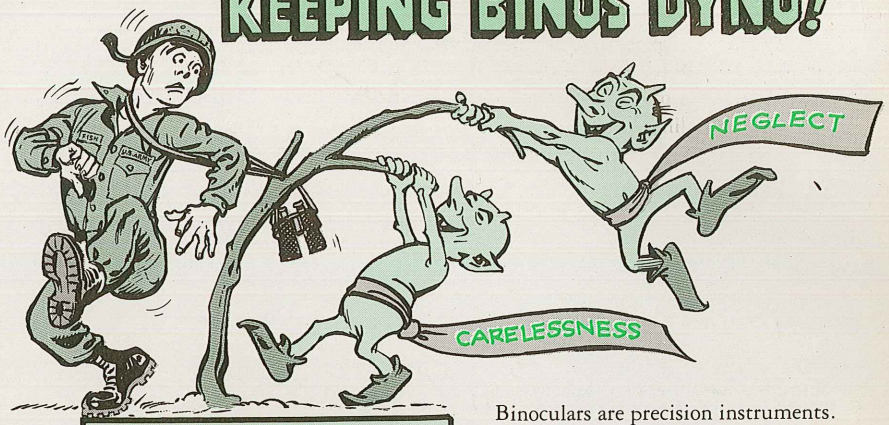
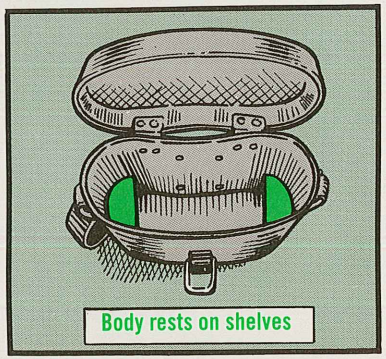

Issue 309
PS
August
1978
THE PREVENTIVE MAINTENANCE MONTHLY
FOD?
FOREIGN OBJECT DAMAGE? YOU REALLY GOT IT, THOR!
BUT OUR KIND OF FOD CAN BE AN EVEN BIGGER HEADACHE!
PAGES 29-36 FAMOUS FOD'ERS OF HISTORY!
THERE'LL NEVER BE A FOD'ERS DAY!
ALFREDO P. ALCALA

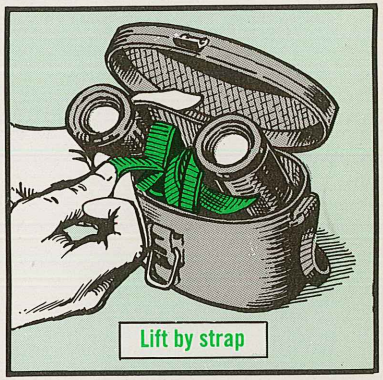
KEEPING BINOS DYNO!





Binoculars are precision instruments. Even dressed in Army green those peepers need careful handling and regular PM. So read and heed the poop in TM 9-1240-372-10 (Jul 76), and . . .

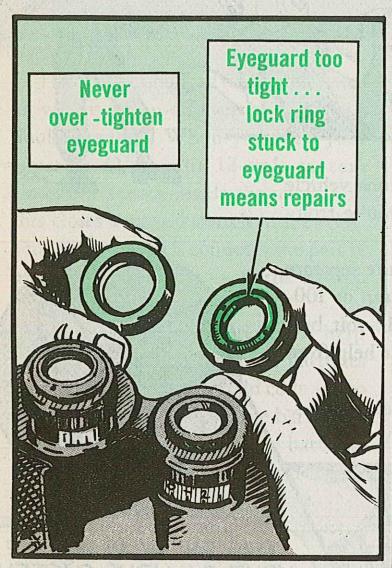
Store binos in the case. Be sure to run the diopters down so the bino body rests on the shelves inside the case. And leave some strap free so you can ease the binos



out of the case by gently tuggin' on the strap. Never lift the binos out by the lens caps. You'll damage the binos if you rest the diopter on the case bottom, or tug those caps.

Also, when you remove an eyeguard to clean a lens, hold the diopter steady. Before reinstalling, make sure that the locking ring is holding the diopter scale tightly in place; and that its setscrew is down.

The eyeguard may be reinstalled finger-tight, but don't overdo it. Run the eyepieces down gently, easy does it. A diopter forced against its stop could damage your binos.



Clean all lenses with plain lens paper. Use facial tissue only in a bind. Silicone treated eyeglasse cleaning materials will ruin the anti-glare, blue/violet magnesium flouride lens coating. So never use 'em!

Check the neck strap for cuts and frays — and keep it around your neck.

Issue 309
PS
August 1978
THE PREVENTIVE MAINTENANCE MONTHLY

Published by the Department of the Army for the information of all soldiers assigned to combat and combat support units, and all soldiers with organizational maintenance and suppiy duties.

Within limits of availability, older issues may be obtained direct from Editor, PS Magazine, c/o US Army Materiel Readiness Support Activity, Lexington, KY 40511.

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

MSG Half-Mast
PS Magazine
Lexington, KY
40511

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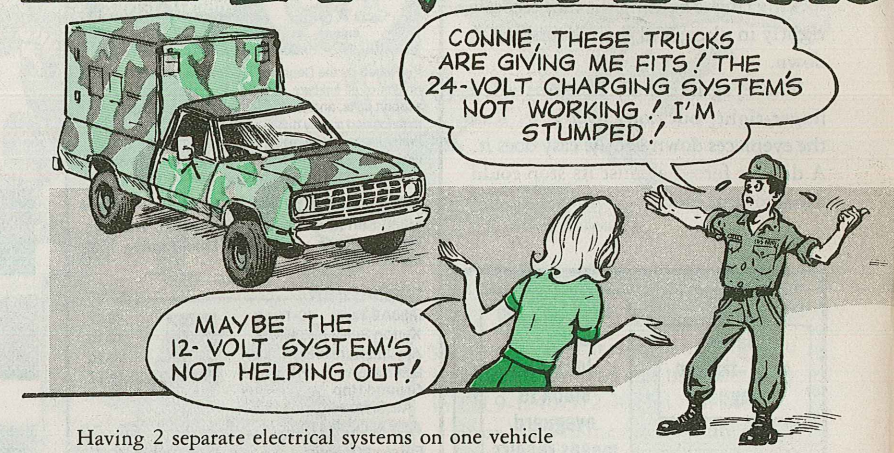
GROUND MOBILITY

M880 - SERIES 1¼ - TON TRUCK . . .

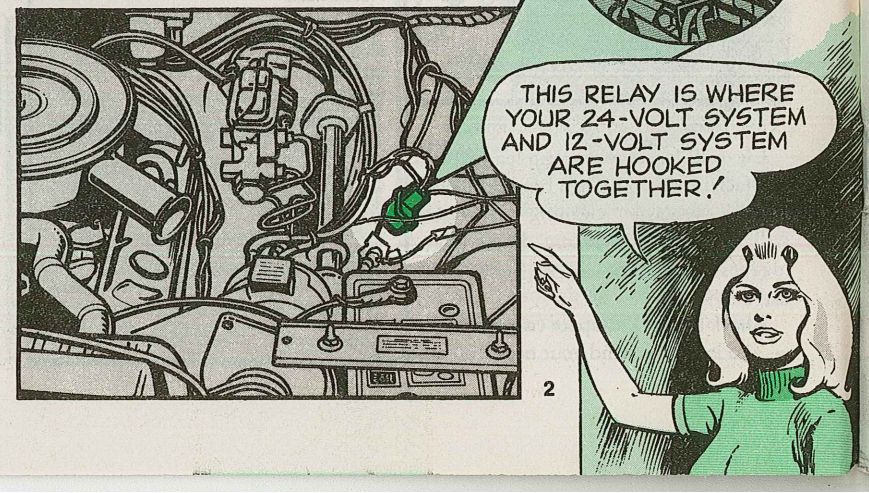
24-Volt Trouble Shooting

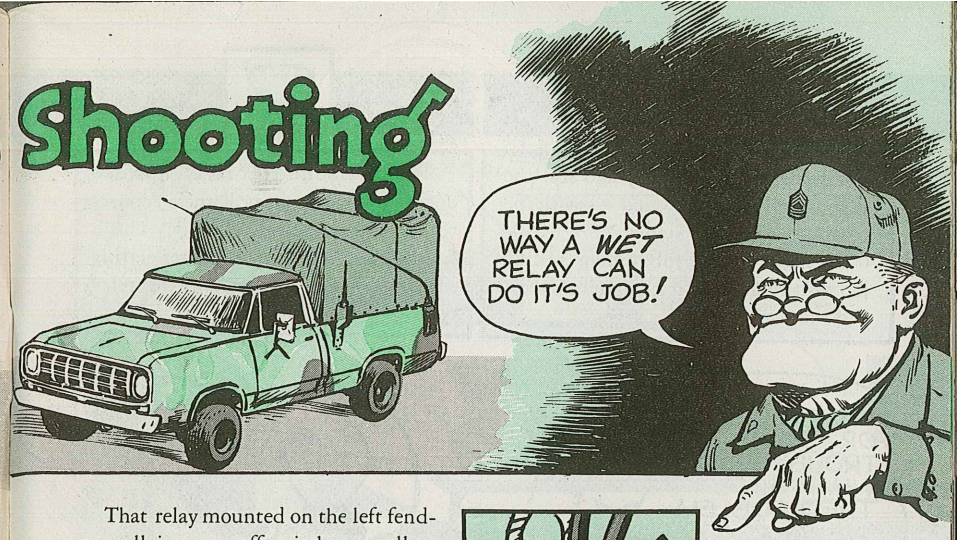


Having 2 separate electrical systems on one vehicle can be confusing for you mechanics when you're troubleshooting electrical problems.

F'rinstance, the 12-volt system is not quite separate from the 24-volt system. Fact is, the 60-amp or 100-amp alternator won't charge that pair of 12-volt batteries in your 24-volt system without a little help from the 12-volt system.

And this hookup point between the 2 electrical systems is where trouble's showing up.



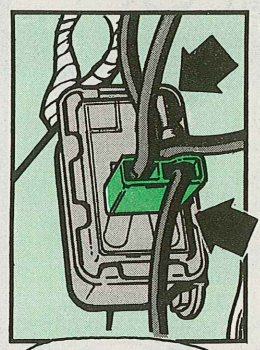


That relay mounted on the left fender well is an on-off switch — really a double switch. When you turn your ignition ON, your 12-volt system closes one switch inside the relay. And this closes a second switch in the relay. This second switch connects the pair of batteries — 24 volts — to the 60 amp (or 100 amp) alternator.

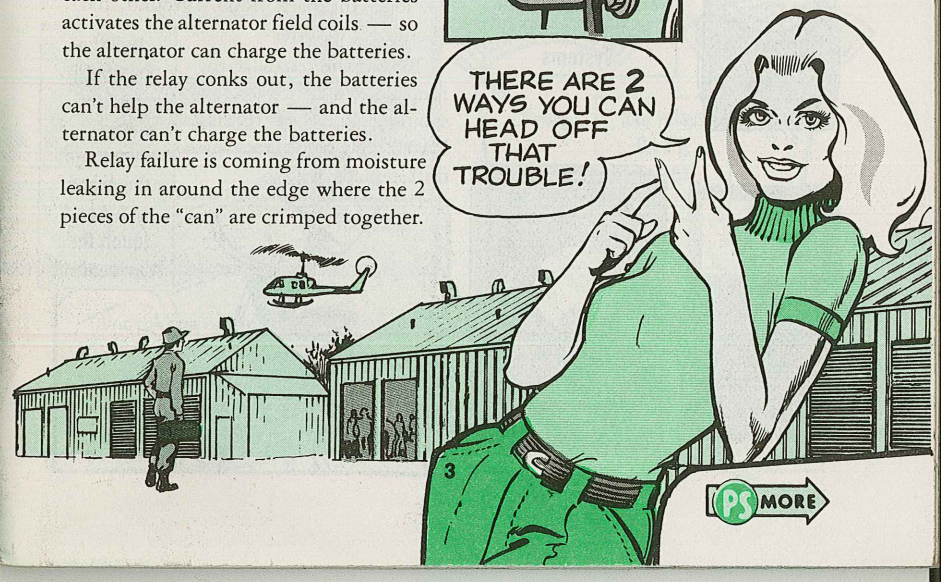
The batteries and alternator help each other. Current from the batteries activates the alternator field coils — so the alternator can charge the batteries.

If the relay conks out, the batteries can't help the alternator — and the alternator can't charge the batteries.

Relay failure is coming from moisture leaking in around the edge where the 2 pieces of the "can" are crimped together.



Water gets in around the edge and under the connector



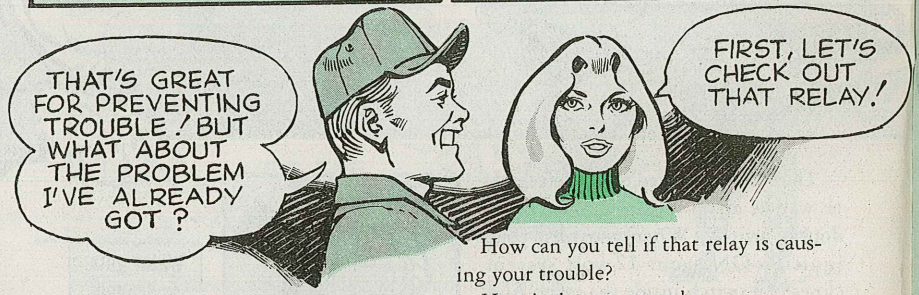
PS MORE

1

First, take off the relay and seal the edge — all the way around — with the compound you get under NSN 8030-00-874-5875 (8-oz tube). Your sealing job will work better if it's done under dry and warm conditions.

2

Then, mount the relay upside-down — so the wiring harness connector winds up on the underside. This'll cut down on the chances of water getting in where the connector and the relay come together.



How can you tell if that relay is causing your trouble?

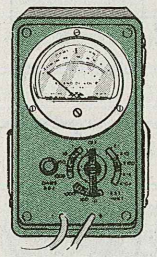
Here is the test procedure:

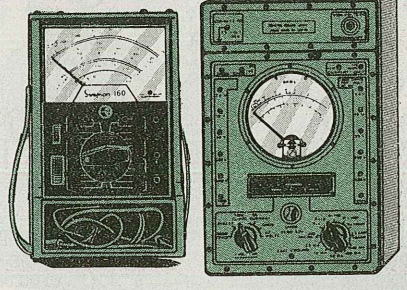
Set your multimeter on the 100 VDC scale (50 VDC for some).

Turn the ignition switch OFF. Touch the red probe to the single terminal on the relay — that's the one wire #27 goes to. Touch the black probe to ground. You should get 0-volts.

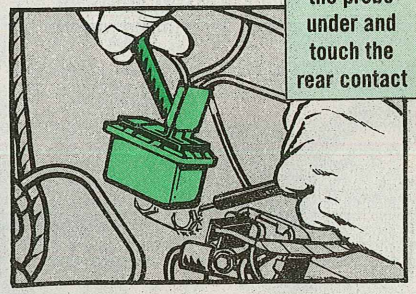
Repeat the test with the ignition switch ON. You should get a 24-volt reading. If your relay won't meet these tests, replace it.

Setting up these multimeters is covered in your TM 9-2320-266-20 (Jan 76) see pages 2-16 through 2-25, Testing Electrical Systems





Pull the connector just far enough so you can get the probe under and touch the rear contact



For the rest of the 24-volt charging system, your troubleshooting guide is DA Pam 750-33 (Dec 76), Charging System Troubleshooting (The Easy Way). Both 60-amp and 100-amp systems are covered.

Also, see TM 9-2320-266-20, Ch 2 (Jul 77), pages 3-4 and 3-5, for wiring diagrams and other info on the 60-amp and 100-amp systems.

PS END

M816 5-TON WRECKER . . .

JERKY BOOMS

Dear Editor,

We had several cases of erratic boom operation when we used the cranes of our M816 5-ton wreckers – because the wreckers were being operated at 1,400 to 1,500 RPM's.

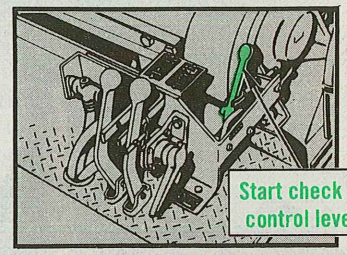
TM 9-2320-260-10 (Nov 77) says engine speed for crane operation should be close to 1,250.

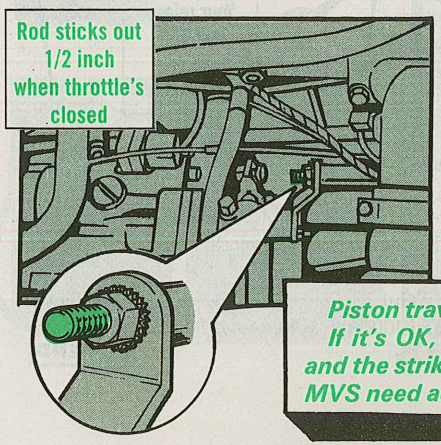
We reset the mechanical variable speed (MVS) governor to 1,250 RPM. The crane boom worked smoothly. The adjustment can be made in about 15 minutes by the unit mechanic.

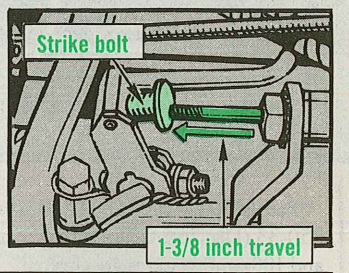
Here's how we did it:

First, check the condition of the linkage between the operator's control lever and the governor – no bends, breaks or binding.

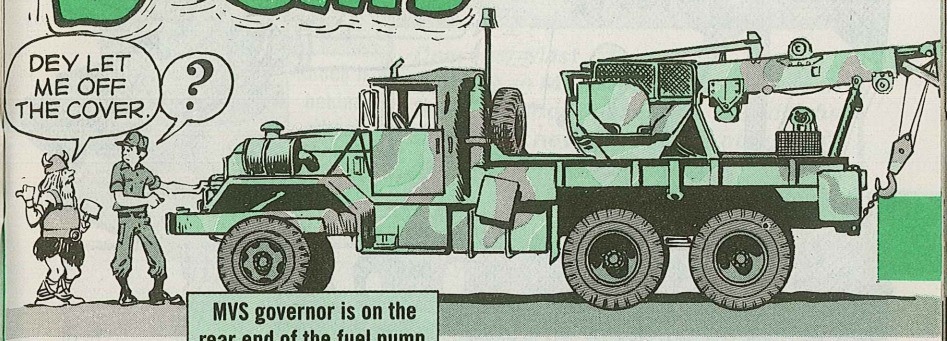
Next, measure the linkage at the MVS governor. A half-inch of threads should show on the piston rod at the air cylinder bracket.



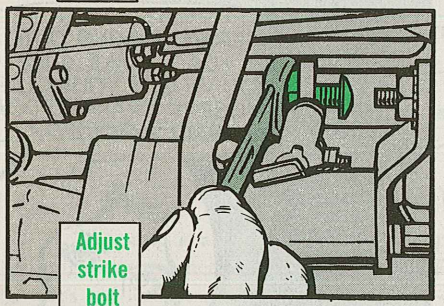




Piston travel should be 1-3/8 inch. If it's OK, then only the throttle lever and the strike bolt on the back side of the MVS need adjustment.



MVS governor is on the rear end of the fuel pump, down at the left side of the engine



(Ed note – The head shed liked the idea, too. The work can be done by your mech.)

Loosen the lock bolt at the bottom of the throttle lever. Move the lever clockwise toward the air cylinder 1 or 2 notches on the throttle shaft. Secure the bolt. Start the engine, engage the crane controls and set the throttle at full RPM.

