



And resolve  
to keep my naddy  
equipment  
at all times.

**I** resolve to keep my  
publications on hand  
at all times.

**I** resolve to remember  
KYC PHOI (keep hands  
cotton-pickin' off it) if I'm not  
authorized.

**I** resolve to follow  
my equipment's  
maintenance.

**I** resolve to use the  
right tools in many  
ways.

1961 Series  
**PS**  
Issue 109

**THE  
PREVENTIVE  
MAINTENANCE  
MONTHLY**

FROM THE LOOKS OF  
SANTA,  
YOUR EQUIPMENT CAN ADD A  
FEW MORE HURRY-  
MY-TIME'S-RUNNIN'-OUT!



1961 Series

**PC**

Issue 109

**THE  
PREVENTIVE  
MAINTENANCE  
MONTHLY**



FROM THE LOOKS OF YOUR EQUIPMENT, SANTA, YOU PROBABLY CAN ADD A FEW MORE! HURRY-MY TIME'S RUNNIN' OUT!

NEW YEARS RESOLUTIONS

1961

TM-SLED

W. FISHER

A Winter Wonderland's...

# SNOW

That pretty, soft, innocent-looking snow can be mighty tough sledding for anything that scoots, shoots or communicates. When snowflakes fall the clammy

whammy is put on everything that makes wheels turn, tracks run and guns fire.  
Sub-zero temperatures and ice plus a blanket of snow spell plenty trouble.

A winter wonderland is a dream world for a song writer. But to you

# JOKES

In a tank or gun crew, telephone line gang, radar team, or operating any outdoor equipment in this man's army, it's bad news. It means sludge in crank and gear-cases, dead batteries, frozen fuel lines, ice all over—and all the other winter maintenance headaches—are on your back.

There's only one way to ease the freeze and stay ahead of the winter game. Put the heat on your Preventive Maintenance—do it more carefully, more thoroughly and more often than usual.

Then, snow and ice can't stop you cold.

**PS**  
THE  
PREVENTIVE  
MAINTENANCE  
MONTHLY

Issue No. 109

1981 Series

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

*Sgt. Halv-Mark,  
PS Magazine,  
Roxton Arsenal,  
Metuchen, New Jersey*

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BE YOUR OWN INSPECTOR:

# THE M14 RIFLE

So you've been issued the M14 rifle. And, if you used to have the M1 rifle, you can see where they look alike in some ways . . . and different in others.

They're dead-alike in one way, though: they both need maintaining. And to make it easy for you to spot trouble before and when it starts, read on and you'll see the maintenance points that need checking.

Notice those trouble spots that're in **BOLD TYPE**. These add up to serious gig points . . . and want to be fixed now.

As you've probably noticed, there are two M14's. One has a fiberglass handguard and hinged butt plate. It's

the latest. The other doesn't have a hinged butt plate and it has a wooden handguard. One day the man'll be around to "dress" the butt plate in the latest style. The fiberglass handguard is listed in TM 9-1005-223-20P under FSN 1005-690-4068.

If you, as the rifeman, have any questions about the rifle, see your armorer-arificer. And if the armorer has any, he wants to check with your Ordnance support.

**HANDGUARD (FIBERGLASS)**—broken, cracked around vent ports; spring doesn't clamp tight.

**HINGED BUTT PLATE**—loose, bent, broken, doesn't open or close.

**SLING**—worn, broken; clamps weak, faulty.

**HANDGUARD (WOODEN)**—cracked, dry, spring doesn't hold tight.

**BUTT PLATE**—screws loose, missing; base access plate doesn't close, is loose; latch bent, doesn't hold; spring weak, missing. (This also goes for the M14 without the hinged butt plate).



**SWIVELS**—don't move freely, battered, missing; rivets holding front swivel loose, missing; bottom butt plate screw that fastens rear swivel loose, missing.

**SPINDLE VALVE**—can't be turned or pushed in, real loose, pin broken, missing.

**BARREL**—bulges, dents, bends.

**STOCK**—ferrule loose, missing; wood dry, cracked (keep your good eye on the look for cracks between the two swivel rivets and the front end of the stock); **liner loose**.

DON'T FORGET THE STUFF YOU NEED TO HELP KEEP YOUR WEAPON IN SHAPE:

**EQUIPMENT FOR MAINTENANCE—** busted, missing.

**CLEANING ROD (Four Sections) AND TIP**

**BORE CLEANING BRUSH**

**CONTAINER**

**CLEANING PATCHES**

**CHAMBER CLEANING BRUSH**

**COMBINATION TOOL**

**OILER**

**FLASH SUPPRESSOR NUT**—damaged threads; loose.



**FRONT SIGHT**—cracked, busted off, burred, loose, securing screw loose; not blackened; blades broken, cracked, bent, not blackened.

**BAYONET LUG**—cracked, burred, bent, broken off.

**FLASH SUPPRESSOR**—loose, burred or busted keys; loaded with carbon; bent, cracked; socket-head lock screw loose, missing. Threads stripped, point rounded.

**BARREL THREADS FOR FLASH SUPPRESSOR AND GAS CYLINDER LOCK**—damaged.

**GAS CYLINDER KEYWAYS**—burred.

**FLASH SUPPRESSOR KEYWAYS**—burred.

**GAS CYLINDER**—dented, burred, cracked; burred or busted keys; loaded with carbon; raised shoulder in "D" slot fouls up piston movement.

**GAS PISTON**—burred, excessive carbon.

**GAS CYLINDER LOCK**—cracked, loose, bad threads.

**GAS CYLINDER PLUG**—loose, threads stripped, excessive carbon.

**CONNECTOR ASSEMBLY**—bent (including hook that holds on to operating rod), cracked, holes worn; plunger bent; spring weak, broken, missing (if your rifle has been set up for automatic fire, a broken or missing spring is the kind of trouble that needs fixing—but now); spring and plunger don't move freely.

**MAGAZINE**—tube split at seams, dented, bulged; spring weak, missing, busted; follower bent, binds; follower tip that holds bolt lock in place bent, broken; floor plate loose, too tight to remove; lock-plate loose, missing.



**STOCK LINER AND RETAINING SCREWS**—loose, missing.



**TELESCOPE MOUNT HOLE**—threads burred.



**COVER**

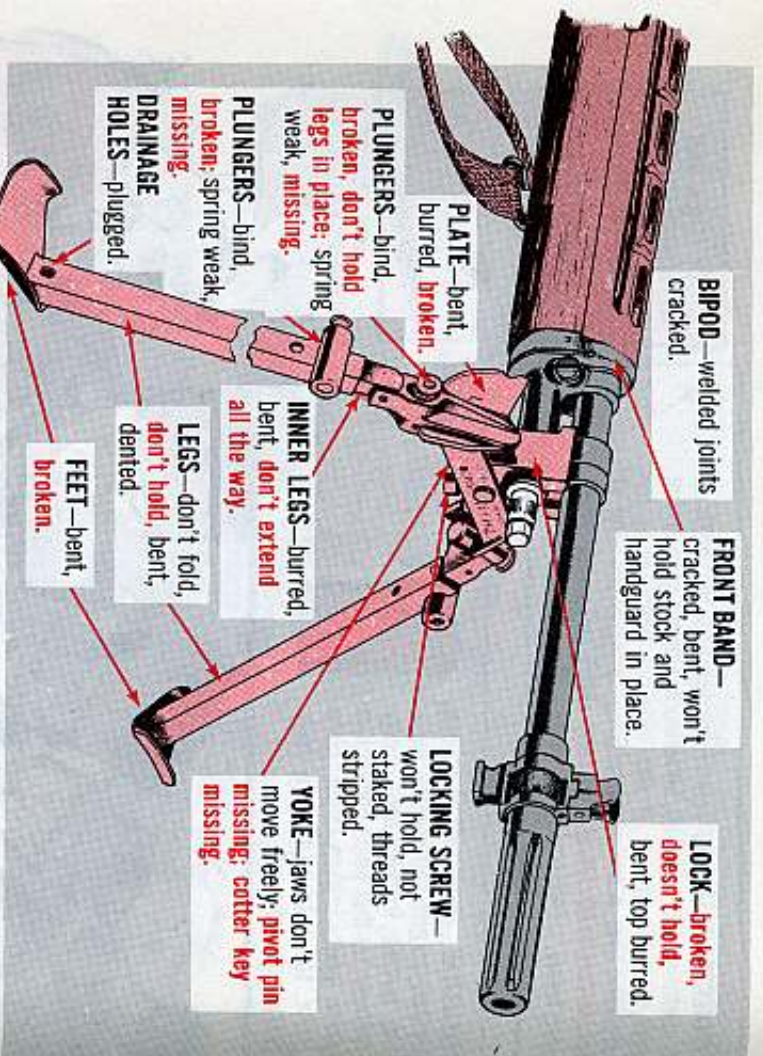
**WINDAGE KNOB**

**BASE**

**APERTURE**

**ELEVATING KNOB**

**REAR SIGHT**—aperture loose, not blackened, hole plugged, notches in rack busted; knobs loose, turn hard, missing, no clicking sound when turned, elevation and windage markings not clear; pinions stripped; threads stripped; cover cracked, out of shape, missing; sight base cracked, threads stripped, aperture groove battered.



**BIPOD**—welded joints cracked.

**FRONT BAND**—cracked, bent, won't hold stock and handguard in place.

**LOCK**—broken, doesn't hold, bent, top burred.

**PLATE**—bent, burred, broken.

**PLUNGERS**—bind, broken, don't hold legs in place; spring weak, missing.

**INNER LEGS**—burred, bent, don't extend all the way.

**LEGS**—don't fold, don't hold, bent, dented.

**FEET**—bent, broken.

**LOCKING SCREW**—won't hold, not staked, threads stripped.

**YONE**—jaws don't move freely; pivot pin missing; cotter key missing.



**EXTRACTOR PLUNGER**—worn, broken, bent, missing, tip rounded.

**EXTRACTOR**—loose, broken, missing, lip burred, beat up; shaft worn.

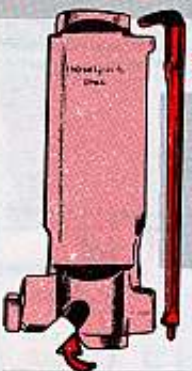
**EXTRACTOR SPRING AND PLUNGER**—broken, won't hold extractor, missing; spring weak, not straight; plunger bent.

**EJECTOR SPRING**—broken, weak, missing, loaded with carbon, brass chips.

**FIRING PIN**—broken, bent, missing; tip flattened or sharply pointed, broken; tang damaged, angle rounded.

**RECEIVER SLOT FOR FIRING MECHANISM**—burred.

**BOLT LOCKING LUG SLIDE RECESS**—burred.



**BOLT AND ROLLER ASSEMBLY**—bolt cracked, sliding surfaces burred, spring and firing pin recesses filled with carbon, brass chips; lugs worn, busted, burred; roller burred, broken, missing, doesn't turn freely.

**SELECTOR OR SELECTOR LOCK**—busted, doesn't turn freely; pin missing; spring weak, missing; selector shaft doesn't turn easily when disengaged from sear release.

**FIRING MECHANISM . . .**

**HOUSING**—tough to get in and out of receiver; cracked, locking notch damaged, rib battered.

**TRIGGER GUARD**—won't lock in firing mechanism housing, twisted out of shape, busted, "new" bend put in hook, point damaged.

**MAGAZINE LATCH**—worn, binds, won't hold magazine, busted; spring weak, broken, pin bent, busted, sticks out beyond housing surface.

**TRIGGER AND SEAR ASSEMBLY**—sear worn, battered; points broken; trigger busted; lugs damaged, pin bent, missing, moves sideways.



**HAMMER**—cracked, chipped.

**HAMMER SPRING PLUNGER**—damaged.

**HAMMER SPRING**—weak, missing, misshapen, ends cut.

**HAMMER PIN**—bent, missing, hard to install and remove.

**HAMMER SPRING HOUSING**—dented, cracked.

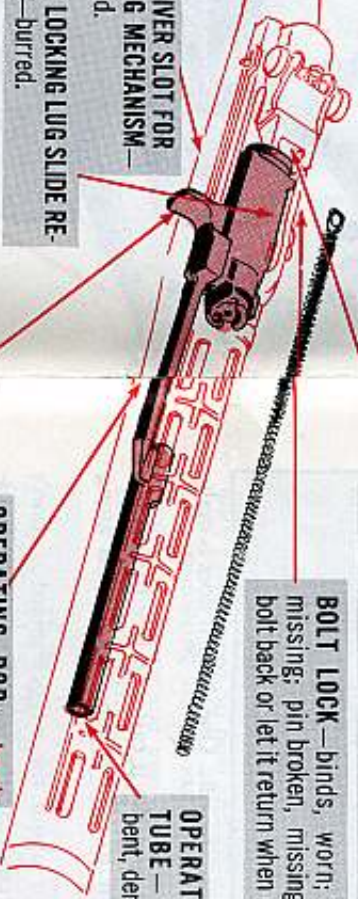
**SAFETY SPRING**—weak, out of shape, missing.

**SAFETY**—won't move, cracked, chipped.

**CARTRIDGE CLIP CHARGER GUIDE**—loose, damaged, misshapen enough to foul up ammo loading; retaining pin sticks out beyond top inside surface of receiver.

**BOLT LOCK**—binds, worn; spring weak, missing; pin broken, missing, won't hold bolt back or let it return when released.

**OPERATING ROD TUBE**—burred, bent, dented.



**OPERATING ROD**—bent, cracked, worn.

**OPERATING ROD HANDLE**—cracked, bent, bolt roller cramping recess battered enough to foul up bolt movement; notched "boss" burred, damaged.

**CONNECTOR LOCK**—missing; connector lock pin broken, installed loosely.

**BORE AND CHAMBER**—excessive pitting, carbon.

**OPERATING ROD GUIDE**—damaged, loose enough to batter or foul up movement of operating rod.

**SPRING GUIDE AND DRIVE SPRING**—guide bent; hole in guide worn; spring kinked out of shape, broken, weak; tip that holds magazine bent, broken.

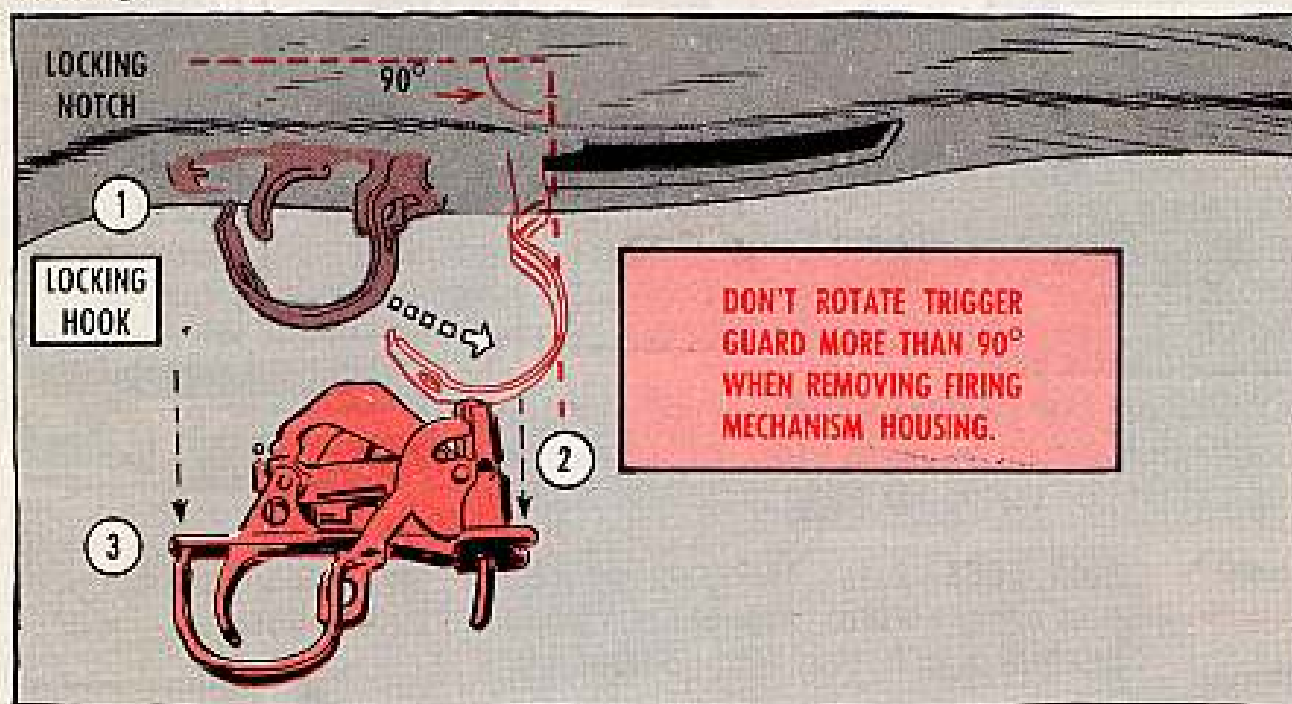
It figures that you want to be on the lookout for rust on all metal parts of the rifle. And dirt is something else you look for—inside and outside the rifle.

Every good rifleman knows that two publications are important to him. Those'd be TM 9-1005-223-12 (26 May 61) . . . and TM 9-1005-223-20P (22 Nov 60).

NOW COMES THE TIME FOR SOME:

### TIPS THAT'LL HELP YOU AND YOUR RIFLE...

1. So you're disassembling your rifle and it's rougher'n a cob to get the locking "hook" on the trigger guard free of the locking notch in the firing mechanism housing. You know . . . so you can rotate the guard and then remove the housing.



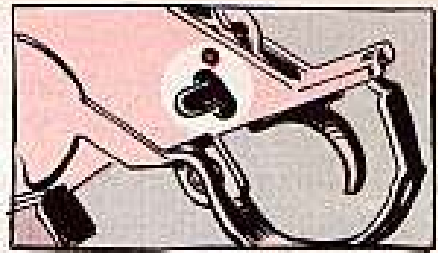
It just happens that the tight fit is built into the rifle. One thing it does is make the weapon more accurate.

So don't bend the hook or file the notch to make it easier to free the trigger guard. If you figure it's too much of a fight to remove the trigger, pass along your troubles to your armorer-artificer.

2. Something else you want to remember about the trigger guard . . . don't rotate it more'n 90 degrees when you're removing the firing mechanism housing. If you feel the cocking stud on the guard coming in contact with the point at the bottom of the hammer, you've turned the guard too much. You want to remove the housing before you feel this metal-to-metal contact.

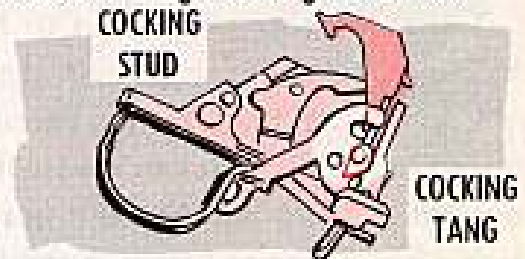
3. The deal is that if you rotate the trigger guard too far and then go to remove the housing, you can batter the rib on the housing as it slides in the slot in the receiver. And a damaged rib'll make it tough removing and replacing the housing.

Another thing . . . take a look now and again to see if the trigger pin rubs against the stock when you remove the firing mechanism housing. If it does, get your armorer to remove about  $\frac{1}{64}$ -inch from the pointed end of the pin.



There're also a coupla good points to keep in mind while you're assembling the firing mechanism.

First . . . make sure the bottom pointed end of the hammer—the cocking tang—is forward of the inside (the right one) cocking stud on the trigger guard. If it's not, you won't be able to install the firing mechanism right . . . and it won't work up to snuff.

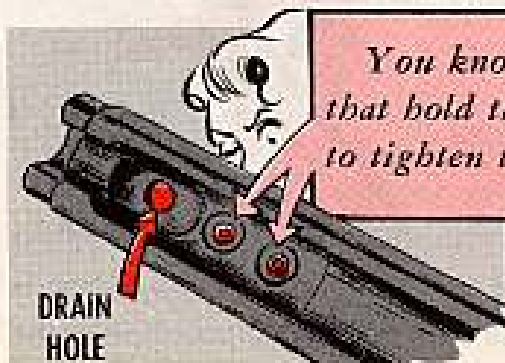


Second . . . install the hammer spring housing so the cutaway part faces the safety. The housing is open that way so the safety will work. You had the same deal on your M1 rifle.

### STOCK TIPS

The stock's not made for using as a pry bar or to hammer down tent pegs. Maybe your stock is made of light-colored wood (birch) and the other guys have dark colored stocks (walnut). Makes no difference. One is just as good as the other—with the right treatment.

And that also includes rubbing it with raw linseed oil now and again to stop splintering and drying out before they start. Never use gun oil or bore cleaner on wooden surfaces.



You know those rivets in the front of the stock—the ones that hold the swivel? There's a right way and a wrong way to tighten them. So let your support unit handle the job.

One more thing about the stock—in case you're wondering—that's a drain—or vent—hole in the front end of it.

Another thing that you don't want to do is cut or whittle away at any part of the stock. And it's your support people's job—not yours—to repair the stock.

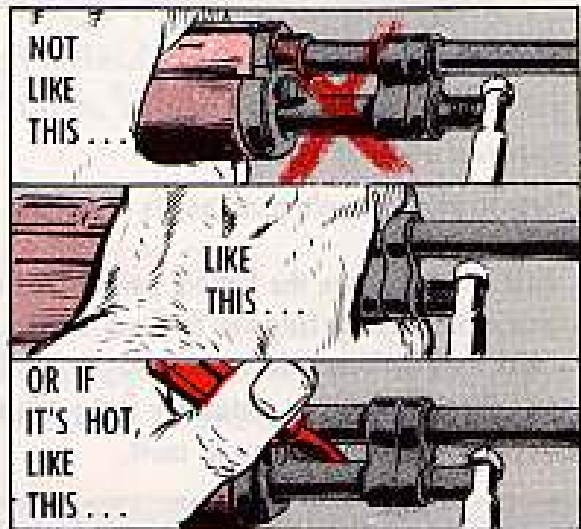




## GAS CYLINDER PLUG TIPS

What do you figure causes the most damage to the handguard? You're wrong. The real damage comes when you hold on to the handguard while you're tightening or loosening the gas cylinder plug.

The right way to do it is to hold on to the barrel and gas cylinder or, if the bipod's attached, grab that. If the barrel and cylinder are hot . . . you can't wait for them to cool off . . . and the bipod's not attached, stick a screwdriver between the barrel and cylinder for leverage.



By the incidentally . . . that combination tool, FSN 4933-768-0211, is the only thing you want to use for removing and installing the gas cylinder plug. Use the combination tool to tighten the plug as tight as you can get it. Don't—double don't—use any extension on the tool for added leverage when you tighten the plug. The only time you might need extra leverage on the tool is when you go to remove a carboned-up plug.

Speaking about tightening again . . . you can see that the cylinder and plug threads are fine, so you have to be careful or you'll cross-thread them.

It's worth remembering that the only stuff you use to clean the gas piston, gas cylinder bore and gas cylinder plug is bore cleaner. The thing to do is soak the piston and plug in bore cleaner and then wipe them with patches or a clean cloth soaked with bore cleaner. You don't have to put the gas cylinder in bore cleaner, but you do clean the bore with patches or a clean cloth loaded with bore cleaner.



