME CHOICE DUTY...

LIKE WORKING WITH THE REIN-DEER...

OR SCOUTIN' FOR THE "GOOD KIDS" LIST!

BUT I GOOFED IT -- BUT GOOD!

HO, HO! PERHAPS NOT, PRIVATE!

SERGEANT MAST, ESCORT PFC HALZ OVER TO SLEIGH MAINTENANCE... IF HE CAN UNSNARL THAT MESS AND GET MY XMAS DELIVERIES ON SCHEDULE, WE'LL SEE ABOUT SOME DUTY HE'D LIKE.

AND SO, ON XMAS EVE...

YOU DID IT, HALZ! SANTA LEFT THE WORD -- YOU'VE JUST MADE SPEC-4, REINDEER-SCOUT!



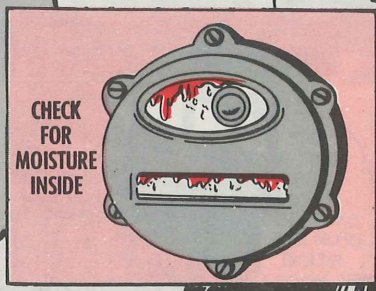
## LET'S GET IT CLEAR

KEEP 'EM DRY!

A little sweat is no sweat, but a lot of moisture inside the blackout light assemblies on your vehicle is a real headache.

If water collects in your blackout lights, remove the door assembly and clean it out. Then, be sure your assembly is sealed up tight.

Check the door assembly for cracked or distorted lenses. Replace the assembly if necessary. Look over that door preformed O-ring packing. If you don't think it's sealing right, replace it.



TM-218-SERIES 1/4-TON TRUCK...

## HEAD OFF RUST



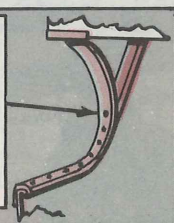
Beat rust to the punch — before it eats through your M151A2 and other TM-218-series ¼-tonners.

A real trouble spot is that channel on the side panel — both sides — where water sits.

Drill a ¼-in hole through the end panel and right on through the channel. Then spot-paint the raw edges. And take a look when you're doing your before-operation check to make sure no dirt or trash has plugged the holes.

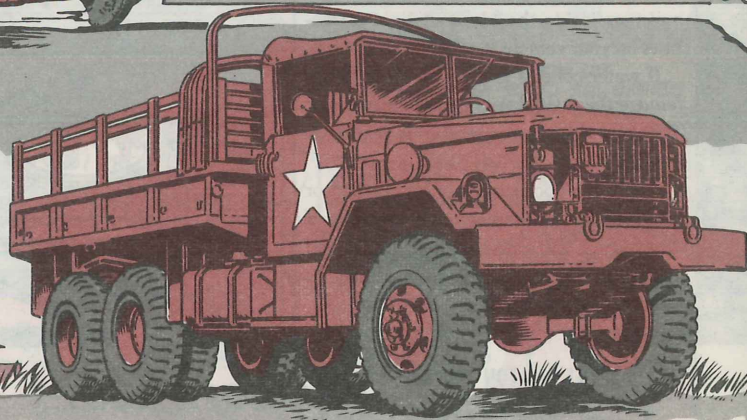


DRILL ¼-IN HOLE IN CENTER OF CHANNEL — THRU BOTH END AND SIDE PANELS.



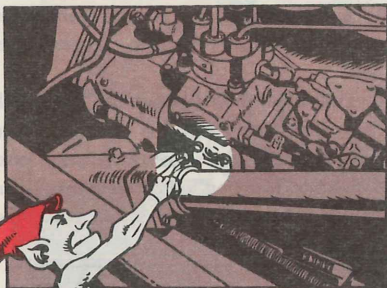


# MULTI-FUEL

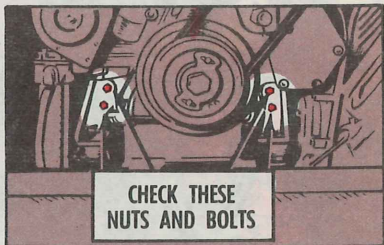


Your fuel injector pump gets mashed . . . when it keeps bashing against your steering gear . . . and you don't know it until your pump's smashed.

You can bet your engine mounts are loose . . . probably those 4 nuts 'n' bolts that fasten the front mount brackets to the engine. This's the setup you find on older 2 1/2-ton multifuels . . . those with the LDS 427-2 or LD 465-1 engine . . . like you see in Fig 2, page 547, TM 9-2320-209-20P (Oct 72).



CONTACT  
HERE BETWEEN  
STEERING GEAR  
AND THE FUEL  
INJECTOR PUMP  
MEANS  
**TROUBLE!**



**CHECK THESE  
NUTS AND BOLTS**

Loose mounts let your engine rock too far. Your engine can even dive ahead . . . far enough so the fan rips into your radiator.

# MASH



THEY GET 75-80  
POUNDS - FEET  
TORQUE.



VIBRATION  
LOOSENS  
THOSE  
MOUNTS...  
ESPECIALLY  
IF YOU  
DON'T HAVE  
THE LATEST  
'N' BEST  
BOLTS, NUTS  
AND  
WASHERS  
HOLDING  
'EM.