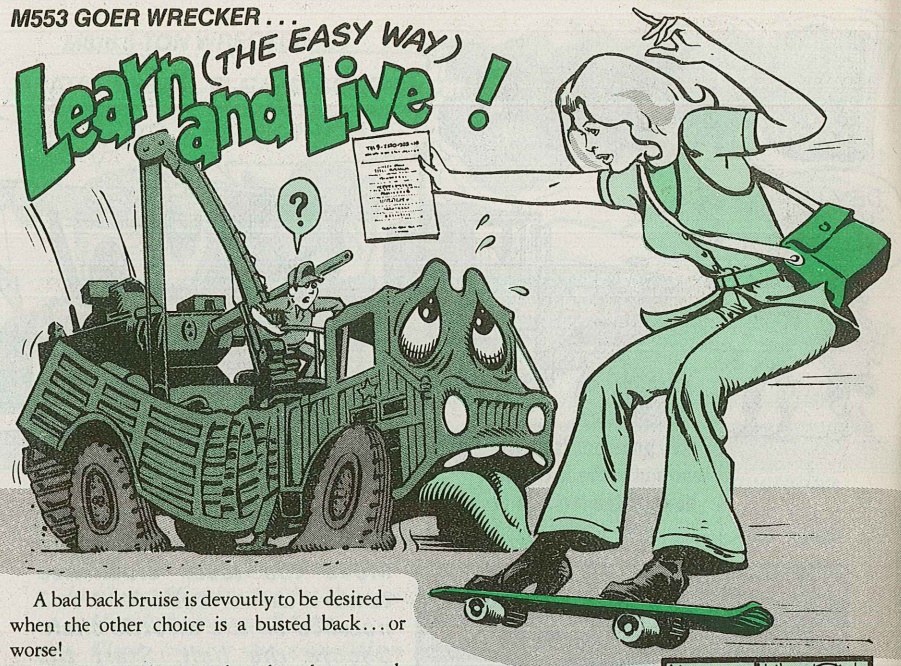
Check the tachometer for 1,250 RPM's.

Minor adjustment with the strike bolt at the top of the throttle lever can increase or decrease RPM's by ± 50 RPM.

CW2 Jerry White
AMSA 4
Newburgh, NY

M553 GOER WRECKER . . .

Learn (THE EASY WAY) and Live!



A bad back bruise is devoutly to be desired—when the other choice is a busted back . . . or worse!

That's what the guy thought when a tank engine hit him.

The operator had forgotten to lock the outriggers on his Goer wrecker. The crane was being used to move a tank engine. The engine was several feet off the ground. With that heavy weight on the crane boom, the outrigger on the working side of the wrecker decided to retract.

Suddenly, as the wrecker tipped, the tank engine dropped—and swung like a wrecking ball.

This guy not only got nicked by the engine. The engine came out worse.

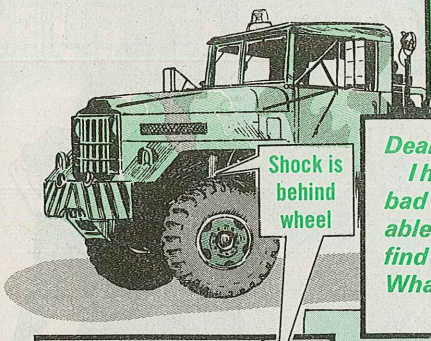
Read and heed! TM 9-2320-233-10 (Jun 76) says, on Page 2-22:

"To lock the outriggers, take out the crank, turn it around, and put the handle in the storage hole."

And keep your outriggers in shape for easy, smooth operation—for both cranking out and cranking back in. LO 9-2320-233-12 (Apr 76) gives you the poop on lubing the outriggers.

TM-206-SERIES 10-TON TRUCK . . .

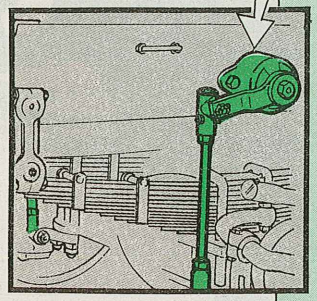
Shocks Not Needed



Dear Half-Mast,

I have an M123A1C 10-ton truck with bad front shock absorbers. I used to be able to get new shocks, but now I can't find 'em in TM 9-2320-206-20P (Dec 71). What gives?

CW3 K. W.



Dear CW3 K. W.,

Not to worry.

All 10-ton trucks came with front shocks, but the headshed decided they're not needed – even took 'em out of the TM's. So, if your truck still has front shocks and they're good, leave 'em on. If they go bad, take 'em off and throw them away.

This word is in Ch 5, para 2-211b, TM 9-2320-206-20 (Oct 71).

Half-Mast

Lifting Device Safety

*TB 43-0142

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

SAFETY INSPECTION AND TESTING OF LIFTING DEVICES

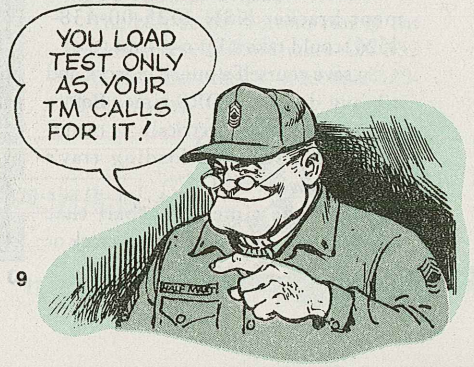
Headquarters, Department of the Army, Washington, DC
11 November 1977

TB 43-0142 (11 Nov 77), Safety Inspection and Testing of Lifting Devices has a lot of new dope for you.

Periodic load testing is required only if the individual equipment TM calls for it.

Load testing is also required before using new equipment — or equipment that's had load bearing parts modified or repaired.

The TB sets the maximum periodic inspection interval limit for lifting devices at one year.

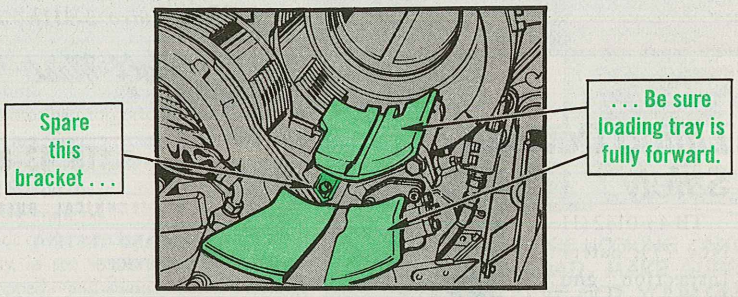


FIREPOWER

M60A2 TANK . . .

PROTECT THAT EJECTOR COCKING BRACKET

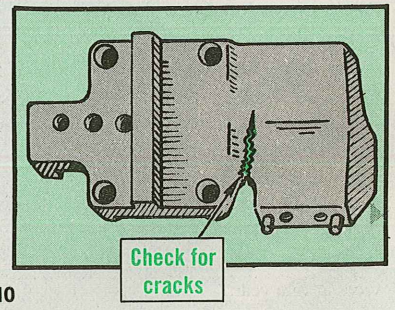
The ejector cocking bracket on your 152-MM gun/launcher can get cracked if you close the breech without bein' sure the loading tray's latched in the full forward position. That's most likely to happen during main gun maintenance, including bore brushing. The bracket can also be broken off if its mounting bolts are loose or if the bracket's not alined with the loading tray right.

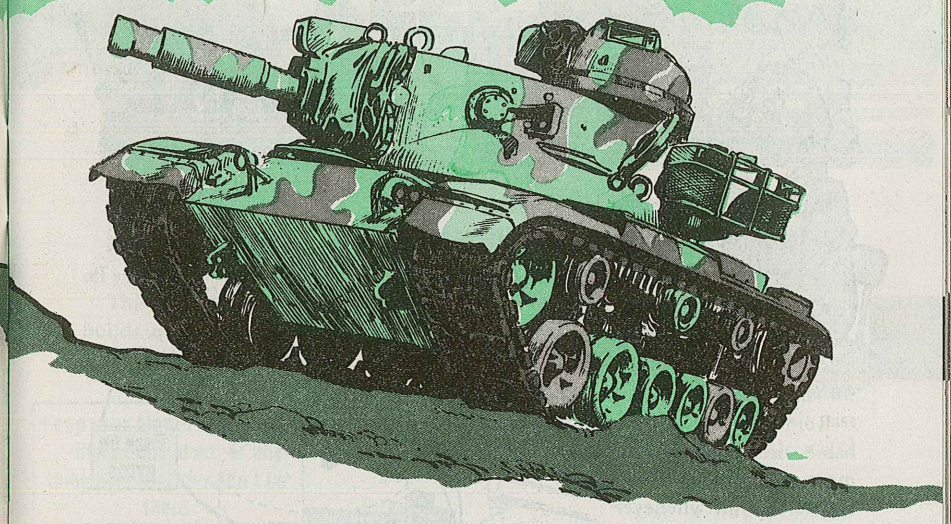


Either way, getting your replacement bracket NSN 1025-00-438-4626, could take a l-o-n-g time.

So save yourself a bunch of work and a heavy dose of NORS time. Before closing the breech electrically or manually, make sure the loading tray's latched fully forward.

Now's the time to eyeball that bracket close, checking for any crack or break.

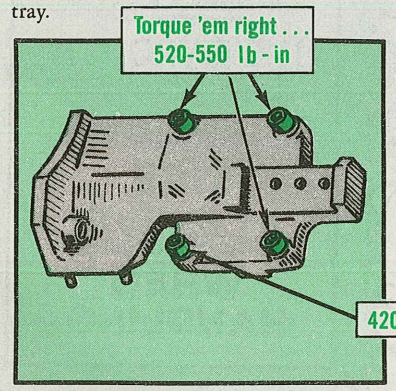




If it's cracked, order up a new one and don't hold your breath. You can fire the gun/launcher with a cracked bracket until your new part's installed. The M60 Tank Project Manager's message DRCPM-M60TD-T 151300Z Sep 77 has the word.

If it's broken, Don't Fire.

Check the gun/launcher for other damage — especially the "U" cable and loading tray.



When you organization maintenance types are alining the cocking bracket go by the TM. And watch that mounting bolt (screw) torque.

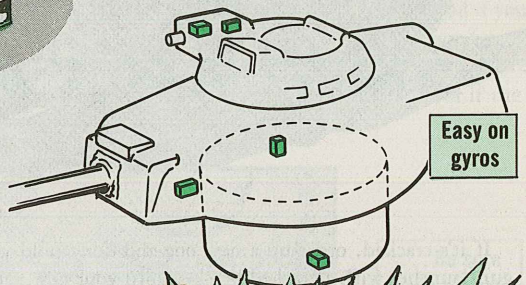
The bolt at the bottom rear of the bracket on the M60A2 takes 420-450 lb-inches; the other 3 bolts take 520-550 lb-inches.

M60A2 GYROS . . .

HANDLE WITH CARE!

The turret gyroscopes on the M60A2 tank are delicate things and should always be treated carefully.

Recent inspections of damaged gyros show that the problems often are caused by poor handling during removal or installation.



Remember! These babies need special treatment — at all times.

Use caution whenever you begin to work on or around a gyro.

Gyro removal and installation instructions in TM 9-2350-232-20-2 have a single caution note.

But this warning covers the entire job — start to finish.

So, when you work around gyros on the M60A2, don't punt, pass or kick them around. Be extra careful.

CAUTION

THE GYRO IS A DELICATE INSTRUMENT. USE CARE WHEN HANDLING!

FOR XENON SEARCHLIGHT . . .

KEEP BLOWER BLOWING

Ah, ah! Back off the switch-off routine.

That's right.

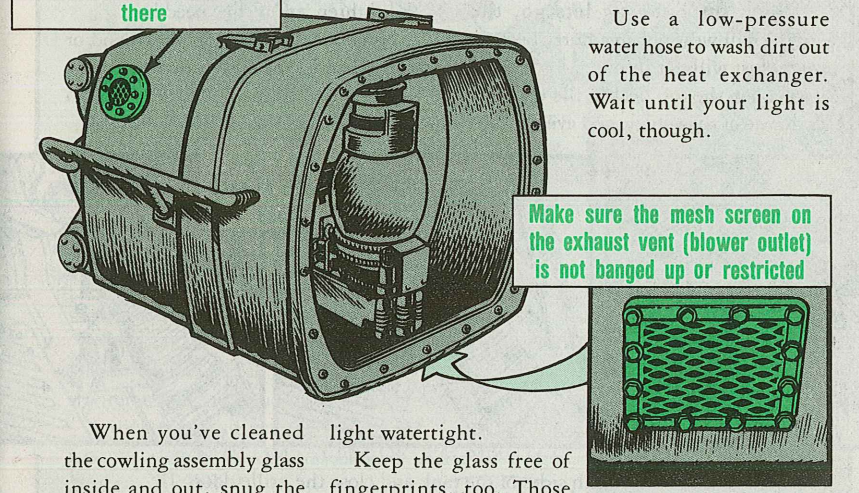
Leave your tracked or wheeled vehicle power on for at least 5 minutes after you turn off your AN/VSS-1 or -3 infrared searchlight set.

This extra time's necessary for the light's blower to get rid of all the hot air that builds up in the light's housing.

If you shut down the vehicle power too soon . . . POW! . . . there goes your light.

To make sure the heat exchanger intake and exhaust ducts let cool air pass through, keep the ducts clean and free of debris.

Use a low-pressure water hose to wash dirt out of the heat exchanger. Wait until your light is cool, though.



When you've cleaned the cowling assembly glass inside and out, snug the assembly to the searchlight before you lock the latches. This will keep the light watertight.

Keep the glass free of fingerprints, too. Those fingerprints cause hot spots that can damage your searchlight.

M48/M60-SERIES TANKS, AVLB, M728...

AIR CLEANER HOSE WOES

The vulcanized bonding that holds the metal flanges to the outlet hose ends of the air cleaners has been letting go on a number of tanks.

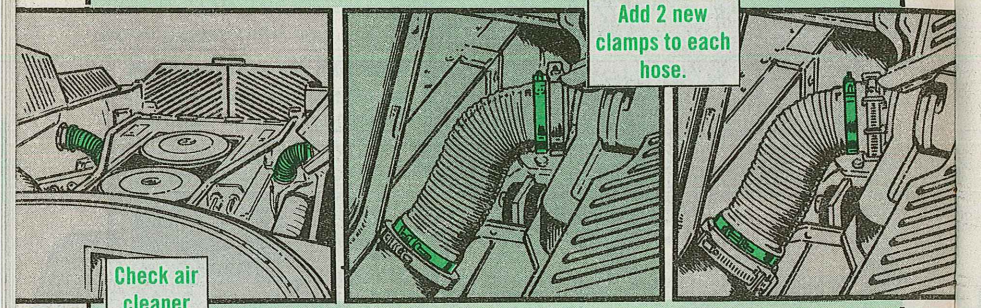
When the bonding lets go, the engine will wear out in a hurry because more dust will get into it.

So open the top deck grille doors on each side of the vehicle and eye the condition of the air cleaner outlet hoses.

If it's cut, torn, deformed, worn, etc., replace it.

Check the air cleaner hose clamps and tighten 'em if they need it.

Now put 2 clamps on all V-band or finger band type hose assemblies and tighten the clamps securely with a ⅜-in. open-end wrench.



Do this on both sides of the tank and close the grille doors.

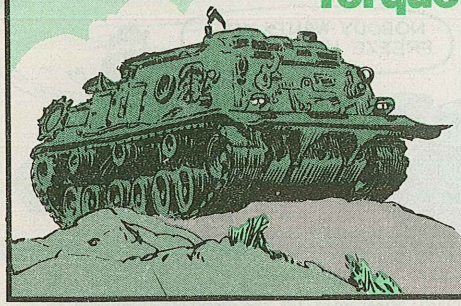
The clamps come as NSN 4730-00-840-8989 (MS 21920-43.)

They're listed in the AMDF at $1.16 each.

Get your hoses clamped up. Your engine will be healthier and last longer.

M88/M88A1...

Torque Change



The torque has changed once again on your M88 or M88A1 recovery vehicle sprocket hub stud. Turns out that the 900-950 lb-ft mentioned on page 15 of PS 297 and in TB 43-0001-39-1 (Apr 77) is too much. It now should be 450-470 lb-ft.

M60-SERIES TANKS . . .

Ground Hop Air Cleaner

Ground hopping the power pack for your tank saves a lot of time. It lets you pull a good operational check before you install the engine.

Problem is, if dust and other crud gets sucked into the engine thru the supercharger inlets you're in for shorter engine life.

So, what you need is a ground hop air filter. You can make one yourself.

FORSCOM units got the word in FORSCOM letter AFLG-REG (8 Sep 77), Subject: Construction of air filtration unit (ground hop kit) for M60-series tanks.

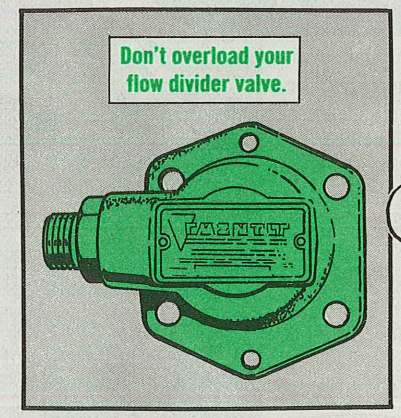
Other units can get the how-to details by writing: Commander, TARCOM, ATTN: DRCPM-M60TD-L, Warren, MI 48090.

M578 Traversing Trauma

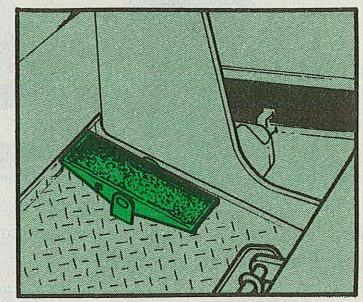
Lots of M578 recovery vehicles are having cab traversing trauma. In fact, some M578 clutches and brakes get so frozen up the cab won't even traverse.

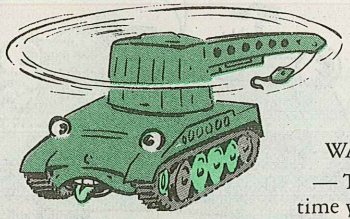
Here's what to do to keep your M578 traverse healthy:

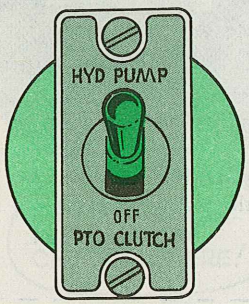
PAUSE A SECOND — Your flow divider valve is built to take high hydraulic pressures and heavy flow rates of hydraulic fluid, but it can be overloaded. This happens if you change direction with the traverse pedal without slowing down at the end of the swing.



If you've been going full speed in one direction, let the traverse pedal go to neutral for a second to set the brakes before you tromp your foot down on the pedal to make the cab turn in the opposite direction. That'll make life a lot easier for the flow divider.







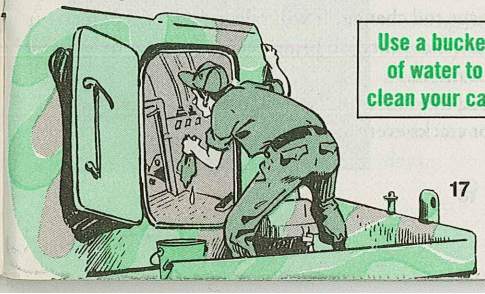
Switch on? Pedal is HOT!

WATCH YOUR STEP — Think about this every-time you climb into the cab: If the PTO clutch switch in the driver's compartment is ON, then the traverse pedal is hot to trot. If you step on it when you climb into the cab, the cab will start to turn that very second. You could get hurt or the boom could injure somebody.

HYDROPHOBIA HELPS — If you've got hydrophobia (a fear of water), it'll help you keep your cab traversing system in shape.