*Don't use any kind of abrasive or something sharp for scraping. The piston, for instance, is made to mighty fine tolerances . . . and trying to clean it with something like crocus cloth, steel wool or sand sure can mess up things.*

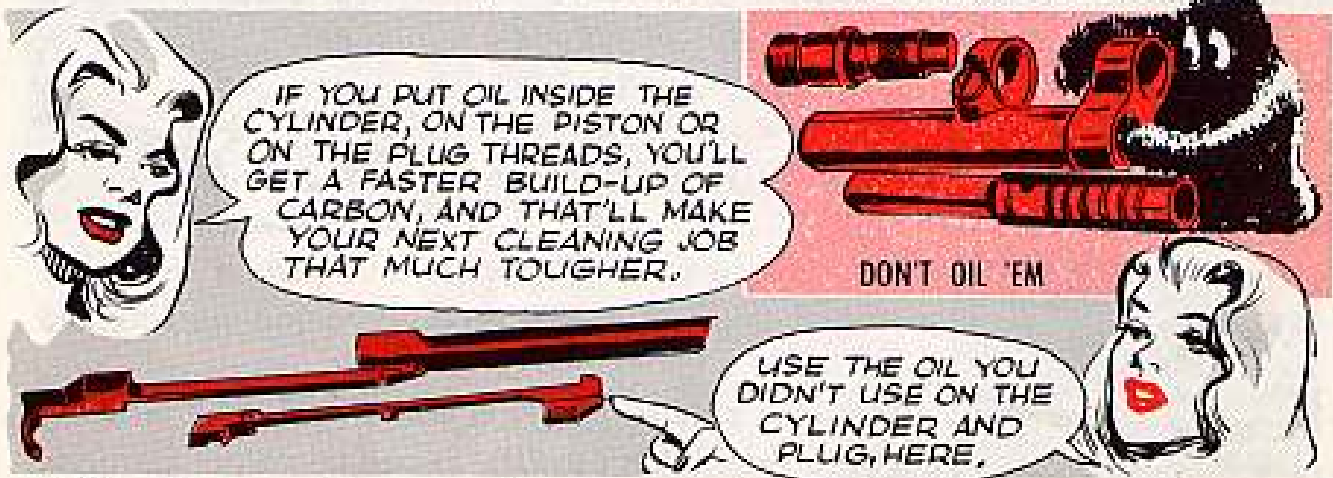
*The inside of the piston, tho, can be cleaned with your bore brush and bore cleaner. The same goes for the gas cylinder plug.*



The deal that is like to tear most guys out of the frame is the way components of the gas system change color once the rifle is fired. They figure they have to get the parts looking like new—polished to a shine. So they give the parts a good going over—short of sand blasting.

Just remember. That change of color is caused by gas and heat. And it doesn't have anything to do with the way the rifle works. So, skip trying to polish up those parts.

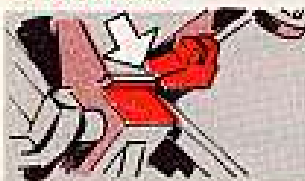
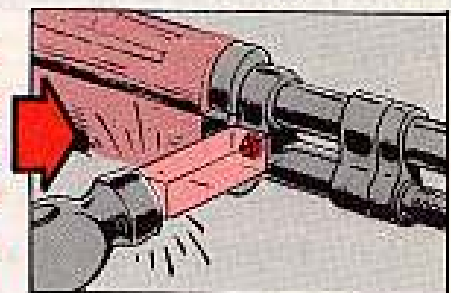
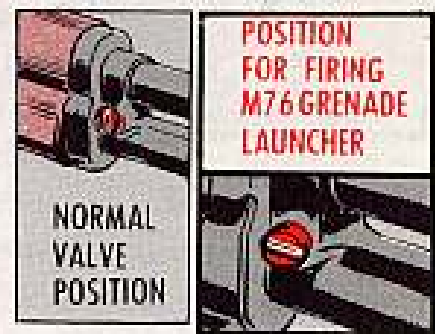
Another thing . . . seeing's how the components of the gas system are made of corrosion resisting steel, they're not going to rust. So you assemble them dry. That's right . . . no oil. Only the exterior surfaces get a light coat of oil.



There're two places you don't want to forget to put oil. Those're the inside of the operating rod tube and the spring and plunger for the connector assembly. You get at the inside of the tube with an oily patch and your cleaning rod.

*You can run into a rough situation when you get carbon between the spindle valve and gas cylinder. When this happens, it's a real job to rotate the valve. 'Course . . . the only time you rotate the valve from vertical to horizontal for firing is when you use the M76 grenade launcher. You want to push it in and rotate it once in awhile just to break loose and get rid of excess carbon.*

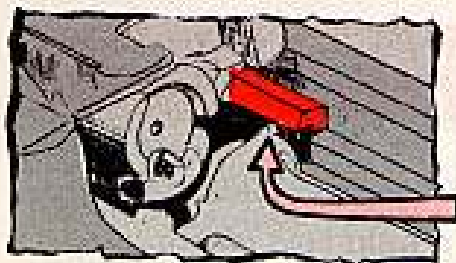
*Anyway . . . if you can't push in the valve so you can rotate it, put a block of wood against it and give the wood a few raps until you're able to move the valve in and out. Then you should be able to turn the valve. Don't try to take it apart. That's a job for Ordnance.*



Now for some quick scoop. But it's important. When the firing mechanism's installed in the receiver and the selector is set for automatic fire, make sure the sear release is touching the sear.

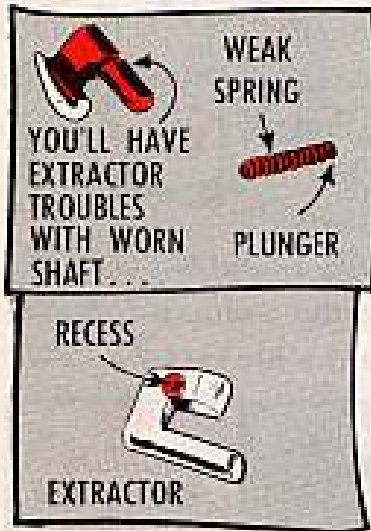
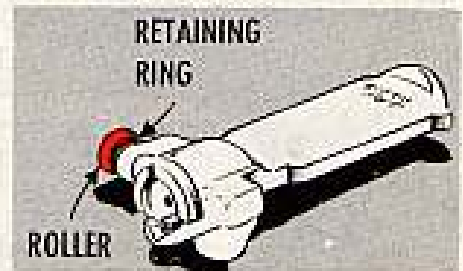
Something else that needs checking—before and after firing—is the flash suppressor and front sight. Give the suppressor and sight a coupla shakes. And if either moves at all, ask your armorer to see if he can spot the trouble.





If you have an empty magazine in the receiver, or when the last round leaves the rifle, and the bolt doesn't stay to the rear, check the follower in the magazine. It should be catching on the bolt lock to keep the bolt back.

While you've got your eyeballs around the bolt, take a look at the roller and retaining ring. They want to be oiled lightly. And it's a good deal if the roller spins easy-like. But it's still good even if it doesn't turn freely.



It's time to call for support unit help if the roller works off the stud. You'll get a new retaining ring and roller.

Does the extractor have a bad habit? Like jumping out of the bolt. That's usually caused by a worn extractor shaft and a weak spring and plunger.

Another thing about the extractor plunger... the round bottom head of the plunger wants to seat in the recess of the extractor. And if the plunger is bent, it'll foul up the movement of the spring. And you'll have extractor troubles. Something else... don't forget to keep a light coat of oil on the plunger.

It's time to get a new ejector spring and plunger when the empty cartridges start flying to the right rear of the weapon when you're on automatic fire. You'll find the three angles on the face of the plunger are usually worn real bad and the spring is shot.

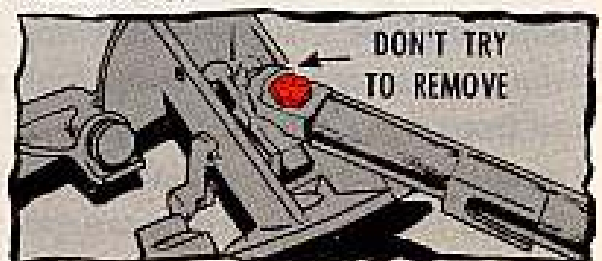


You never, ever, never want to take a bolt from one rifle and put it in another—unless your support unit checks the bolt and says it's OK. Making this kind of switch can mess up the headspace and you.

Don't forget the new deal on cleaning the bore. You only have to do it once with the newer bore cleaner after firing. Of course, you don't stop running patches through until one comes out clean. Then you follow through with a light coat of oil.

The best way to keep the chamber clean is to do the job whenever it needs doing—or any time you're not sure just how clean it is.

When it comes to the bipod, you tighten or loosen the locking screw in the bottom of the right-hand jaw with your combination tool. Don't try to remove the screw. You could ruin the jaw and screw threads.



A selected list of recent publications of interest to Organizational Maintenance Personnel. This is a list compiled from recent Adjutant General's Distribution Center Bulletins.

#### TECHNICAL MANUALS

TM 5-2805-207-20P Jul Engine Gasoline Chrysler Model IND 908A.  
 TM 5-2815-207-15 Aug Engine, Diesel Hammelheger Mod 87C-10 Series.  
 TM 5-2815-208-20P Jul Engine, Diesel Carl Mod TD427.  
 TM 5-3695-203-15P Jul Saw, Chain; Mill Tool Mod 5P24.  
 TM 5-3805-213-20P Jul Loader, Belt Letaimeau; Westinghouse Mod 30 Traveler.  
 TM 5-3820-205-10/1 Jul Crusher, Roll, Diesel and Electric Driven; Caterpillar Mod 5230B.  
 TM 5-3820-205-20/2 Aug Crusher, Jaw, Diesel and Electric Driven; Eagle Crusher Mod 5157.  
 TM 5-3825-208-20P Jul Sweeper, Rotary, Towed; Spencer Models (Mod MS-1, MS-2).  
 TM 5-3825-216-15 Jul Sweeper, Rotary, Towed Little Giant Mod ES-100C.  
 TM 5-3825-217-15 Jul Distributor, Water, Collapsible Tank, 900 Gal, Gravity Feed U. S. Rubber Mod CE-9C-2.  
 TM 5-3825-219-10 Jul Snowplow, Truck Mounted, Hydraulically Controlled.  
 TM 5-3895-246-15P Jul Knife, Heating Bit Aerol Mod 72P5A.  
 TM 5-4120-219-13 Aug Air Conditioner, on Modified M109 Van Air Cooled; 36,000 BTU.  
 TM 5-4120-220-15 Jul Air Conditioner, 10,000 BTU; Ellis & Worn Mod A18.  
 TM 5-4310-331-20 Jul Compressor, Recip Air, 15 CFM, 3500 PSI; Jay Mod 41SHER-2.  
 TM 5-4320-221-15P Jul Operator, Organizational, Field, and Depot Maintenance Repair Parts and Special Tool Lists for Pump, Centrifugal Gasoline Driven Base Mod 2 Inch, 115 GPM, 25 Ft. Head (Red Jacket Models (Model 7M) Model 7 MAG).  
 TM 5-4520-205-12 Jul Heater, 150,000 BTU Hunter Mod FH-150-GE.  
 TM 5-4520-206-15 Jul Heater, Duct Type Port 15,000 BTU Hunter Model UH48DC.  
 TM 5-4610-304-12 Jul Water Purification Unit, Mel-Pur Mod 1500-3600.  
 TM 5-4610-209-15P Jul Filter Unit, Water Pur 30 GPM All Makes & Models.  
 TM 5-6115-237-20 Jul Generator Set, 100 KW, AC, Diesel Mod 4115.  
 TM 5-6115-292-20P Jul Generator Set, 150 KW Cummins Model NVH-12-G-150, KW-AC.  
 TM 5-6115-293-20P Jul Generator Set, 100 KW, Detroit Diesel Mod 6918A.  
 TM 5-6665-201-12 Jul Mine Detector Set, Anti-Pers AN/FRS-3, 3A1, -3B, -3C, -3D.  
 TM 5-6675-211-15P Jul Alcada, Surveying; Telescopic; Dietzen Mod 6230, 6220.  
 TM 5-6675-212-15P Jul Transit; Dietzen Mod 6130S and 6024CFS.  
 TM 5-6675-218-15P Jul Operator, Organizational, Field, and Depot Maintenance Repair Parts and Special Tool Lists for Alcada, Surveying Telescopic, W/Accessories (Knauff and Eisei Models) Model PSD95A, 10 to 18 Power; Model 5095A, 10 to 18 Power; Model 5093A, 15 to 24 Power.

TM 5-6675-219-15P Jul Alcada, Surveying; Gurley Mod 580, 580F.  
 TM 5-6675-221-15P Aug Transit; Telescopic; Gurley Mod 1128, 112L.  
 TM 5-6675-222-15P Jul Level, Surveying, Gurley Mod 372 and 373F.  
 TM 9-1005-211-12P/1 Aug Caliber .45 Auto Pistol M1911A1.  
 TM 9-1005-222-12P/1 Jul Caliber .30 US Rifle M1.  
 TM 9-1410-400-20P Jul LaCrosse.  
 TM 9-1430-250-20P/5 Jun Tracking Station Nike-Herc.  
 TM 9-1430-250-20P/10 Jun Tracking Station (Imp-Herc).  
 TM 9-1430-267-12 Jun AN/MPD-36 (15D2) Nike-Ajax.  
 TM 9-1440-250-20P/2 Jun Launching Control Group, AN/MSW-4 (Nike-Herc/Imp-Herc).  
 TM 9-1440-400-20P/1 Jun Helical Rail, (LaCrosse).  
 TM 9-1440-400-20P/2 Jul Guided Missile AN/DSM-57 (LaCrosse).  
 TM 9-1450-250-20P/3, /4 Jun Gr Handling Top (Nike-Herc).  
 TM 9-2330-221-24P Jul Semitrailer, Van, Eel M349.  
 TM 9-2330-246-24P Jul Semitrailer, Van, Electronic M348A1, M348A2C, M348-A2D and M348A2F.  
 TM 9-4935-402-20P Jun LaCrosse.  
 TM 9-4935-412-20P Jul LaCrosse.  
 TM 9-6920-400-20P Jul Training Set, XM50 (LaCrosse).  
 TM 10-3930-407-20 Jul Tractor, 4,000 Lb Drawbar Pull MHE-172.  
 TM 10-5430-201-15 Jul Depot Tank, Liquid Storage, Metal, 600 Gallon.  
 TM 11-5815-222-20P Jul Teletypewriter Set AN/FGC-38, AN/FGC-38A and AN/FGC-38B.  
 TM 11-5820-256-10 Jul Operators Manual for Radio Set AN/GRC-260.  
 TM 11-5820-422-23P Jul Receiving Set, Radio AN/FRX-39.  
 TM 11-5820-467-15 Jul Antenna Group AN/GRA-50.  
 TM 11-5831-240-30P Jul Control, Radio Set C3367/ARC.  
 TM 11-5840-222-20P Jul Radio Set AN/TPS-D.  
 TM 11-6625-239-20P Jul Electronic Multimeter TS-505/U.  
 TM 11-6625-280-30P Jul Signal Generator AN/URM-49 and AN/URM-49A.  
 TM 11-6625-351-12 Jul Radio Interference Measuring Set AN/URM-85.  
 TM 11-6625-356-20P Jul Transmission Measuring Set TS-559A, B, C, D/FT.  
 TM 11-6625-301-20P Aug Solar Radiation Measuring Set AN/GVR-1A.  
 TM 11-6660-219-12, 20P Jul Radio-Range Baseline Check Sets AN/GMM-1 and AN/GMM-2A.  
 TM 11-6730-301-20 Jul Projection Set, Motion Picture Sound AS-211.  
 TM 11-6730-308-30 Aug Projector Set AN/PPD-1.

#### LUBRICATION ORDERS

LO 5-3810-220-12-1, 12-2, 12-3 Jul Grease-Shovel, Base Unit, Koching Mod 155-1A.  
 LO 5-3825-213-20-1 Jul Snow Removal Unit, Self-Propelled, Gasoline Driven, Rotary, Wheel Mt'd, Winterized (Feed Model 5347 V), W/T WD Engines; Washburn Model DMR4.  
 LO 5-3825-213-20-3 Jul Snow Removal Unit, (FWD Mod 5347-V).  
 LO 9-1000-209-12 Jul Weapon System, XM38 and XM39.

LO 9-1055-215-12 Jun Launcher, Rkt, Mod, 115MM, M91.  
 LO 10-3930-218-25 Jun Cr Air, Tr-Mtd, Hydraulic-Powered Winch, (Gar Wood Model SX-N-4370).

#### MWO'S

MWO 9-1055-208-10/20 Aug 762-MM Rkt Hdg Unit M40G; Salar Chain Hoist.  
 MWO 9-1450-500-20/2 Aug Loader-Trans XM501E1 and XM501E2 (Howe) Relocation of Fire Ext.

#### DA FORMS

DA Form 9-34 Jul Nike-Herc Daily Check Sheet-Radar System.  
 DA Form 9-55 Aug Herc Check Sheet: Air and Oil Serv of Acc Pr Sup.  
 DA Form 9-55-1 Jun Herc Check Sheet: Air and Oil Serv of Acc Pr Sup.  
 DA Form 9-58 Aug Herc Check Sheet: Fuel Serv and Opera Test.  
 DA Form 9-58-1 Jun Herc Check Sheet: Fuel Serv and Opera Test.  
 DA Form 9-60 Jun Herc Check Sheet: Install HE Warhead Body.  
 DA Form 9-62 Aug Herc Check Sheet: Axle Rkt Motor Cluster.  
 DA Form 9-63 Aug Herc Check Sheet: Missile Body and Rkt Cluster.  
 DA Form 9-64 Jun Herc Check Sheet: FI Prep of Missile M6.  
 DA Form 9-65 Aug Herc Check Sheet: Deactivation Procedures.  
 DA Form 9-66 Jul Nike Ajax Launching Area Check Sheet.  
 DA Form 9-67 Jul Nike Ajax Check Sheet: Operational Check Procedures.  
 DA Form 9-114 Jun (Herc) Monthly Check Sheet.  
 DA Form 9-120 Aug (Herc) Check Sheet Calibration RF Test Set Group.  
 DA Form 9-181 Aug Herc Check Sheet: Air and Oil Serv of Hydr Pump.  
 DA Form 9-195 Aug (Imp Herc) Air Defense Guided Missile System - Weekly Check List-Low Pr Acq Rad Sys.  
 DA Form 9-196 Aug Imp Herc: Monthly Check Sheet.  
 DA Form 9-197 Aug (Imp Herc) Daily Check Sheet-Acq Radar System.  
 DA Form 9-198 Aug Imp Herc: Weekly Check List.  
 DA Form 9-199 Aug Imp Herc: Monthly Check Sheet.  
 DA Form 9-200 Aug Imp Herc: Daily Check Sheet.  
 DA Form 9-201 Aug Imp Herc: Weekly Check Sheet.  
 DA Form 9-202 Aug (Imp Herc) Monthly Check Sheet-Tgt Tracking Rdr Sys.  
 DA Form 12-9 Jun Req for ID of Pub and Forms DA Reg and Cir.  
 DA Form 1987 Jul Modification of A/C Modification.

#### MISCELLANEOUS

AR 750-2200-1 Aug Maint Rail Equip.  
 DA Cir 310-48 Jul Military Publications - Distribution of DA Regulations and Circulars.  
 SB 10-577 Aug Supplies and Equipment Shelter Hall Tent.  
 SB 55-34 Aug FC Critical Items.  
 SM 10-1-C6-6-5L May General Supplies - FSC Class 5130, Handtools, Power Driven; FSC Class 5133, Drill Bits, Countersinks and Countersinks, Hand and Machine; FSC Class 5136, Taps, Dies and Collets; Hand and Machine; FSC Class 5140, Tool and Hardware Boxes.  
 TB 9-1400-293-20 Aug Rep of Nut-Plates in Warhead Structure 9037800 (Nike-Herc).

# Connie Rodd's

"SHORT 'N SWEET DEPT"



## Hot tip

That last  $\frac{1}{8}$  inch on a screw tip may hand you a hot one you won't like.

So, when you take apart the steering knuckle assembly on the M38 or M38A1 Jeep, or the M170 ambulance, better grab a ruler and do a bit of measuring.

Two of the four cap screws that hold the upper bearing cap to the steering knuckle flange are  $1\frac{1}{2}$  inches long. But

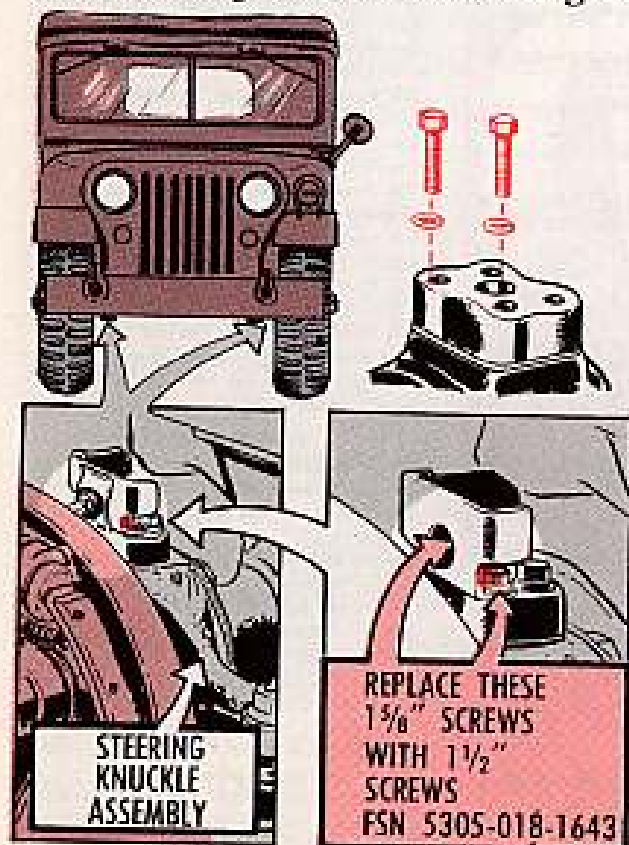
the other two . . . which do double duty and secure the brake line guard to the flange . . . are likely to be  $1\frac{3}{8}$  inches long. 'Cause that's the size originally installed in these assemblies.

Except for length, those screws are as much alike as twins. But that extra  $\frac{1}{8}$  inch in one pair can get you trouble . . . if they're shifted about. Put the  $1\frac{3}{8}$ -in screw where there's meant to be one  $1\frac{1}{2}$  inches long and you'll put the king pin bearing cage in a bind.

Then you'll get over-heating, wear on the bearing cage and maybe breakdown of the steering knuckle assembly.

So play it safe. Replace the two  $1\frac{3}{8}$ -in screws with two that are an even  $1\frac{1}{2}$ -in, like it says in para 213c (7) in Change 3 (19 June 58) to TM 9-8014 (6 Apr 55). Here's the one that'll do the job: Screw, cap, hex-hd, S, 85,000 PSI yield strength, cd or zn-pltd,  $\frac{3}{8}$ -24NF-3x $1\frac{1}{2}$ , FSN 5305-018-1643.

While you're about it, better put a reminder note in all pubs for these vehicles to keep you from getting in another bind with those long screws.



## Looking for tire chains?

Nope... nobody swiped the tire chains from that new buggy your outfit just got. They're not included as OEM or initial issue with vehicles. If you're

in a climate where you need chains to move when that white stuff hits the ground—you can get 'em by following the word in SB 9-99 dated April 1951.

## Stow that MWO kit

It shouldn't happen—but it sometimes does—that a Quartermaster MWO kit gets sent to your organizational unit instead of the maintenance outfit that's supposed to install it.

If you ever get a kit that's Greek to

you, don't get careless with it. Tuck it safely away and then tip off your support guys that the kit's arrived and needs installing.

This'll save lots on money and ulcers.

## Gals. vs lbs.

Could be that you're confused about gallons and pounds when it comes to bromochloromethane (tech), FSN 6810-209-8098. That FSN should get you a 5-gal can of it.

When it arrives you find that you have an 80-lb can. Don't worry, they're the same. A 5-gal can of that stuff weighs 80.40 pounds, so it's the same difference when you see 80-lb or 5-gal.