- Bolt, FSN 5306-851-0179 (LDS 427-2 engine only) or Bolt, FSN 5306-145-0879 (LD 465-1 engine only)
- Washer, FSN 5310-850-7048 (under bolt head)
- Washer, FSN 5310-022-3305 (under nut)
- Nut, FSN 5310-061-4651

IF YOU  
EVER FIND  
THESE  
MOUNTS  
LOOSE, TAKE  
OUT THE NUTS  
'N' BOLTS  
AND LOOK 'EM  
OVER FOR  
CRACKS OR  
STRIPPED  
THREADS.

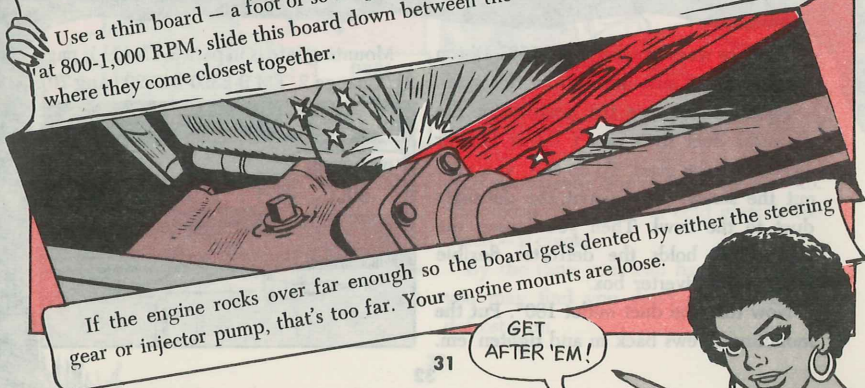


CHECK  
OFTEN.

HERE'S  
HOW.

REPLACE  
BAD  
ONES!

Use a thin board — a foot or so long and 2 or 3 inches wide. With the engine idling at 800-1,000 RPM, slide this board down between the steering gear and injector pump where they come closest together.



If the engine rocks over far enough so the board gets dented by either the steering gear or injector pump, that's too far. Your engine mounts are loose.

GET  
AFTER 'EM!



GAMA GOAT GRIEF...

# SAVE YOUR

CRACKED WINDSHIELDS DON'T HAVE TO HAPPEN.



# WIND SHIELD

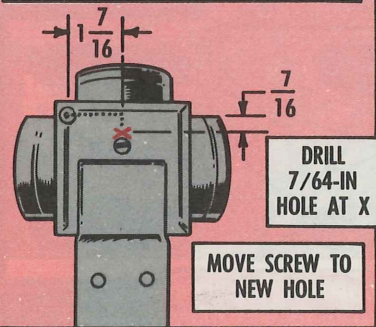
Then, make sure your windshield mounting screws — outside on the front of your windshield — are not too tight.

Some guys tighten these thumbscrews with pliers. They get 'em too tight. This puts stress on the glass. When defroster heat hits the glass, it cracks.

Next, before you tighten the hose back on the diverter box, fix the box so it won't let out so much heat.

You'll have to take the box out of your Goat for this fix — para 3-83, page 54, in that same -20 TM change tells how.

So, you loosen up those screws and then retighten 'em — only finger tight. That's enough!

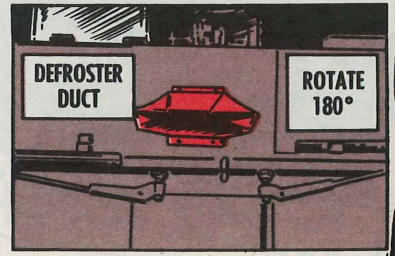


There're ways to save your M561 1 1/2-ton truck or M792 ambulance from this grief.

First, you change the position of the defroster duct so it won't throw hot air directly on the glass. To do this, you take out the screws that mount the defroster duct to the cowl. Then you loosen the clamp that holds the defroster flexible hose to the diverter box.

Now turn the duct outlet 180°. Put the mounting screws back in and tighten 'em.

Mounting info is in para 3-77c (11), page 21, Change 2, TM 9-2320-242-20 (Aug 70).



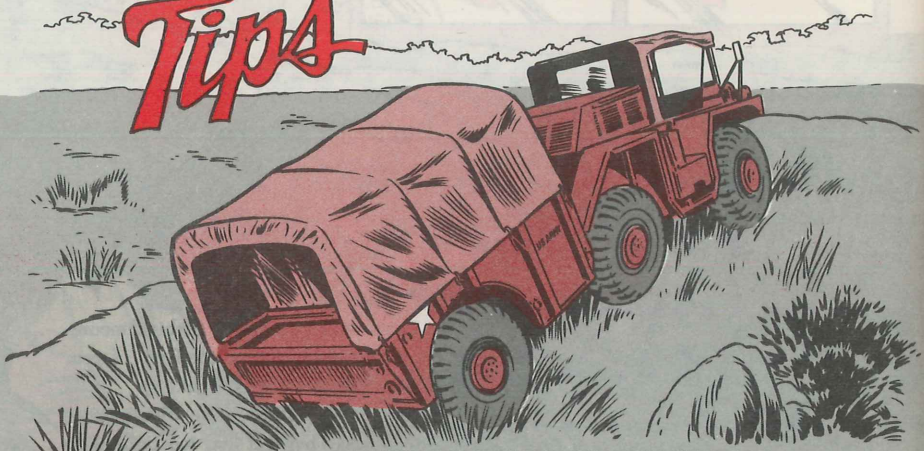
Details on changing the location of the baffle plate stop screw are in Article 10, page 9, TB 750-981-1 (Jan 73).