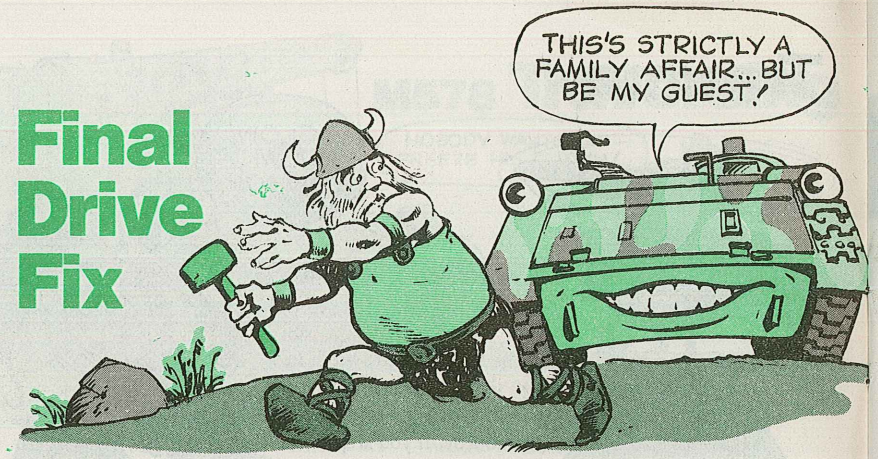
Everybody knows that you're not permitted to use high-pressure water above the roadwheels on the M578, but lots of crewmen clean out the cab with pressure hoses. High pressure water sprayed on top of the traversing assembly gets through the brake and clutch adjustment seal. The water in the gear case settles to the bottom where the clutch is located. This makes the clutch rust up or slip.

Instead of high-pressure water hoses, use a little water in a bucket to clean your cab. That way you can control the water, and it won't leak down and rust things.



Use a bucket of water to clean your cab

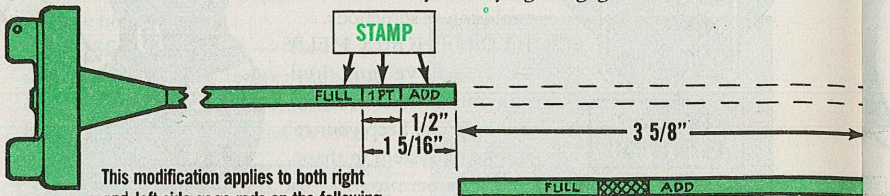
Final Drive Fix



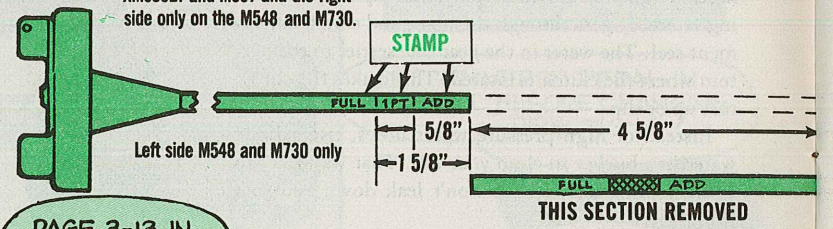
If you operate a member of the M113/M113A1 carrier family, chances are water has been getting into the final drives.

Water sneaks in because the final drive output shaft seal doesn't have enough lube.

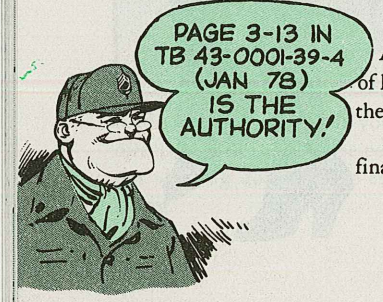
Your track mechanic can take care of this by modifying the gage rods like so:



This modification applies to both right and left side gage rods on the following vehicles: M113, M113A1, M577, M577A1, M106, M106A1, M125A1, M741, XM806, XM806E1 and M667 and the right side only on the M548 and M730.



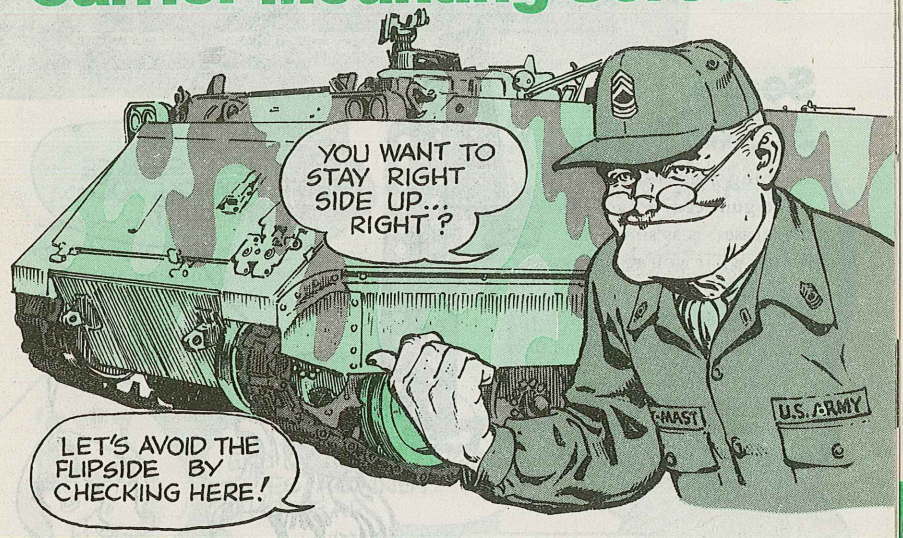
Left side M548 and M730 only



After the gage rod change, it will take a total of 9 pints of lube (6 additional pints) to bring the oil level up to the new FULL mark.

Add 3 oz red dye NSN 6820-00-926-8887 and inspect final drives for cracks every oil change.

Carrier Mounting Screws

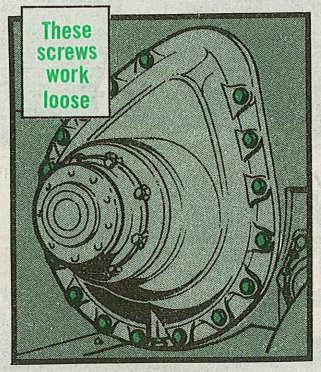


The final-drive-to-hull mounting cap screws on your M113/M113A1 series vehicles have a nasty habit of working loose, so check 'em every quarter.

Loose screws can let the final drive separate from the hull.

If this happens, the track could override the final drive sprockets and lock.

'Course, a locked track can flip a vehicle over.



Some commands have switched the quarterly service to a 6-month service — but this is too long an interval for these cap screws! They have a history of working loose, so be sure you check and correct the torque on 'em at least every 90 days.

Sears, Shafts & Such

Keeping your M60 machine gun ready to go, in most cases, is as simple as doing what you're supposed to do.

It's also as simple as **not** doing what you're **not** supposed to do.

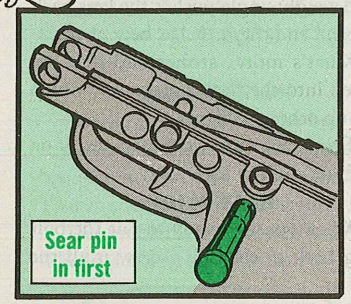
Some examples:
wrong sear position; too much lube in some places and not enough in others; and missing cotter pins.

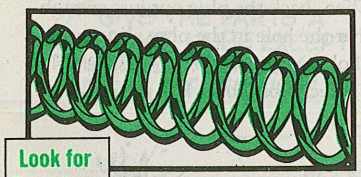
SEAR

When you install the sear, the shoulder must be **up** and facing the **rear**.

Wrong positioning of the sear spring and plunger sets up a runaway gun.

The spring goes in the well first, and the plunger goes on the **top** of the spring.





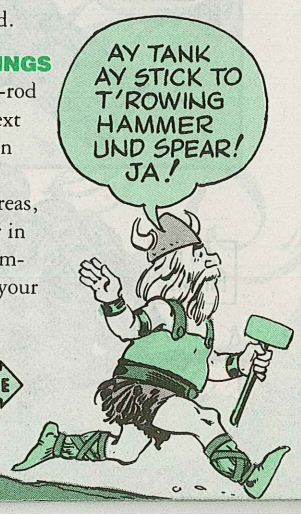
Now, put the sear on top of the plunger, press down, and put the sear pin in from the left side.

You're in business as far as the sear is concerned.

DRIVING ROD SPRINGS

Eyeball the driving-rod spring for flat spots next time you take your gun down.

If you see any flat areas, they're caused by wear in the operating-rod assembly. Turn the gun into your armorer for spring replacement.



PS MORE

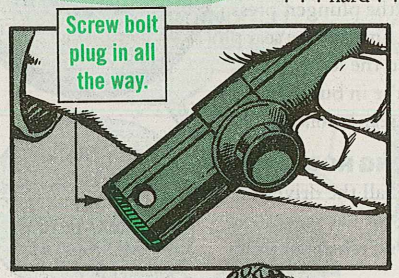
BIPOD LEGS

Those bipod legs on your gun give you good support for prone firing . . . but they're not made to stack the gun.

Example: Standing the gun on the flash suppressor and the extended legs puts most of the weight of the gun on the legs. The weight angle pushes the legs back . . . hard . . . and can bend them. It has bent them.

What's more, stones and dirt are forced into the flash suppressor, which sets up other problems.

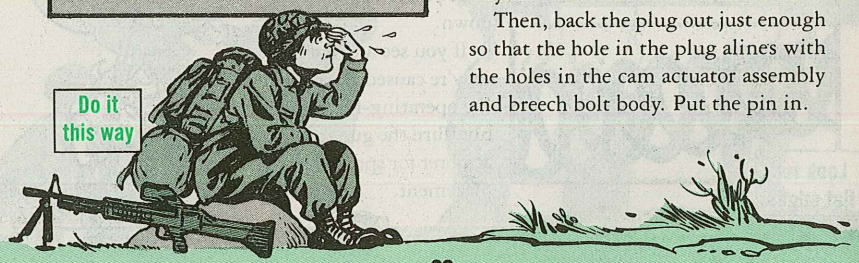
If you have to rest the gun, rest it on the butt and the legs.



BOLT PLUG

When you get ready to put the bolt plug back in the bolt, screw it all the way in.

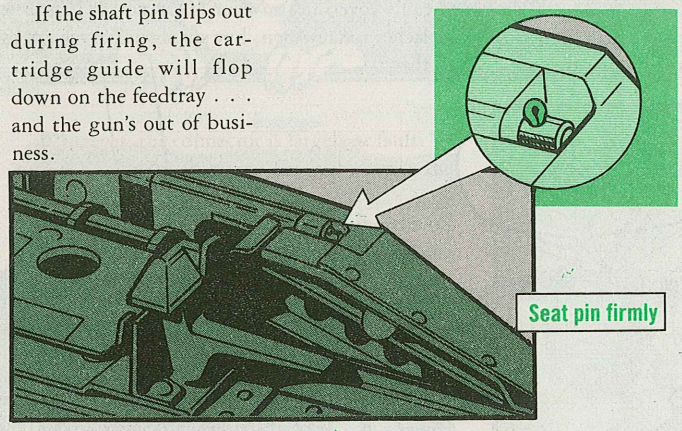
Then, back the plug out just enough so that the hole in the plug alines with the holes in the cam actuator assembly and breech bolt body. Put the pin in.



CHECK THE PEN

Armorers must be extra eyeball alert when they install the cartridge guide shaft. The cotter pin that locks the shaft in place should be firmly seated.

If the shaft pin slips out during firing, the cartridge guide will flop down on the feedtray . . . and the gun's out of business.



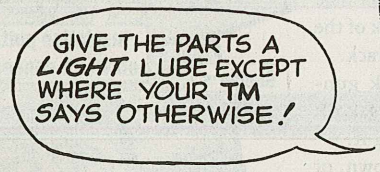
CLEANING

Your friendly armorer can take care of minor carbon buildup in the weapon with RBC. If there's a lot of crud he'll have to use PC-111 (NSN 6850-00-965-2332).

LUBRICATION

Overlubing parts like the bolt face, trigger mechanism and receiver assembly causes crud and carbon buildup. That hinders weapon operation.

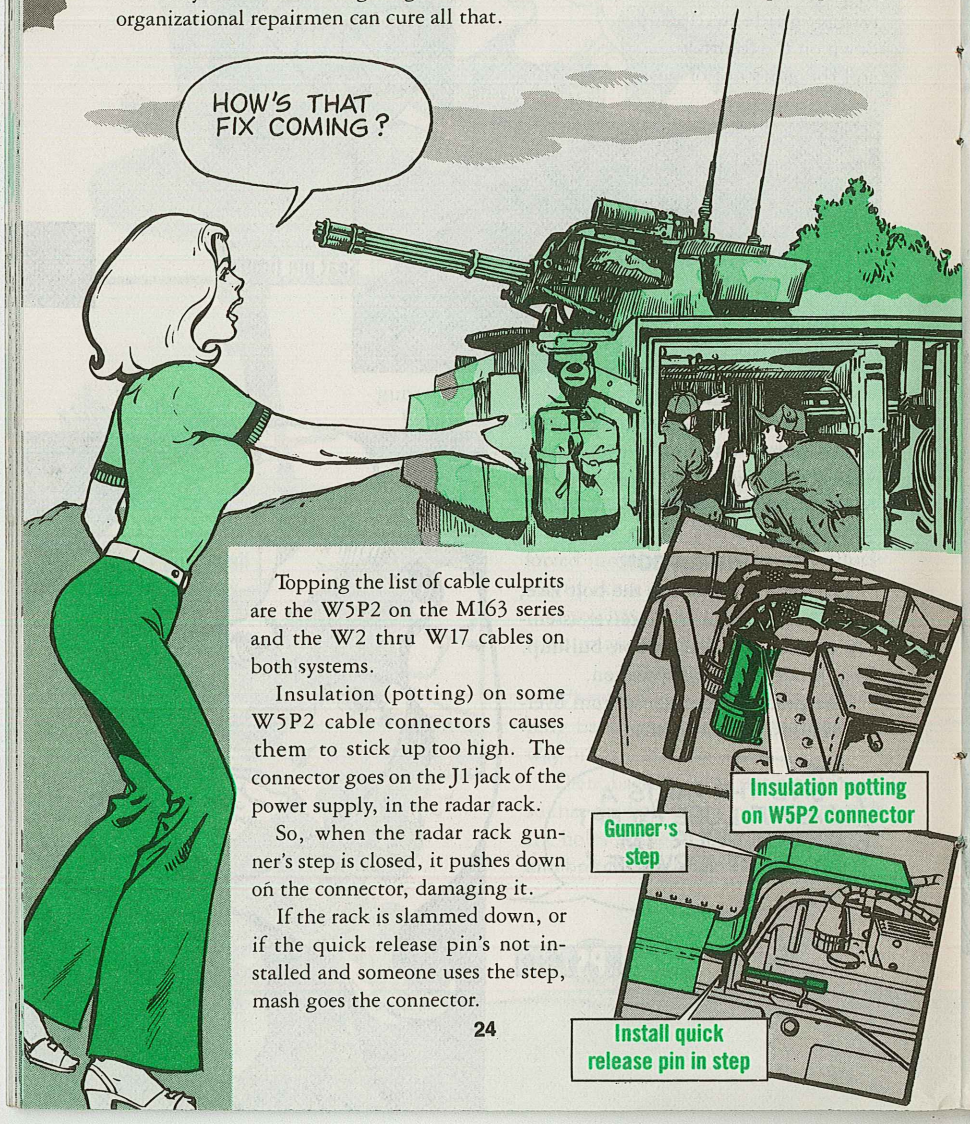
The problems get worse from overlube in dusty or sandy areas.



PS END

VULCAN CABLE FIX

Popped-up potting and unzipped cable coverings on your M163 and M167-series Vulcan systems have been giving headaches to crewmen, but some simple repairs by organizational repairmen can cure all that.



Topping the list of cable culprits are the W5P2 on the M163 series and the W2 thru W17 cables on both systems.

Insulation (potting) on some W5P2 cable connectors causes them to stick up too high. The connector goes on the J1 jack of the power supply, in the radar rack.

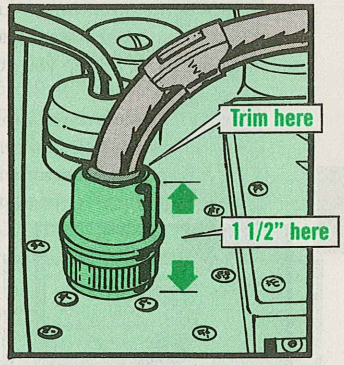
So, when the radar rack gunner's step is closed, it pushes down on the connector, damaging it.

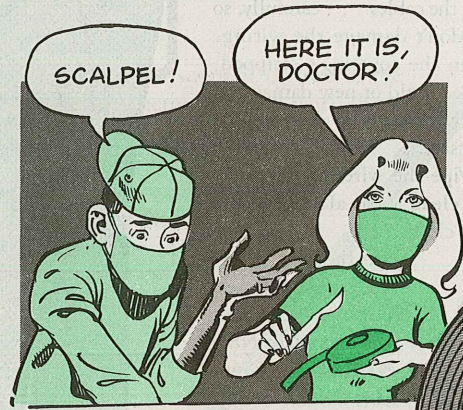
If the rack is slammed down, or if the quick release pin's not installed and someone uses the step, mash goes the connector.

Whatever, the connector is largely at fault. To cure the problem, measure 1½ inches from the end of the connector (metal included).

Working toward the wiring, carefully trim off the potting with a knife. Make the trim area about the same size as the cable. Do not cut into the cable.

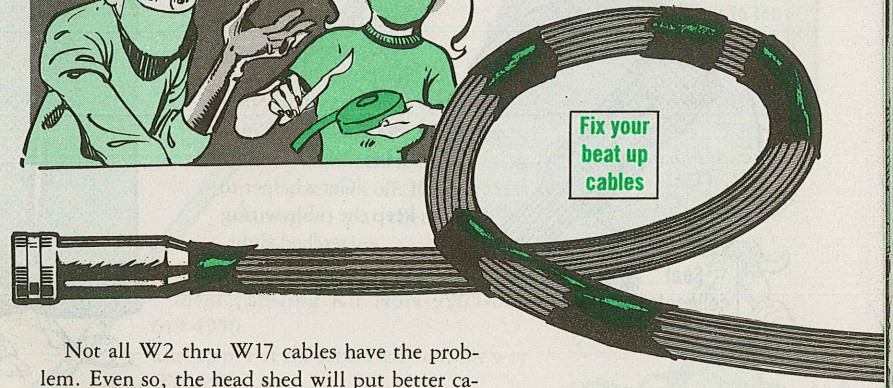
When you're through, seal the trimmed area with sealing compound NSN 8040-00-701-9546 (5-oz tube).





ELECTRICAL CABLES

The covering on the W2 thru W17 electrical cables cracks and peels off, leaving the inside wiring to snag or break. It also strips insulation off the wiring.



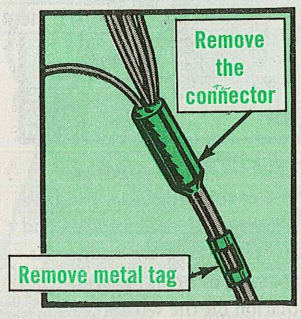
Not all W2 thru W17 cables have the problem. Even so, the head shed will put better cables into the supply system soon.

PS MORE

In the meantime, you can repair any stripped cables in your system (partially or fully stripped, that is). It'll keep you going till you get new cables.

First, remove the cables like the -20-1 TM on your system tells you to.