**SM 3-1-6800**

6810-209-8098	130800	BROMOCHLOROMETHANE, TECHNICAL, MIL-S-4386, 5 GAL. CAN.	04
6810-209-8098	130800	1 GAL. C. BOILING RANGE GAUGE (MIL-S-4386) DES. C. BOILING RANGE DETERMINED AT 760 MM. PRESSURE. LEAD TO 3-840 SP OR AT 25 DEG/55 DEG C.	04
6810-209-8098	130800	BROMOCHLOROMETHANE, TECHNICAL, MIL-S-4386, 5 GAL. CAN.	04

PAGE 01. SUPPLY MANAGEMENT DATA

FEDERAL STOCK NUMBER	ORG. SYMB.	UNIT	PACKAGE	DATE	UNIT	PER	DEM	(LINES)	REMARKS
		UNITS/PCD	TYPE/PCD	CLASS/PCD	CU	PI/PCD	LEADS	TEMP	REGRY
6810-209-8098									80
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## Detective work

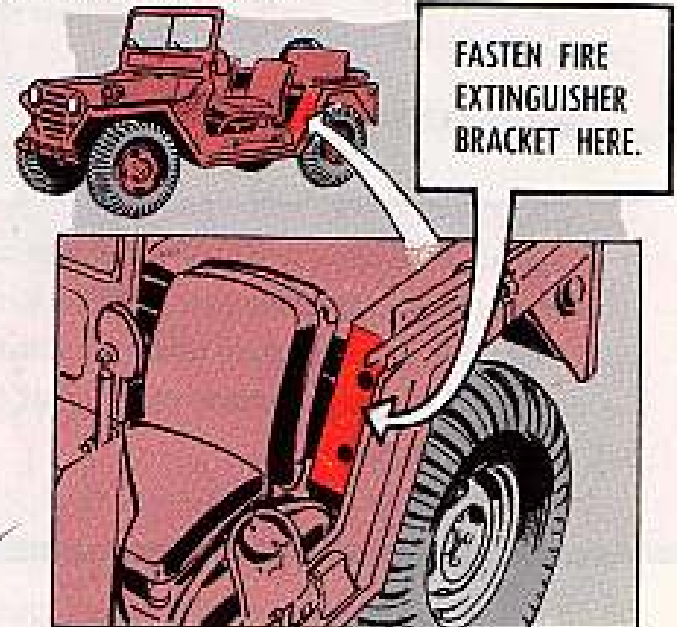
No use killin' a lotta time lookin' for the spot to hang the fire extinguisher in your M151 ¼-ton truck.

Just make like a Sherlock with those penetrating eyes until they've focused on what looks like a coupla tapped holes (they're really nuts welded to the underside of the fender) on the inside front panel of the left rear fender—just behind the driver's seat.

You'll find the extinguisher and bracket listed in TM 9-2320-218-10 (May 60) under basic issue items. But to fasten the bracket to the panel, you'll need two of these screws;

SCREW, MACHINE: Flat Counter-Sunk Hd., 5/16-18 UNC-2A × 5/8, FSN 5305-013-3822 (H001).

Knowing where and how to hang the extinguisher will come in handy if you need the info suddenly—to comply with AR 385-55 (Nov 59) on when they're to be in the M151.



## Out of sight

YOU'VE SCORED ENOUGH MAGGIE'S DRAWERS TO FILL THE LADIES CLOTHING DEPT. IN THE PX.

WLD! SHOULDA HAD THE PERISCOPE SIGHT CHARGED WITH A SHOT O' NITROGEN...

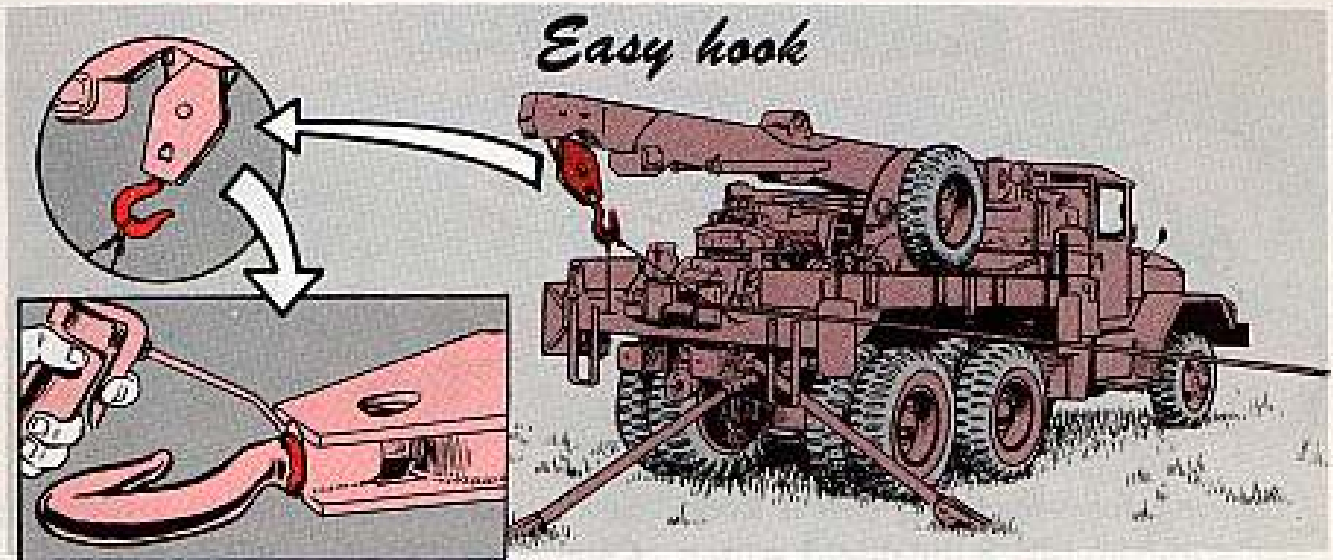
There's nothing like playing it safe. And that's what a guy can do when it comes to the fire control equipment he uses—the equipment in this case—that contains nitrogen to keep out moisture.

The list includes the M12, M13, M13A1, M14 and M17C range finders. M105C articulated telescope . . . M25 and M28 periscope sights . . . and M29, M31 and XM30 periscopes.

What you want to do is set up a schedule so you get your support unit to

stop off at your outfit every 90 days to purge and then charge the equipment with a fresh batch of nitrogen. And if you're in a humid spot, or a place where you've got plenty changes in the climate, change it to a 60-day schedule.

It's a lot better than waiting until you have so much moisture in the sight that its operation is fouled up. And that could happen just when you need the sight the most.



The boom hook on your wreckers (M62, M108, M246, M543) is made to swivel easy in its collar. Just give it an occasional turn, brush off all grime, and it's not likely to freeze-up on you.

If it ever does take extra muscle to make it turn, aim a squirt of oil inside

its housing. If the oil doesn't help you to work it loose give it a whack or two with a hammer to shake loose any binding gunk.

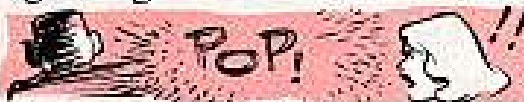
Look after the hook regularly and you'll not end up wrestling with it when you need the boom on a job.

### *Don't be jerky*

Jerks don't go far in this man's army . . . that's for sure.

So, natch, it follows that jerky action can bring things to a screechin' halt also.

Right?



Like when you M48A1 and M48A2 tankers are sitting in the M1 cupola and cocking the 50-cal machine gun with the M-10 charger—jerking the handle of the charger can lead to a busted cable and an MG that's NG, like no good, that is.

So-o-o, even tho it's not spelled out in any pub, just use common everyday horse sense and apply a steady pressure

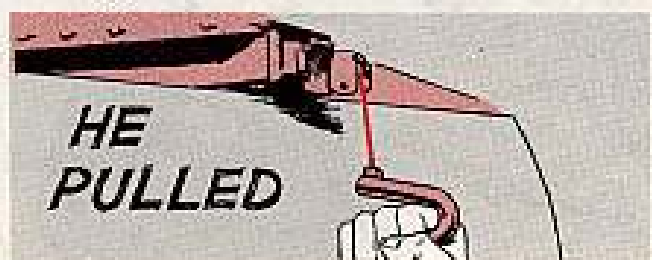
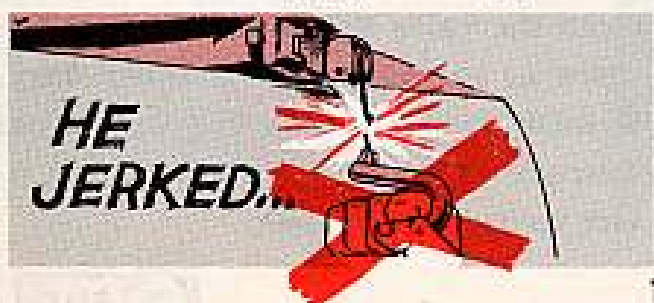
when you're pulling back the handle to cock the gun, to apply immediate action, or to check headspace and timing.

It makes little nevermind whether you pull it straight back, straight down or sideways 'cause a swivel pulley that the cable rides in takes care of the angle.

The main thing's to remember to pull the handle with steady pressure and not a jerk.

And, when the bolt moves forward, hang on to the handle.

This'll stop it from flying all over the place and cut down on cable kinking—one big reason for cable failure.





## Beat Old Man Winter



Looking for something that'll keep your windshields, windshield wiper blades, locks and latches from freezing up? Try a 14-oz spray can of Fluid, Anti-icing FSN 6850-835-0484. It's also good for anti-fogging and de-icing. Also, for fighting fog on windshields

and windows, there's Anti-fogging Compound FSN 6850-754-2671, 3½-oz squeeze bottle, or FSN 6850-754-2672, a pint squeeze bottle.

These are on your Chemical support's authorized local purchase list . . . find 'em in GSA September 1961 catalog.



*Clean it—but*



Maybe you do . . . and then maybe you don't have a gimmick for cleaning the valve in the gas cylinder lock screw on your M1 rifle. There's sure nothing in FM 23-5 (Sept 58) about cleaning the valve.

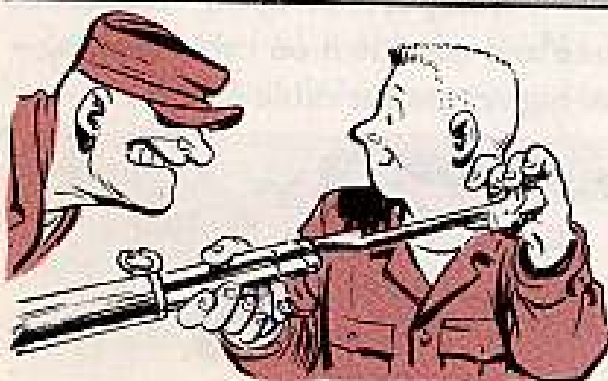
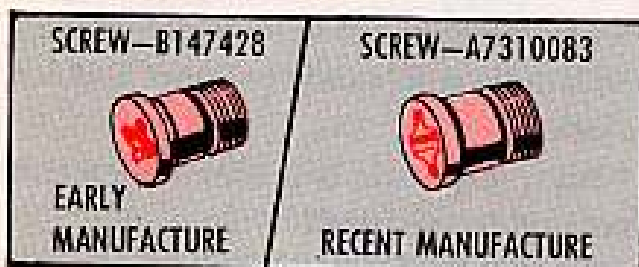
If you have a deal that works—but it means using components of the rifle to make a gadget to do the job—you'd be playing it smart by bringing that kind of situation to a screeching halt.

The different parts of the rifle have one reason for being where they are—to get the ammo into the chamber and started on its way out the barrel.

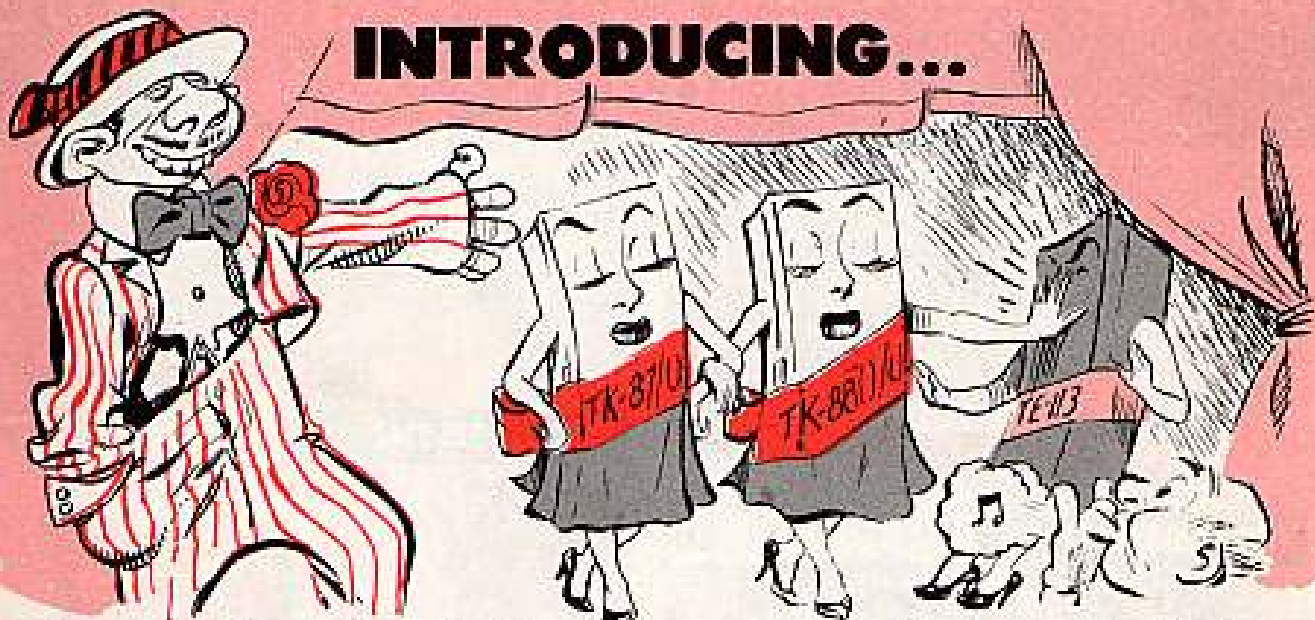
Using the parts for something else puts extra strain on them . . . and could mean busting them. Could be the break won't come until the parts're back in the rifle . . . and you're using it in a tight spot.

But, if you're using something to clean the valve that won't damage the screw or valve . . . that's another story. Remember, tho, if the valve won't come unstuck without a big fight, forget it. Get yourself a new one.

### GAS CYLINDER LOCK SCREW



## INTRODUCING...



Just as Hollywood's aging beauties must move aside for youth, the Signal Corps' TE-113 (Tool Equipment, Radar and Radio Repair) is being pushed off the maintenance scene by two newcomers.

Walking on stage for their call are Radar and Radio Repair Kit TK-87/U and Supplementary Radar and Radio Repair Kit TK-88( )/U.

Already billed in SB 11-253, Signal Corps Adopted Items of Materiel (March 1961) these maintenance twins are ready now to do their routine.

You'll appreciate these new kits, for one thing, because of their light weight. The TK-87 weighs 14 pounds. It will be issued on the same one-to-each-repairman basis as the TE-113 was.

The "88" goes 34 pounds and it's slated for issue to every fifth repairman. The TE-113 weighed 48 pounds.

Between them, TK-87/U and TK-88( )/U will provide all the tools found in the TE-113, plus a few extras. Your "87" packs the tools used over and over again . . . while the "88" takes care of the rest.

Here's a handy reference for taking inventory on your TE-113, while also getting familiar with its successors.

Some tools in your TE-113 may not look exactly like those you see here. No sweat. It's probably because they were made by different firms.

You may spot some differences in nomenclatures and FSN's. Here again there's no need to hit the panic button because these are the latest. This goes also for added or deleted items.

Tools that did not come from the TE-113 are shown with nomenclature and pictures

both enclosed in a box:

**this color**



# RADAR AND RADIO REPAIR KIT TK-87/U

## FSN 5180-690-4452

ALINEMENT TOOL: end S, 1 end brass w/laminated phenolic insulated rod type PBE, 3  $\frac{1}{32}$ -in lg,  $1\frac{1}{32}$ -in w,  $\frac{1}{4}$ -in thickness overall, socket wrench 1 end, 2 wrenches connected to insulated rod by nickel plated brass pins 0.040-in dia,  $\frac{5}{16}$ -in lg.



**FSN 5120-356-4631**

QM

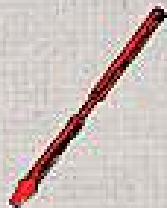
ALINEMENT TOOL, ELECTRONIC EQUIPMENT: (TL-644/U), screwdriver type, 2 working ends, metallic and nonmetallic tip, fiber composition body,  $5\frac{5}{8}$ -in lg overall.



**FSN 5120-516-2974**

QM

ALINEMENT TOOL, ELECTRONIC EQUIPMENT: screwdriver type, 2 working ends, metallic tips, S body,  $3\frac{23}{64}$ -in lg overall.



**FSN 5120-356-4632**

QM

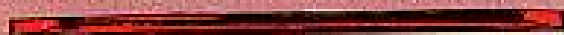
ALINEMENT TOOL, ELECTRONIC EQUIPMENT: screwdriver type, 2 working ends, 1 end metallic tip, other end nonmetallic recessed tip, fiber composition body,  $6\frac{1}{8}$ -in lg overall.



**FSN 5120-408-0477**

QM

ALINEMENT TOOL, ELECTRONIC EQUIPMENT: Screwdriver type, 2 working ends, nonmetallic tips, fiber composition body, 7-in lg overall.



**FSN 5120-227-7290**

QM

BRUSH, PAINT: flat, camel hair, sq edge 1-in w,  $\frac{1}{8}$ -in thk,  $\frac{1}{8}$ -in exposed lg.



**FSN 8020-245-4509**

ENG

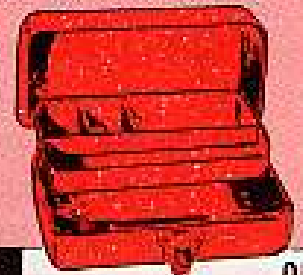
BURNISHER, CONTACT, HAND (TL-557/U): 6 blades, flat type, sand blasted finish,  $\frac{1}{16}$ -in w, 0.0035-in thk, rd ball tipped type, 6 sand blasted finish, 0.024-in dia, w/removable blades, w/compartiment for blades.



**FSN 5120-223-9347**

QM

CHEST, TOOL: Union Steel Chest; SC 5314 or equal.



**FSN 5140-678-4805**

QM

CLOTH, ABRASIVE: crocus, 9x11.



**FSN 5350-192-5052**

ORD

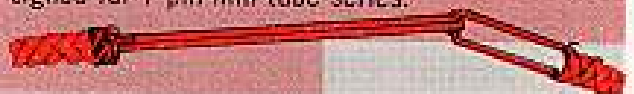
CLOTH, COTTON, CHEESECLOTH: .90 oz min, 1.06-oz max wt per sq yd, 36-in w, white, unshrunk.



**FSN 8305-170-5062**

2 QM

EXTRACTOR, ELECTRON TUBE: basket type designed for 7 pin min tube series.



**FSN 5120-293-2696**

QM



EXTRACTOR, ELECTRON TUBE: basket type designed for 9 pin min tube series, special features, one end used for extracting opposite end.



**FSN 5120-508-0584**

QM

FLASHLIGHT (MX-991/U): tubular case, olive drab, right angle; fixed focus; 2 cell; plastic lens, colorless, 2¼-in max dia; min flange base lamp; slide and push switch, 2¼-in max dia, 8½-in max lg; spare lamp; w/clip and ring hanger; watertight.



**FSN 6230-264-8261**

**ENG**

INSULATION TAPE, ELECTRICAL (TL-83): cotton, black, adhesive, ¾-in w, 82.5 to 85 ft lg, 0.015-in nom thk, rubber coating, rubber impregnated.



**FSN 5970-296-3305**

**SIG**

INSULATION TAPE, ELECTRICAL: plastic, black, adhesive, ½-in w, 36 yd lg, .007-in thk.



**FSN 5970-644-3170**

**SIG**

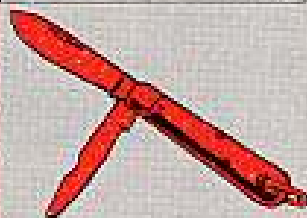
INSULATION TAPE, ELECTRICAL (TL-636/U): polyethylene, black, non-adhesive, ¾-in w, 30 ft lg, 0.015-in TO 0.017-in thk.



**FSN 5970-296-1175**

**SIG**

KNIFE, POCKET (TL-29): cutting blade 2-¾-in min to 2-¾-in max lg, w/screw-driver & wire scraper, w/clevis.



**FSN 7340-240-5943**

**QM**

ORANGEWOOD STICK: 67/8-in nom lg, ¼-in nom dia.



**FSN 5120-408-4036**

**QM**



KEY SET, SOCKET HEAD SCREW: hex dr; L-type hdl; 10 keys in set; w/case.



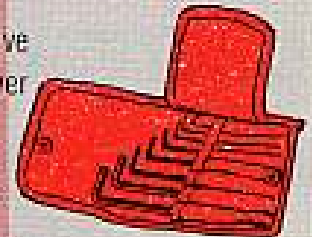
**FSN-5120-554-7866**

**QM**

WRENCH, SOCKET HEAD: hex dr; L-type hdl.

FSN	SIZE	NOM ARM LG
5120-198-5398	¼	1¾
5120-224-2504	¾	1½
5120-242-7410	¾	2
5120-240-5292	⅝	2¼
5120-198-5392	¾	2½
5120-240-5300	⅝	2¾
5120-242-7411	¾	3
5120-224-4659	¾	3¼
5120-240-5274	¾	3¼
5120-198-5390	¾	4½

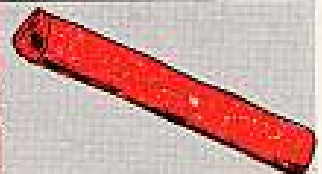
BAG, TOOL STORAGE: olive drab, folding flap cover w/snap fastener.



**FSN 5140-509-9791**

**QM**

PAPER, ABRASIVE: flint, grade no 4/0, rope paper or kraft paper, 46.5 to 63.0 lb wt, 9-in w, 11-in lg.



**FSN 5350-235-0124**

**ORD**

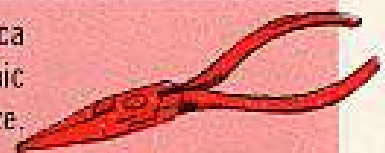
PIN STRAIGHTENER, ELECTRON TUBE: 7 or 9 pin min type ty base.



**FSN 5120-392-8361**

**QM**

PLIERS: w/cutters, Utica #296 or equal, electronic cutting, 6½-in nom size.



**NO FSN**

**SIG**

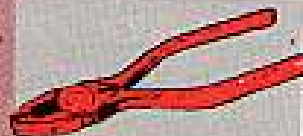
PLIERS, DIAGONAL CUTTING (TL-103): Type H, Class 1, style 2, 5-in nom size.



**FSN 5110-224-1896**

**QM**

PLIERS, DIAGONAL CUTTING: Type IV, class 1, style B, 4½-in nom size.



**FSN 5110-240-6209**

QM

PLIERS (TL-126): lg rd nose, w/o cutter, 6-in nom size. Type XI, class 1, style B.



**FSN 5120-268-3579**

QM

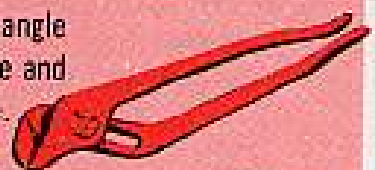
PLIERS (TL-13-A): Line-man's, w/side cutter, 6-in lg.