Finally, never turn on your defroster until your heater has warmed up the cab. The shock of hot air on cold glass is too much — it cracks.

By the time your cab has warmed up, you may find you don't even need the defroster on.

# TIRE ROTATION

## Tips

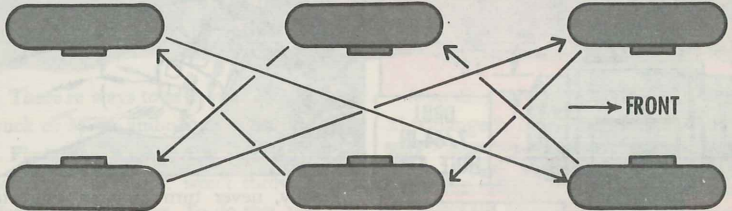


Hey, you guys, the next time somebody bugs you about rotating the tires on the M561 1 1/4-ton truck or M792 ambulance, you can let 'em know you've got the dope.



HERE 'TIS.

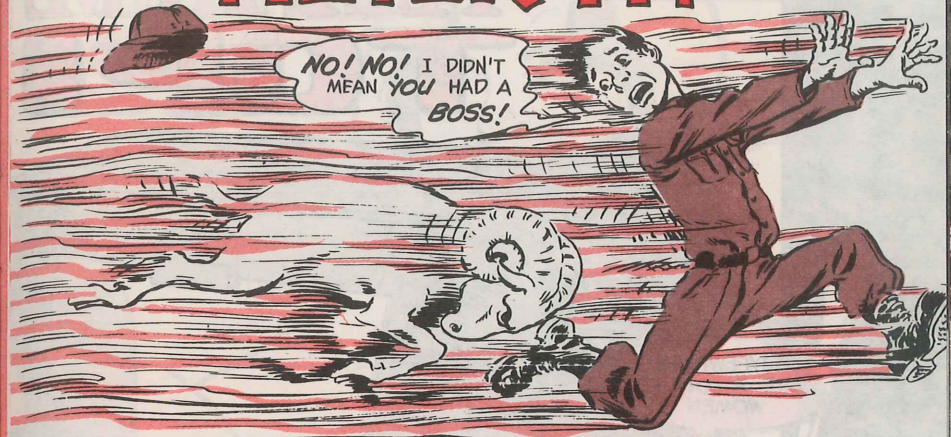
CROSS-SWITCH THE TIRES LIKE SO . . .



EVERY 12,000 MILES OR ANNUALLY, WHICHEVER COMES FIRST. THIS WAY, ALL SIX TIRES WILL GET EQUAL WEAR AND LAST LONGER

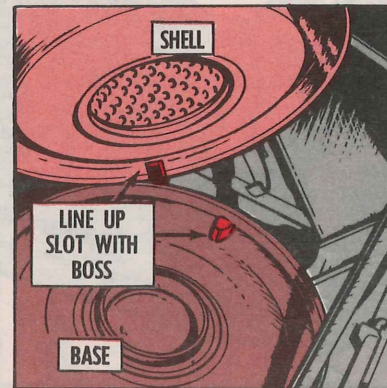
Stop gnashing your teeth over TM 9-2320-242-10. This dope's not in the manual, though it'll show up in a future change.

# FILTER FIT



Dear Editor,

If the air filter on the M561 Gama Goat has a boss in the mounting base, the slot in the body shell fits over it and the filter seals properly. If the filter is latched down in the wrong position, it won't work right.



I suggest painting an arrow or a line at the slot on the air cleaner shell and at the boss on the air cleaner base. Then, drivers can line them up easily, and so save on filters.



GOOD IDEA.

Ssg Eugene Osment  
APO New York 09827

# TELETYPE WRITER TOPICS

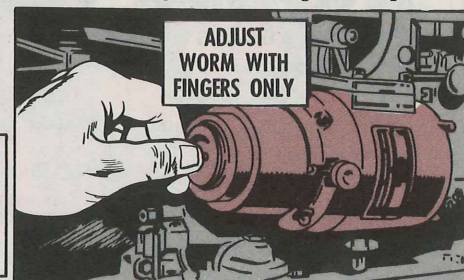
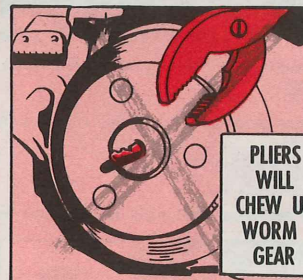


It's because they send and receive in mysterious ways — not because they're chatter-boxes!

Your success in getting your message across depends a great deal on technique and touch. That ol' heavy-handed aggressor stuff is out. O-u-!

Eyeball these PM points on various sets. They may be just what you're looking for.

Here's one that goes for a number of sets: Never grab the worm gear with pliers.

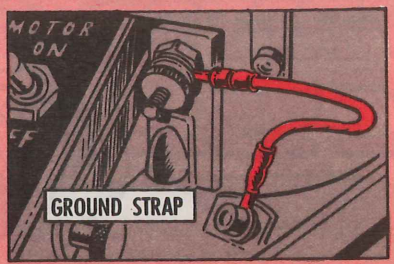


Pliers burr the worm, and burred worms make nasty cuts for the next guy that comes along and grabs with his fingers. Cuts from plastic take a long time to heal.