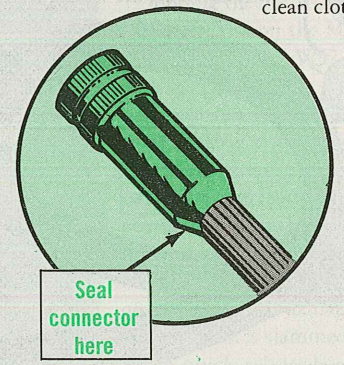
Tag each connector with the cable number on the metal marker nearest to it.



Remove the metal markers and keep them safe for later.

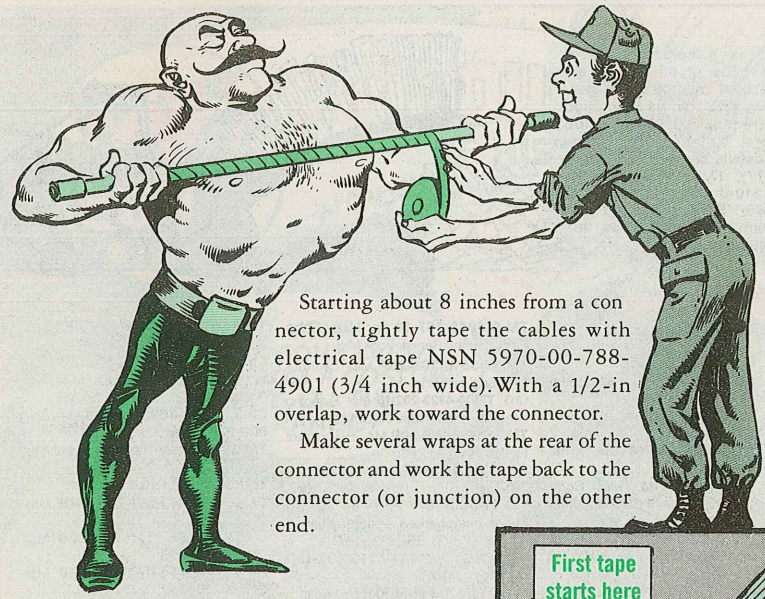
Remove the beat-up covering from the cables . . . carefully, so you don't damage the wiring. When the covering's stripped, check for old or new damage on the wiring. Fix damage, if necessary.

Wipe the wires and connectors clean with alcohol and a clean cloth.



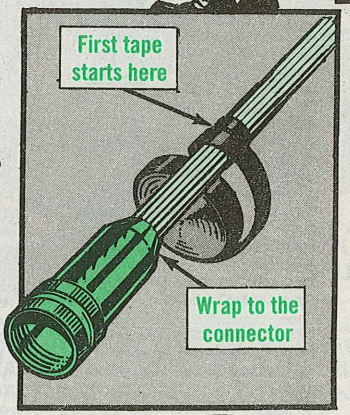
At the point where the wires enter, seal each potted connector with sealant NSN 8040-00-701-9546. Let the sealant dry.

Get a helper to keep the cable wiring stretched tight.



Starting about 8 inches from a connector, tightly tape the cables with electrical tape NSN 5970-00-788-4901 (3/4 inch wide). With a 1/2-in overlap, work toward the connector.

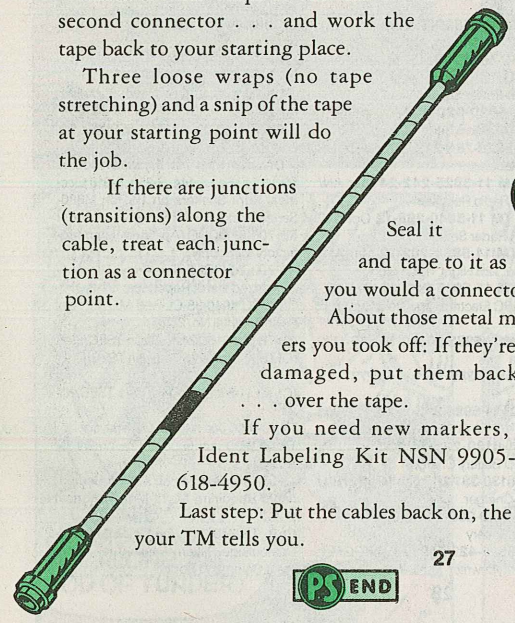
Make several wraps at the rear of the connector and work the tape back to the connector (or junction) on the other end.



Make several wraps at the rear of the second connector . . . and work the tape back to your starting place.

Three loose wraps (no tape stretching) and a snip of the tape at your starting point will do the job.

If there are junctions (transitions) along the cable, treat each junction as a connector point.



Seal it and tape to it as you would a connector.

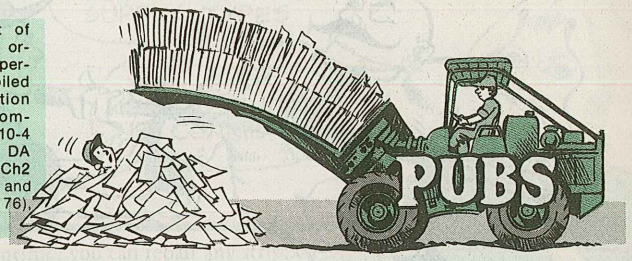
About those metal markers you took off: If they're undamaged, put them back on . . . over the tape.

If you need new markers, use Ident Labeling Kit NSN 9905-00-618-4950.

Last step: Put the cables back on, the way your TM tells you.

PS END

This is a selected list of recent pubs of interest to organizational maintenance personnel. This list is compiled from recent AG Distribution Centers Bulletins. For complete details see DA Pam 310-4 (Oct 77), TM's, TB's etc.; DA Pam 310-6 (Jul 77) and Ch2 (Jan 78), SC's and SM's and DA Pam (C) 310-9 (Nov 76), COMSEC pubs.



TECHNICAL MANUALS

Ch 1, **TM 3-4240-280-10** Jan M24 and M25/25A1 Mask
Ch 1, **TM 5-2805-256-14** Feb Engine, Gas 1½-HP Mil Std
Ch 1, **TM 5-2805-257-14** Mar Engine, Gas 3-HP Mil Std
Ch 1, **TM 5-4310-277-14** Mar Compressor, Recip Air, 175 PSI, Tank Mtd, GED
Ch 4, **TM-5-4320-248-15** Mar Pump, Centrifugal; Gas Driven; Base Mtd 1½ Inch; 100-GPM
TM 5-4930-226-12&P Oct Nozzle Assembly, CCR
TM 5-5420-203-24P Apr AVLB M48 and M60
TM 5-6115-584-24P Apr Generator Set, DED 5-KW
TM 5-6115-585-24P Apr Generator Set, DED Mtd 10-KW
TM 9-1005-313-10 Jan M240 Machine Gun
TM 9-1005-313-24P Mar M240 Machine Gun
TM 9-1240-381-10 Nov M19 Binocular
TM 9-1425-473-24P Dec TOW Airborne
TM 9-1427-380-20P Feb Pershing
TM 9-1430-486-24P Nov Lance
TM 9-1430-526-24P Jan Improved HAWK
TM 9-1430-534-24P Jan Improved HAWK
TM 9-1440-585-24P Oct Chaparral
Ch 1, **TM 9-2320-258-10** Nov Truck Tractor, 22½-Ton, M746
Ch 2, **TM 9-2320-260-20** Apr M809-Series 5-Ton Trucks
Ch 1, **TM 9-2320-270-20** Apr Truck Tractor (C-HET) M911
TM 9-2350-238-10 Mar M578 Recovery Vehicle
Ch 1, **TM 9-2350-247-20** Mar M548 Carrier
TM 9-2350-258-20-2 Apr M48A5 Tank
TM 9-2350-258-20P-2 Mar M48A5 Turret
TM 9-2350-300-20-2 Mar Vulcan M163A1
TM 9-4940-457-14 Apr Maint Shop Eqpt, Organiz Repair, Truck Mtd
TM 10-3510-208-20P May Laundry Unit, Sngl Trlr Mtd
Ch3, **TM 10-4320-202-15** Mar Pumping Assembly, Flammable 50-GPM
TM 11-1520-210-20P May Helicopters Electronic Eqpt Config
Ch 5, **TM 11-3895-209-12** May RL-207/G and 207 A/G Reeling Machines
TM 11-5805-471-20P Feb Switchboard. Telephone, Cordless, Manual SB-3082(V)1/GT, SB-3082(V)2/GT
(FOUO) Ch 1, **TM 11-5810-232-12P** Mar TSEC/KG-27
(OUO) Ch 1, **TM 11-5810-285-12** Jan Transponder Systems Using Kit-1A/TSEC
(OUO) **TM 11-5810-290-14&P** Dec Installation Kits used with TSEC/KY-38 or HYL-3/TSEC
Ch 7, **TM 11-5820-498-12** Dec AN/VRC-53, AN/VRC-64, AN/GRC-125, and AN/GRC-160 Radio Sets and OA-3633/GRC and O-3633A/GRC Amplifier-Power Supply Groups.
TM 11-5820-520-20P-2 Apr AN/GRC-106A Radio Set
TM 11-5820-784-24P Feb R-902/GR Radio Receiver
Ch 1, **TM 11-5825-242-24** Mar AN/TRQ-23 Radio Receiver
Ch 10, **TM 11-5840-298-12** Oct AN/PPS-5 () Radar Sets
Ch 6, **TM 11-5855-202-13** Mar AN/TVS-2, -2, -2B Night Vision Sight
Ch 3, **TM 11-5915-223-12** May MX-7778/GRC Electrical Transient Suppressor
Ch 6, **TM 11-5985-262-15** Mar AS-1729 Antenna
TM 11-5985-355-13 Apr AS-2731 Antenna
Ch 1, **TM 11-5995-208-15** CX-11230/G and CX-10734/G Cable Assemblies
TM 11-6130-225-14-2 Feb PP-2926C/U Battery Charger
TM 11-6130-381-20P Feb PP-4127B/U Battery Charger
TM 11-6140-208-24P May BB-451/U Storage Battery
TM 11-6625-422-24P Feb AN/GGM-1, 2, 3, Teletypewriter Test Sets
TM 11-6625-654-24P Mar AN/USM-223 Multimeter
Ch 4, **TM 11-6665-214-10** Mar IM-9E/PD, IM-93/UD, IM-93A/UD, IM-147/PD Radiacmeters
Ch 3, **TM 11-6665-224-15** Mar AN/PDR-27P Radiac Set
TM 38-750 May The Army Maint Mgt Sys (TAMMS)
TM 55-1510-201-10/5 Mar U-8F
Ch 9, **TM 55-1520-220-PMS** May UH-1C/M
Ch 35, **TM 55-1520-227-20-1** Mar CH-47B, CH-47C
Ch 28, **TM 55-1520-228-20** Mar OH-58A

MISCELLANEOUS

AR 750-1 Apr Maintenance Concepts and Policies
Cir 310-3 Apr Notice To Users of Supply Catalogs
DA Form 2408 Dec Eqpt Log Assy (records) Card
DA Form 2415 Dec Ammo Condition Report
DA Form 2715 Jul 78 Unit Status Report
DA Label 80 (1 Dec 77) Calibration
SB 11-640 Feb S-144, S-250, S-318 Electrical Eqpt Shelters on 1½-Ton M880-Series Trucks
SB 708-6, FICHE (Apr) Item Name Directory for Supply
SB 700-20 FICHE Jan Army Adopted/Authorized List of Reportable Items
Ch 1, SC 4940-95-CL-A08 Mar Tool Set Supplemental No. 2
(C) TB 11-5810-224-14-2 Jan TSEC/KY-8
(C) TB 11-5810-225-14-2 Jan TSEC/KY-3, -3A
(C) TB 11-5810-244-14-2 Dec TSEC/KY-28
TB 43-0106 Jun Aircraft Oil Analysis
TB 43-0210 Jun Ground Equipment Oil Analysis
TB 55-1500-307-24 Feb Aircraft Components Requiring Maint Mgt, Historical Data
Ch 1, TB 746-95-1 Jan Color, Marking, Camouflage Pattern Painting for Armament Command Eqpt

...RUST SPELLS FOREIGN OBJECT DAMAGE!

WE CALL THAT *FOD* FOR SHORT

JA! VIT CLEAN HAMMER I COULD SHOW YOU T'UNDER!

WHOEVER RENTED YOU THE COSTUME SHOULDA CLEANED THIS UP, DAD!

BUT WE'LL DERUST IT FOR YOU!

OH, GOOT! ISS TOO BAD I NOT HEAR ABOUT *FOD* BEFORE I BLEW THE CHARGES!

WHAT CHARGES?

LOKI'S FORCE VAS COMING AND ON MY BATTLE HORN I BLEW HONEY!

HEY! DON'T YOU CALL CONNIE HONEY!

NO! IT VAS HONEY VOT GOT INTO MY HORN! AY YOOST GURGLED THE CHARGE... AN' DET ISS ALL AY REMEMBER!

THAT'S *FOD* ALL RIGHT!

IF YOU REALLY HAD BEEN BACK IN OLDEN DAYS... *FOD* MESSED UP A LOT OF HISTORY!

LIKE VOT?

HEH... TAKE CASEY AT THE BAT ... MAYBE *HE* GOT HIT BY *FOD*! LIKE A PIECE OF TINFOIL ON HIS CHAW!

SOUNDS REASONABLE

SO WHEN THAT THIRD STRIKE CAME, HE BIT DOWN ON IT...

CHOMP

EE-OO-OW!

AND THE MIGHTY CASEY ... HAD STRUCK OUT!

AND HANNIBAL *DID* GET HIS ELEPHANTS ACROSS THE ALPS ... BUT WHAT IF SOME GRUNT LET PEPPER GET INTO THEIR FEED!

THEY'D HAVE BLOWN IT FOR SURE!

KACHOOO!

KACHAW!

ITCH ITCH ITCH

AT WATERLOO... MAYBE WHAT NAPOLEON GOT *FOD*'ED BY WAS A *FLEA*!

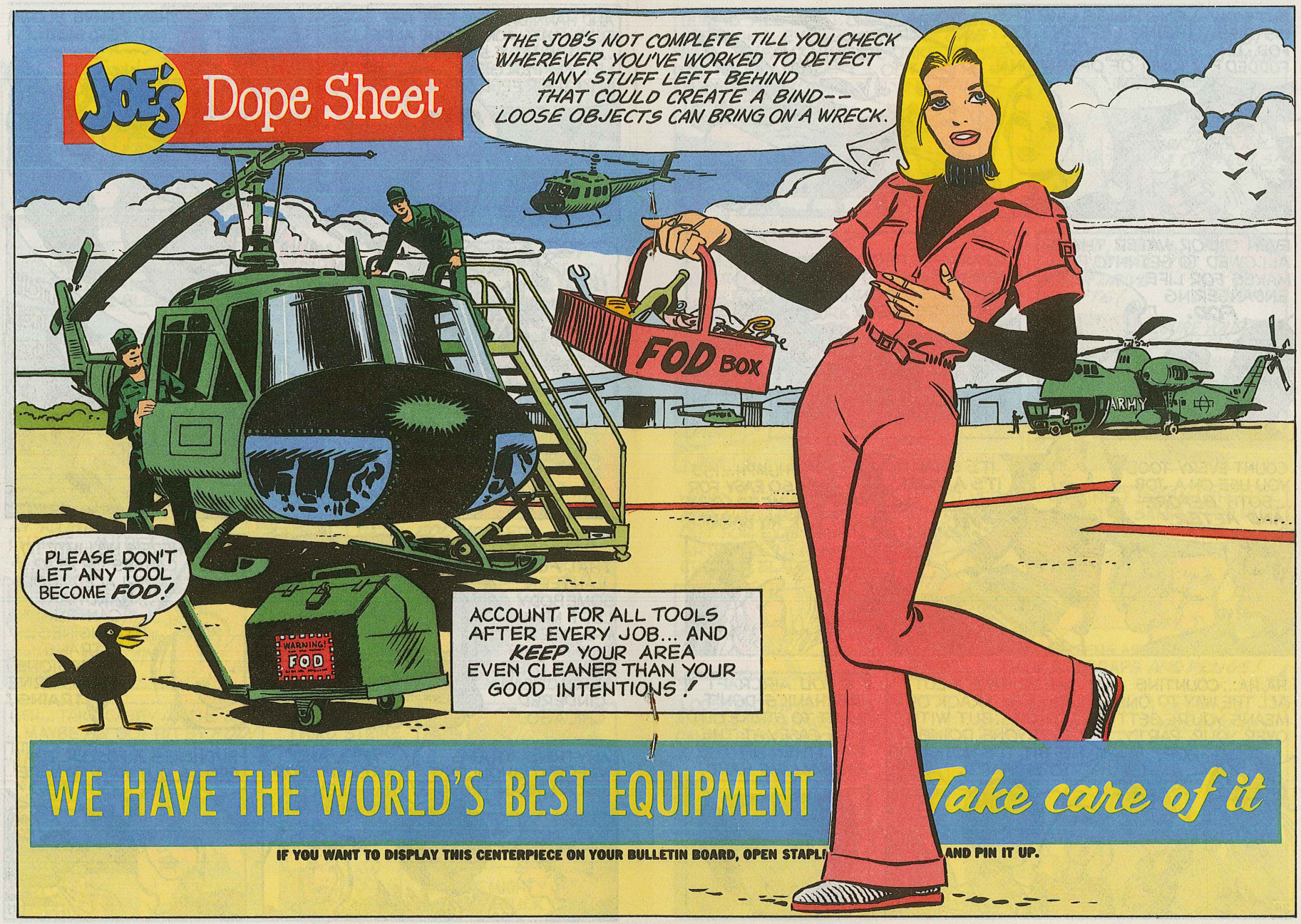
WHAT ABOUT THAT *FOD* LANTERN SOMEBODY LEFT NEAR MRS. O'LEARY'S COW? IT GOT KICKED OVER 'N PRACTICALLY CINDERED CHICAGO!

THERE'S NO LIMIT TO CAUSES OF *FOD*... MISPLACED TOOLS, ... HARDWARE CAN RUIN ENGINES... TRANS-MISSIONS AND DRIVE TRAINS!

ANYTHING THAT'S WHERE IT SHOULDN'T BE CAN MEAN TROUBLE!

YES... AND AIRCRAFT *FOD* HAS BEEN ON THE INCREASE!

BUT HERE'S A POSTER THAT SPELLS OUT WAYS TO WIPE OUT *FOD*!

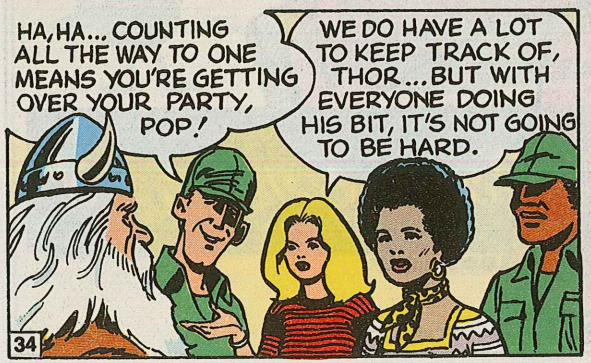

JOE'S Dope Sheet
THE JOB'S NOT COMPLETE TILL YOU CHECK WHEREVER YOU'VE WORKED TO DETECT ANY STUFF LEFT BEHIND THAT COULD CREATE A BIND-- LOOSE OBJECTS CAN BRING ON A WRECK.
FOD BOX
ARMY
PLEASE DON'T LET ANY TOOL BECOME FOD!
WARNING! FOD
ACCOUNT FOR ALL TOOLS AFTER EVERY JOB... AND KEEP YOUR AREA EVEN CLEANER THAN YOUR GOOD INTENTIONS!
WE HAVE THE WORLD'S BEST EQUIPMENT
Take care of it
IF YOU WANT TO DISPLAY THIS CENTERPIECE ON YOUR BULLETIN BOARD, OPEN STAPL
AND PIN IT UP.


BUT HOW ISS DISS FOD...UH... FODDED?
BY THINGS LIKE THIS BEING LEFT IN... OR GETTING INTO... ANY KIND OF OPERATIONAL SYSTEM!