**FSN 5120-239-8254**

QM

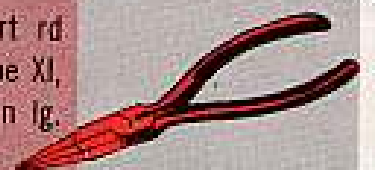
PLIERS, SLIP JOINT: angle nose, multiple tongue and groove 8-in nom size.



**FSN 5120-278-0351**

QM

PLIERS (TL-87): short rd nose w/o cutter, type XI, class 2, style B. 4-in lg. nom size.



**FSN 5120-293-3486**

QM

PULLER, TUBE: Sig Tube Puller TL-201, used to remove radio tubes, consists of pair of tongs w/specially shaped rubber covered jaws to fit contours of radio tubes, approx 8-in lg overall.



**FSN 5120-498-8903**

QM

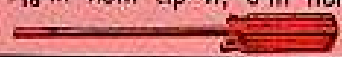
RULE, STEEL, MACHINISTS: 6-in lg, ¾-in w, ⅜-in thk, smallest unit of graduation for each graduated edge, 1/100-in, ⅜-in, ⅓-in, ⅛-in, rh reading.



**FSN 5210-273-1965**

QM

SCREWDRIVER (TL-360/U): Flat tip, stght sided tip; plastic hdl, ⅜-in nom tip w; 6-in nom blade lg.



**FSN 5120-227-7356**

QM

SCREWDRIVER, CROSS TIP: Phillips type tip, plastic hdl, tip size #1, 3-in blade lg.



**FSN 5120-240-8716**

QM

SCREWDRIVER, CROSS TIP (TL-457/U): Phillips type tip, plastic hdl, tip size #2, 4-in blade lg.



**FSN 5120-234-8913**

QM

SCREWDRIVER, CROSS TIP (TL-468/U): Phillips type tip, plastic hdl, tip size #2, 1½-in blade lg.



**FSN 5120-227-7293**

QM

SCREWDRIVER, CROSS TIP (TL-469/U): Phillips type tip, plastic hdl, tip size #1, 1-in blade lg.



**FSN 5120-224-7370**

QM

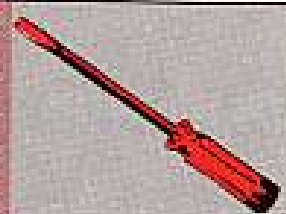
SCREWDRIVER, FLAT TIP (TL-496/U): plastic hdl, flared tip, ¼-in w tip, 1-in lg blade.



**FSN 5120-222-8866**

QM

SCREWDRIVER, FLAT TIP (TL-456/U): stght sided tip, plastic or wood hdl, non-removable blade, ⅜-in nom tip w, 4-in nom blade lg.



**FSN 5120-596-1183**

QM

SCREWDRIVER, FLAT TIP: adj blade, 4½-in lg overall.



**FSN 5120-303-1191**

QM

SCREWDRIVER, FLAT TIP (TL-358/U): wood hdl, flared tip, ¼-in w tip, 4-in lg blade.



**FSN 5120-277-9491**

QM

SOLDER, TIN ALLOY: wire rosin-cored, ⅜-in dia, 1 lb spool.



**FSN 3439-269-9610**

ORD

**SOLDERING AID TOOL:**

Metal prong tipped one end, metal spade type other end, wood body, 8-in lg overall.



**FSN 5120-610-5116**

**QM**

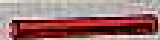
**SOLDERING IRON, ELECTRIC (TL-606A/U):** 3/8 lb, pyramid tips, plug type, setscrew fastenings, 1/8-in dia, 115 v, 25 w ac.



**FSN 3439-240-5641**

**ORD**

TIP, stght.



TIP, stght.



**FSN 3439-273-2683 ORD**

**FSN 3439-293-4709 ORD**



CAREFUL WHERE YOU REST THE HOT IRON.



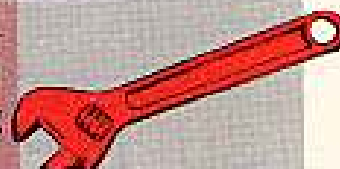
**SOLDERING GUN (TL-650/U):** ac, 115 v, 60 cycles, sgle ph dc, 110 v, pyramid shape tip, 1/4-in dia, non-removable, 2 wire plugs, pistol gp hdl w/spotlight, w/thermostatic control, 9 3/8-in lg, 1 3/16-in w, 6 1/8-in h.



**FSN 3439-294-9568**

**ORD**

**WRENCH, OPEN, ADJUSTABLE (TL-476/U):** sgle hd type, 0 to 0.947-in jaw opng cap, 8-in nom lg overall.



**FSN 5120-240-5328**

**QM**

**WRENCH, OPEN, ADJUSTABLE:** sgle hd type, 0 to 0.510-in jaw opng cap, 4-in nom lg overall.



**FSN 5120-240-5330**

**QM**

**WRENCH KIT (TL-483/U):** w/case.

**FSN 5120-303-7718**

**QM**



**WRENCH, OPEN END, FIXED:** dbl hd 15 deg angle of hds.

FSN	OPENING	LENGTH OVERALL	THICKNESS
5120-228-9528	13/64 & 7/32	3	7/64
5120-278-2421	15/64 & 1/4	3	3/32
5120-277-2307	5/16 & 3/8	3 3/4	13/64
5120-277-4593	9/32 & 11/32	3 1/2	1/8

HANDLE, SOCKET WRENCH, SLIDING T-TYPE: 1/4-in sq dr, 4 1/2-in lg.

**FSN 5120-221-7966**



**QM**

HANDLE, SOCKET WRENCH: spin type, 1/4-in sq dr, 5 5/16-in lg overall.

**FSN 5120-242-3256**



**QM**

**SOCKET, SOCKET WRENCH:** sq drive, hex shape, wrench opng, regular lg, 1/4-in drive size:

FSN	SIZE	FSN	SIZE
5120-236-2262	3/16	5120-235-5878	5/16
5120-236-2263	7/32	5120-242-3351	11/32
5120-236-2264	1/4	5120-242-3352	3/8
5120-232-3345	9/32	5120-235-5869	3/4

**PLIERS, SLIP JOINT:** angle nose, mltple tongue and groove, 5-in nom size.

**FSN 5120-278-0350**



**QM**

**CASE, SOCKET WRENCH SET:** sheet S, metal divider lengthwise to form two compartments, 1 for socket wrenches, 1 for drive parts and tools, cover hinged on narrow end, w friction snap closing, semi-gloss paint finish, 6 3/4-in lg overall, 2 15/16-in w overall, 1 1/4-in h overall.

**FSN 5120-356-3874**

**QM**

WRENCH SET: socket hd, parkerized S, for no: 4, 6, 8, 10 and 1/4 screws, wrenches vary in lg from 1-3/16 lg, 3/8 w, hd at right angles to arm on no. 4 size to 3 27/32-in lg with 27/32-in lg hd at right angle to arm on 1/4-in size.

FSN 5120-408-2262

QM

KEY, SOCKET HEAD SCREW: splined, L-type hdl, 6 flutes.

FSN	SIZE	NOM ARM LG
5120-293-0195	.060	3/8
5120-540-1020	.072	1 27/32
5120-223-6965	.094	1 7/8
5120-224-2482	.110	2
5120-277-1724	.144	2 1/4

BAG, TOOL STORAGE: Signal Corps No 6Q2107-3



## SUPPLEMENTARY RADAR AND RADIO REPAIR TOOL KIT TK-88()/U

### FSN 5180-893-1389

BLADE, HAND HACKSAW: flex back, high carbon or low tungsten S, 0.025-in thk, 10-in nom lg, 24 teeth per in.



FSN 5110-228-3189

2 QM

BLADE, HAND HACKSAW: flex back, high carbon or low tungsten S, 0.025-in thk, 12-in nom lg, 32 teeth per in.



FSN 5110-221-0252

2 QM

CHISEL, COLD, HAND: 3/8-in w of cut, 5-in lg overall.



FSN 5110-242-3457

QM

CLIP, ELECTRICAL: 6try, 3/8-in max jaw opng, S, galvanized fin, uninsulated, 1/2-in h, 1 1/3-in lg, 3/16-in w.



FSN 5940-177-1719

6 SIG

CONTAINER:



FSN 5340-392-8359

ORD

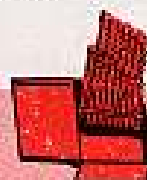
DRILL, HAND: w/hollow side hdl, w/o ratchet, sgle speed, 0 to 1/4-in cap.



FSN 5110-223-4993

QM

DRILL SET, TWIST (TL-305/U): 1 to 60 incl.



FSN 5133-293-2643

QM

FILE, HAND: American patt, fl type, dble-cut, sec-cut faces, sgle-cut, sec-cut edges, 8-in lg heel to pt.



FSN 5110-234-6534

QM

FILE, HAND (TL-133/U): American patt, rd type, dble-cut, bastard face, 1 1/4-in dia of largest sec, 6-in lg heel to pt.



FSN 5110-234-6548

QM

FILE, HAND: American patt, three sq type, dble-cut, bastard faces, 6-in lg heel to pt.



FSN 5110-241-7675

QM

FILE, HAND: jeweler's flat, escapement equalizing, sgle-cut, 3 1/8-in lg.



FSN 5110-388-3367

QM

FINGER, MECHANICAL (TL-506/U): rigid type, 8-in finger reach, 10 3/4-in lg overall.



FSN 5120-288-8716

QM

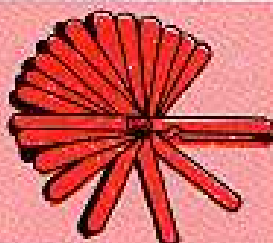
FRAME, HAND HACKSAW: adj lg, closed pistol gp hdl, 3-in to 3<sup>3</sup>/<sub>4</sub>-in depth of throat, 8-in, 10-in and 12-in blade lg.



**FSN 5110-542-3494**

QM

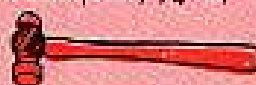
GAGE, THICKNESS: English system, one blade gp, 26 stght blades, thickness 0.0015-in to 0.025-in, 3<sup>1</sup>/<sub>4</sub>-in lg, 1/4-in w at tip, w/ blade lock.



**FSN 5210-274-2857**

QM

HAMMER, HAND: machinist's ball peen, 1/4 lb, nom hd wt.



**FSN 5120-243-2985**

QM

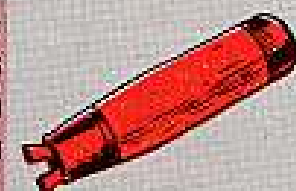
HAMMER, HAND: machinist's ball peen, 3/4 lb, nom hd wt.



**FSN 5120-224-4082**

QM

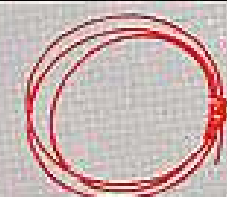
HANDLE, FILE, WOOD: includes expanding S jaws w/ knurled adj cap, 4<sup>5</sup>/<sub>8</sub>-in nom lg overall, 1<sup>5</sup>/<sub>8</sub>-in nom dia overall.



**FSN 5110-595-8325**

QM

INSULATION SLEEVING, ELECTRICAL: flex, braided glass, black, 0.072-in max id, varnish coating.

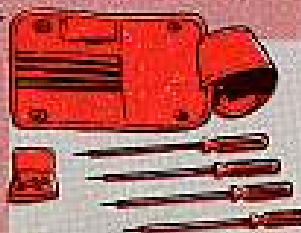


**FSN 5970-266-2261**

QM

KEY SET, SOCKET HEAD SCREW: long reach, alloy S, w/separable plastic screwdriver hdl 3-in lg by 7/8-in dia overall, 10-in lg overall, w/ 1-in flute lg, w/four keys per set and w/one key 0.050-in across hex flats for attaching key to hdls, furnished w/bag.

SIZE	DIA
2	0.048
4	0.060
6	0.076
8	0.094

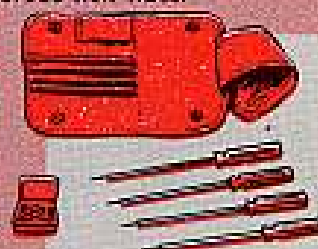


**FSN 5120-679-4459**

QM

KEY SET, SOCKET HEAD SCREW: long reach alloy S, w/separable plastic screwdriver hdl 3-in lg by 7/8-in dia overall, 10-in lg overall, w/ hex portion 1-in lg, w/four keys per set and w/one key 0.050-in across hex flats for attaching key to hdls; furnished with bag, 0.035, 0.050, 1/16, 3/32-in size across hex flats.

SIZE	DIA
2	.035
4	.050
6	.062
8	.078



**FSN 5120-679-4460**

QM

MIRROR, INSPECTION: 1<sup>1</sup>/<sub>8</sub>-in mirror dia, 6<sup>3</sup>/<sub>4</sub>-in nom lg.



**FSN 5120-448-2455**

QM

OILER, HAND: 6-oz cap, force fed by pressure created by an int pump, S bdy, nickel-plated finish, 1<sup>1</sup>/<sub>8</sub>-in dia, rigid brass spout, nickel-plated finish, 4<sup>3</sup>/<sub>4</sub>-in lg, female threaded bottom end, 3/8-in dia of thread.



**FSN 4930-204-3737**

QM

PLIERS, SLIP JOINT: stght thin nose, comb, w/cutter, 8-in nom size.



**FSN 5120-203-6588**

QM

PLIERS: jeweler's flat med nose, 4<sup>1</sup>/<sub>2</sub>-in nom size.



**FSN 5120-372-0672**

QM

PLIERS, RETAINING RING: ext, fl jaws, stght tips, w/ bracket; 0.870-in size of ring, 0.038-in nom w of tip, size 2.



**FSN 5120-288-9717**

QM

PLIERS, RETAINING RING: ext, flat jaws, fixed jaw stop, 0.125-in ring size, 3/8-in nom w of tips, size 12.



**FSN 5120-595-9550**

QM



PLIERS, RETAINING RING: ext. fl jaws, fixed jaw stop, .015-in ring size, .023-in nom dia of tip, size 15.



**FSN 5120-595-9548**

QM

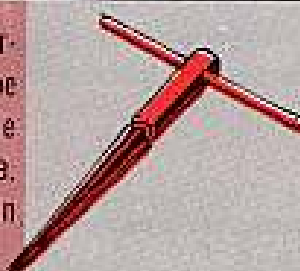
PUNCH, CENTER, SOLID:  $\frac{3}{32}$ -in dia at top of tapered pt,  $\frac{3}{16}$ -in nom dia of stock,  $3\frac{3}{8}$ -in nom lg overall.



**FSN 5120-293-3512**

QM

REAMER, HAND: repair-man's taper type, w/T-type hdl, carbon S, stght style flute,  $\frac{1}{2}$ -in large end dia,  $\frac{1}{8}$ -in small end dia,  $5\frac{1}{2}$ -in nom lg overall.



**FSN 5110-186-4214**

QM

SCREWDRIVER, CROSS TIP, OFFSET: tip size #1 and 2,  $4\frac{3}{4}$ -in lg overall.



**FSN 5120-256-9014**

QM

SCREWDRIVER, FLAT TIP (TL-459 U): flared tip, plastic hdl, w wrench gp, bolster, forged, hvy duty,  $\frac{3}{8}$ -in nom tip w, 8-in nom blade lg.



**FSN 5120-278-1280**

QM

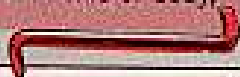
SCREWDRIVER, FLAT TIP (TL-471): stght sided tip, plastic or wood hdl, w/insulated blade, non-removable blade,  $\frac{1}{8}$ -in nom tip w, 8-in nom blade lg.



**FSN 5120-393-0553**

QM

SCREWDRIVER, OFFSET (TL-464): Opposite offset, opposite ends, each offset tipped, 1 fl tip parallel to longitudinal axis of body, 1 fl tip 90 deg angle to longitudinal axis of body, or 2 fl tips 45 deg angle to longitudinal axis of body,  $\frac{1}{4}$ -in tip,  $4\frac{1}{4}$ -in lg overall.



**FSN 5120-287-2130**

QM

SCREWDRIVER SET, JEWELER'S; SWIVEL KNOB: 6 screwdrivers w/removable blades, 0.025 to 0.100-in w tip.

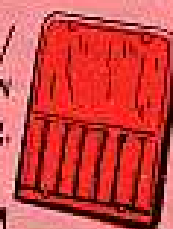
**FSN 5120-288-8739**

QM

5120-180-0705	0.025
5120-180-0706	0.040
5120-180-0727	0.055
5120-180-0728	0.070
5120-180-0729	0.080
5120-180-0730	0.100



TOOL POUCH: duck, 6 pockets, w/flap, snap fastener closure, mildew resistant, waterproof,  $8\frac{5}{8}$ -in lg,  $8\frac{1}{4}$ -in w,  $\frac{1}{8}$ -in thk.



**FSN 5140-351-8311**

QM

SCREW STARTER, HAND: sliding wedge gp, plastic hdl,  $\frac{1}{4}$ -in nom tip w, 4-in nom blade lg.



**FSN 5120-293-3344**

QM

SOLDERING IRON, NON-ELECTRIC: stght shot, ctg type.



**FSN 3439-588-1007**

ORD

TIP, pyramid,  $\frac{1}{8}$ -in dia, #7

**FSN 3439-588-1008**

$\frac{1}{4}$ -in dia, #6

$\frac{3}{8}$ -in dia, #5



**FSN 3439-588-1009** **FSN 3439-588-1010**

BRUSH, WIRE, TUBE: sgle spiral, S fill,  $5\frac{5}{8}$ -in lg overall,  $\frac{7}{8}$ -in dia brush part,  $1\frac{1}{2}$ -in lg brush part.



**FSN 7920-577-4057**

QM

CARTRIDGE, SOLDERING IRON, NON-ELECTRIC: rd mtl case,  $1\frac{3}{32}$ -in lg,  $\frac{3}{4}$ -in dia overall, chemical filled mtl case w/primer percussion cap.



**FSN 3439-711-0524**

12 ORD

SOLDER, TIN ALLOY: wire, rosin-cored,  $\frac{1}{8}$ -in dia, 1 lb spool.



**FSN 3439-273-2536**

**ORD**

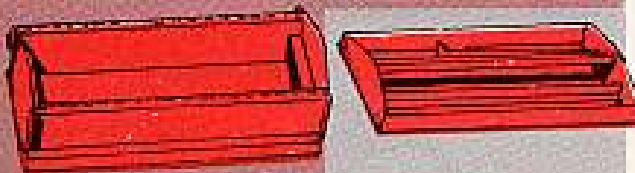
TAPE, MEASURING (TL-454/U): S,  $\frac{5}{8}$ -in w, in std unit of grad, lh to rh reading, 72-in max grad lg  $\frac{1}{32}$ ,  $\frac{1}{16}$  min increments, w std unit of grad, lh to rh reading, 72-in max grad lg  $\frac{1}{16}$ -in min increment, w/case.



**FSN 5210-287-4286**

**QM**

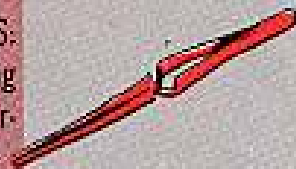
TOOL BOX, MECHANIC'S (CH-77): S container, 1 removable tray, w/ front panel locking device, 1 additional hdl located on top, 21-in lg overall, 8 $\frac{1}{2}$ -in w overall, 7 $\frac{3}{8}$ -in h overall, excluding projections.



**FSN 5140-498-8772**

**QM**

TWEEZERS, CRAFTSMAN'S: non-magnetic, self-closing (cross-lock), 5 $\frac{3}{8}$ -in lg overall.



**FSN 5120-498-8970**

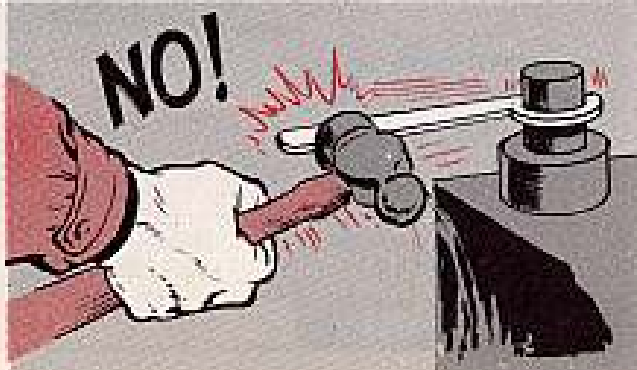
**QM**

WIRE ELECTRICAL: hook-up; stranded; black, tinned copper, no 18 AWG.

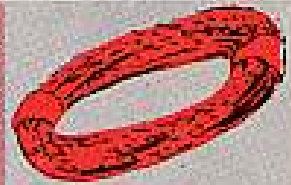


**FSN 6145-548-0973**

**SIG**



WIRE ELECTRICAL: ins stranded, white w/red tracer, no 18 AWG, cond copper, tinned finish.



**FSN 6145-160-5176**

**SIG**

WRENCH SET, SOCKET (TL-651): Spintite wrench opngs  $\frac{3}{16}$ -in to  $\frac{9}{16}$ -in, hex shape socket, w/case.



**FSN 5120-542-5799**

**QM**

BAG, STORAGE

**FSN 5140-631-5933**

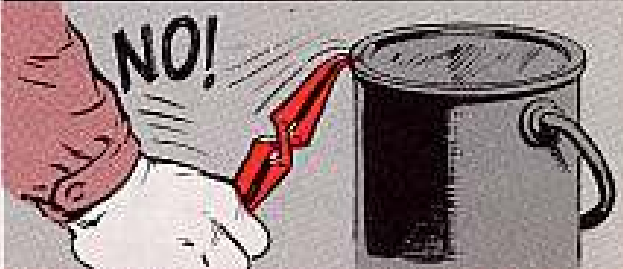
**QM**

WRENCH, SPANNER: non-magnetic, cadmium plated,  $\frac{1}{8}$ -in opng dia, 180 degs between pins, 0.015-in pin w of lug or slot, 1 $\frac{1}{4}$ -in lg,  $\frac{3}{16}$ -in outside dia.



**FSN 5120-521-8784**

**QM**



WRENCH, SET, SPANNER: 5 cad-pl sgle head, fixed type, pin, spanner wrenches.



**FSN 5120-658-9805**

**QM**

WRENCH, SPANNER:  $\frac{3}{16}$ -in outside dia,  $\frac{3}{32}$ -in lug thickness,  $\frac{1}{4}$ -in lug w, 2 $\frac{3}{4}$ -in nom lg overall.



**FSN 5120-595-9044**

**QM**

**TE-113 ITEMS NOT CARRIED OVER TO  
TK-87/U or TK-88()/U  
TE-113 FSN 5180-448-7478**

ALINEMENT TOOL, ELECTRONIC EQUIPMENT: wrench type; 2 working ends; 2 hex socket wrenches,  $\frac{5}{16}$ -in wrench size, plastic body, 5-in lg overall.



**FSN 5120-241-3190**

**QM**

ALINEMENT TOOL, ELECTRONIC EQUIPMENT: screwdriver type; 1 working end, metallic tip, plastic body, 5-in lg overall.



**FSN 5120-288-7780**

**QM**

ALINEMENT TOOL, ELECTRONIC EQUIPMENT: combination screwdriver & wrench type; 2 working ends, metallic screwdriver tip &  $\frac{3}{16}$ -in hex socket wrench; screwdriver slides inside wrench; plastic body, 6 $\frac{1}{4}$ -in lg overall.



**FSN 5120-498-8982**

**QM**

DRILL, TWIST



**FSN 5133-277-9658**

**2 QM**

DRILL, TWIST: HSS, stght rd shk, fractional series,  $\frac{3}{8}$ -in, two flutes, rh cut, 3 $\frac{5}{8}$ -in fluted lg, 5-in lg overall.