REMEMBER TO DISCONNECT THE GROUND STRAP BEFORE YOU REMOVE THE COVER!

TT-4

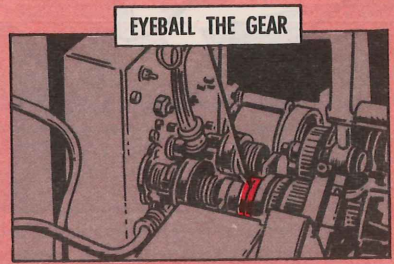
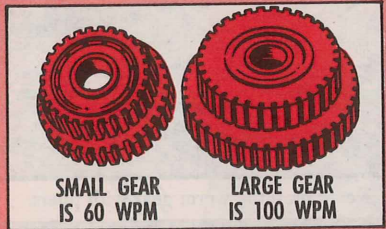


And, the end of a dusty day for a TT-4 should mean the beginning of a cleaning job. A vacuum cleaner works wonders, but any substitute (like a clean rag) will keep your TT-4 putting out the next day, and the next.

AN/FGC-25

**WHAN THAT APRILL WITH HIS SHOURES SOOTE THE DROGHTE OF MARCH HATH PERCED TO THE**

Garbled words from the TT-178 of your FGC-25 may mean you've got the wrong gear on the multi-solenoid function shaft.



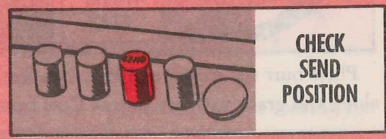
Like, if you switch from 100 to 60 words per minute, or 60 to 100 WPM, not only must you change the worm gear . . . but support has to change the double gear on the function shaft.

So, eyeball the gear. If the wrong WPM speed is stamped on it, get your support to put the right gear in.

AN/FGC-56

If the set won't operate when you try to run tape on your FGC-56, or attempt to use the keyboard, make one eyeball check before you call in a repairman:

Be sure you're in the SEND position. Now, if you're set up right and it still won't run, call your friendly repairman.

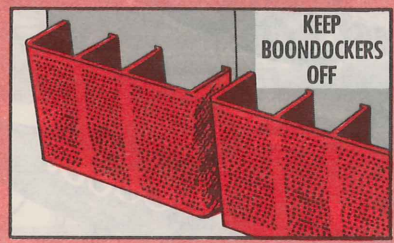


TT-98, TT-117, ETC.

With the TT-98, TT-117 or any other set with glass windows, find a better place to lean than on the window. Like, you can really stick your elbow into it.



The aluminum bins of the MK-695A and receiver console of the FGC-70 are not footrests. Using the bins for boon-dockers can break them.

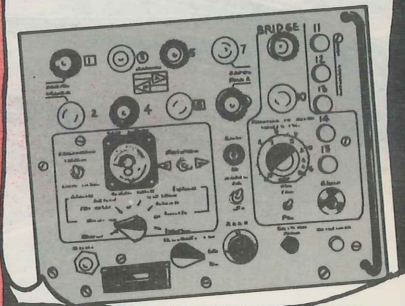


CLEAN UP  
If you're looking for a handy, safe cleaner to remove ink spots, grease and crud from TT cases, try FSN 7930-266-7121 (furniture polish).

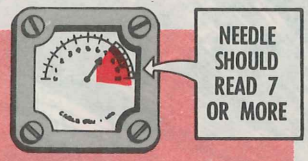
**GREEN GOOD—BEYOND BETTER**

Dear Half-Mast,  
How come the AN/PTM-7 telephone test set sometimes reads more than in green with good BA-30 batteries? I'm told it must be in the green area to be OK.

Mr. C. H.



Dear Mr. C. H.,  
TS-1323/PTM-7 is powered by eight (8) 1½-volt batteries hooked up in series. That makes a total of 12 volts. Since the meter is only graduated to 10 volts, a good set of batteries will push the meter needle beyond the 10-volt mark.



The important thing is that the reading is 7 or more volts DC when you're testing.

*Half-Mast*



M28/M28A1 SUBSYSTEM...