EVEN OIL OR WATER THAT'S ALLOWED TO GET INTO FUEL MAKES FOR LIFE-ENDANGERING FOD.


AN ARMY IS PEOPLE DEPENDING ON OTHER PEOPLE...SO DON'T BE CAREFUL!

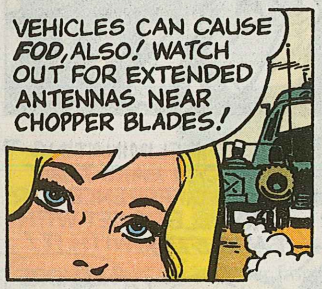

COUNT EVERY TOOL YOU USE ON A JOB ...BOTH BEFORE AND AFTER!
IT'S SMART.. IT'S A MUST!
HUMPH... ISS SO EASY FOR ME TO COUNT MY HAMMER.


HA, HA... COUNTING ALL THE WAY TO ONE MEANS YOU'RE GETTING OVER YOUR PARTY, POP!
WE DO HAVE A LOT TO KEEP TRACK OF, THOR... BUT WITH EVERYONE DOING HIS BIT, IT'S NOT GOING TO BE HARD.


IF YOU AIRCRAFT MECHANICS DON'T WANT TO STRIKE OUT LIKE CASEY AT THE BAT... THEN HIT THE EYEBALLING HARD!


DURING ALL IN-SPECTIONS, EYE-BALL EVERYTHING ON YOUR AIRCRAFT THOROUGHLY! PICK UP ALL FOREIGN OBJECTS!
CHECK OUT EVERY-THING! ONE STRIKE YOU'RE OUT IN THE OL' FLYING GAME!


ALONG WITH TOP RATE TOOL CONTROL AND PM INSPECTIONS ...POLICING OF AIRCRAFT RUNWAYS AND WORK AREAS IS A MUST ALSO!
THINK CLEAN!

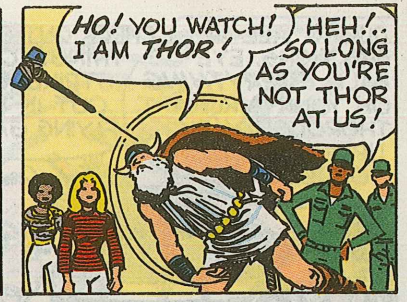

VEHICLES CAN CAUSE FOD, ALSO! WATCH OUT FOR EXTENDED ANTENNAS NEAR CHOPPER BLADES!

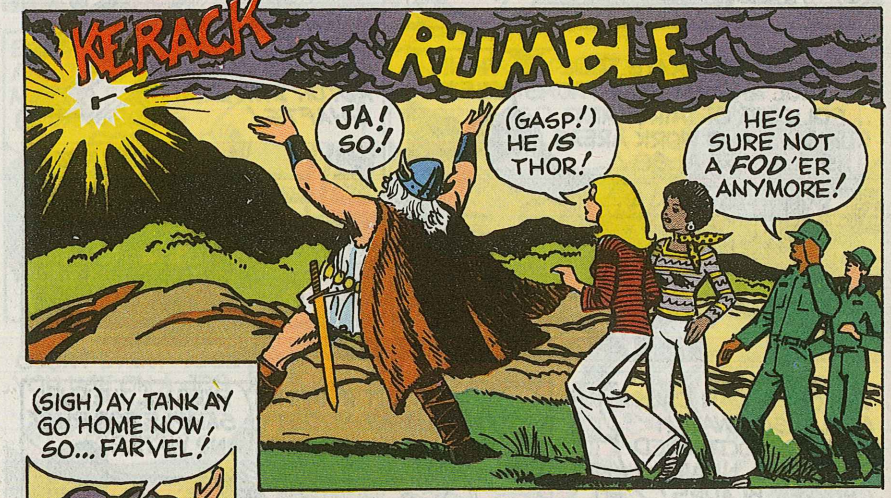

VERY INT'RESTING ...BUT AY YOOST HAVE HAMMER!
EYEBALL THE FUEL SAMPLE FOR RUST AND WATER.
GOTCHA!
WHEN SYSTEMS ARE OPEN PROTECT THEM WITH CAPS AND PLUGS!


LOOSE CLOTHING AND CLEANING RAGS CAN BE BLOWN INTO A ROTOR BLADE!


THAT'S THE WAY TO KEEP A BIRD FOD-FREE!
HERE YOU ARE, POP! ALL CLEANED AND POLISHED!


TOOLS LEFT BEHIND MAY SEEM INSIGNIFICANT, BUT FLIGHT VIBRATIONS CHANGE THAT!
SCREWDRIVERS ROLL TO JAM CONTROLS!
WRENCHES HAVE SCORED, EVEN SEVERED TAIL ROTOR DRIVE SHAFTS!
SECURE YOUR TOOL BOX IN FLIGHT!

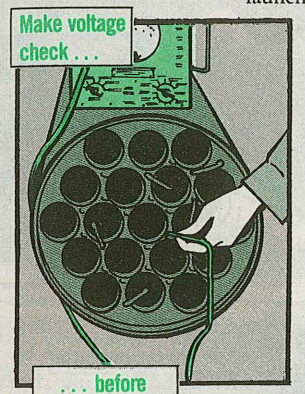




2.75-IN ROCKETS . . .

STRAY VOLTAGE DANGER

Stray dogs can be lovable; stray cats can be cute; stray voltage on a rocket launcher can kill you.



That's why the stray voltage check on your M158A1 and M200-series 2.75-in rocket launchers is a must.

Make the voltage check before you load the rockets. Table 3-3 of TM 9-1055-460-14 tells you how. Be sure to ground the aircraft first.

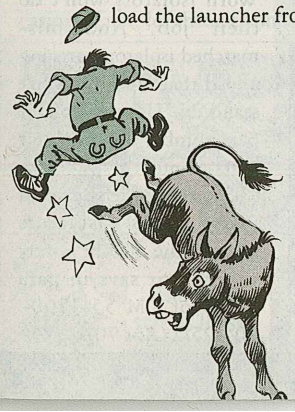
If you don't get a "0" VDC reading on your multimeter, get your aircraft mechanic to check for the stray voltage.

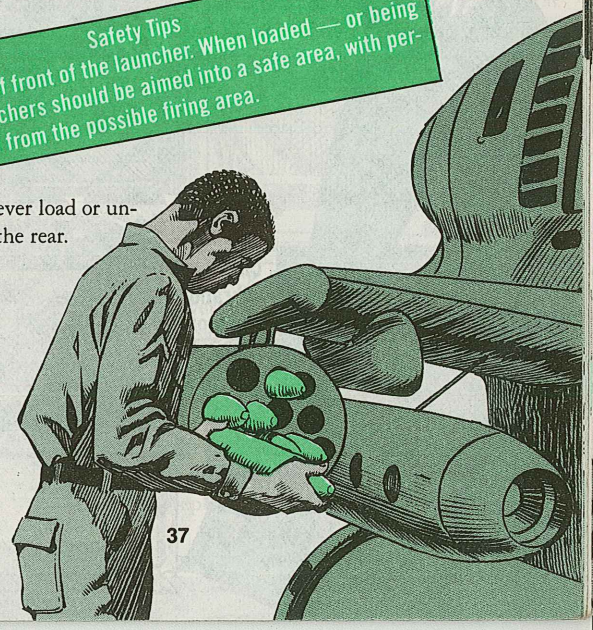
In addition to the voltage check, your support should check the launchers for firing pulse or voltage (Ch. 3, Table 3-3, TM 9-1055-460-14).

Safety Tips

Never stand if front of the launcher. When loaded — or being loaded — launchers should be aimed into a safe area, with personnel cleared from the possible firing area.

If you can avoid it, never load or unload the launcher from the rear.

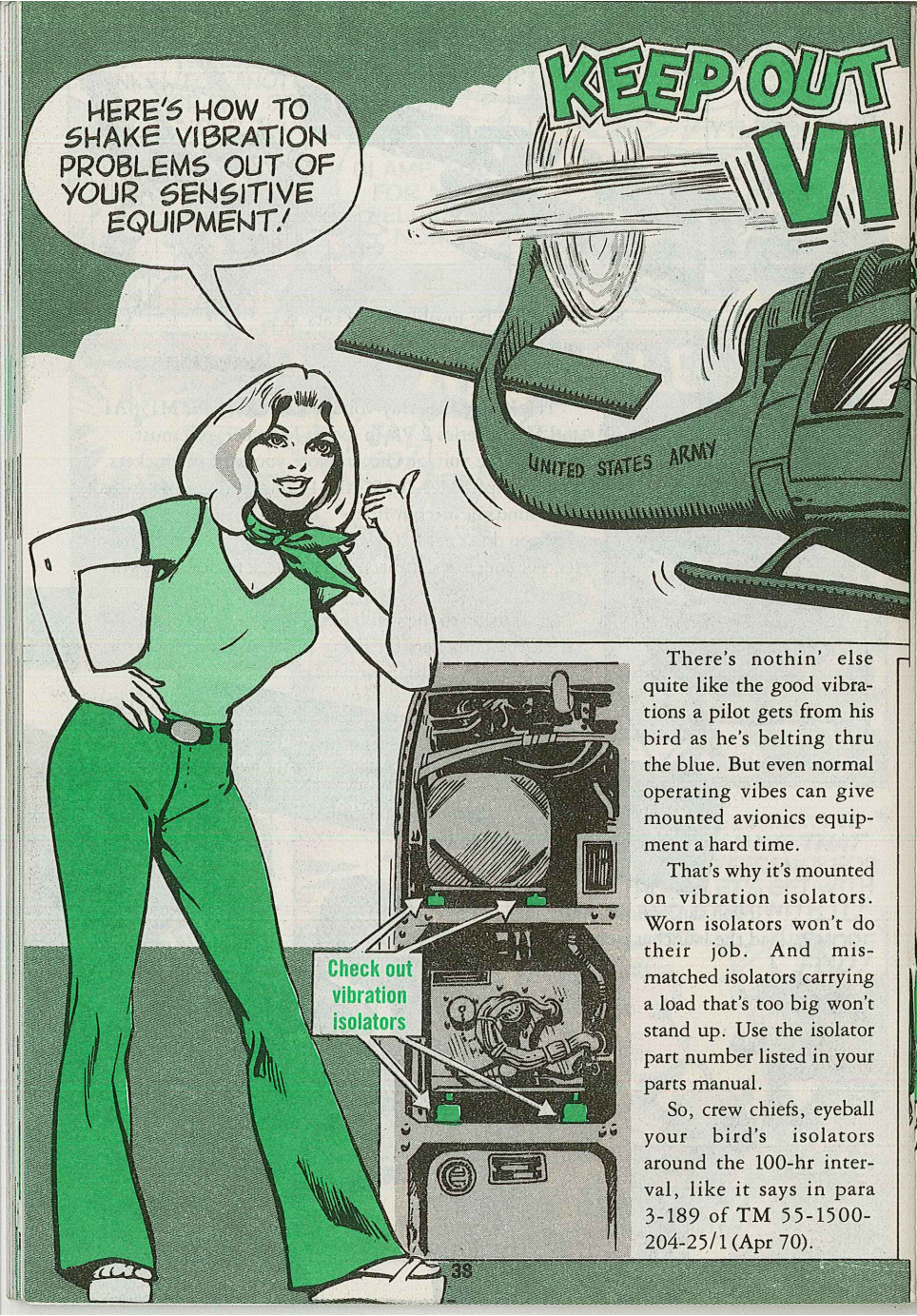




KEEP OUT THE BAD VIBES

HERE'S HOW TO SHAKE VIBRATION PROBLEMS OUT OF YOUR SENSITIVE EQUIPMENT!

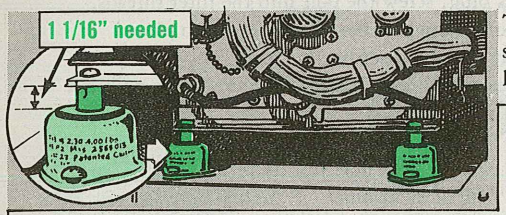
HOW ABOUT SOME PM ?



There's nothin' else quite like the good vibrations a pilot gets from his bird as he's belting thru the blue. But even normal operating vibes can give mounted avionics equipment a hard time.

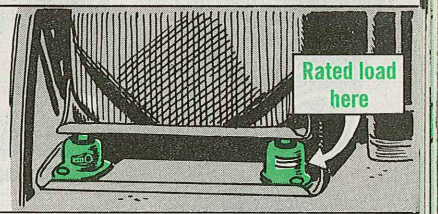
That's why it's mounted on vibration isolators. Worn isolators won't do their job. And mismatched isolators carrying a load that's too big won't stand up. Use the isolator part number listed in your parts manual.

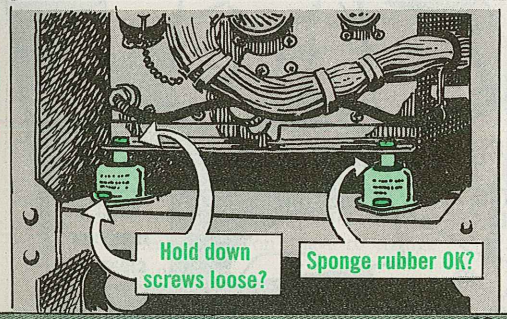
So, crew chiefs, eyeball your bird's isolators around the 100-hr interval, like it says in para 3-189 of TM 55-1500-204-25/1 (Apr 70).



Be sure the isolator's matched to its load. The rated weight for the isolator is usually printed on the casing. If not, let that clearance check be your guide.

The clearance between each isolator and the supported item or isolated load has to be at least 1/16 inch. If it's not, change the isolator.





Check for sagging or loose retaining rivets or hold-down screws To do it, move the equipment or mounted panel to extreme positions in every direction.

While you're moving it, peek at the sponge rubber or metal mesh pads or rubber for deterioration or separation of rubber-to-metal bonding. If you see any, replace the isolator.

And your favorite pilot can keep on groovin' on the bird's good vibes.

SAVE FILTER, ELBOW GREASE!

Any time you Huey and Cobra mechs spot metal chips on the T-53 engine chip detector, or in the oil filter, you have some additional inspections to make.

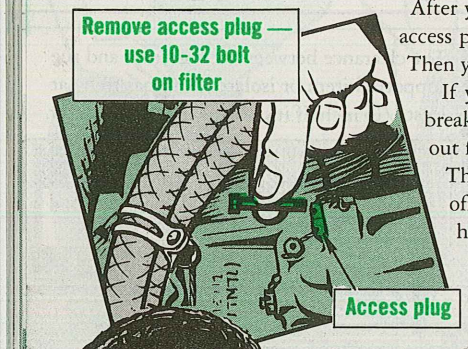
'Course, Para 12-29 of TM 55-2840-229-24 has the word on eyeballing the other strainers and filters for metal contamination.

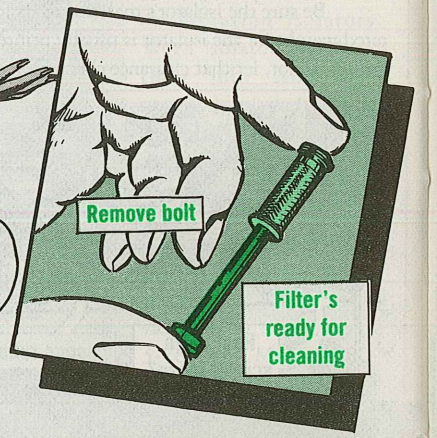
Hold one, tho, before pulling the overspeed governor and tachometer drive filter. Latch on to a 10-32 bolt because you'll need it to remove the firmly-seated filter.

After you break the safety and remove the filter access plug, screw the bolt into the filter threads. Then you can pull the filter, easy as you please!

If you use a scriber to "fetch" the filter you'll break the filter in half. Then your work is really cut out for you.

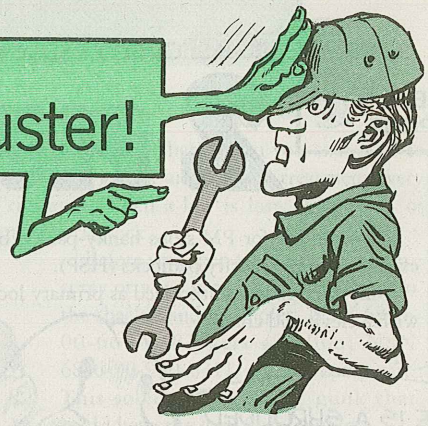
The aft housing has to come off so you can push out the other half of the strainer . . . ugh!!





TIME TO RETORQUE?

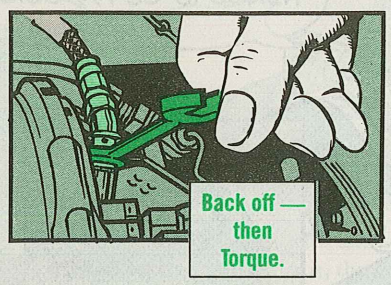
Back Off, Buster!



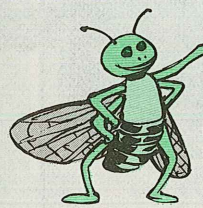
Physics may play second fiddle to the opposite sex at your bull sessions, but at least one subject seems to cause quite a few arguments: How to check torque.

OK, once more.

When it's time to check torque on a nut, never just slap the wrench on it and take a reading. You need about 10 percent more torque than was orginally applied just to start the nut moving again. And, the nut has to be moving to get the right torque.



Back off on the nut a half to a full turn with a regular wrench, and tighten it with the torque wrench to the correct value. That's the word in para 6-152h of TM 55-1500-204-25/1 (Apr 70).



'B' IS BETTER

When you mechs spot engine oil around the Huey or Cobra engine bleed band holes, or at the inlet guide vanes, there may be an engine change in your future.

A leak at the No. 1 bearing means the seal can't be changed in the field and the engine has to go to overhaul. You can change the seal on the No. 2, 3 and 4 bearings if one of them is shot.

But if you have the new T53-L-13B (serial number suffix B) engine, you've got it made in the shade. That baby has a new, tougher No. 1 bearing seal that won't leak. You won't have to change the engine.

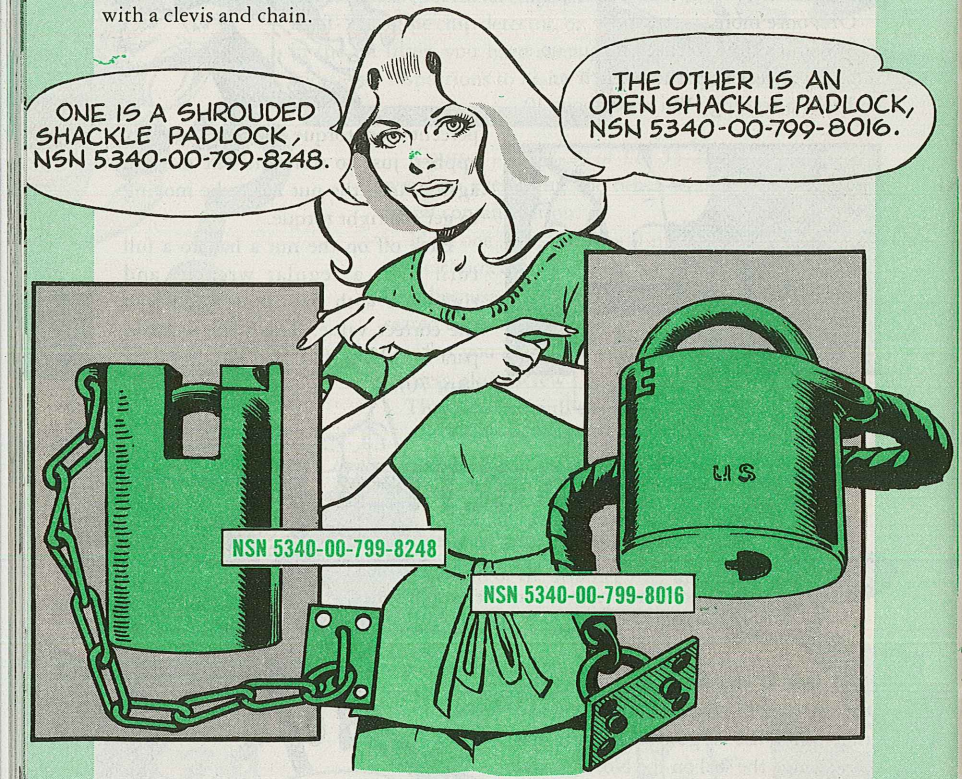
COMBAT SUPPORT

HIGH SECURITY PADLOCKS . . .