**FSN 5133-227-9666**

**2 QM**

DRILL, TWIST: HSS, stght rd shk, two flutes, rh cut, number series, No. 2, 2 $\frac{5}{8}$ -in fluted lg, 0.221-in dia, 3 $\frac{7}{8}$ -in lg overall.



**FSN 5133-189-9247**

**2 QM**

DRILL, TWIST: HSS, stght rd shk, two flutes, rh cut, number series, No. 10, 2 $\frac{1}{16}$ -in fluted lg, 0.1935-in dia, 3 $\frac{5}{8}$ -in lg overall.



**FSN 5133-189-9255**

**2 QM**

DRILL, TWIST: HSS, stght rd shk, two flutes, rh cut, number series, No. 18, 2 $\frac{1}{8}$ -in fluted lg, 0.1695-in dia, 3 $\frac{1}{4}$ -in lg overall.



**FSN 5133-189-9263**

**2 QM**

DRILL, TWIST: HSS, stght rd shk, two flutes, rh cut, number series, No. 28, 1 $\frac{3}{4}$ -in fluted lg, 0.1405-in dia, 2 $\frac{7}{8}$ -in lg overall.



**FSN 5133-189-9273**

**2 QM**

DRILL, TWIST: HSS, stght rd shk, two flutes, rh cut, number series, No. 33, 1 $\frac{1}{2}$ -in fluted lg, 0.113-in dia, 2 $\frac{5}{8}$ -in lg overall.



**FSN 5133-189-9278**

**2 QM**



NIPPERS, END CUTTING: jeweler's type, integral cutters, 4 $\frac{1}{2}$ -in nom lg overall, style B.



**FSN 5110-221-1503**

**QM**

SCREWDRIVER, CROSS TIP.



**FSN 5120-537-8694**

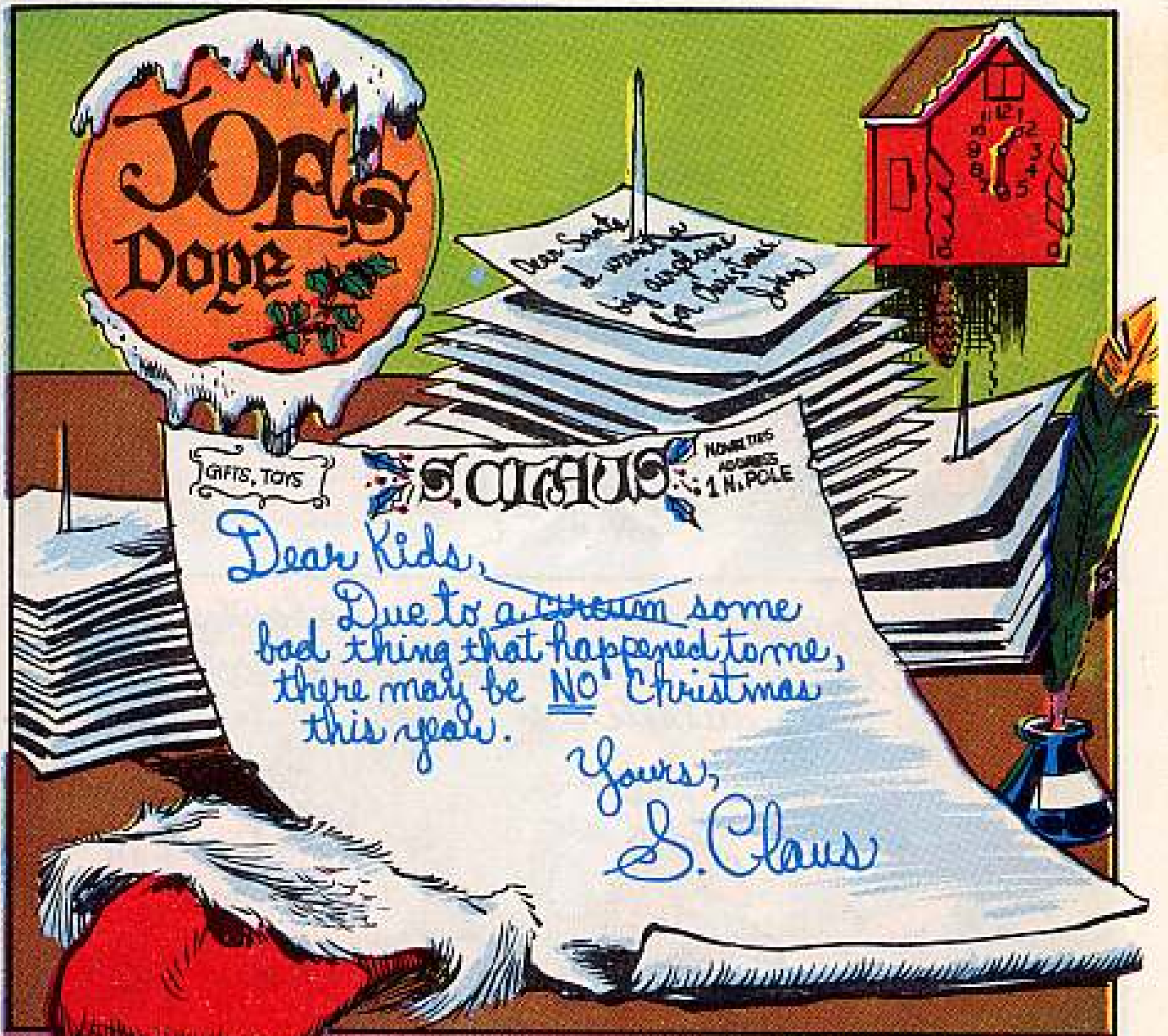
**QM**

SCREWDRIVER, FLAT TIP: flared tip; wood hdl; blade extends through hdl;  $\frac{3}{16}$ -in nom tip w, 4-in nom blade lg.



**FSN 5120-236-3203**

**QM**



GIFTS, TOYS

S. CLAUS

NUMBER 1 ADDRESS: 1 N. POLE

Dear Kids,

Due to a ~~stream~~ some bad thing that happened to me, there may be NO Christmas this year.

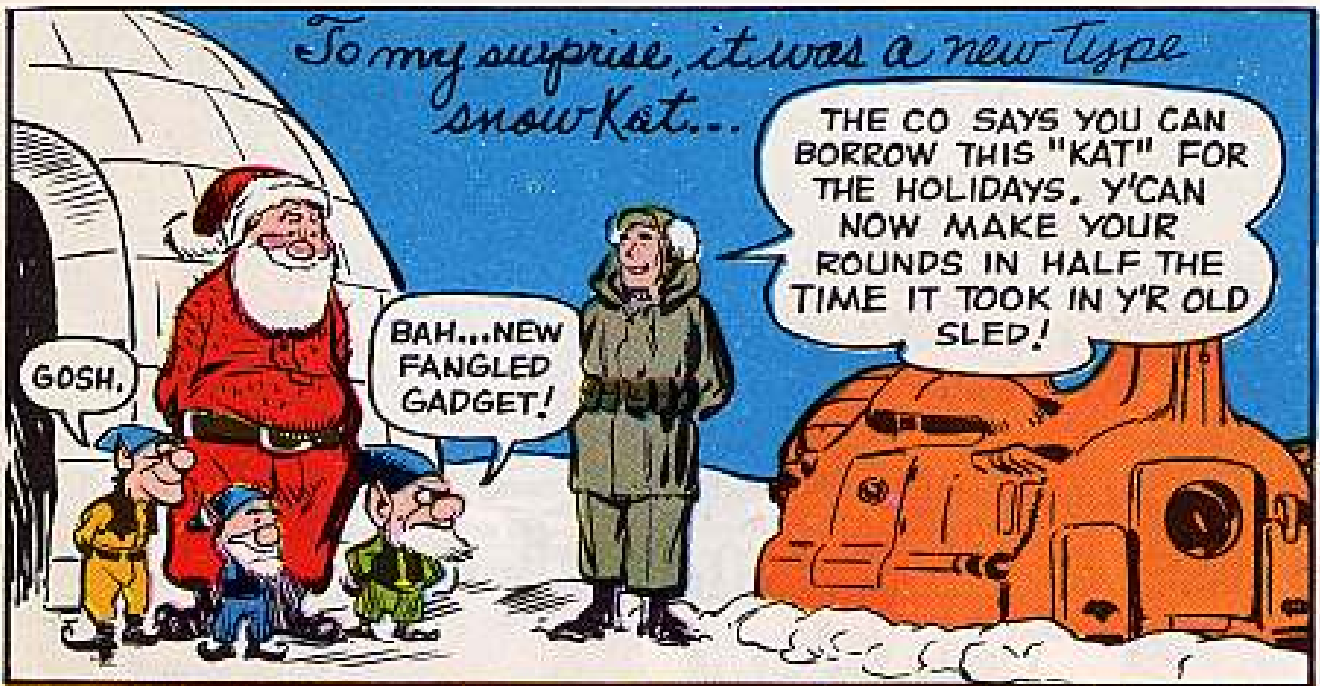
Yours,  
S. Claus

It all started yesterday when a couple of friends from the BMW's outfit on the ice floe nearby decided to give me a Christmas gift...

HEY SANTA!  
C'MON OUT-'N-SEE  
WHAT WE BROUGHT YA!

S. CLAUS  
CHRISTMAS  
GIFTS A  
SPECIALTY





*To my surprise, it was a new type snow kat...*

THE CO SAYS YOU CAN BORROW THIS "KAT" FOR THE HOLIDAYS. Y'CAN NOW MAKE YOUR ROUNDS IN HALF THE TIME IT TOOK IN Y'R OLD SLED!

BAH...NEW FANGLED GADGET!

GOSH.

*So, last night with my chores about done, I decided to deliver some early gifts down to the DEW line outfits... in my new snow kat.*



BRRR... IT'S COLD... LET'S TURN ON THE PERSONNEL HEATER AND WARM UP BEFORE WE START OUT.



HEY, SHUT THAT WINDOW, BOY, DON'T WANT TO LET OUT THE HEAT!

*And so I settled back... I did not check  
the personnel heater exhaust tube for leaks...*



*... If I had, I would have noticed ...*



*I didn't even check the seals to see if  
they were tight.*



# Joe's Dope Sheet

## DANGER!

### KEEP HIM OUT

By keeping pipes and vents tight

### FLUSH HIM OUT

With a blast of fresh air.

The driver should run his hock  
With windows open a crack.

But he loves to be warm

Out there in the storm:

With moxie\* in, he won't get back.

\*CARBON MONOXIDE



WE HAVE THE WORLD'S BEST EQUIPMENT... *Take care of it*

Also, I should have checked along the path from engine to the exhaust for any leaks along the way. (I was in a new Kat, but the same thing goes for any tracked or wheeled vehicle where you burn gasoline or fuel oil in an engine or personnel heater.)

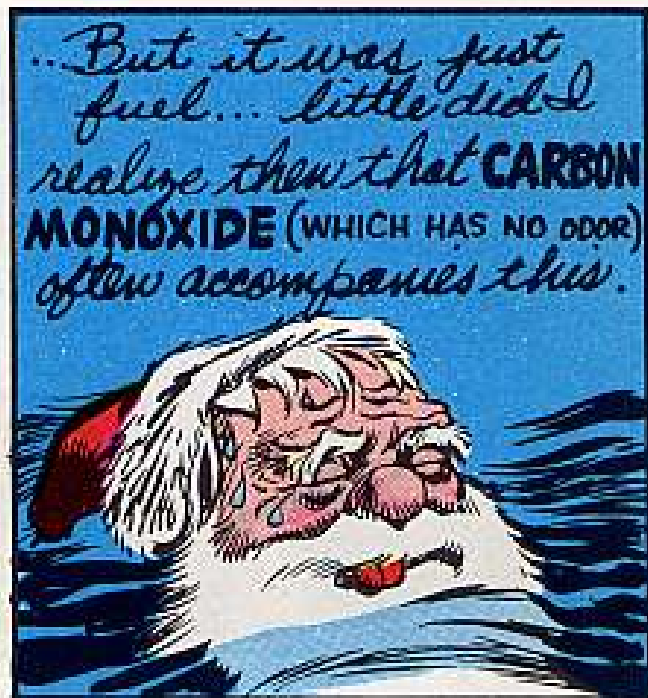


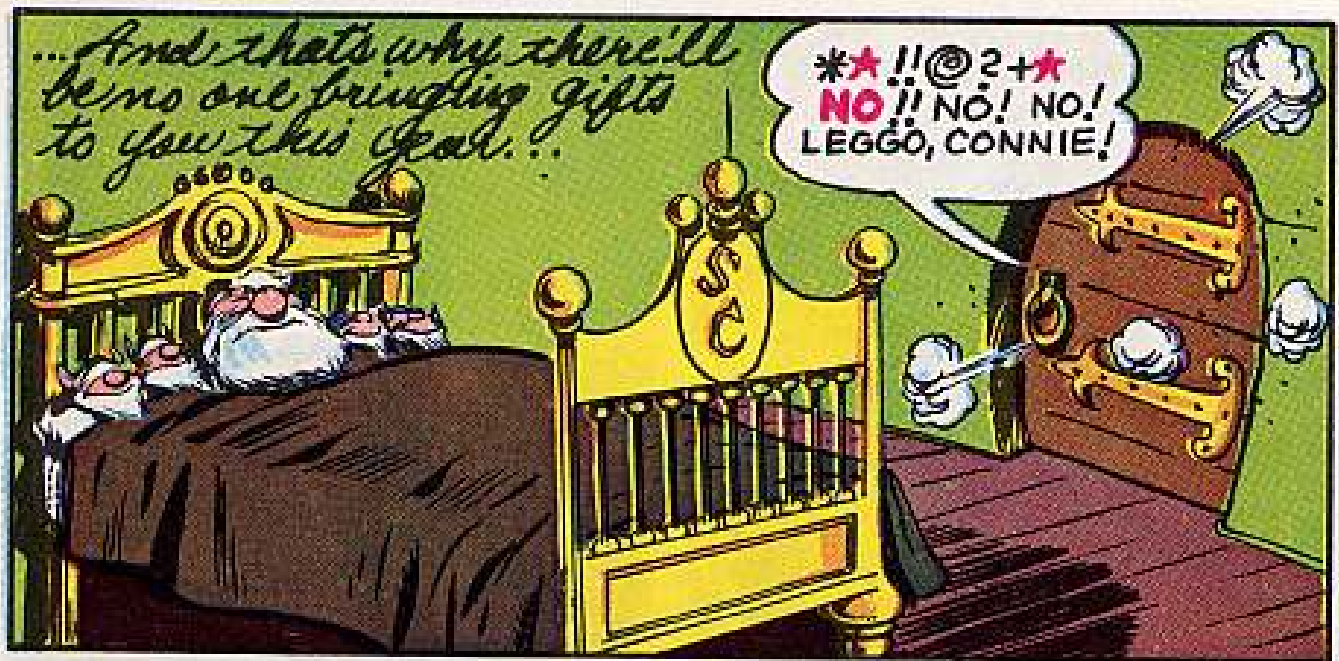
Muffler, for instance



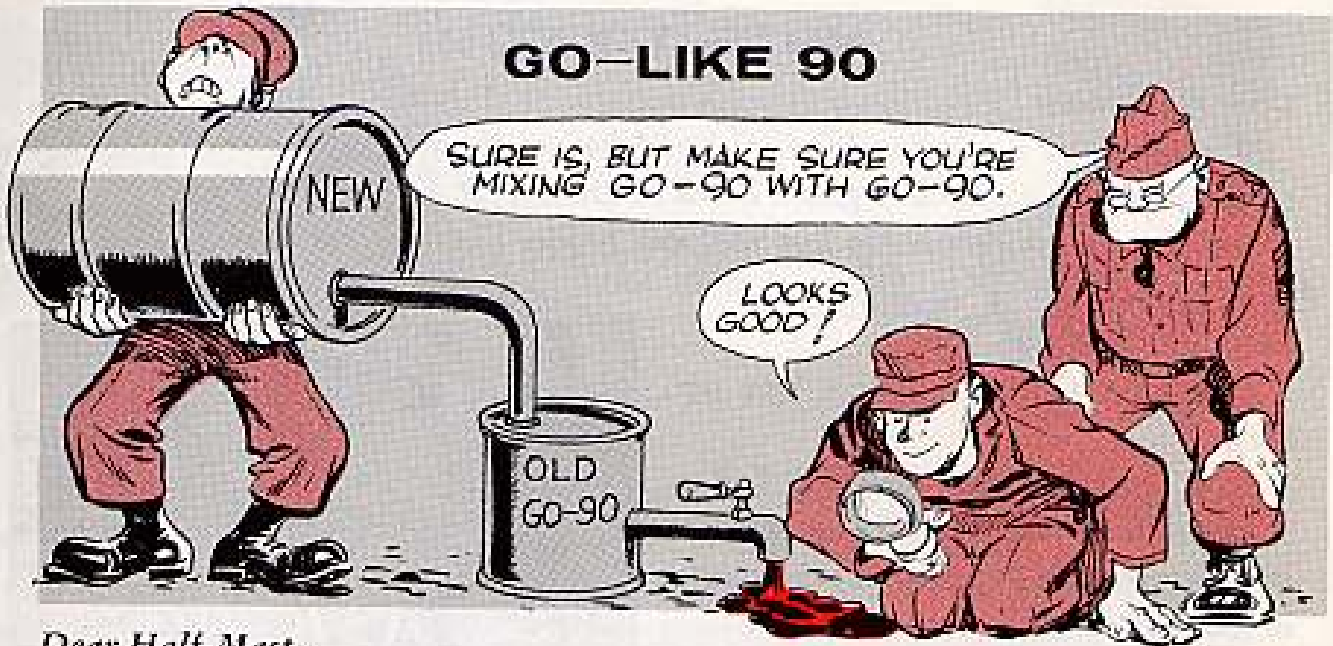
And before I started the engine up I should have checked to see that the access panels and plates were in place.







## GO-LIKE 90



Dear Half-Mast,

We received a 5-gal drum of GO-90 and we're all shook up. The stuff looks, acts and smells more like OE-30 than the old GO-90, which was black and thick as molasses.

My question to you, Sarge: Can this new stuff be mixed with the old GO-90? For example, if there's still some old GO-90 left in the gear case, can we just fill her up with the new GO-90, or must we first flush out the old stuff?

Sgt M. O. B.

Dear Sergeant M. O. B.,

Don't be too shook by the look and smell of the new GO-90, Sarge. Just be careful with it.

This new gear oil (Spec MIL-L-002105A) is designed to do the same job as the old GO-90 (Spec MIL-L-2105). And since the basic spec number (2105) is the same, it means the new can be mixed with the old if necessary.

However, the old GO-90 will be issued till stocks are used up and it should be used first.

If there's any doubt as to what's in your gear case, etc, drain it first before using the new oil. But drain it while the lube's hot from operation.

SB 10-572 (14 Dec 59) gives you the dope on this new GO.

## HERE'S A HANDY CHART

OLD

... AND ...

NEW

Half-Mast

OLD GO-90 (MIL-L-2105)

FSN 9150-240-2250... 5-gal drum  
FSN 9150-240-2251... 15-gal drum  
FSN 9150-240-2253... 55-gal drum (16 gage)  
FSN 9150-240-2252... 55-gal drum (18 gage)

NEW GO-90 (MIL-L-002105A)

FSN 9150-577-5844... 5-gal drum  
FSN 9150-577-5845... 55-gal drum (16 gage)  
FSN 9150-577-5846... 55-gal drum (18 gage)

## NUTS TO YOU

Dear Half-Mast,

We are short a lug nut for the spare tire mount on one of our M125 10-ton cargo trucks. Can't seem to find it listed in ORD 7, 8, or 9 SNL G792.

Can you tell me where to find this nut before it drives me nuts?

MSgt. J. R.

Dear Sergeant J. R.,

Don't let this nut screw you up, Sarge.

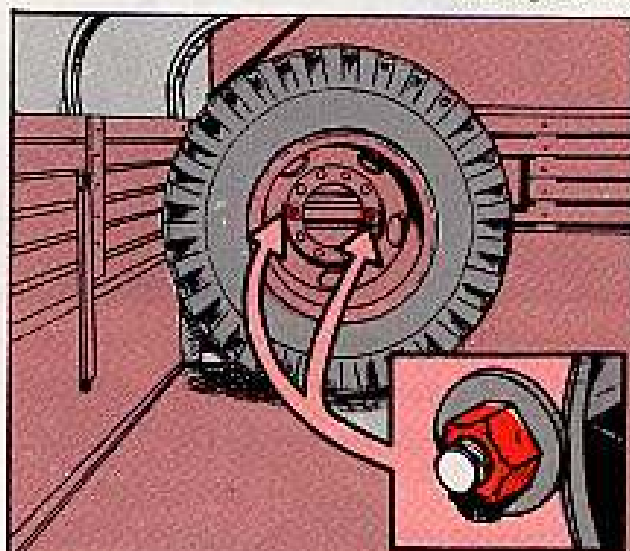
You don't find it in the ORD 7, 8 or 9 'cause it is not listed as an item of issue for the M125 10-ton cargo truck, in the SNL G792-series.

However, it is listed in common hardware items like so:

Nut, Plain, Hexagon: S, cd- or zn-pltd; 1-14 UNF-2B, 1-7/16 w, 7/8 h, FSN 5310-012-4657.

The washer you need to go with it is listed like this:

Washer, Flat: S, cd- or zn-chromate-fin; 1-1/16 id, 2 od, 0.134 thk, for 1 in. screw size, FSN 5310-655-7150.



You can requisition them through regular supply channels but you gotta give the supply people a reason why you need these parts.

*Half-Mast*

## GUARDING YOUR T-195/GRC-19

Dear Half-Mast,

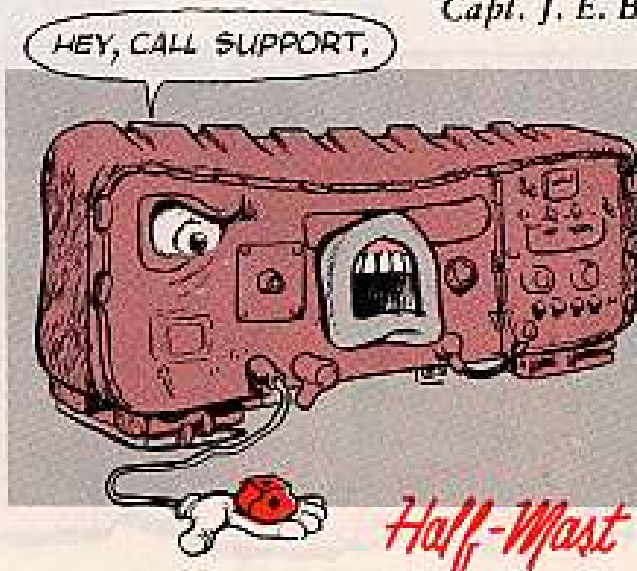
Our unit has trouble getting an antenna terminal guard for the T-195/GRC-19 transmitter in its AN/GRC-19. When we sent in a requisition for the guard you see in Fig 4, TM 11-5820-295-10, we were told to give the FSN and a more complete description. Can you help us track it down?

Capt. J. E. B.

Dear Captain J. E. B.,

Replacing the guard is a job for your support. But you can lend a hand by telling them about Cap, Electrical, FSN 5940-566-3862. It's listed in TM 11-5820-335-35P, for the T-195 transmitter.

That switch in nomenclature from "guard" to "cap" might have caught some people with their guard down.