AIR MOBILITY

# AMMO

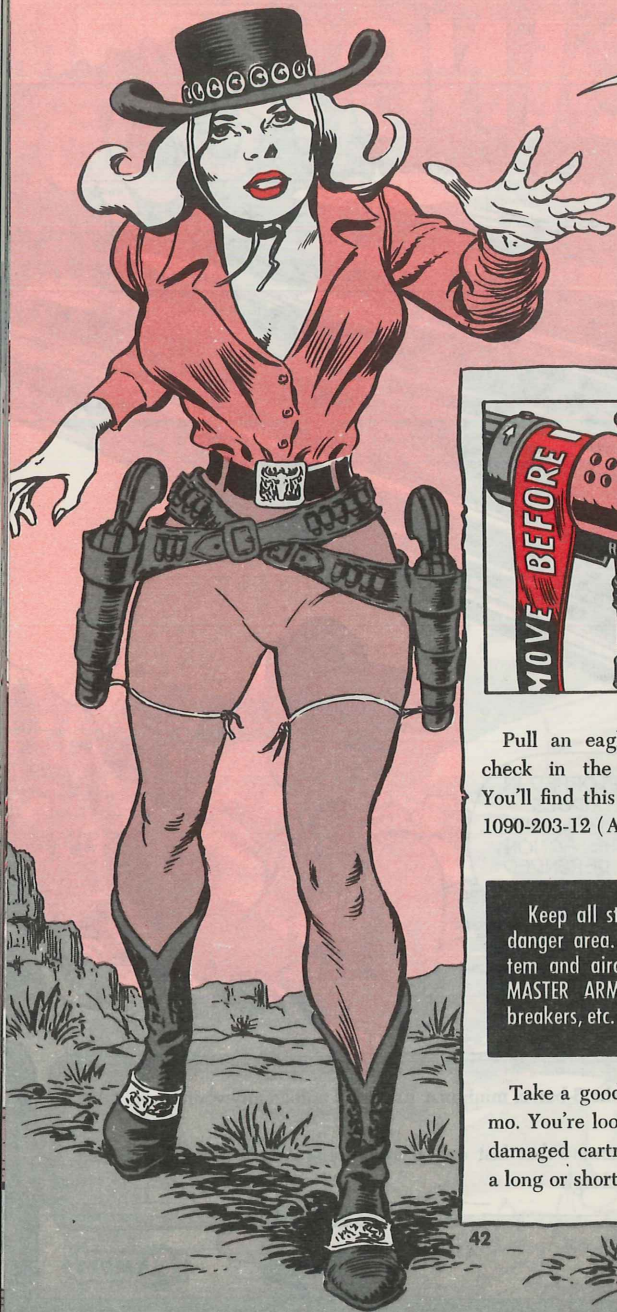
MOST FRONTIER FIGHTERS NEVER HAD TO WORRY ABOUT LOADING THEIR SINGLE-BARREL 6-GUNS LIKE 6-BARREL SNAKE HANDLERS DO!

# LOADING POOP

OLD TIMERS PLOPPED IN 5 OR 6 CARTRIDGES IN EACH REVOLVER AND WAITED FOR THE ACTION. FIRING SPEED DEPENDED UPON REFLEXES, NERVES AND HAIR TRIGGERS.

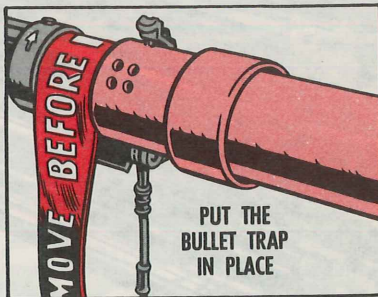
It's not that simple with the 6-barrel miniguns. Each will unload anywhere from 2,000 to 4,000 rounds per minute. 'Cobra gunners can fire ammo that fast only if each M134 7.62-MM magazine feed assembly is loaded and timed right.





**WHOA!**

BEFORE YOU START LOADING YOUR WEAPONS, TURN YOUR BIRD TOWARDS THE WIDE OPEN SPACES. YOU DON'T WANT TO PUT A BYSTANDER IN THE WORLD OF HURT!



PUT THE BULLET TRAP IN PLACE

Pull an eagle-eye "no-rounds-present" check in the M134's firing chambers. You'll find this poop in para 2-23, TM 9-1090-203-12 (Apr 70).

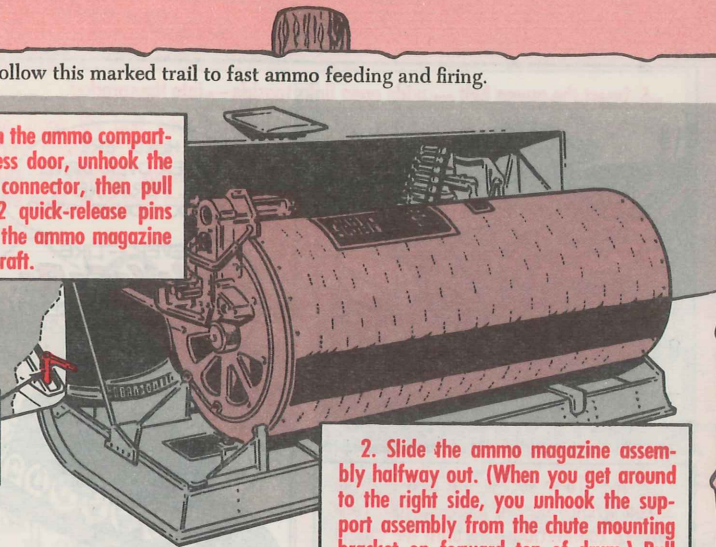
Keep all stray people away from the danger area. Flip all armament subsystem and aircraft electrical switches — MASTER ARM, OVERRIDE PILOT, circuit breakers, etc. — OFF.

Take a good look at your 7.62-MM ammo. You're looking for damaged links and damaged cartridges. And you never want a long or short round in the links.

Follow this marked trail to fast ammo feeding and firing.

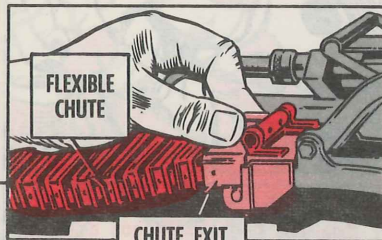
1. Open the ammo compartment access door, unhook the electrical connector, then pull out the 2 quick-release pins that hold the ammo magazine to the aircraft.