2 PLUS PM

An eagle eye for PM stops hanky-panky, broken locks and parts replacement for expensive high security padlocks (HSP).

Only 2 HSP's are authorized as primary locks on arms storage rooms. Each comes with a clevis and chain.

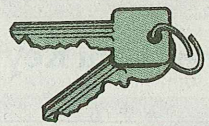


That's the word in para B-1, Appendix B to AR 190-11 (30 Mar 77).

The open shackle padlocks — NSN 5340-00-799-8016 — were reclassified as medium security locks in mid-76.

It's OK to use 'em until your stock on hand becomes unserviceable. Then replace 'em with the shrouded shackle HSP NSN 5340-00-799-8248.

Clean, Lube



Clean and lube your HSP at least every 6 months. That's when you change it to another primary door. You also clean, lube, and give it an anti-rust treatment every time you change the combination. F'rinstance, when a key is lost, misplaced, or stolen, you change the core ASAP — and PM the lock.

If the keyway is plugged with salt, flush it out with hot water, dry it, then add the lubricant.

Use the liquid solvent, then the lube if the keyway is clogged with grease or oil. A dab of powder graphite NSN 9620-00-233-6712 in the keyway also makes the lock open easier.

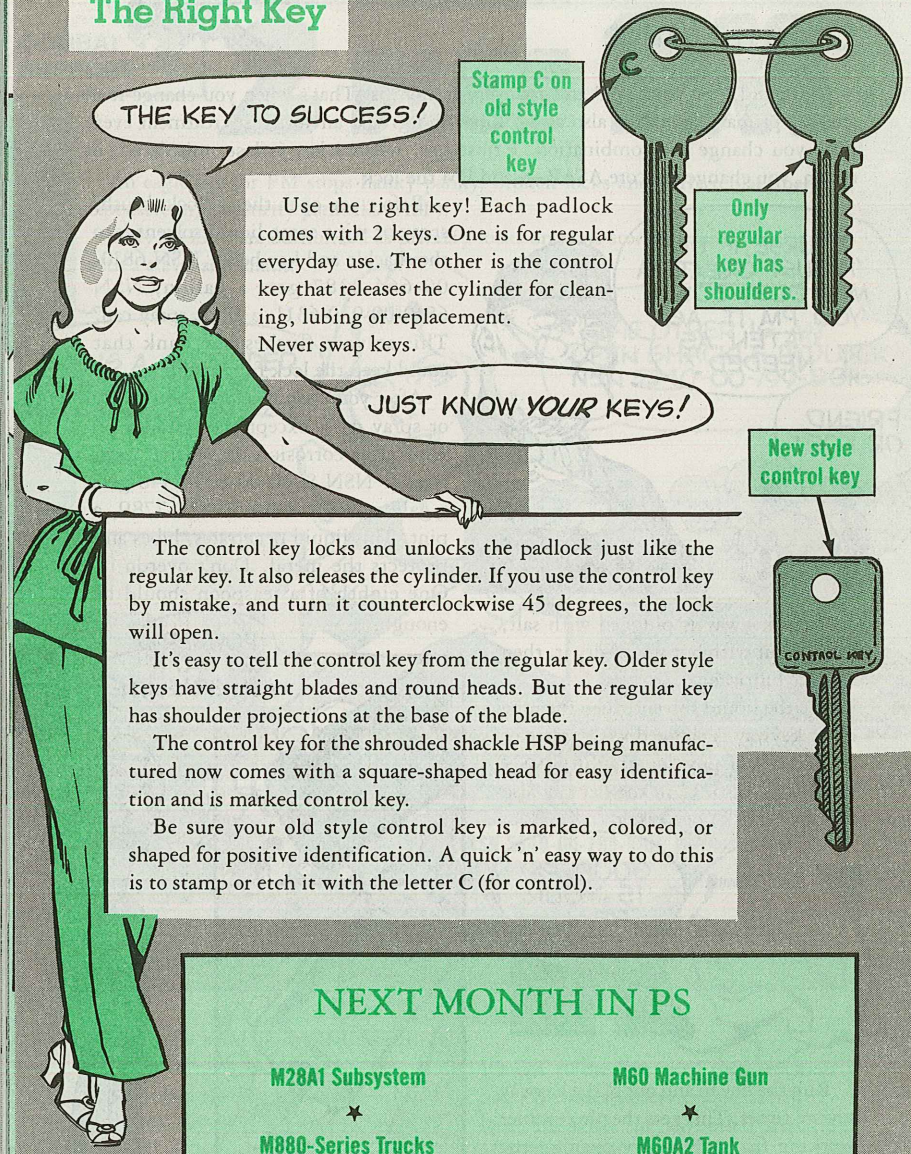
Run the key in and out of the keyway several times. This gets the pin tumbler working freely. Now try opening the padlock.

Before you open the padlock, brush, spray or wipe some liquid solvent into the shackle and key holes. NSN 6810-00-664-0387 gets a gallon; NSN 6810-00-930-6311, a 12-oz spray can. This solvent flushes out gunk that could keep the lock from opening.

After you open the lock, brush, dip or spray it — except the cylinder — with clear corrosion preventive compound. NSN 8030-00-835-4348 gets a gallon; NSN 8030-00-838-7789, a pint. This liquid penetrates, lubes and protects the metal. Don't overdo it. One eighth of a teaspoon should be enough.

PS MORE

The Right Key



Use the right key! Each padlock comes with 2 keys. One is for regular everyday use. The other is the control key that releases the cylinder for cleaning, lubing or replacement. Never swap keys.

The control key locks and unlocks the padlock just like the regular key. It also releases the cylinder. If you use the control key by mistake, and turn it counterclockwise 45 degrees, the lock will open.

It's easy to tell the control key from the regular key. Older style keys have straight blades and round heads. But the regular key has shoulder projections at the base of the blade.

The control key for the shrouded shackle HSP being manufactured now comes with a square-shaped head for easy identification and is marked control key.

Be sure your old style control key is marked, colored, or shaped for positive identification. A quick 'n' easy way to do this is to stamp or etch it with the letter C (for control).

NEXT MONTH IN PS

M28A1 Subsystem

M60 Machine Gun

*

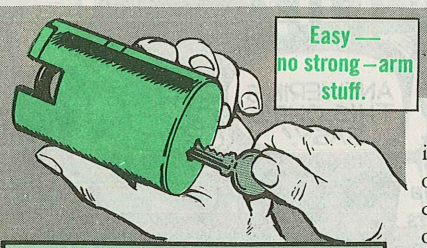
M880-Series Trucks

M60A2 Tank

*

HSP Inspection

Every 6 months when you rotate your HSP to a new primary locking door — or whenever you find a damaged or defective key or HSP — follow this inspection poop:



Insert a test key no more'n ¼ inch into the keyway. Use the same amount of force to turn the key you use every day. No strong-arm stuff. If the lock opens with the test key, replace it ASAP! Careful here. You don't want to jam the test key in the lock. That damages the locking levers.

NOTE: The test key is any key — except the regular or control key — that will slide easily a quarter inch into the keyway.

Report Bad Locks

Report any lock or cylinder that's unserviceable for any reason to U.S. Army General Materiel & Petroleum Activity, ATTN: STS-GP-TT, New Cumberland Army Depot, New Cumberland, PA 17070. Use SF 368 Quality Deficiency Report. Hold onto the padlock and key until GMPA tells you what to do with 'em.

If an HSP key is lost, misplaced or stolen you'll have to replace the lock or core immediately. This shouldn't be a big hassle 'cause you can replace it with a lock from the 15 percent HSP surplus para 2-8h, AR 190-11 authorizes each arms room. All high security padlocks are nonexpendable. Use 'em only like para B-1e says.

Padlock PM and the careful eye will stop broken locks and parts replacement . . and this is the cheapest way to positive security for your arms room.

WEEKLIES AND DD 314

Hung up over which weekly services to schedule on the DD Form 314?

You schedule:

All weekly lube actions required by an LO.

All weekly services in a -20 TM or the organizational-level section of a TM.

You do not schedule any weekly services the TM says an operator pulls — unless the TM says a mechanic or equipment specialist must supervise that service.

PLAN AHEAD

When you're making out a DD Form 314, make sure you're not overlooking 2 words in para 3-3c(2) of TM 38-750. Services will be scheduled at least 1 month or 1 service in advance, whichever time is greater. That sentence says you schedule 1 service or 1 month in advance as a minimum. You can schedule as many more in advance as you please.

COME AND GET IT!

Dear Half-Mast,
The decals on our insulated food containers – NSN 7330-00-238-2411–are damaged or missing. Same goes for the parchment paper that protects the rubber gaskets in the container lid.
Can you help with NSN's so we can keep our containers – and food – up to snuff?
CWO D. L. S.

Dear Mr. D. L. S.,
There're no NSN's for the decals. Get your support to requisition 'em from S9G, like so:

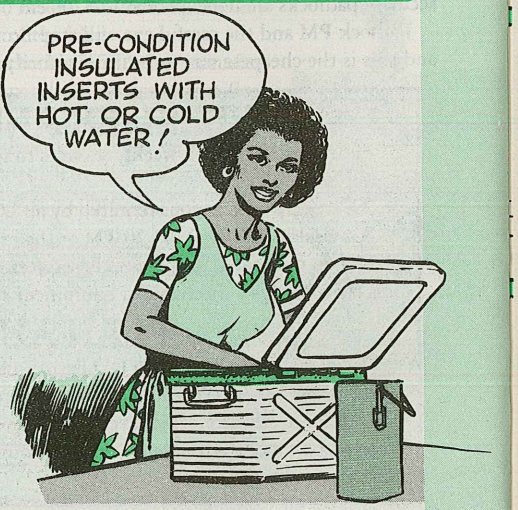
FSCM 66745 PN 8450 Food Container, Insulated, with inserts
FSCM 66745 PN 8449 Instructions for Use
FSCM 66745 PN 8448 Nomenclature of Parts

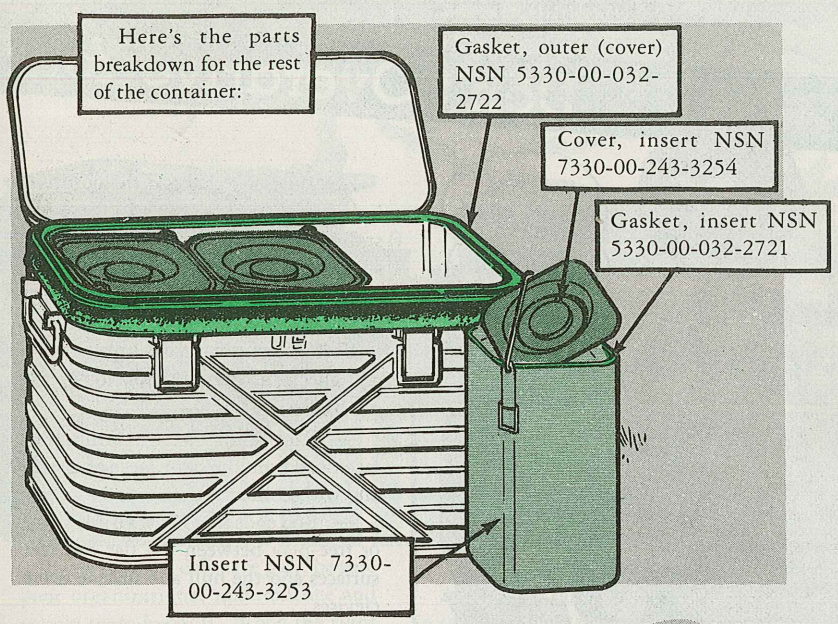
Forget the parchment paper. The manufacturer uses the paper to protect the rubber gaskets when the lid is closed during long-time storage.

When the container is issued to Army field mess units, the paper is trash-canned . . . and gasket PM becomes the special for the day!

Immediately after you clean the container and inserts, take out all rubber gaskets and wash 'em in soap 'n' water.

Wipe with a clean cloth. Replace the gaskets — open side down — ASAP. This lets 'em dry in place so they won't stretch, shrink or lose their shapes.

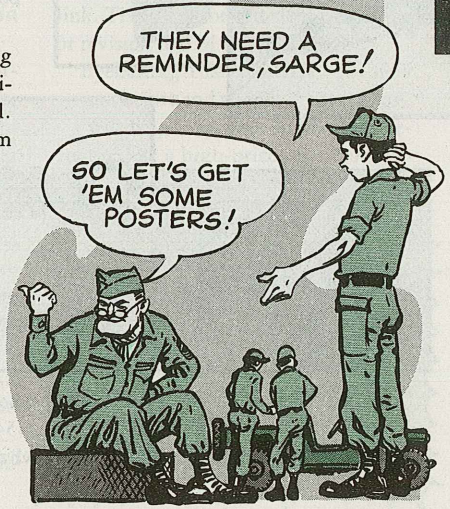




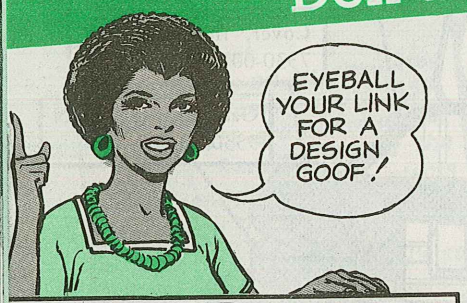
Testing, Anyone?

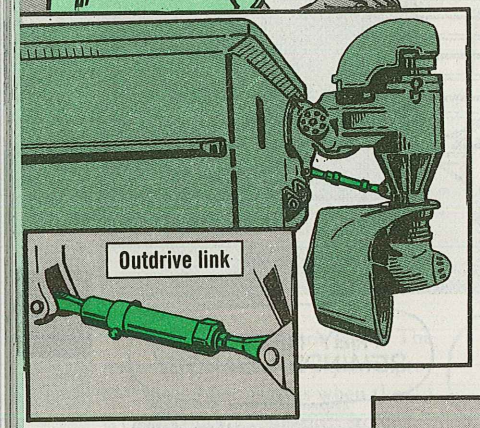
If you're in the business of testing electrical circuits or working on vehicles, you'll find these posters helpful. Your unit can get them with a DA Form 17 to Baltimore Pubs Center.

DA Poster	Subject
750-50	Low Voltage Circuit Tester
750-51	Spark Plug Cleaner/Tester
750-52	Antifreeze/Battery Tester
750-53	TS-352B/U Multimeter
750-54	Dry Cell Battery Tester
750-55	AN/URM-105 Multimeter
750-56	Vacuum Gage
750-57	Timing Light
750-58	Tach-Dwell Test Set
750-59	Compression Gage



Don't Overdrive Your Outdrive Link





Last time you changed the outdrive link on your MAB, you may have installed one that doesn't meet design specifications.

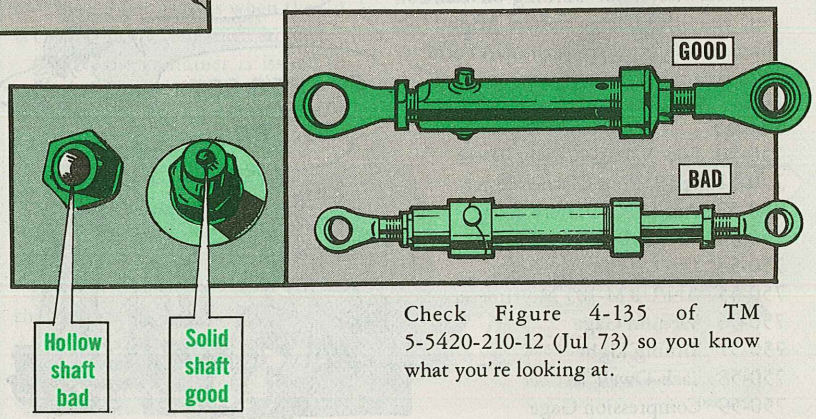
And that means your link may not hold up to its load.

Eyeball your outdrive link soonest and check for these telltale signs of a wrong-design link:

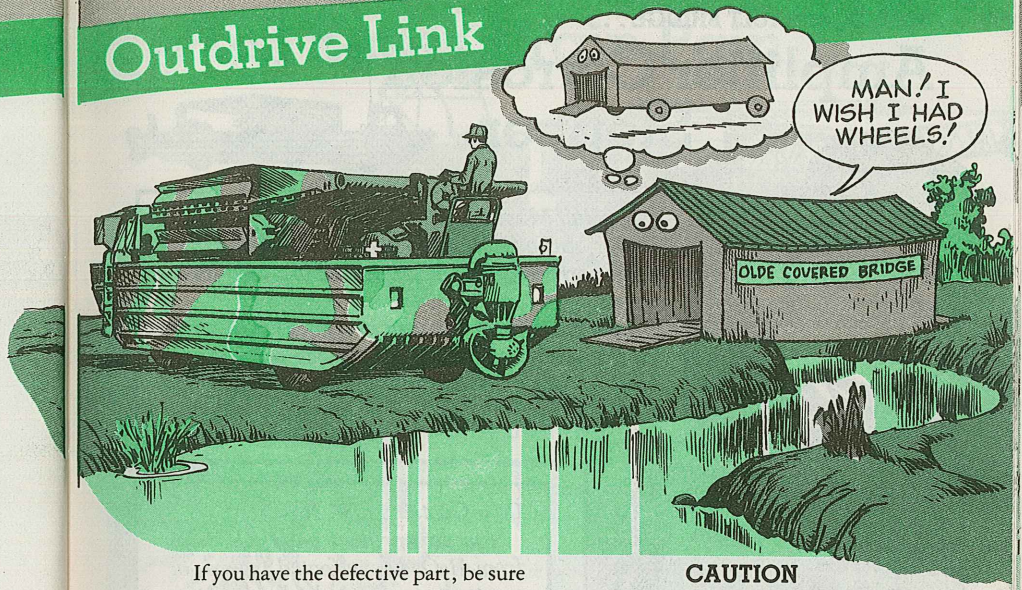
— Rod ends with connectors fashioned from the same piece of metal, and with hollow shafts.

— Rod ends that allow visible space or free-play between the flat rod end surfaces and the hull and marine drive clevises.

— Wiggle or play between the inboard rod end and connector and the body of the outdrive link.



Check Figure 4-135 of TM 5-5420-210-12 (Jul 73) so you know what you're looking at.



If you have the defective part, be sure your organizational maintenance and supply types know it. When the right parts become available, they can get in on a one-for-one trade for all bad outdrive links installed on MABs or in stock.

Until your new and better link arrives, cool it on waterborne maneuvers.

Don't go directly from full power forward (zero degrees on the propeller position indicator) to full power aft (180 degrees). Whenever the situation permits, reduce engine RPM and the MAB's forward momentum before throttling up at a 180-degree setting.

That's spelled out in TSARCOM Message 061700Z Jun 77.

Whichever outdrive link is on your MAB, add a step to your before-and after-operations checks:

Inspect the outdrive link for cracking or breaking.

CAUTION

A damaged outdrive link can result in severe damage to or complete loss of marine drive assembly. Do not operate marine drive with a damaged outdrive link. That's due for addition in a change or revision to TM 5-5420-210-12.