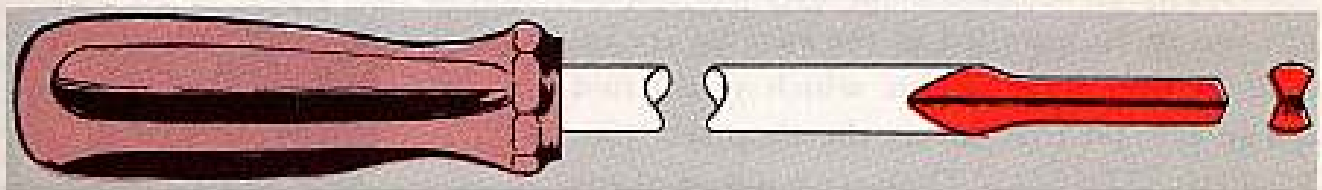


Dear Half-Mast,

I'm the organizational motor pool officer for this unit and need the answer to this problem.

For some time now, I've run into troubles getting my hands on some of the special tools needed to do our PM on commercial type vehicles...

Like the screw driver for removing the figure-8 screws on Ford bodies...



...or the wrench needed when replacing the distributor points in Chevy 6-cylinder sedans... etc.



Give me the directive that'll authorize me to get 'em, Sarge.

CWOK. P.

Dear CWOK. P.,

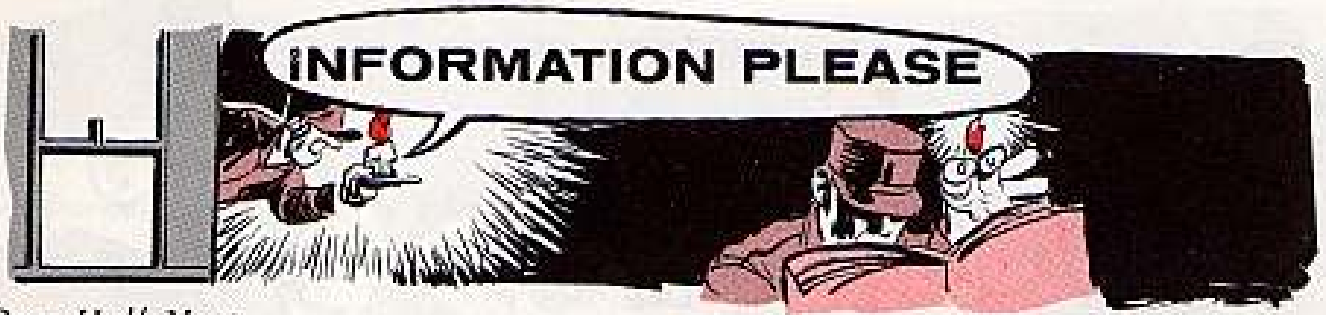
A bit tricky to get 'em, but not impossible.

First, drag out a copy of TA 55-34 (23 Feb 60) and pick out the items needed.

Next, prepare a requisition (authorized by your major commander) and submit it thru channels.

Your authority is AR 725-5, Change 1, para 15.1a. The same AR gives the commander authority to recommend a change to the TA when he thinks the TA should carry the item—and it doesn't.





Dear Half-Mast,

Request information as to where FSN and nomenclature can be found for an electrical cable to run electricity into the M109 shop van truck. We received truck without cable and we need it.

Sgt. P. M., Jr.

Dear Sergeant P. M., Jr.

The cables used with the M109 come with the shops sets to be installed in the van, or are included in the hardware kit which you'll find listed in the TB that covers the shop set. (See TB 9-4910-337-30/1) They are not part of the truck's OEM.

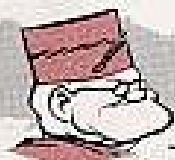
Here are a couple of FSN's for cables that you might want to jot down since they have a different group and class number than they once had. FSN 4910-395-1995 (ORD) is for a 7-ft cable, and FSN 4910-395-1994 (ORD) is for a 25-ft cable. These used to have a group and class number of 6150.

The short cable goes from the generator to the long cable, and the long cable plugs into the truck (unless your generator is close enough for the 7-ft cable to reach the truck).



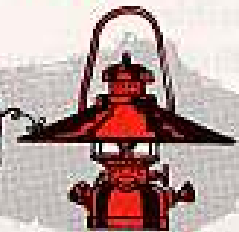
Half-Mast

## MORE LANTERN LIGHT



THERE'S YOUR REFLECTOR... A QM ITEM,

REFLECTOR,  
LIGHT FOR GASOLINE  
LANTERN ALUMINUM  
FSN 6260-273-9219



Dear Half-Mast,

Night field operations for us Finance Corps types call for sharp eyes on the figures. How can we get more light from our gasoline lanterns? Is there some kind of reflector we can use?

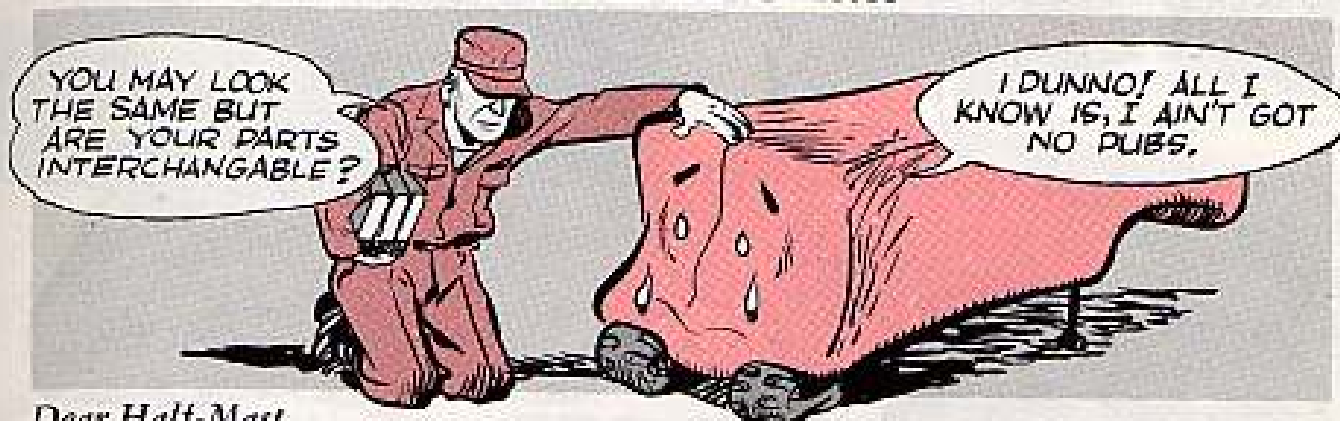
LT D. B. H.

Dear Lieutenant D. B. H.,

There sure is. Ask for it under the name: REFLECTOR, Light for Gasoline Lantern Aluminum . . . FSN 6260-273-9219. It's a QM item.

Half-Mast

## SIMILAR SEMI

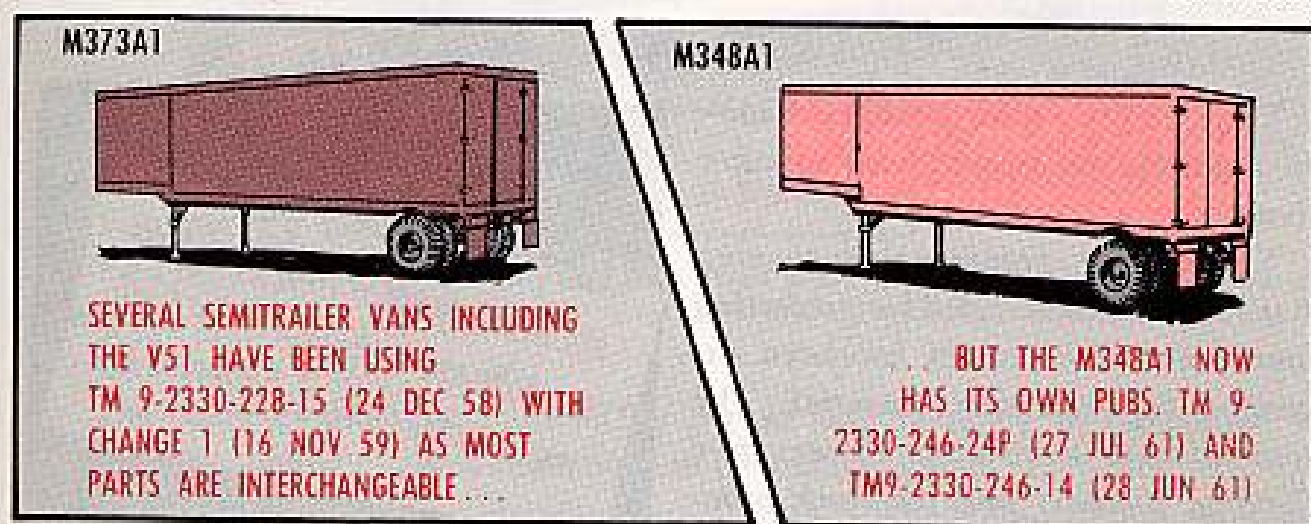


Dear Half-Mast,

We've got some V51 semitrailer vans but no TM or parts manual to take care of maintenance.

TM 9-236 shows two similar semitrailers, but the numbers are M373 and M373A1. Are these vehicles the same as the V51? If not, are parts interchangeable?

C. W. R.



Dear C. W. R.,

Good guessing, but those vehicles are not exactly the same.

The V51's a commercial van but using units are now getting the M348A1, an Ordnance semi, instead.

Although the M348A1 has a shorter body than the M373 or M373A1, most parts of these semitrailers are interchangeable. And... even though some may not be exact mates... it's likely that most parts are interchangeable on the V51.

Several of the semitrailer vans

(M348A1, M373A1, M373A2C, M393, M394, M433, M433C and M433D) are so much alike they've been using the same TM... TM 9-2330-228-15 (24 Dec 58) and Change 1 (16 Nov 59).

But the M348A1 has its own pubs... TM 9-2330-246-24P (27 Jul 61) and TM 9-2330-246-14 (28 Jun 61).





## KEEP OFF

The slide rules're out and Ordnance is working on something to beef up the battery cover plate on the XM501E1 and XM501E2 Hawk loader-transporter. Meanwhile . . . you can help keep the

cover plate from getting cracked by keeping your boots—with you in 'cm—off the thing. In other words . . . walk around it—not on it.

## SOMETHING NEW

There've been some changes made—the kind you missilemen want to know about.

The rubber preservative coating that's been recommended for protecting your fire control cables has been exhausted to some new material. The nomenclature is the same: Preservative Coating, Rubber. And the stock numbers shape up so:



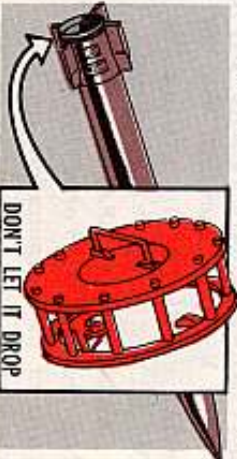
## BE A WEIGHT WATCHER

Here's something that every on-the-ball Littlejohn crew never forgets.

It doesn't let anyone remove the thrust neutralizer from the rocket unless he knows the score.

And that means he knows the neutralizer weighs in at 26 pounds.

If you don't have a tight hold on it, and it gets away, the neutralizer can shear the battery and switch assemblies from the nozzle. And that'd sure leave



the rocket in bad shape.

Your feet wouldn't exactly feel so good either if that 26 pounds of dead weight landed on them.

The threads are plenty big—but you can still get into trouble when you go to mate the warhead to the Littlejohn rocket motor.

So go easy as you do the mating. And don't tighten the captive-locking ring with your spanner wrench until you're sure—and then some—that you don't have a cross-threaded situation on your hands.

## DO IT RIGHT

## NOT NEEDED



You can stop looking.

You're not going to find anything in your puns on lubing the thrust bearings on your Littlejohn rocket motor.

And there's a good reason.

The bearings don't get lubed. They get the full treatment by the people who put them together . . . and don't need to be touched again.

## FUZE DO'S AND DON'TS

OK . . . so what do you do?

It tells you on page 23 of TM 9-1340-204-12: When the T2075E1 fuze you're going to install in your Littlejohn rocket warhead won't line up the letter "S" on the dial scale with the letter "O" on the vernier scale you don't use it. And, it doesn't get used if the pull pins are off or missing.

What you do when you run into this kind of fuze is put it back in the can and turn it in for another one.

If you fire a rocket with a fuze in this shape, you might end up with a dud instead of a warhead that does the job it's supposed to do.





## IS THIS DRIP NECESSARY?



Your spirits dampened by the drip-drip-drip of a leaking tent? Get fast-fast relief with MIL-C-13295, Type 1, the mildew-water-fire-resistant textile compound that's guaranteed to convert your canvas cotage into the mansion of your dreams.

You'll find this compound in SM 5-1-C5-1-SL (1 May 61). It comes in paste-thick form in 5-gal drums . . . FSN 8030-264-3840.

You can apply it with a brush, spray gun or by dipping—whatever way's handiest for you. The success of the mission depends on how well you put the stuff on and how well you let it dry afterwards.

Like any other PM operation, this re-creating bit begins with inspection. Erect the tent outdoors or in a well-ventilated area where you'll do the coating job. Go over it inch by inch. If the shelter needs cleaning or patching, now's the time to do it. The fabric's got to be free from dirt, oil, grease stains, mildew, etc., for the compound to go on right.

If you have to scrub it down, though, be mighty sure it's real dry before applying the compound.

Mix 40 percent compound and 60 percent dry cleaning solvent for spraying and brushing. You'll find this cleaning solvent in SM 10-1-6800 (14 Mar 61). Use FSN 6850-281-1985 for a 1-gal can and FSN 6850-264-9038 for a 5-gal drum.



FSN 8030-264-3840



It's a smart idea to estimate about how much of the mixture you'll need for the entire job. Figure to use one gallon of the mixture to cover 90 square feet of tent surface.

The figures on the various tents in FM 20-15 (Jan 56), Tents and Tent Pitching, will clue you to the dimensions of most shelters.

Now that you're ready to go to work, here're the steps to take, whether you apply the compound by brush or spray gun:

**1** Always erect the tent outdoors or in a well-ventilated area and have it clean and dry before you start.

LIKE IT SAYS  
ERECT IN WELL  
VENTILATED  
AREAS.

HEY! HOW  
COME YOU'RE  
ERECTING THE TENT  
WAY UP HERE?



**2** Start at the top and work down. Make sure you get the seams and patches well done. This is where the fabric needs the most protection from mildew.

BE SURE TO GET  
THE SEAMS  
AND PATCHES

**3** Treated fabric'll dry to the touch in half an hour, but for a right job let the tent dry in the sun and wind for at least 24 hours before folding and storing it.

13  
12





HERE'RE SOME TIPS ON VARIOUS METHODS.

**SPRAYING**—Most any paint spray gun'll do as long as you use a nozzle that gives a coarse spray. After spraying, if you get too much compound in one area, brush it out even all around. Remember, too much compound in one place is as bad as too little. Let guys with spraying know-how do the job if you can. Anyhow, the mixture tanks take about 30 pounds of air pressure per square inch and the spray guns about 15.

**DIPPING**—The dip method is for small tents and shelter halves out in the boon-docks. You mix the stuff just like in the other methods and use a 35-gal can or whatever size is big enough for the tent. (Do only one tent at a time, anyway.)



COUGH! COUGH!  
WOT ARE YOU, SOME KIND OF NUT!  
COUGH

OOPS!

**BRUSHING**—A whitewash brush or the like is best for small tents. But for the larger ones use a long-handle brush. Work the brush up and down and across to get the stuff in there good.

Like in the other methods, you want to make sure you get the seams done right. But be doubly sure you let the tent dry out good after it's coated. Erecting the tent's best for drying.

But don't use the dip method less'n you really have to. For one thing, it coats both sides of the fabric when only the outside really needs it. Then, too, it'll greatly increase the weight of the tent . . . not good when you have to tote that tent in your pack.



IT'S JUST WATER PROOFED ON BOTH SIDES.

UGH! WOT'S IN HERE... ROCKS?

## WATCH THAT STUFF

One thing you'd better chalk up right now: Both the compound and the thinner are flammable and the compound also contains a strong fungicide. So don't use it near an open flame (or a lit butt) . . . and try to keep it off your skin and clothing. Make sure it doesn't get near equipment that's used for food or drinking water.



Wear a respirator when you use a spray gun. If you accidentally get any of the stuff on your skin, wash it off pronto with warm soapy water.



Actually, the stuff's most dangerous when it's wet. That's one good reason for making sure it's thoroughly dry before you fold and store the tent. There's a story about a guy who stored his tent before it was good and dry. The next time he pitched the tent, the fumes caught fire . . .



## WHEN TO RE-TREAT

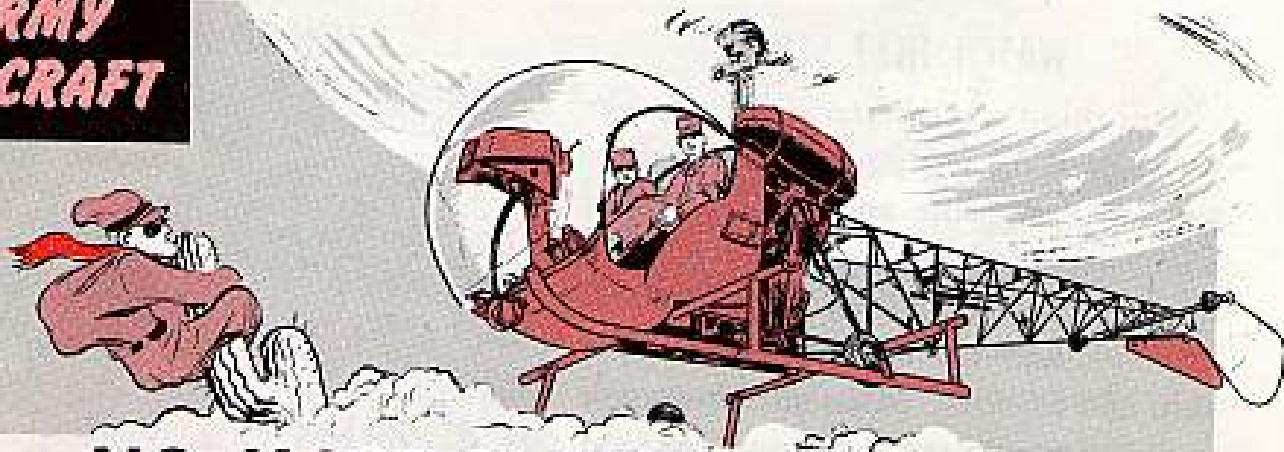


There's no telling for sure just how often your tent'll need re-coating. In the tropics, it'll need it more often, that's for sure.

But it's always good strategy to keep an eye on that mildew-water-fire-resistant coating. That means constant inspection.

More'n that, though, it means smart PM. First off, you've got to understand that this coating doesn't make a tent mildew-proof, water-proof or fire-proof. It only makes it resistant. That coating can be ruined in nothing flat through accident or carelessness. A guy running his hand on the inner surface of the tent . . . or a tree limb scratching against it . . . or the ground rubbing against it if you drag the tent—all these things'll bring back the leaks in a hurry.

Do the best job you know how when coating it . . . take common-sense care of it when you're done . . . and your tent'll weather most anything that comes along.



## NO MORE BLASTED BLADES

Dear Windy Windsock,

Whenever we get into any desert type operations, it's the same old battle with dirt, dust and sand—flying in all directions and giving us too much wear on the leading edge of the rotor blades on our H-13's and other choppers.

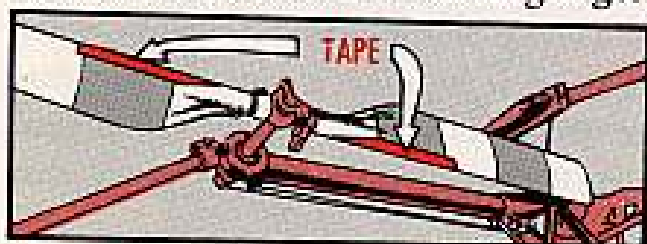
How about using a tape abrasion strip to stop this wear . . . would it affect blade balance to a dangerous point?

B. E. W.

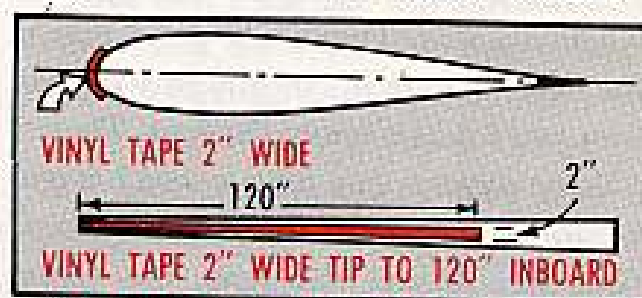
Dear B. E. W.,

Abrasion strips are authorized for your Sioux (H-13) and some other models. They won't affect blade balance if they're installed correctly by experienced types. That's why your support people do the job—and the tape they use has to be a special type, cut and put on just so.

Take your Sioux (H-13), for instance. Your support used to have TB AVN 21-38 to follow for instructions on installing these strips on metal tail rotor blades. This TB was rescinded because the same info was being picked up in TM 55-1520-204-34. This installation is aimed at cutting down the erosive effect of sand and loose dirt on leading edges.



On the main rotor blades, the sand-blasting effect you stir up with a hovering H-13 chopper can be cut down with tape supplied by a kit listed in TM 1-1H-13H-1019 (20 May 60), "Application of Vinyl Plastic Tape to Leading Edge of Metal Main Rotor Blades."



For the other choppers at your post here's a run-down on the rest of the Army models.

The use of abrasion strips for the Shawnee (H-21C) is spelled out in TB AVN 21-34 (4 Oct 57), "Scotchcal Application to Rotor Blade" and TWX TCMAC EH-37-11-1258 (16 Nov 60) has similar info for the Mojave (H-37).

Also, there's no objection to using these Scotchcal tapes on the Choctaw (H-34) for both main and tail rotor blades; while TM 55-1520-207-20 (10 Mar 61), Chapter 2, Section V, page 5-3, says you can use them on the main rotor blade of the Iroquois (HU-1). Of course, TC's permission is based on having the services available of some experts from field maintenance support.

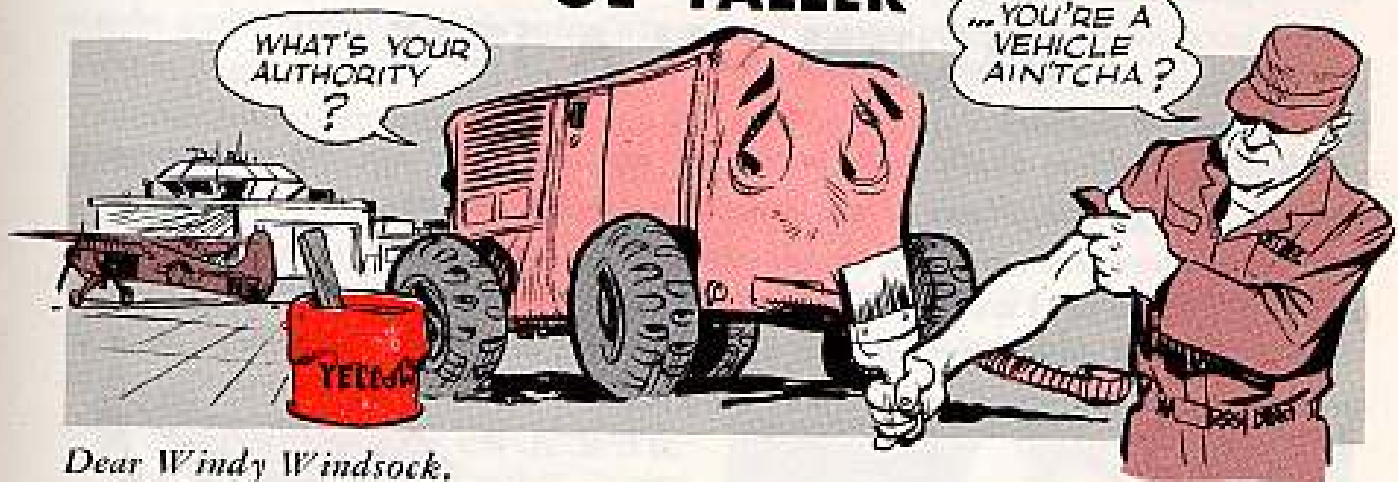
No UR's have turned up yet on the

Raven (H-23) or the Chickasaw (H-19), so abrasion's not considered a problem on these two models. But if you happen to come up with blade erosion on either model, the engineers at TMC would like to hear about it on a UR (DD Form 1275), pronto.