QUICK RELEASE PIN



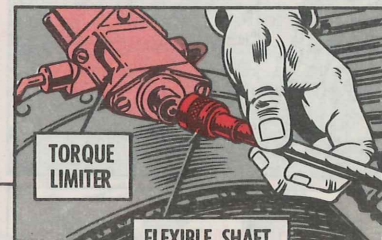
2. Slide the ammo magazine assembly halfway out. (When you get around to the right side, you unhook the support assembly from the chute mounting bracket on forward top of drum.) Pull the drum all the way out.

3. Unhook the flexible chute assembly from the chute exit assembly, and the flexible shaft assembly from the torque limiter assembly.



FLEXIBLE CHUTE

CHUTE EXIT



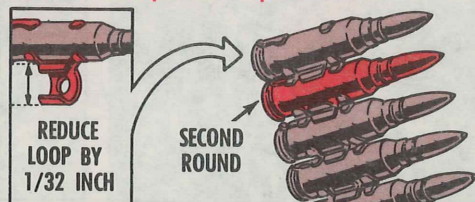
TORQUE LIMITER

FLEXIBLE SHAFT

4. Open the loading gate.



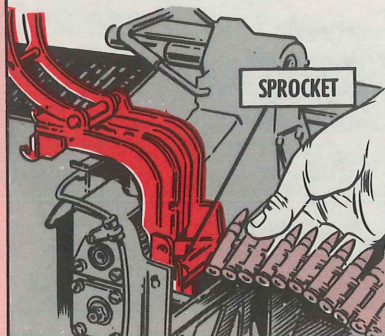
5. Push the second round from the ammo belt. Crimp the single loop of the first link 1/32 of an inch. Insert a round in the crimped link to rejoin the belt.



REDUCE LOOP BY 1/32 INCH

SECOND ROUND

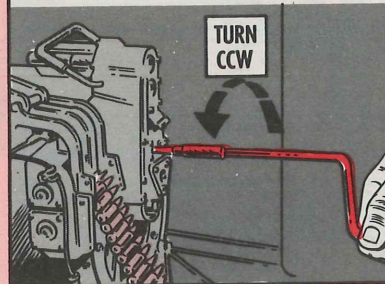
6. Insert the ammo belt — wide open links topside — into the sprocket.



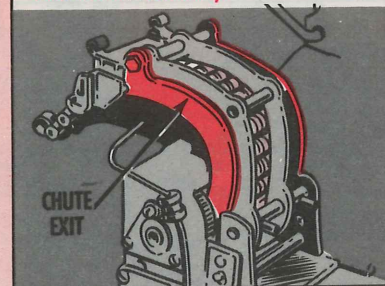
HOLD 'ER!  
NEVER OVER-DRIVE  
THE PERMANENT  
4,000 ROUND STOP.

NEVER -- LIKE  
**N-E-V-E-R-**  
USE A POWER WRENCH  
TO LOAD YOUR MAGAZINE  
ASSEMBLY!

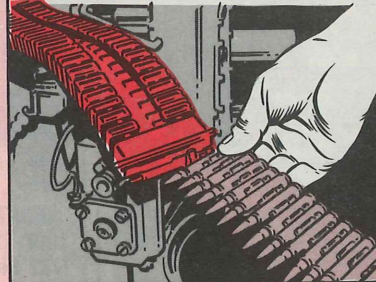
7. A 9/16-in socket and 3/8-in drive speed wrench does a bang-up job. Turn wrench counterclockwise until the ammo strikes the stop.



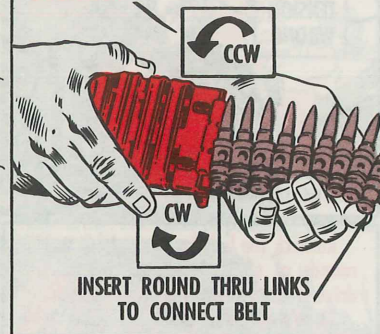
8. Unhook the ammo belt at the 16th link. Lay remaining belt over and thru the chute exit assembly.



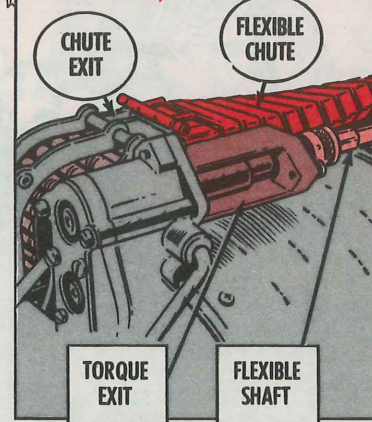
9. Feed the ammo belt thru the flexible chute and to the M134 gun delinking feeder.



10. Rotate the flexible chute 180° clockwise. Hook the belt back together by inserting rounds thru links. The flexible chute is twisted correctly when rounds are nose-up as they pass thru the chute area.