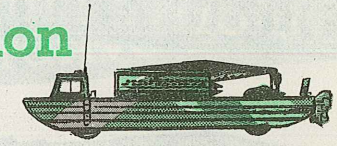
Eyeballing that outdrive link now — and before and after every operation — will help keep your MAB from becomin' just a high-priced piece of flotsam.

FLOATING BRIDGE BUST

If you're engaged in a bridge or ferry operation and have to use your MAB's wheels for propulsion — like maybe the marine drive is kaput — be sure you don't ground 'em. All the weight of any vehicle that's on top of the MAB is transferred directly to the wheels, suspension system, and frame . . . and could seriously damage these items.

MOBILE ASSAULT BRIDGE . . .

Amplifier Corrosion Stopper

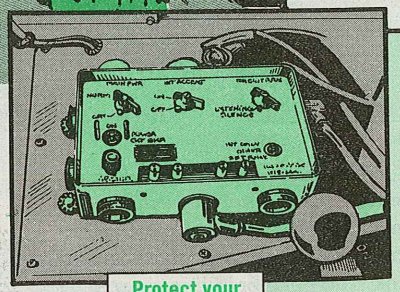


Dear Half Mast,

Our audio frequency-amplifier – AM-1780 – gets corroded from water seeping into its innards.

Can we mount the unit in a vertical position so the water will drain off? Or is there a cover to stop water from collecting on top of the unit?

CPT M. W. K.



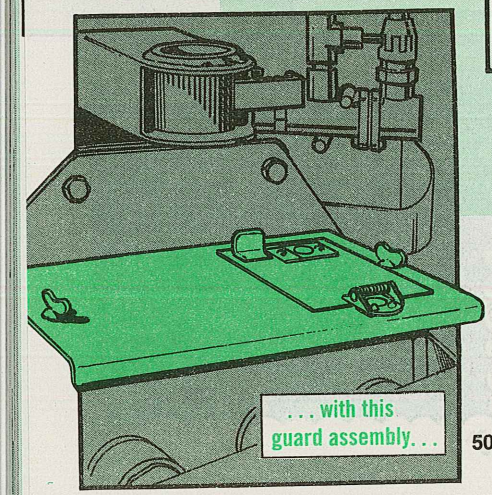
Protect your AM–1780 . . .

Dear Captain M. W. K.,

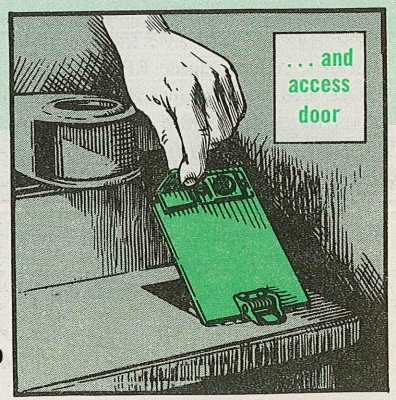
You can protect your AM-1780 from H_2O, heavy-footed troops, or any junk or gear carelessly tossed into the radio shelf area with guard assembly, NSN 5830-00-179-7736.

An access door on the cover's top left side lets you use the amplifier's main power and circuit breaker switches real easy-like.

Half-Mast

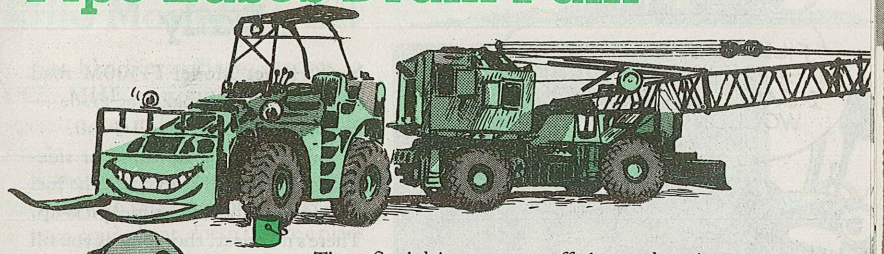


. . . with this guard assembly. . .



. . . and access door

Pipe Eases Drain Pain



Those final drives on your off-the-road equipment — loaders, cranes, forklifts, tractors and even the Goer — can be real messy to drain.

The drain plug is set inboard of the tire rim. So, when you pull the plug, that heavy oil runs down on the wheel and tire.

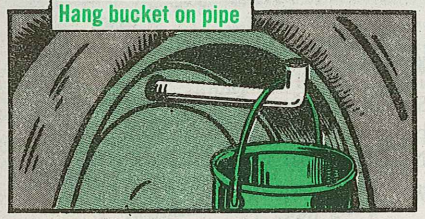
What you need is a length of pipe threaded to fit the drain plug hole. Try this next time you pull a scheduled service:

Raise the wheel to be drained. Rotate the wheel so the drain plug's at the top. Take the plug out and screw in the pipe.

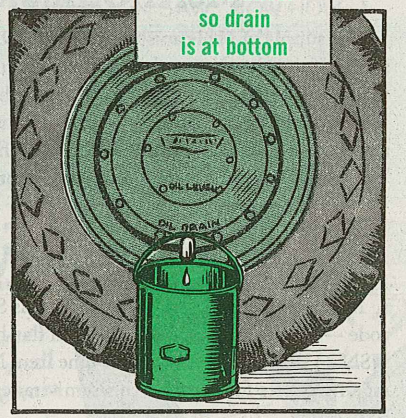
Hang a bucket on the pipe. Rotate the wheel so the drain is at the bottom. The oil will drain into the bucket, and you'll have no mess to clean up later.

Be sure, then, to take out the pipe and put the plug back in.

Remove plug . . . screw in pipe



Hang bucket on pipe



Rotate wheel so drain is at bottom

HUBER F1500M ROAD GRADER . . .

Fill Fuel Tank Daily

Your Huber Model F1500M road grader just may not make the grade — if the fuel tank is less than 1/3 full.

If you're working downhill or side-hill, the engine will stop when the fuel in the tank falls below the fuel pick-up.

There's no sweat, tho, long as you fill the tank daily. The grader will use only about ½-tank of fuel in 8 hours of operation.

So, fill the tank before each day's operation and your grader will make the grade.

Reportable Time

Before you drive yourself up the wall keeping track of Not Operationally Ready-Supply and Maintenance time you'll never use, doublecheck your TM 38-750.

The only equipment you need NORS/NORM time on is that listed in the DA 2406 column of Appendix C of TM 38-750 and the gear that operates as a subsystem of equipment in Appendix C.

M9A1 Canister Substitute

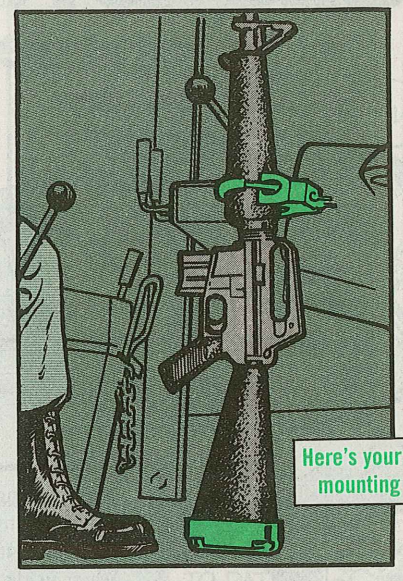
The supply of M11 canisters for your M9A1 chemical-biological protective masks is short. If you have an order in, chances are you'll get C1 Canadian canisters, NSN 4240-01-044-6465, instead of the M11. The C1 canister fits the M9A1 and works fine. However, make sure nobody wears a mask with a C1 canister for more than one hour in a toxic area — test chamber, field test or the real thing or even a suspected toxic area. The canister's only good for an hour except against riot control agents.

New WSDC

Make a change to your list of Weapons System Designator Codes (WSDC). A new code — 40 — applies to your 34-ton flat-bed semi-trailer transporter, model M872, NSN 2330-01-039-8095 under Line Item Number (LIN) 65779. Use the new WSDC on all requests for parts for this semi-trailer — no matter what priority you use.

M16A1 . . .

Rifle Mounting Kit



Just like Eleven Bravo machos, a CCE, MHE or engineer equipment operator has to have his M16A1 rifle handy.

Sometimes you have a hard time keeping it in shooting shape, 'specially if your equipment doesn't have a place for weapon storage.

A $3.12 package of rifle PM can prevent damage to rifle sights, carrying and charging handles, buttstocks or whatever.

All you need is an M16/M14 Rifle Mounting Kit, NSN 2540-00-763-7348, your CO's OK, and a mechanic. It's the same rifle kit that's used on Army trucks.

Mount the kit on your grader, dozer, RT fork lift or MHE so your rifle will be handiest . . . but safe from damage.

Unleaded Gas OK

Dear Half-Mast,

The manufacturers' manuals on some of our gasoline-powered equipment (chain saws, etc.) recommend leaded gasoline.

Will use of lead-free gas do any damage?

SFC S. N. F.

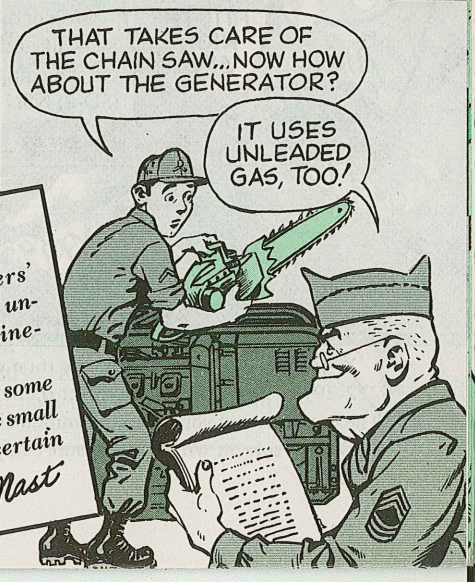
Dear SFC S. N. F.,

None to speak of.

Regardless of manufacturers' recommendations, you can use unleaded gasoline in all gasoline-powered equipment.

You may find, however, that some installations do local-purchase small amounts of leaded gas for certain equipment.

Half Mast



Your Solvent Gun . . .

CLEANING POWER on the Target

You're flirting with dangerous short circuits, rust and corrosion when you use a high-pressure hose to clean your equipment.

Water in electrical connections, electronics and fire control components can do immediate damage — and set up a future failure.

Most of the time clean water is all you need. But once in awhile it takes dry cleaning solvent to get oil and dirt off the equipment. That solvent is PD-680, Type II (SD-2) NSN 6850-00-274-5421 for a 5-gal can.

When you use the solvent, spray it on with the pneumatic oil gun NSN 4930-00-222-2975. This way you can direct the solvent away from those critical components. The gun is part of your No. 2 Common Shop Set.

Dry the solvent with low-pressure compressed air (less than 30 PSI).

Back To Basics!

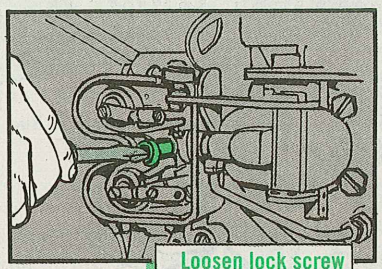
When you check the ignition timing on an ailing 6-HP Military Standard engine, always start from scratch.

Some mechs have gone right to work on the cam adjustment without following the poop in TM 5-2805-203-14 (Jan 77).

The result has been to locate the cam 180 degrees out-of-phase. They can't get ignition in the right firing order of cylinders: 1 — 4 — 2 — 3.

With no spark, the coil must be shot, right? Wrong!

'Course, you wouldn't pull a boner like that. Not when the step-by-step timing info for opening the contact points is in Figs 4-44 and 4-45 of the engine pub.


Loosen lock screw . . . then adjust cam.

Follow the timing poop in the tech pub and you won't end up replacing a perfectly good coil by mistake. You'll also cut down on the high usage rate of ignition coils.

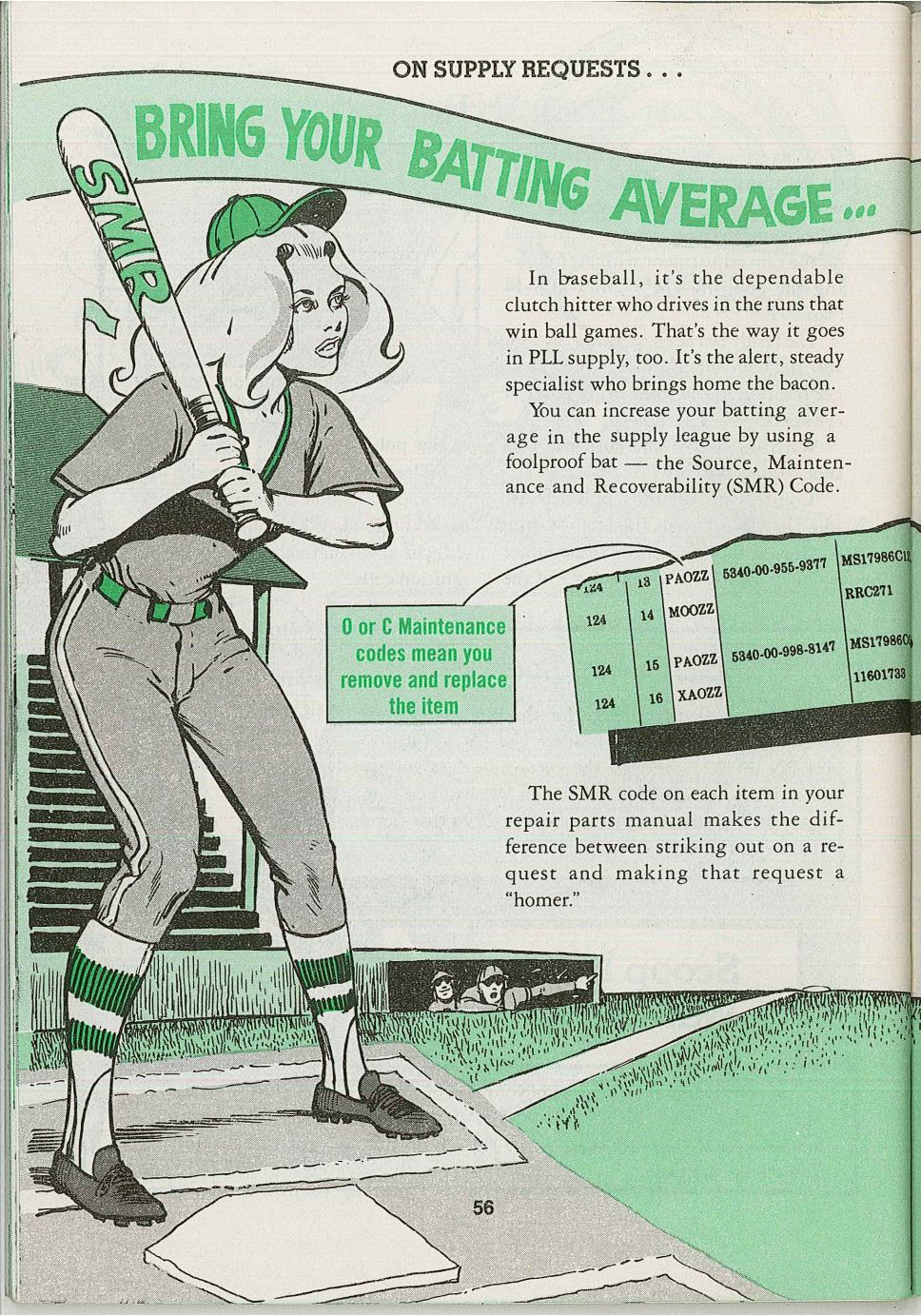
CCE Scoop Loader

Need a side-cutting edge for the bucket on your Clark Model 175-B Scoop Loader? Use FSCM (40152) and PN 2510211 and go the exception data supply route. It's good for either a right- or left-hand cutting edge. The PN listed in parts book No. 2998 that came with the equipment is wrong.

Scoop Loader Warning Lights

Correct the NSN on page 21 of your TM 5-3805-239-20P (Aug 74) for the warning light. NSN 6240-00-553-1038, P/N (08108)6S6DC-24V, double-contact bayonet base, is the right bulb . . . so pencil that in at Item 9 on that page.

BRING YOUR BATTING AVERAGE ... UP!



In baseball, it's the dependable clutch hitter who drives in the runs that win ball games. That's the way it goes in PLL supply, too. It's the alert, steady specialist who brings home the bacon.

You can increase your batting average in the supply league by using a foolproof bat — the Source, Maintenance and Recoverability (SMR) Code.

O or C Maintenance codes mean you remove and replace the item

124	13	PAOZZ	5340-00-955-9377	MS17986C1[illegible]
124	14	MOOZZ		RRC271
124	15	PAOZZ	5340-00-998-8147	MS17986C[illegible]
124	16	XAOZZ		11601733

[illegible] IN. DIA.		EA	2
96906	PIN, QUICK RELEASE: CRES, ¾ IN. DIA, 1½ IN. LG	EA	1
81348	CHAIN, WELDLESS: PIN QUICK RELEASE, FABRICATE FROM CHAIN NSN, 4010-00-725-3338 (SEE GROUP 9501.)	EA	2
96906	PIN, QUICK RELEASE: CRES, ⅜ IN. DIA, 3.9 IN. LG	EA	2
19207	BEARING: HOUSING	EA	2

The SMR code on each item in your repair parts manual makes the difference between striking out on a request and making that request a "homer."

SMR IS SCORING BIG!

SMR is a triple threat. The first two letters tell you how the item is stocked in the supply system. The next 2 codes give you the maintenance use level and who's authorized to pull complete repair on the item.

The last code tells you if the item is repairable and who gets rid of the item if or when it cannot be repaired.

But, when it comes to requesting items, 2 of the SMR codes add up to real time-savers.

First, check the maintenance code. The third place code tells you who removes, replaces and uses an item. If it's coded O or C, that's you! If it's not, you can't order the item.

For parts OK'd for replacement at your level, check the source code.

PS MORE

Source codes starting with P mean the item is provided by regular supply system sources.

If your item has a K source code, forget it. K source codes apply to kit components that are not stocked except in the kit. To get those items, you must order the whole kit.

2	PAOZZ	5310-00-975-2075	MS3
3	PAOZZ	5310-00-637-9541	M
4	KFOZZ		
5	KFOZZ		

You can order PA parts through regular channels.

Part of a kit. Not stocked separately so no NSN assigned. You must order the whole kit.

M source codes go on items that must be fabricated or manufactured. The second letter tells you who makes it. If the code is MO, you make it.