Any time you expect to be operating under extreme erosion conditions, abrasion tape will do a good job of cutting down on blade wear.

*Windy Windsock*

## OL' YALLER



Dear Windy Windsock,

We've been given some flight-line equipment (APU's, etc) that's painted OD. We feel—for safety reasons—these items should be repainted with yellow so pilots and mechanics can see them during ground operations, like taxiing, parking, etc.

The question is this. What do we cite for authority to make the color switcheroo?

SP5 R.D.

Dear Specialist R.D.,

AR 746-2300-1 (11 Mar 60) "Color and Marking of Vehicles and Equipment" gives with the word on this.

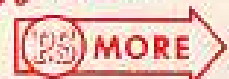
Head right for section V, para 22 for the info on painting airfield vehicles and equipment such as you mentioned. It spells out the use of a combination of gloss yellow No. 13538 and lustreless black No. 37038 colors.

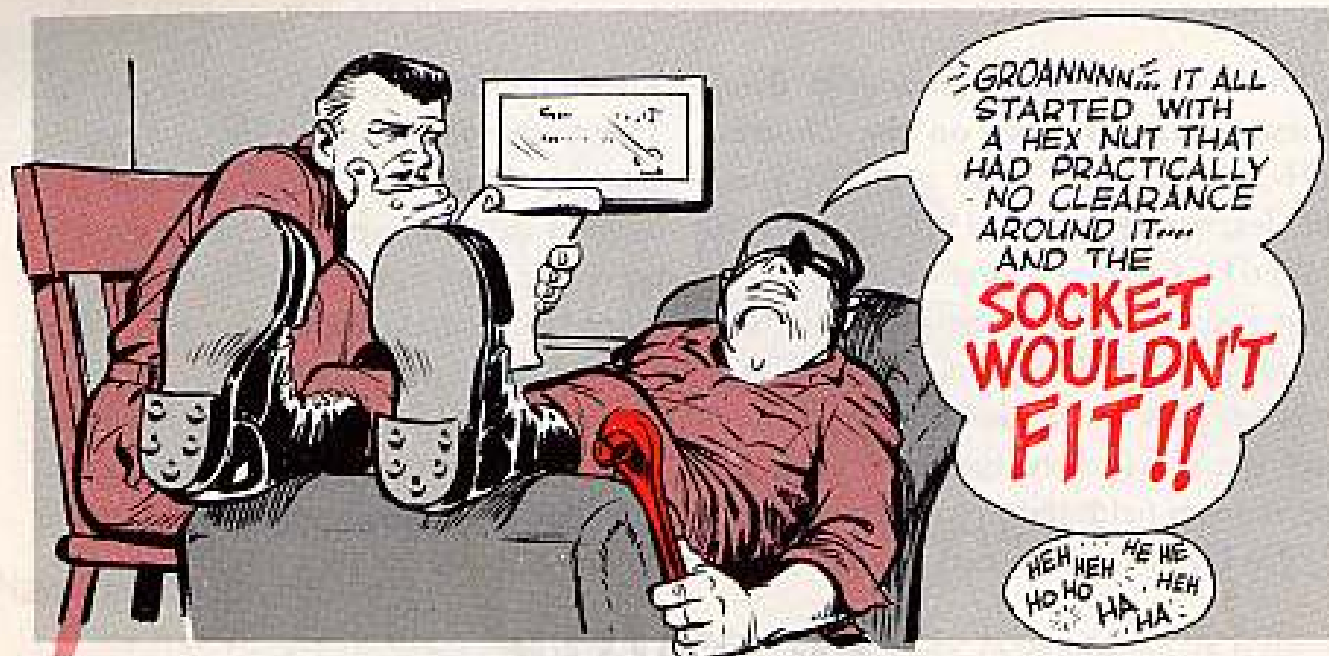
Take a flip back to section IV, para 14, where it tells you how to add the

stripes. Then to section 2, para 7b which says the commander responsible for your equipment can authorize repainting from OD to yellow and black for safety reasons.

From the AR you wander over the Class 8010 in SM 5-5-8000 (Oct 59). Pick out the right FSN for the job. Depends on whether you're painting over enamel or lacquer, and what size container you need.

*Windy Windsock*





## TELL 'EM ON A 1275

Dear Windy Windsock,

I have a problem that's been bothering me and other aircraft maintenance men for a long time. Many of our wrenches (socket and open end) fit the nuts, bolts or whatever they are used on fine—that is, the inside part fits fine but because they're too thick they won't fit in the tight space around the nut.

This is a real serious problem as you can see. Can you do anything about it or at least pass the word to somebody who can?

SFC R. A. W.

Dear R. A. W.,

Best thing to do, Sarge, is to send in a DD Form 1275 (UR) to:

Commanding General  
U. S. Army Transportation Materiel Command  
ATTN: TCMAC-ED  
P. O. Box 209  
Main Office  
St. Louis 66, Missouri



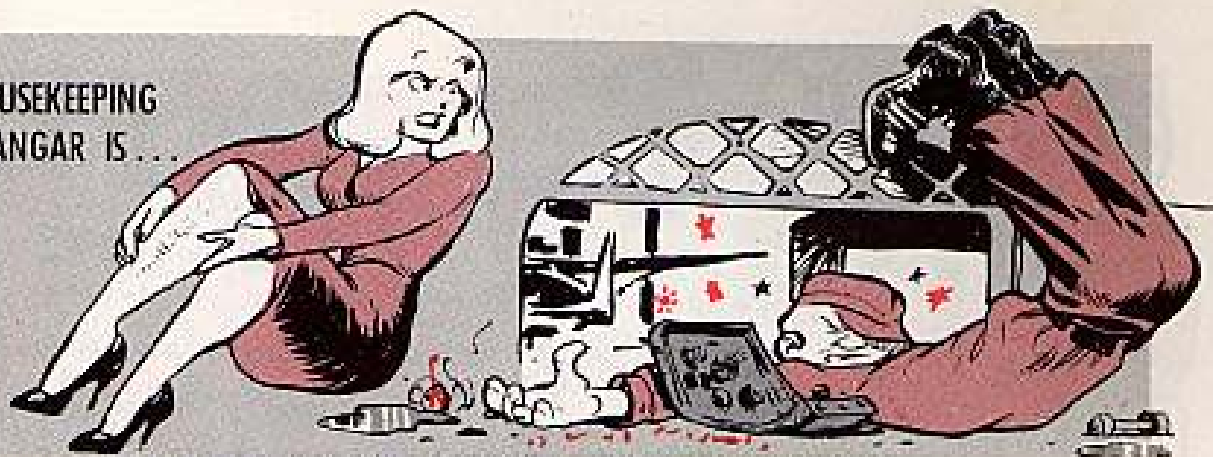
But be sure to give all the info about each tool. That means you include the FSN and nomenclature. Then you tell just why that tool won't do the job for which it was intended.

AR 700-41 gives you the dope on filling out the UR.

Unless you do tell the people responsible for the set, they'll keep thinking you're happy with it.

*Windy Windsock*

GOOD HOUSEKEEPING  
IN THE HANGAR IS . . .



## EVERYBODY'S BUSINESS

Ever see, or hear about, somebody tripping over a hose, taking a flier off a stand or waltzing into an aircraft? If so, maybe some hangar housekeeping's not what it ought to be!

Good housekeeping makes good sense. The lack of it's been the villain

behind a neverending list of broken bones, cuts and bruises.

That's why keepin' your hangar neat and its equipment clean, in good working order, and in a set place is an around-the-clock job.

### CLEAN, CLEAR FLOOR

Take the hangar floor. It's got to be kept clean of dripped or spilled fuel, oil, grease and any other flammable and slippery liquids. Floors should also be clear of all types of equipment, except for items you're using.

Always leave plenty of elbow room for your aircraft.

You can do this by keeping bulky stands, platforms, portable lights, air hoses and other equipment in a marked-off area out of the line of hangar traffic.

Lettering on the floor or wall like **RETURN STANDS HERE** will help



your hangar housekeeping by showing just where the equipment should be when it's not being used. You can even use lines on the floor to mark off storage areas.

You can't be too careful with smaller equipment either, like your tool box. It can really trip you up.



Take the case of a Beaver (L-20) about to be moved out of a hangar. A forgetful type was walking out of the hangar with his tool box when he suddenly remembered he had left his cap behind. So he plopped the tool box at the edge of the hangar door just for a second. His timing was the greatest . . . couldn't have been better if he planned it.

One of the Beaver wing men had his eyes focused on wing clearance with the hangar door when—wham! He came up with a new dance step but managed to stay on his feet . . . no thanks to his hat-less buddy.



There's just no substitute for putting things in the right place—and that includes aircraft.

Aircraft should be parked so the ones being worked on are off the beaten path—so that others will have room to move in or out.

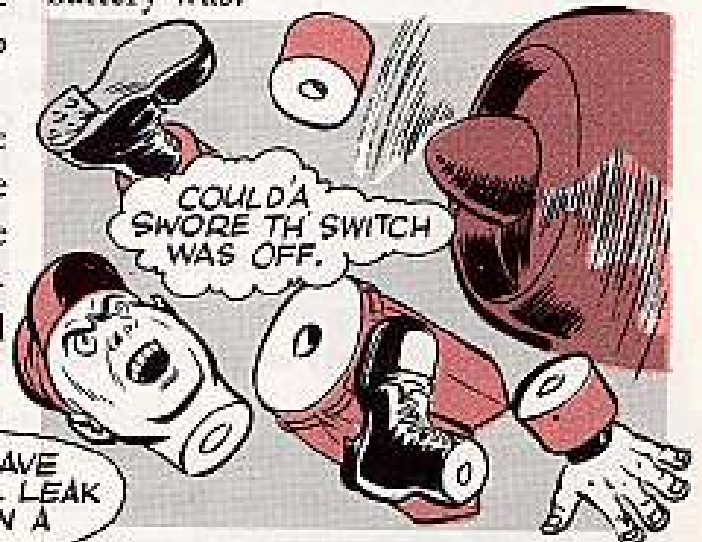
When your bird's inside, make use of all the equipment you have to keep your hangar clean.

Suppose your bird's down in the mouth, drippin' oil from the engine somethin' awful! Your best bet is to use a drip pan to hold the oil. It'll beat cleaning up the floor every few minutes and let you get to the leak pronto.



But before you lift a wrench, make sure you don't have a live bird. All switches on the bird should be off—especially the battery switch. If you disconnect the battery you'll be playing it safe. Because with a flow of juice and the ignition switch "OFF", an engine could still come alive... with a twist of the prop.

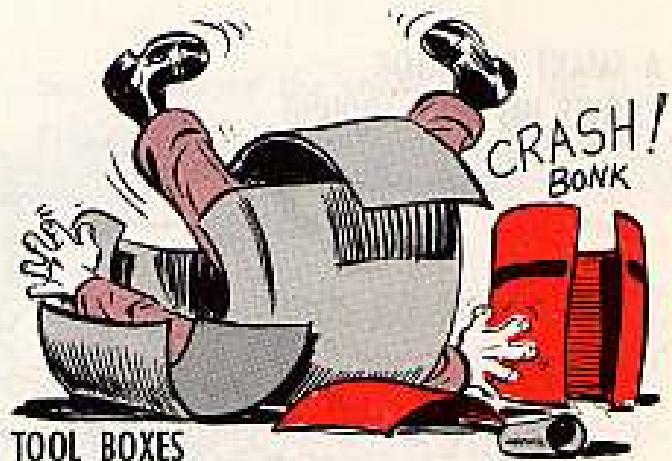
One hangar still echoes with the words of one type who lost his head: "But the ignition switch was off, I tell you—it was off!" Turned out the switch was off. The engine had come to life 'cause the ground from the mags to the aircraft wasn't connected... but the battery was!



When you connect your ground static wire from your bird to the grounding stake in the floor, watch your step. You could be riggin' a booby trap that somebody may trip over. Put some masking tape on the wire and it'll be more visible... help prevent accidents. If you don't have grounding stakes set in the floor you can get your ground connection easy enough. Just tape the wire to the floor. Of course, if you have an overhead grounding cable to hook into you won't have a housekeeping problem.



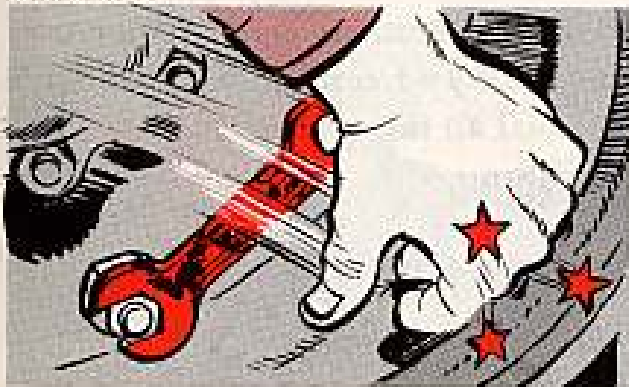
When you're taking parts off the bird—like the cowling—it's good housekeeping to stack 'em out of the way. If the cowling's not going back on soon, you could put some masking tape or cloth streamers on the sharp edges so nobody would walk into them.



## TOOLS AND TOOL BOXES

How about the tools you're using. Any mech worth his salt treats 'em with loving care, right?

This means keeping your tools clean. There's nothin' so annoying as torquing a bolt or tightening a nut with a greasy wrench and losing your grip. You can skin your knuckles real easy in close quarters.



Make sure your tools go back into your tool box. This will cut down on the chances of leaving a wrench in the bird.

Bad housekeeping leads to more fires than you can shake a fire hose at. So don't store highly flammable cleaning materials in your tool box or leave gas- and oil-filled rags around loose. You've got to put flammable materials in a safe place and put dirty rags in a special container that gets cleaned out regularly.

Another thing. Your hangar equipment should be in A-1 shape. There's always danger around frayed electric cords and air hoses and oily stands. If you check the equipment before you use it, your next step won't be your last.

## UP TO YOU

A neat, clean working area is not only a safe area—it can put you in a good frame of mind to do some of your best work.

The trouble is it only takes one to mess up an area. You know the type. He goes around with oil on his shoes, greasy rags in his pocket (to match his coveralls) and grease all over his tools.

He's been lucky to stay out of the hospital, so far. Maybe if you drop a hint he'll see the light before it's too late.

'Course any on-the-ball mech reads the TM's to keep up to date. And TM 1-

1-1-309 (3 Feb 61) "Ground Operation, Service and Maintenance of Aircraft," is a real must.

When it comes right down to it, good housekeeping is everybody's business and everybody should make it his business.



A SMART OPERATOR KNOWS HIS WAY AROUND...

## WINTER EARTH-MOVING



Even old-timers find the going rough when the temperature takes a nosedive and the cold wind sweeps down from the north.

With roads still to be completed, bridges to be built, and ranges to be constructed and maintained—you know you've got to get the best out of your heavy equipment.

And, even with the best—it's still no picnic.

Time was when winter meant a shutdown in operations and all your construction equipment went into storage during the deep-freeze months, but that's in the long gone past. Now, it's business as usual all the year round.

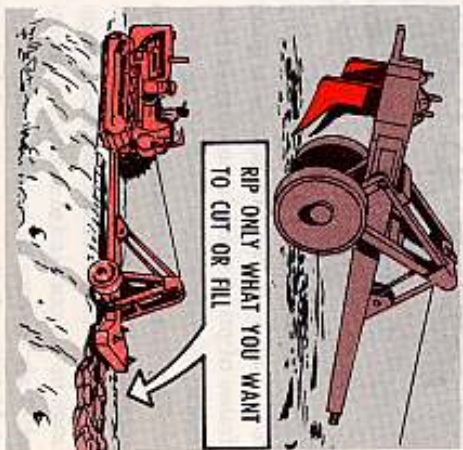
### THE COLD, HARD GROUND

Frozen ground is one of the chief roadblocks in making cold weather earth-moving production pay off. In order to take a sizable bite out of the frozen earth, most times you have to break through with a ripper or rooker.

Since you can't move dirt with a ripper and it's just a means of getting at the job to be done, try to keep ripping to a minimum. Rip a small area and bring it down to grade with a dozer before you make the cut any bigger. This way you'll only have to rip each section once—not a half-dozen times.



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Fills are worked in the same way—by bringing a small section up to grade without any lost time before the ground gets a chance to freeze solid.

## OPERATIONS



You can make good use of an angle-dozer, too. By sidecasting, the corner of the blade will dig in and give you a start—or you can run one track of your dozer up on a log or mound of dirt to get the same result.



Move forward and backward until the cutting edge wears through the frozen layer of earth. Then, bring the edge under the frozen layer and lift the blade.



You can make the snow work for you in the battle against the frozen ground. By letting the snow act as a blanket, it'll keep the heat in the ground and will cut the depth of the freeze in half.

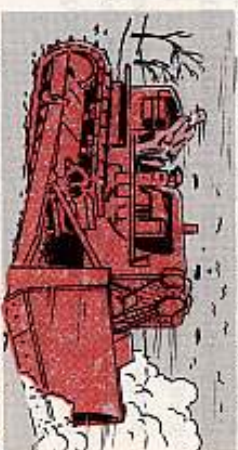
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So, just move the snow from the area you're going to work in one day. Leave the rest of the area covered until you're ready to work it.

### THE WINDS DO BLOW

Winds can have the same chilling effect as a quick drop in temperature. A 20-MPH wind makes you feel just that many degrees colder. Don't buck the wind while you're operating—if you can help it.

Plan your job so you can do as much operating as possible with your back to the wind. Sometimes, you can doze with your back to the wind and make a quick return trip in reverse... still keeping your back to the wind. Natch, you'll have to face the cold blast long enough to see where you're going.

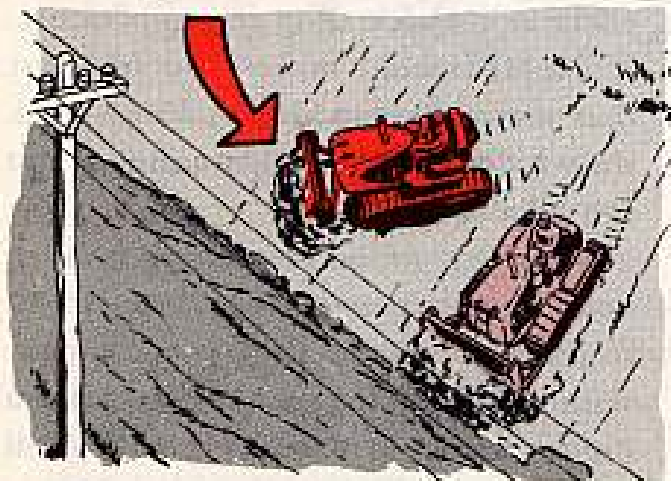


Course, you've got a good deal if you've a winterized rig—complete with cab and heater. But, take extra care to make sure all exhaust and manifold connections are leakproof. Also make sure you don't have any oil or grease leaks around the deck area. You can do very easily without any carbon monoxide or oil fumes.

### TAKE IT SLOW AND EASY

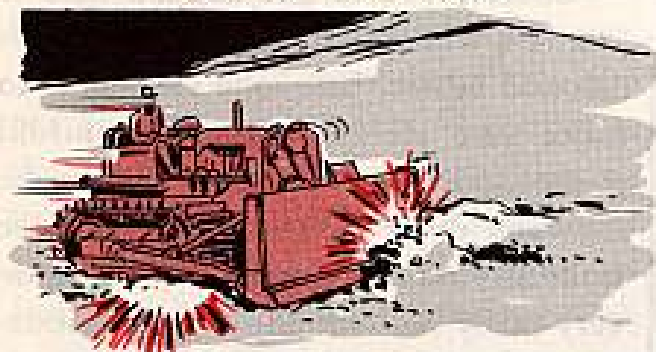
Winter operation also means extra care has to be taken in handling your equipment. Since the ground doesn't

allow much traction, side hill work can be tricky. Whenever you can, keep your tractor at right angles to the slope so your tracks'll dig in and grab. Moving across the side of a slippery hill or frozen slope could be your ticket for a quick slide to the bottom.



Frozen ground can be as hard as a concrete slab. When you ride over a good size rock or pile of solid dirt, you'll find that the frozen earth will give you about as much cushion as a sledge pounding a chunk of granite. Not only can this jolt you right to the teeth, but it also shakes up your rig and could cause serious damage.

### AVOID THE ROUGH



Take it easy. Travel over rough ground at reduced speed. Better yet, stay away from or steer around rough areas. It's a good idea to leave the work area smooth before shutting down. This won't give the churned-up mud a

chance to freeze into rough mounds and ruts.

### SHUTDOWN CARE

Any time there's a possibility of a winter freeze on your job, park on high ground and on a plank when you shut-down to keep from being frozen or mired-in next day.

Be sure to clean the tracks of a crawler, including rollers and other track components. As you know, it's almost impossible to remove mud that's frozen and caked on, and it only takes a short time to ruin an idler or roller that's held in place.

If you're playing jockey to a rubber-tired rig, don't forget you've a cleaning job on it, too. If you're using a scraper with fenders, clean out the mud to prevent damage to the tires. You might have to do this a couple or three times a day on some jobs. Also clean the area around the mechanism that operates the apron and bowl. Frozen mud could shut you down but good. Besides, clean equipment is easier to inspect for worn or damaged parts.

### KEEP YOUR SEAT DRY

One last hint . . . before leaving your machine, cover the seat—or prop it up—and the operator's compartment with canvas, cardboard, or plastic, so that you'll have a dry work area in the morning.

A frozen or wet seat doesn't make for the most comfortable operation.



## BRR...BRR...IT'S COLD OUTSIDE



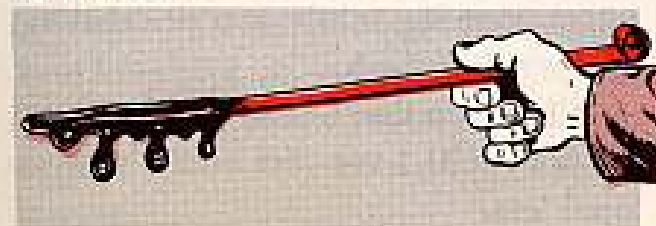
Naturally, you followed the LO for your Engineer equipment and changed your engine lube to OES (subzero engine oil) when the thermometer started flirting with the  $-10^{\circ}\text{F}$  mark.



So, you're OK.

'Course, this is as it should be. But, there's a couple of things to keep in mind when you've got OES circulating through your engine.

First off, your oil consumption will probably go up. No need to get shook. You always give the dipstick a look-see before you start operations and when you shut down anyway, so just make an extra check or two during your work breaks. That way... you get an idea of how much oil you're using — then you'll know how often you ought to check it. Better an extra look at the dipstick than to get caught short and have to shut down in the middle of an operation.



Dilution and sludge will also increase, so your oil changing times will probably start coming closer together than with regular oil.

Diluting the OES is strictly no-go. Anything less than full strength will cut down the lubing, cooling and sealing job it does.

### ENGINE OVERHEATING

Engine overheating is not good.

Idling for long periods of time can cause your engine to overheat, so speed it up enough during idling to make sure you have normal cooling and oil circulation.



The flash point of OES is  $290^{\circ}\text{F}$ —that's when everything can go... whom!