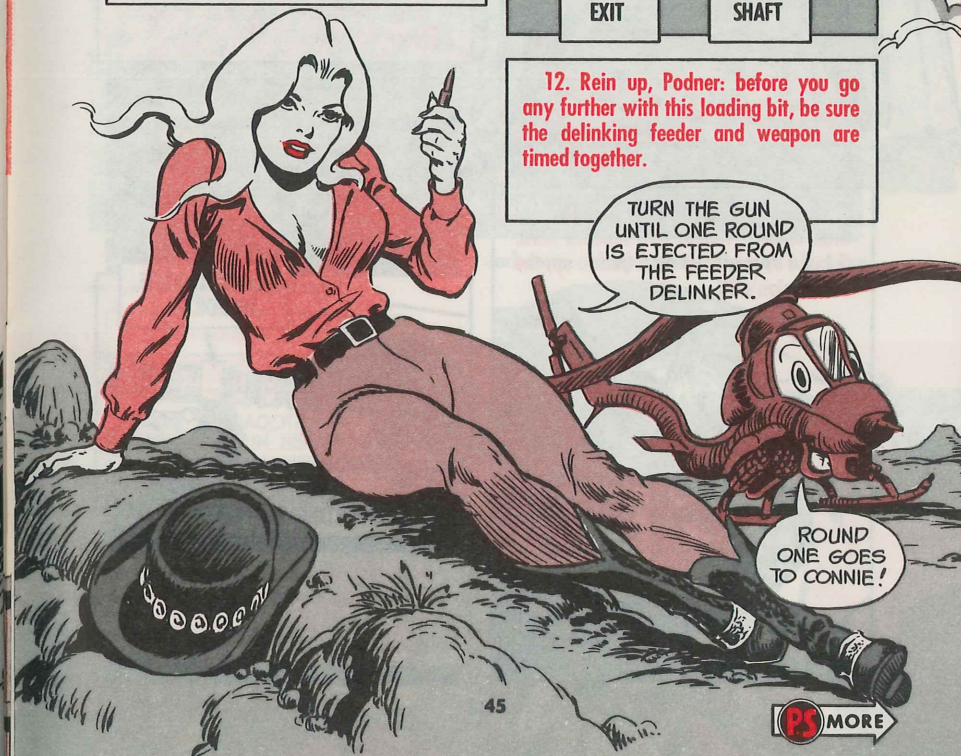


11. Connect the flexible chute assembly to the chute exit assembly and the flexible shaft assembly to the torque limiter assembly.

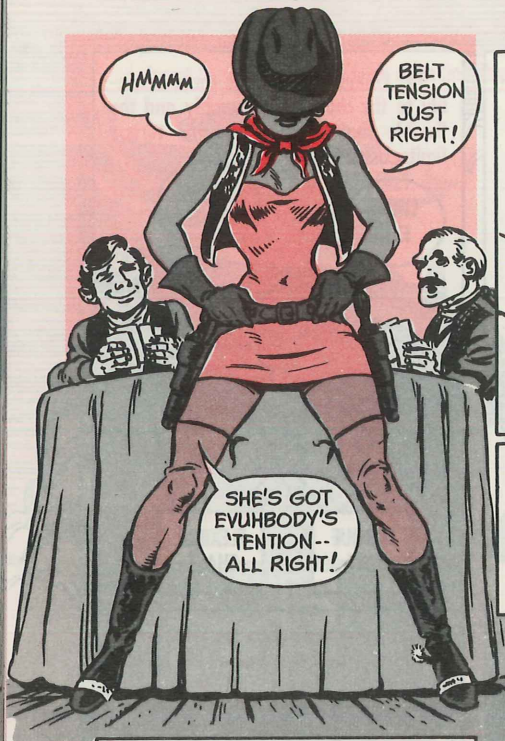


12. Rein up, Podner: before you go any further with this loading bit, be sure the delinking feeder and weapon are timed together.

TURN THE GUN  
UNTIL ONE ROUND  
IS EJECTED FROM  
THE FEEDER  
DELINKER.

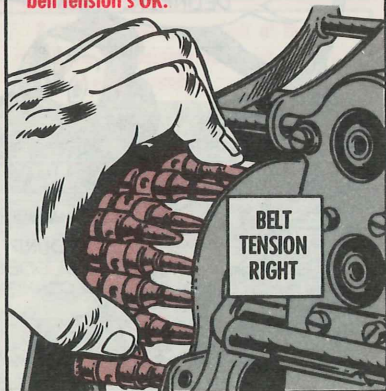






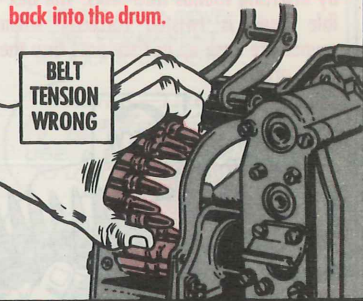
SHE'S GOT EVUHBODY'S 'TENTION-- ALL RIGHT!

13. Now, check belt tension like so. Grab about 7 rounds and squeeze hard. If 1 or 1½ rounds of slack buckle up, the belt tension's OK.



14. If you get more'n this normal amount of slack, unhook the flexible drive shaft and crank the extra rounds back into the drum.

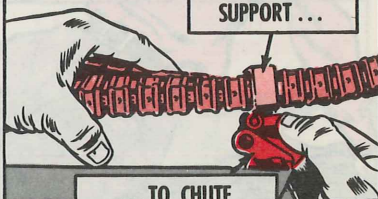
BELT TENSION WRONG



Recheck the belt for the right 1 to 1½ rounds of slack. Hook up the flexible drive shaft to the torque limiter assembly. Close the loading gate. Slide the ammo magazine assembly halfway into ammo compartment.

NOTE: On right ammo magazine assembly connect the chute support assembly to the chute mounting bracket on the forward top of the drum.