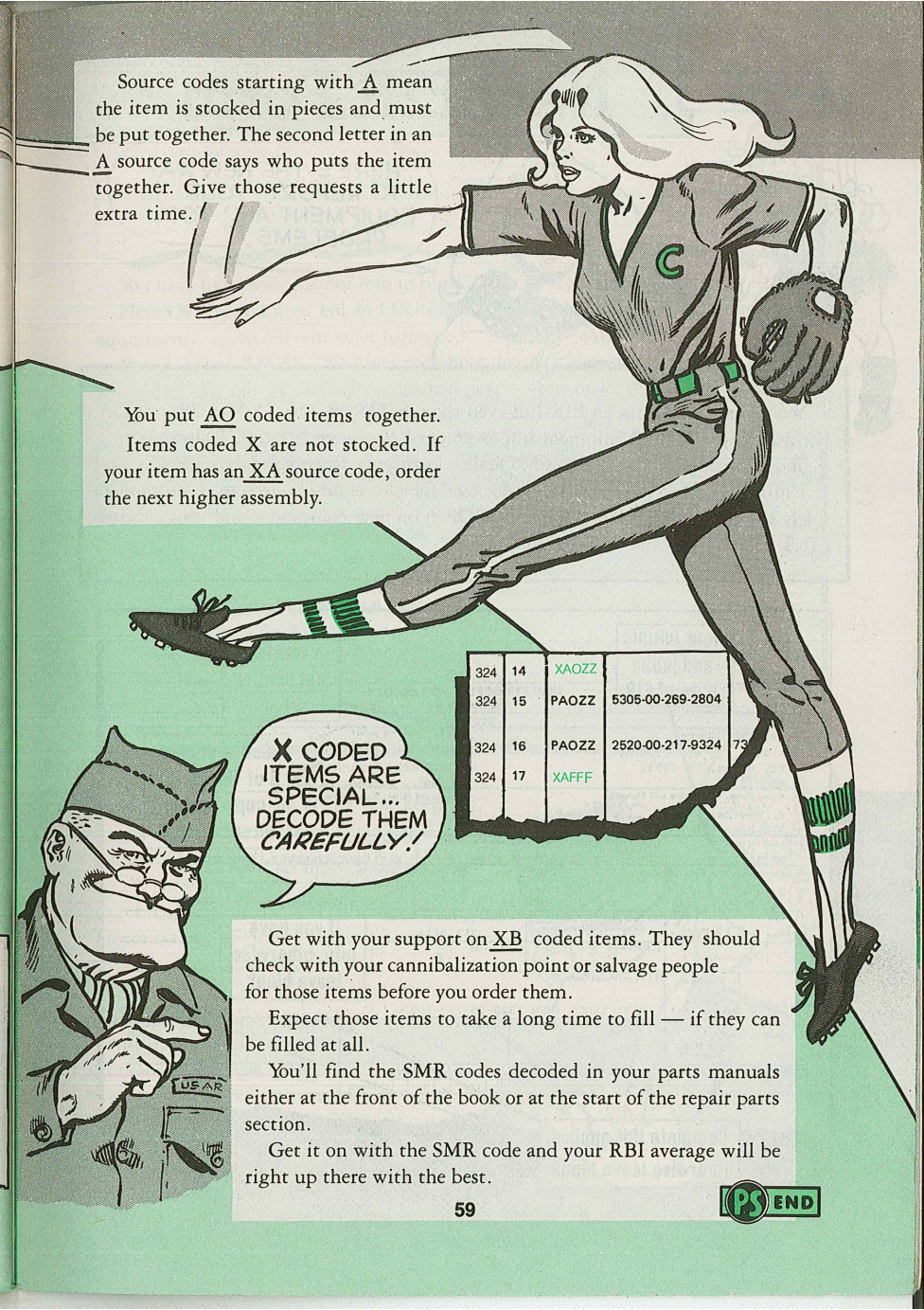
65	8	MOOZZ		10896820	19207	LEAD, ELECTRICAL: magnetic relay to solenoid (MFD from 2-insulator, NSN 5970-00-705-6635, 1-terminal, NSN 5940-00-800-7470, 1-terminal, NSN 5940-00-705-6715, 1-band, NSN 9905-00-752-4649, 13 in. wire, NSN 6145-00-538-8222)	AC	EA	1
65	9	MOOZZ		10896821	19207	LEAD, ELECTRICAL: relay to actuating solenoid (MFD from 2-insulator, NSN 5970-00-705-6635, 1-terminal, NSN 5940-00-705-6715, 2-terminal, NSN 5940-00-985-3621, 1-band, NSN 9905-00-752-4649, 13 in. wire, NSN 6145-00-538-8222)	AC	EA	1

MO means you make this item. It won't be stocked except in parts so look for list of parts or materials you need to make the item.

Source codes starting with A mean the item is stocked in pieces and must be put together. The second letter in an A source code says who puts the item together. Give those requests a little extra time.

You put AO coded items together.

Items coded X are not stocked. If your item has an XA source code, order the next higher assembly.



324	14	XAOZZ		
324	15	PAOZZ	5305-00-269-2804	
324	16	PAOZZ	2520-00-217-9324	73
324	17	XAFFF		

Get with your support on XB coded items. They should check with your cannibalization point or salvage people for those items before you order them.

Expect those items to take a long time to fill — if they can be filled at all.

You'll find the SMR codes decoded in your parts manuals either at the front of the book or at the start of the repair parts section.

Get it on with the SMR code and your RBI average will be right up there with the best.

P.S END

SF 368 . . .

New EIR Form

You can still give 'em an EIR-full even though TM 38-750 (15 May 78) put DA Form 2407 out of the Equipment Improvement Recommendation (EIR) business.

You now use Standard Form 368, Quality Deficiency Report.

Unlike DA Form 2407, SF 368 is not used for a lot of other purposes. It's intended solely for Quality Deficiency Reports (QDR's) on new equipment and your routine EIR's. Here's how to fill out that form:

Your initials and julian date of EIR

You fill out section 1 only

See appendix B of TM 38-750 copy 1 goes direct to NMP.

Complete only if you have info, otherwise leave blank

Complete if it applies, otherwise leave blank

QUALITY DEFICIENCY REPORT
(Category II)

SECTION I

1a. From (Originating point)
A Btry, 3d Bn 133D Arty
Ft. Bliss, TX 79931
WYOU78

2a. To (Screening point)
Commander
US Army Tank-Automot
Cmd., Warren, MI 48

1b. Typed Name, Duty Phone and Signature
H. Pierce
A/V 842-9478
H. Pierce

2b. Typed Name, Duty Phone and Sig

3. Report Control No.: HP7346
4. Date Deficiency Discovered: 7 Dec 77
5. National Stock No. (NSN): 2805-00-678-1391
6. Nomenclature: Manifold Assembly, Exhaust
7. Manufacturer/Mfg. Code/Shipper: ABC Corp.
8. Mfg. Part No.: 8754032
9. Serial/Lot/Batch No.:
10. Contract/PO/Document No.: -XXXX
11. Item: [X] New [ ] Repaired/Overhauled
12. Date Manufactured/Repaired/Overhauled
13. Operating Time at Failure: 212 miles
15. Quantity: a. Received 2; b. Inspected 2
16. Deficient Item Works On/With: a. End Item (Aircraft, tank, ship, howitzer, etc.): (1) Type/Model/Series: M151 TRUCK (NSN 2320-00-763-1091); 3000-8434
b. Next Higher Assembly: (1) National Stock No. (NSN); (2) Nomenclature; (3) Part No.; (4) Serial No./Lot No.
17. Dollar Value
18. Est. Correction Cost
19. Item Under Warranty: [ ] Yes [X] No [ ] Unknown
20. Work Unit Code/EIC (Navy and Air Force only): 0

21. Action/Disposition
[X] Holding Exhibit for 25 days [ ] Released for Investigation [ ] Returned to Stock/Disposed of [ ] Repaired [ ] Other (Explain in Item 22)

22. Details (Describe, to best ability, what is wrong, how and why, circumstances prior to difficulty, description of difficulty, cause, action taken including disposition, recommendations. Identify with related item number. Include and list supporting documents. Continue on separate sheet if necessary.)

Utilization Code: ON. Failure detected during normal operation of the vehicle. Noted exhaust leaking from manifold, TM 9-2320-218-20P, Jan 72, pp. 30-31. Circumstances before trouble--normal use of vehicle in cross-country travel. Description--2 manifolds failed on same truck. Failure occurred within a month of installation. Cause--Unknown. Noted both manifolds were bent after failure--photographs have been taken and are attached. Recommendations--Need way to seal manifold to keep exhaust from leaking.

You have to provide a lot of info in block 22 if the item applies to aircraft.

Here's where you give 'em an EIR-full. Only you know what went wrong on your equipment . . . so tell 'em what happened.

Para 3-23j of TM 38-750 gives you those details. You may, if needed, continue your block 22 info on a separate, attached page — but make sure to note that fact.

The 21 blocks you fill out are all in Section I. Don't worry about Section II. That part is filled out at the National Maintenance Point (NMP).

SECTION II

23a. To (Action Point)
24a. To (Support Point) (Use Items 25 and 26 if more than one)
23b. Typed
24b. Typed Name, Duty Phone and Signature.
25a. To (Sup
26a. To (Support Point)
25b. Typed
26b. Typed Name, Duty Phone and Signature

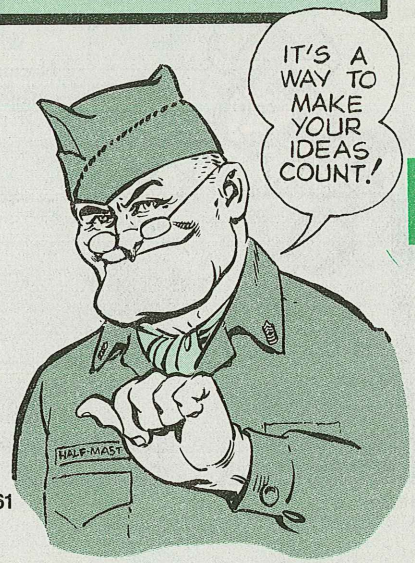
368-101
STANDARD FORM 368, April 1974
General Services Administration (FPMR 101-26-7)

Copy 1 goes to the NMP. You keep copy 2. Your organization gets copy 4. Your DSU and GSU gets copies 3 and 5.

What's more, SF 368 can take your problem beyond the NMP. A standard form — like SF 368 — doesn't have to stay in Army channels.

Instead, it can be sent across channels — from maintenance to supply — and even outside Army channels to other government agencies and civilian manufacturers and contractors.

But, the SF 368 can't fill itself out. You've got the action. Start blowing the whistle on your equipment problems.



PLL Packs

If the warhorn sounded today, how long could you fight?

Maybe not as long as you think!

Take a look at your Prescribed Load List (PLL). The items on that list — forms or printout — can affect how long your unit stays alive.

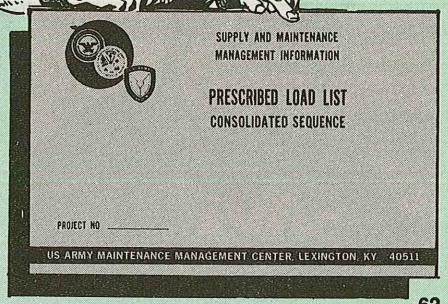
CLASS IX REPAIR PARTS PRESCRIBED LOAD LIST

UAAC AC7AA-A

NSN	NOUN	A/M	U/I	AUTH	EXP CODE	DIST
2940 005864792	FILTER ELE		EA	002	X	
	ROLLER BEA		EA	002	X	

Your PLL covers the repair parts you need to keep your wheels or tanks moving, choppers winging, commo talking, chemical gear protecting and weapons shooting for 15 days.

The PLL authorizes you — and AR 710-2 requires you — to have every item on hand or on order at all times. A company-sized outfit stocks up to 300 lines.



WHAT GOES ON A GOOD PLL?

Normally any part listed for organizational level maintenance and repair work in a repair parts manual can go on PLL — unless your support's Quick Supply Store (QSS) carries it. QSS items do not go on PLL.

PLL items are picked up as initial issue, demand supported or mission essential gear.

Initial issue items go on PLL as essential needs based on a similar unit's PLL, a recommended stockage list for new equipment or a recommended PLL from USAMRSA — formerly USAMMC — in Lexington. See paras 2-36 and 2-37 of AR 710-2 on how to set up an initial PLL.

a PUNCH

Some parts you can add to a PLL — but they cannot go on an initial PLL. Any item in your repair parts manual that's coded recoverable — R, S, T or U in old manuals; A, D, O, F, H or L in new ones — cannot go on an initial PLL. Those recoverability codes appear in the last place of the part's Source, Maintenance and Recoverability (SMR) Code.

78 JUN 09 PAGE NO 3

OCK	END ITEM	UNIT PRICE	EXT UNIT PRICE
	TRK,M880	$ 9R	$1.96

Your PLL covers the repair parts your equipment needs for 15 days of operation

ILLUSTRATION (a) FIG NO	(b) ITEM NO	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION	(7) U/M	(8) QTY INC IN UNIT
						GROUP: 2202 ACCESSORY ITEMS		
102	1	PAOZZ	2540-01-034-7841	3730987	86403	PIVOT: WINDSHIELD WIPER, RIGHT	EA	1
102	2	PAOZZ	2540-01-034-7840	3730988	86403	PIVOT: WINDSHIELD WIPER, LEFT	EA	1
102	3	XDOZZ				WINDSHIELD WIPER,	EA	1
102		XDOZZ				R	EA	1

USABLE ON CODE

Only parts coded non recoverable — Z in the last place of the SMR code — go on initial PLL

You add recoverable items to your PLL based on the number of times — demands — you request that item in 180 days, 360 for reserves. Those PLL parts are demand supported. Your CO OK's or turns down the addition of demand supported parts.

MISSION-ESSENTIAL ITEMS

Other items go on PLL because your major command wants them there. Your major command may want parts stocked for gear you don't use much normally — so you won't have many demands — but you need for special exercises, seasonal needs or war. They may also want parts stocked for gear that's scarce in your area to keep your request waiting time down.

Those parts are mission-essential. You keep mission-essential parts on PLL independent of the number of requests you make for them or their recoverability codes.

PS MORE

DEMAND-SUPPORT ITEMS

Most of the items on your PLL will be demand-supported.

(1) Illustration (a) Fig No.	(1) Illustration (b) Item No.	(2) SMR code	(3) National stock number	(4) Part number	(5) FSCM	(6) Description / Usable on code	(7) U/M	(8) Qty inc in unit
						0603—STARTING MOTOR		
33	1	PAOFH	2920-00-961-1436	1113188	16764	MOTOR, ENGINE STARTER: ELECTRICAL	EA	1
33	2	PAOZZ	5306-00-064-5356	9418228	24617	BOLT, MACHINE	EA	3
33	3	PAOZZ	5310-00-820-6653	MS35338-50	96906	WASHER, LOCK: ⅝ IN. NOM. SIZE	EA	3

Recoverable parts go on PLL as demand supported or mission essential

But adding demand-supported items — and keeping them on your PLL depend on the way you send in requests. Do you put in a request as soon as the part's needed? Or do you wait until you need several like items before putting in a request for them?

You need 3 separate requests in 180 days, 360 for Reserves, to add an item to your PLL. One request every 180 days (360 for Reserves) keeps an item on PLL.

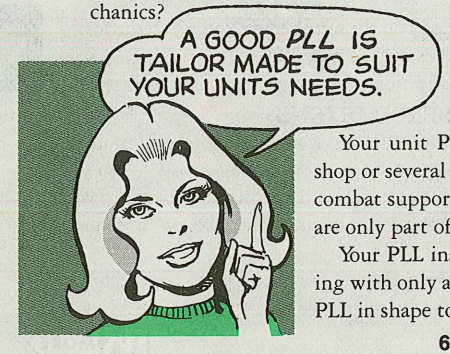
If you're not putting in enough separate demands, those parts will never make your PLL. Sure, large one-time only requests save work — but that won't hack it when you're 10 miles away from support on the front line.

If your PLL has a whole lot fewer than 300 lines, take a look at how you order your repair parts.

While you're giving your PLL the once-over, see what kind of repair parts are listed.

PLL = ALL REPAIR PARTS

Do you carry repair parts needed by your arms room, chemical (NBC) specialist, commo shop and range or tent repairmen as well as motor pool mechanics?



Your unit PLL — whether you operate out of one shop or several — must support all the unit's combat or combat support missions. Your wheels, tracks or wings are only part of the show.

Your PLL insures that your unit can keep on punching with only a little bit of help from support. Get your PLL in shape to do that job!

New TM 38-750 Date

Hold off on implementing the revised TM 38-750 for a little longer. The new effective date is 15 Aug 78. That's the go-date on the revised AR 220-1, too. DA Msg DALO-SMM 312044Z May 78 has the word on the new dates and on working with new PMCS/ESC procedures.

Cool Batteries

Cold weather puts the whammy on batteries unless you keep them fully charged. Tack up a reminder — DA Poster 750-72. Your unit can get it with a DA Form 17 to Baltimore Pubs Center.

Turn 'Em In!

These items are in critical short supply. Turn in any excess or repairable ones to your Support N-O-W!

Mast assy	1615-00-179-9165
Valve	1660-00-872-1719
Engine, acft	2840-00-937-0480
Generator	1615-00-951-0488
Light Set	6210-00-337-6252
Engine, diesel	2815-00-430-3480

Your turn-in of these items could mean an equipment turn-out for another unit.

Slave Receptacle Repair?

Yes, you can replace those electrical contacts in your vehicle's slave receptacle when they're burned out. Use Socket, electrical, NSN 5999-00-909-3751.

M880 Troop Seat Pin

It seems to be an easy-loser, that pin used to lock your troop seats. So now it's easier to get a new one, NSN 5340-01-043-5215. This NSN will be showing up in TM 9-2320-266-20P (Feb 76), page 2-119, where the pin's now listed only by Part No. 122556. Chain for this pin comes under NSN 4010-00-129-3221. That's for 100 feet of chain, so check your QSS and-or SSSC to get just the length you need.

Forms up to Snuff?

If one of the new S Model Cobras is entering your traffic pattern, you'll want to check out the log book during your acceptance inspection. TB 55-1500-307-24 (Feb 78), on components requiring historical data, now lists the parts affected and the forms required. Eyeball a copy.

Cat Tail-Ender

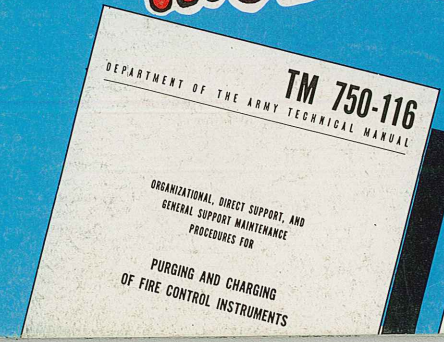
So you can't find NSN 2990-00-404-2054 on the AMDF for your D7E's exhaust pipe extension. No sweat. Use NSN 2990-00-104-2054 for Item 5, Fig 32, TM 5-2410-214-20P (Dec 75).

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

☆ U.S. GOVERNMENT PRINTING OFFICE: 1978—757-081/10

FIRE CONTROL INSTRUMENTS NEED PURGING and CHARGING AT LEAST EVERY 90 DAYS

...OBVIOUSLY!

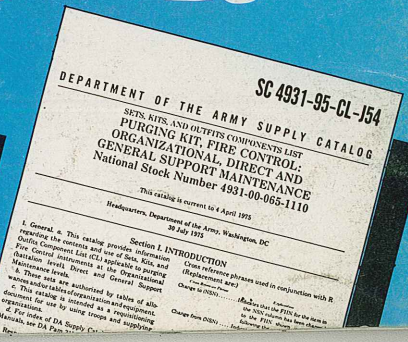


DEPARTMENT OF THE ARMY TECHNICAL MANUAL

TM 750-116

ORGANIZATIONAL, DIRECT SUPPORT, AND GENERAL SUPPORT MAINTENANCE PROCEDURES FOR

PURGING AND CHARGING OF FIRE CONTROL INSTRUMENTS



DEPARTMENT OF THE ARMY SUPPLY CATALOG

SC 4931-95-CL-J54

SETS, KITS, AND OUTFITS COMPONENTS LIST
PURGING KIT, FIRE CONTROL:
ORGANIZATIONAL, DIRECT AND
GENERAL SUPPORT MAINTENANCE
National Stock Number 4931-00-065-1110

This catalog is current to 4 April 1975

Headquarters, Department of the Army, Washington, DC
30 July 1975

Section I. INTRODUCTION

1. General. a. This catalog provides information regarding the nomenclature and use of Sets, Kits, and Outfits Component List (SC 4), applicable to purging Fire Control instruments at the Organizational (Battalion level) Direct and General Support Maintenance levels.

b. These sets are authorized by tables of allowances and are authorized as a requisitioning document for use by supporting troops and supplying organizations.

c. This catalog is intended as a requisitioning document for use by supporting troops and supplying organizations.

d. For index of DA Supply Cr... Manuals, see DA Pam ...

2. Rep...