CONNECT CHUTE SUPPORT ...



... TO CHUTE MOUNTING BRACKET

Ease the ammo magazine assembly into the ammo compartment ... add the 2 quick-release pins ... hook up electrical connections.

FINAL CHECKS



All set. Not yet. Give a 20/20 look at the ammo chute and flexible shaft assembly. No kinks or pinching allowed.



Make sure the ammo chute and flexible shaft assembly have enough length in the turret area for full up 'n' down, side-to-side travel.

Close the access doors to turret assembly and ammo compartment. Be sure all doors are bulldogged and tied tight.

Reset the rounds counter.

YUP, A SMOOTH-FED M134 MINIGUN HEADS OFF A HEAP O' MAINTENANCE DOWNTIME AND PARTS REPLACEMENT LIKE SPROCKETS, FLEX SHAFTS AND SUCH.



## PARTS FSN UPDATE



Here's some new FSN info on fuel and oil filters and other parts for units that maintain tractors, graders and scoop loaders.



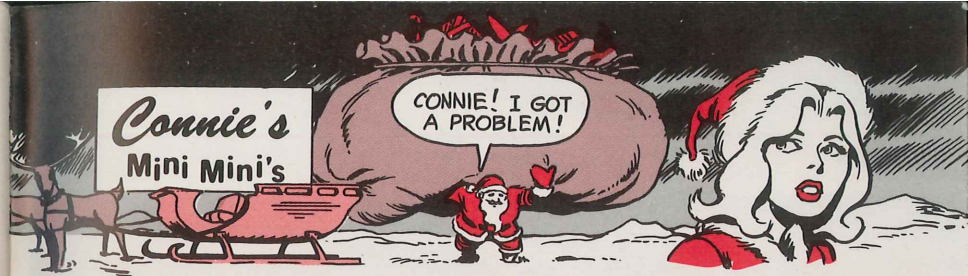
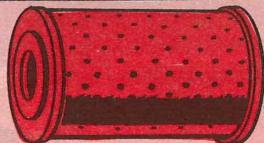
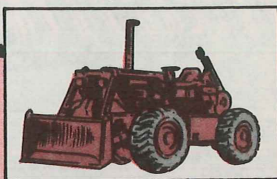
SO MAKE SOME NOTES ON THE PAGES FOR THESE ITEMS...

MRS 100C tractor, TM 5-2420-219-20P (Oct 70): Element, oil filter, FSN 2940-580-6283 replaces the one listed as item 6 on page 37 (shown in Fig 57).



Cat D7F tractor, TM 5-2410-233-20P, Ch 1 (Oct 72): Element, filter, fuel, FSN 2910-438-1488 and Packing, preformed, head, FSN 5330-431-7138 replace those listed as items 1 and 2 on page 15 of Ch 1.

Grader 330 HAD, MEC 7610-C-1-3608: Strainer assembly element, primary fuel filter, FSN 2910-363-8608; Element, secondary fuel filter, FSN 2910-890-2436; and Element, oil filter, FSN 2940-580-6283 replace those now listed in this commercial pub.



### *They'll All Do It*

Metal set, A-4, does a first-rate job of patching up aircraft. If supply is fresh out, tho, you mechs may get an equivalent substitute. No sweat. RP 1258, EA 9340 and Epi Seal 10-10 will do an equally good job. All 4 adhesives are issued in 6-oz Kits under FSN 8040-944-7292.

### *Aircraft Towbar Wheels*

Need some 6-in solid rubber tires for your ground-handling towbar? Use FSN 2530-288-0406.

### *Tail Boom Switch?*

If your UH-1B has a UH-1C/M tail boom — the one with a canted fin — you should be using a Charlie/Mike model tail rotor blade. You want blade FSN 1615-907-0842, P/N 204-011-700-17.

### *A New Start*

A slave cable isn't a scrap-pile candidate just because an end terminal is broken. You can get a replacement for it. Request the connector with FSN 5935-258-9156, and you'll be in business again.

### *Beacon Bulb*

A new lamp for your 5-ton wrecker's rotating beacon comes under FSN 6240-635-4643. You need 2 of 'em for 1 beacon.

### *Never The Twain*

Some maintenance support units are consolidating the chores of MOS 68D20, Aircraft Powertrain Repairman, and MOS 68E20, Aircraft Rotor Repairman . . . a real no-no! To head off substandard maintenance, eyeball the MOS tasks spelled out in Chg 27 (Apr 73) to AR 611-201.

### *Magazines For You*

You can have copies of PS Magazine back issues for free. Most of the issues after No. 200 are available. Send a note to PS Magazine, Lexington, Ky. 40507 for those you want and the quantity. They'll be sent direct to you.

☆U.S. GOVERNMENT PRINTING OFFICE: 1973 - 758-441/5

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

# IN THE DARK?



USE  
THESE  
ARMY  
INDEXES  
TO FIND  
THE  
WAY!

DA Pamphlets 310-1 Administrative  
Pubs (AR's, Pamphlets,  
Posters)

310-2 Forms, Labels

310-3 Doctrinal, Training  
Pubs (FM's, TOE)

310-4 Technical Pubs (TM's,  
TB's, SB's, LO's)

310-6 Supply Catalogs and  
Manuals

310-7 MWO's

310-8 Personnel Tests

310-9 Comsec Pubs

108-1 Movies, Audio-  
Visual Aids