This is much lower than the  $360^{\circ}\text{F}$  flash point of heavy duty SAE 10 oil. So, you can see that it doesn't take a whole lot to overheat the engine to a point where it can be dangerous—especially in air-cooled engines.

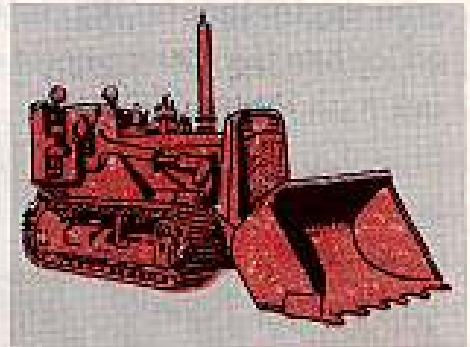
## FOLLOW THE SIGNALS

**TURN  
OFF  
WHEN NOT  
NEEDED**

Glow plugs can give you a lift in starting rigs like your IHC TD-6 tractors, but the plugs'll burn out in a hurry if you keep 'em glowing too long.

Just keep 'em on long enough to do the job—then when the engine's knockin' off the RPM's, douse the glow.

Here're the starting signals for your TD-6 (62).



### READY... SET

1. Turn on your glow plug switch for about a half minute or let 'em on for about a minute and a half when it's real cold, but no longer.

2. Eyeball the glow meter to see that the needle has shifted all the way to the right and you know all the plugs are ready to do their job.

3. Now, push the starter button.

4. When the engine catches hold and is carrying the ball without interference, wait a couple of seconds and switch the glow plugs off.

### A SLOW START

No need to go into a huddle if the engine doesn't start when you first push the starter button. Crank 'er for about 15 seconds, then wait for about a half-minute to give the cranking motor a chance to cool off. Then, try again. But, don't crank 'er for more'n 15 seconds

at a crack.

But remember—you keep the glow plugs glowing while you're cranking and waiting, both.

When you don't need 'em, turn 'em off so you'll have 'em when you do need 'em.

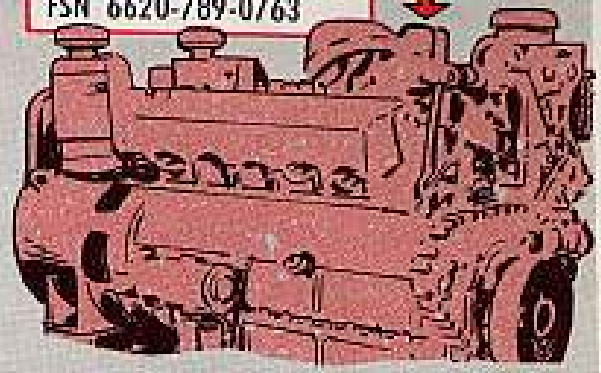
## RUN 'EM HOT

You'll get better performance from your Cummins Model MVH-12-G-150 KW-AC generator if you use higher range thermostats to bring the engine up to operating temperature.

If your engine's operating at too low a temperature, you'll want to requisition a pair of thermostats that'll raise the temperature and give you a smoother running engine.

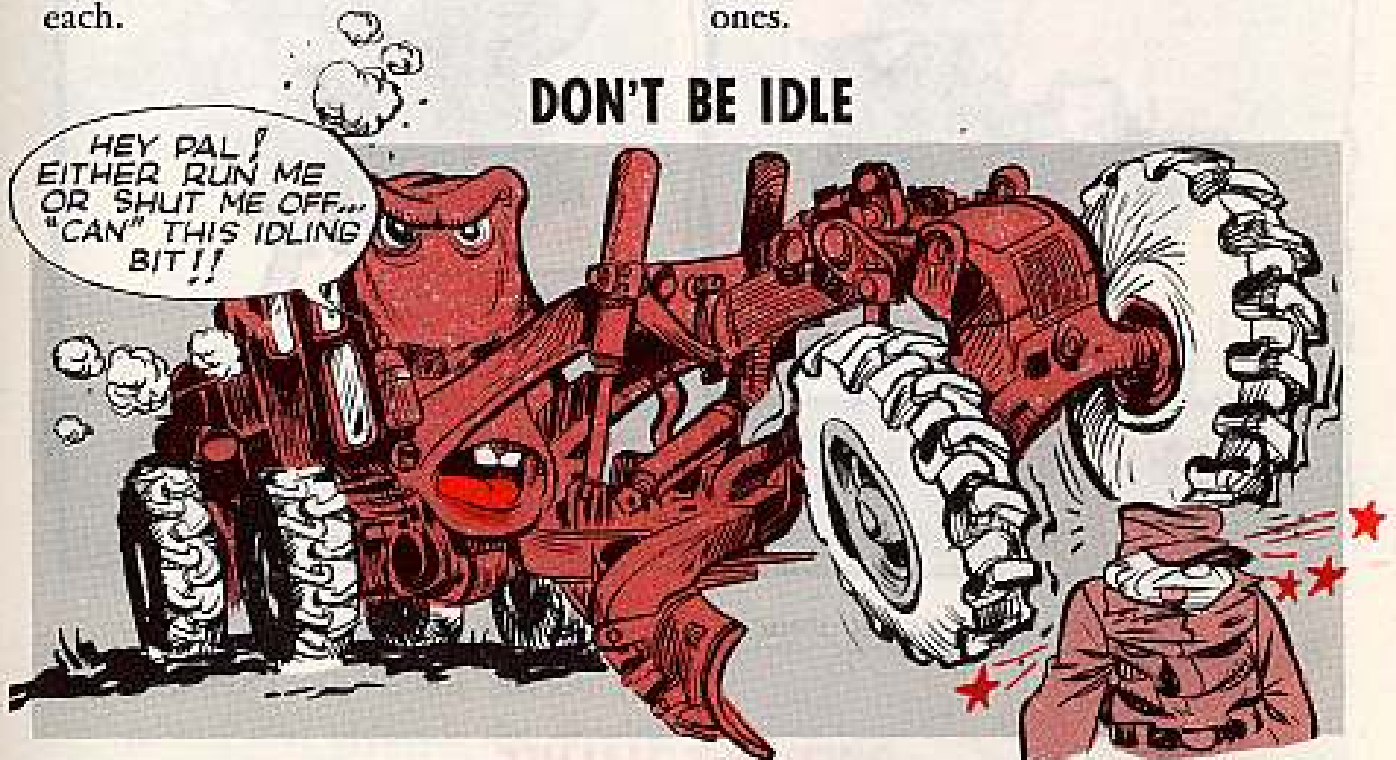
Here's what you need: Thermostat, Flow Control (2), FSN 6620-789-0763. You can get them through regular Engineer supply channels. They cost \$6.97 each.

REPLACE WITH HIGHER  
RANGE THERMOSTATS (2)  
FSN 6620-789-0763



Follow the instructions in TM 5-6115-292-15 (Feb 61) when you remove the low operating range thermostats and replace them with the new ones.

## DON'T BE IDLE



You're asking for trouble when you let your Huber-Warco Model 4D grader idle with the transfer drive gearshift in neutral.

With the engine running and the transfer drive in neutral, the lower gears don't turn and, natch, they can't carry or splash lube on the upper shaft bearings.

This means that the bearings and seals on the upper shafts are going to take a beating.

Too much idling can mean a sidelined rig. So, when you take a break—shut 'er off.

Don't let 'er idle when you're idle. It's a lot easier to start 'er up again than it is to replace bearings and seals.

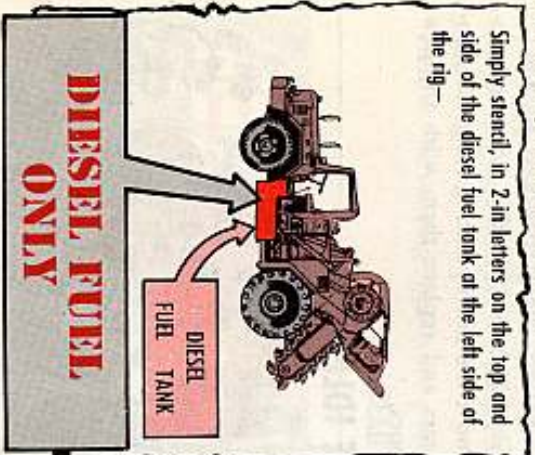
## PUT IT IN WRITING

You've got two main tanks on a Model 4262 Unit Rig trencher—right? One for diesel fuel and one for hydraulic oil.

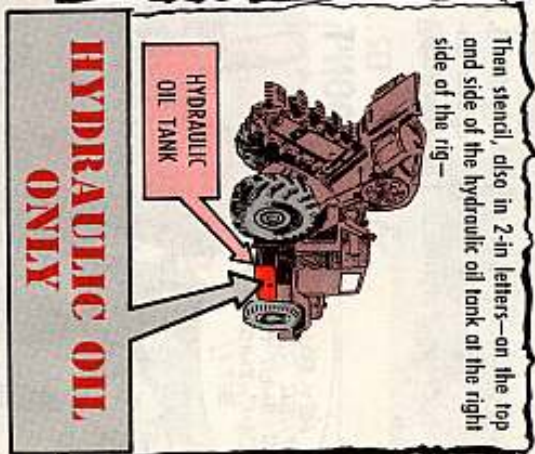
Goes without sayin' there'd be one ear-splittin' flap should some far-gone type fill the hydraulic tank with fuel oil—or vicey' versa.

Better scratch that chance before some such revolvin' development fouls the works on your unit trencher.

Simply stencil in 2-in letters on the top and side of the diesel fuel tank on the left side of the rig—



Then stencil, also in 2-in letters—on the top and side of the hydraulic oil tank at the right side of the rig—



Never spare the stencil when it'll save you a flap.

## OPEN THE VALVES

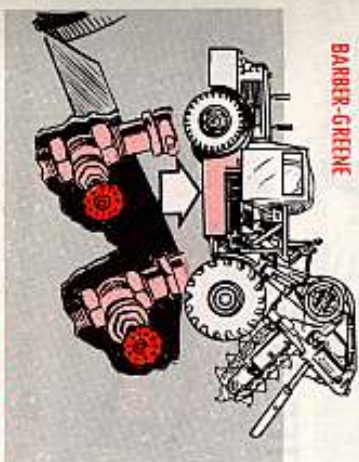
Your Model 4262 Unit Rig and Model 750 Barber-Greene high speed trenching machines have independent operated hydraulic systems for the crowd and hoist circuit, the conveyor circuit, and the steering power assist circuit.

On each of these machines, the cut-off valves for these circuits are located on the inboard side of the hydraulic tank.

Make sure these valves are open before you nudge the engine starter button.

You don't want to start or run the engine on this equipment with the hydraulic valves closed. If you do... you'll have a burned-out hydraulic pump to replace.

### BARBER-GREENE



### UNIT RIG



## TAKE A GOOD BITE

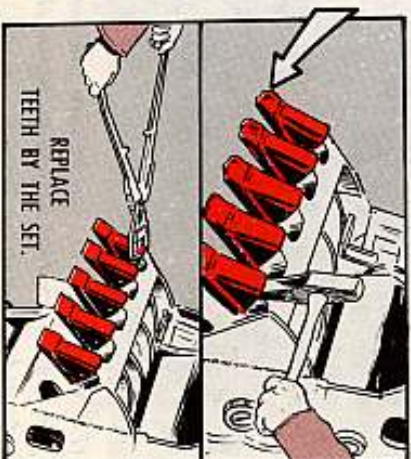
Makes no never-mind how rugged or high-powered your earth-digging equipment may be, it needs good, sharp teeth to bite off king-size chunks of real estate.

This goes double for your high speed trenching machines.

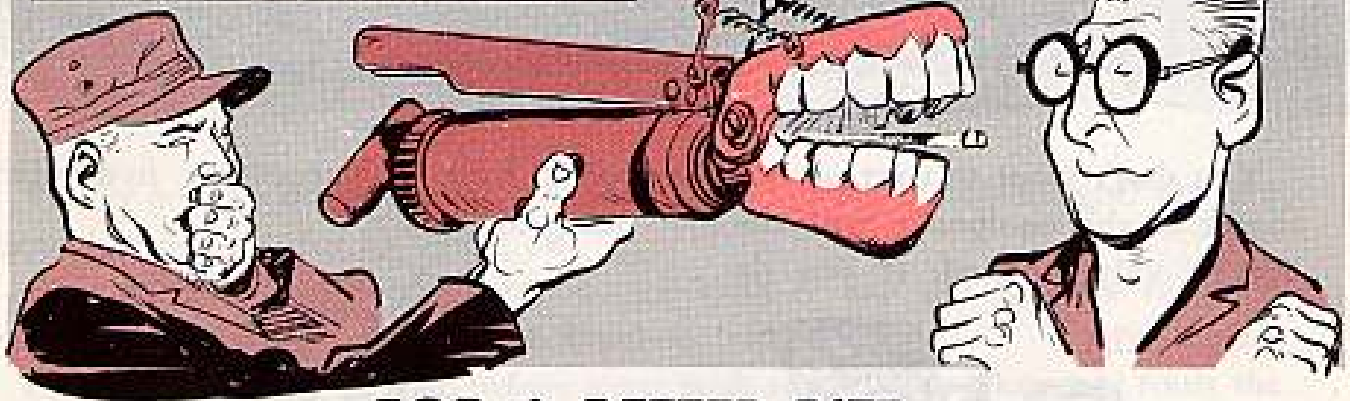
Take your Unit Rig, Model 4262, as a frinstance.

When the teeth in the bucket line get chawed and blunted, the digging speed is cut way down, you waste power, and it makes for extra wear and tear on the sides of the bucket, the bucket pins, and the drive mechanism. Loose, split, or broken teeth play hob with your payload, too.

Rebuild or replace teeth when the cutting edge has worn down 1½ inches. But, remember, you replace teeth by the set—not one at a time.



# CONTRIBUTIONS



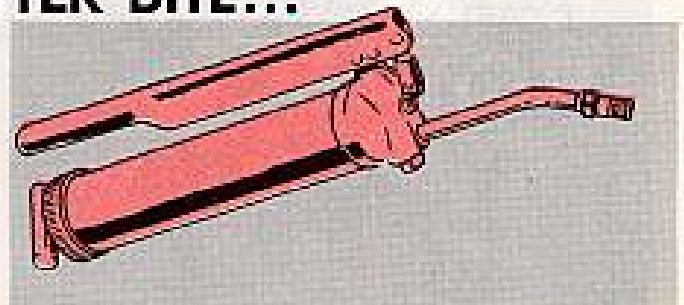
## FOR A BETTER BITE...

Dear Editor,

Some of the grease guns we got under FSN 4930-223-3391 — the kind that come as OEM on combat vehicles — don't couple up right with the lube fittings. The jaws don't grab a good hold.

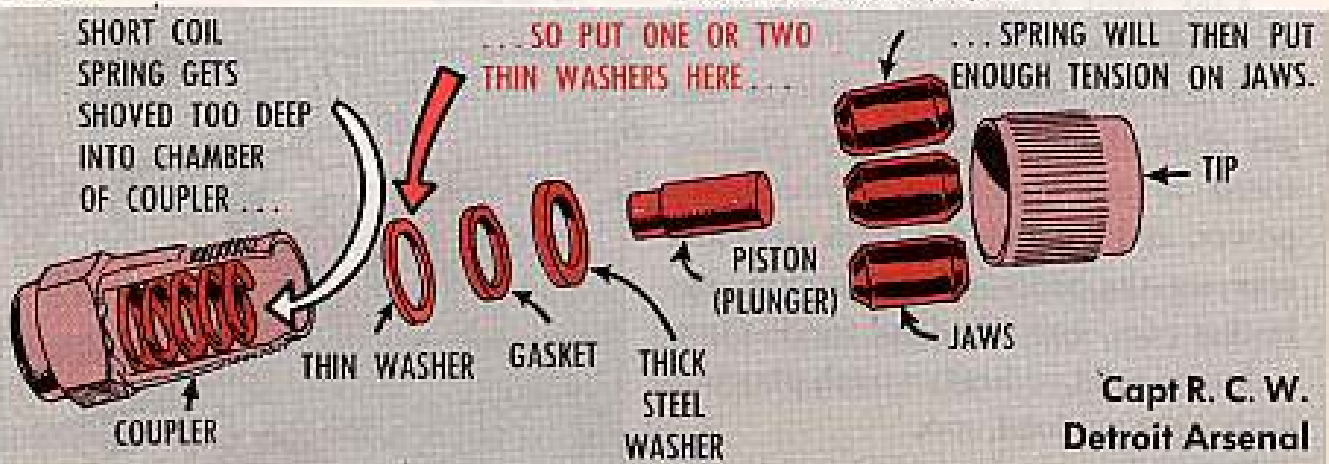
Seems the main trouble is the small coil spring that's a part of the coupler on the end of the extension. It gets shoved into the inner chamber of the coupler so far that it can't put enough tension into the jaws to keep 'em from popping off when the lever's pumped.

Well, here's how we created enough tension to make the jaws take a good hold:



We took a steel washer or two of the same size and put them between the gasket and the spring before putting the coupler together.

If the washers don't do the trick, then you know the jaws are worn out or some other part in the coupler is shot. You can replace the jaws with FSN 4930-387-9497 (QM) and the coupling with FSN 4930-387-9491.



*(Ed Note—Good . . . but be sure you fire off a UER on the make and model of this gun. That's the best way to point out that it's defective and should be corrected soonest by the manufacturer.)*



# SCORPION TRACK REMOVAL



Dear Editor,

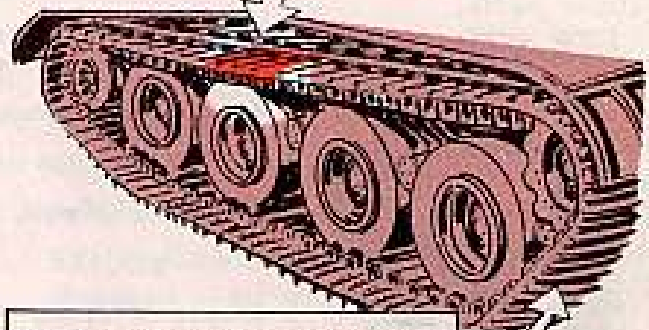
I don't agree with the section on track removal on page 165 of TM 9-2350-213-20 (June 58).

It says to break the track between the drive sprocket and the front road wheel.

For my money that is doing it the hard way.

You can do the job in half the time if you hook in the track fixtures near the upper center of the track like I show you here.

Hook on track fixtures here.



The TM says to hook on track fixture here—but it is a lot harder.

R. F. McKibben  
Fort Bragg, N.C.

*(Ed Note—We're with you; we tried your way and it really works.)*

# SCRAMBLED SCREWS



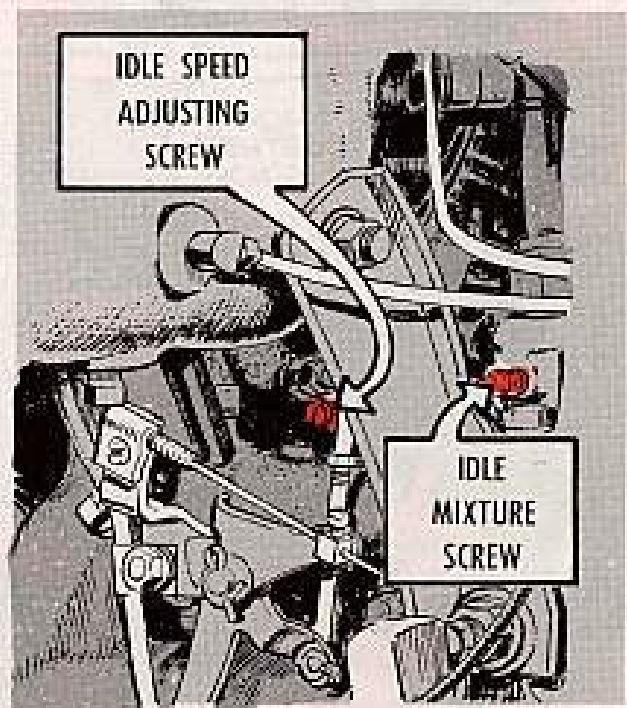
Dear Editor,

Identification tags on carburetor idle screws on the G741-series 3/4-ton vehicles are reversed in Fig 70 of TM 9-8030 (2 May 55).

The idle speed adjusting screw is on the left. The idle mixture screw is on the right on these carbs . . . right?

IDLE SPEED  
ADJUSTING  
SCREW

IDLE  
MIXTURE  
SCREW



WHO'S  
ON  
LEFT?



ME... LEFTY!!  
YOU'RE ON  
RIGHT, SEE!

Sp4 Robert A. Miller  
Ft. Stewart, Ga.

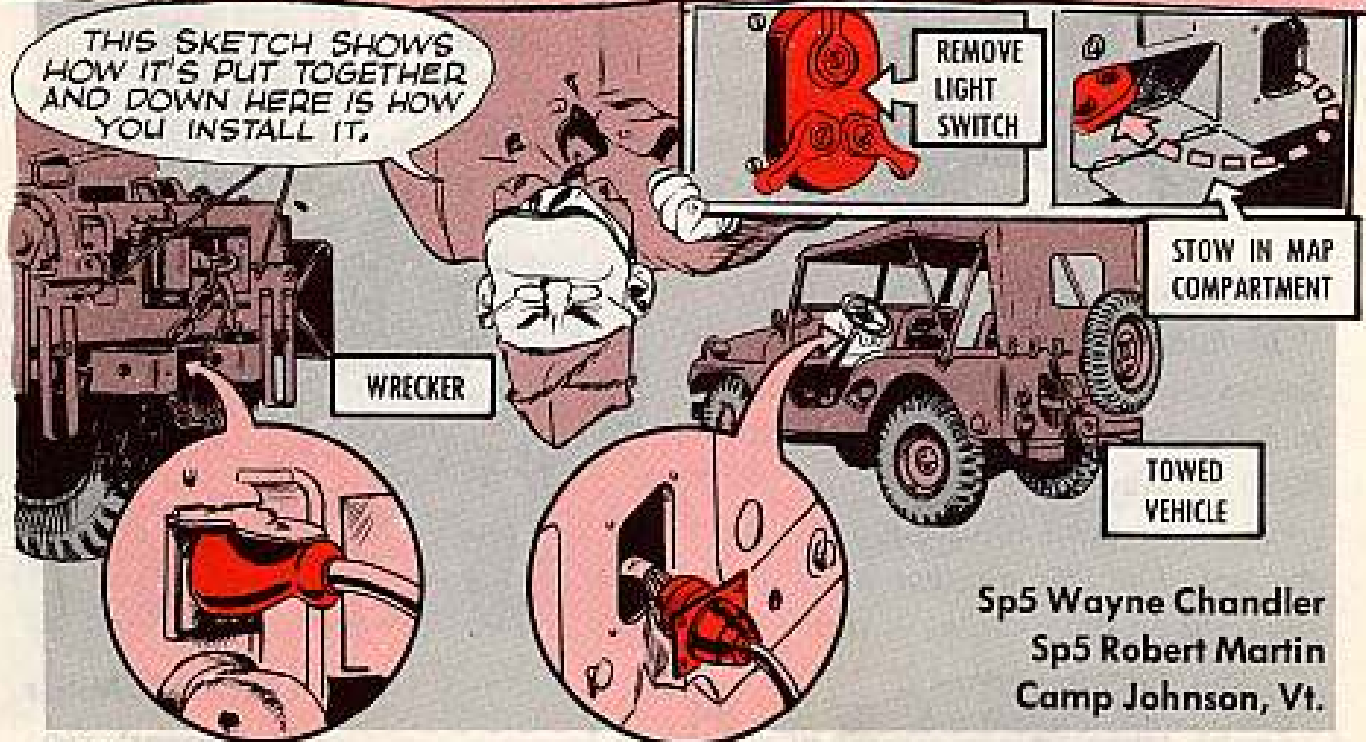
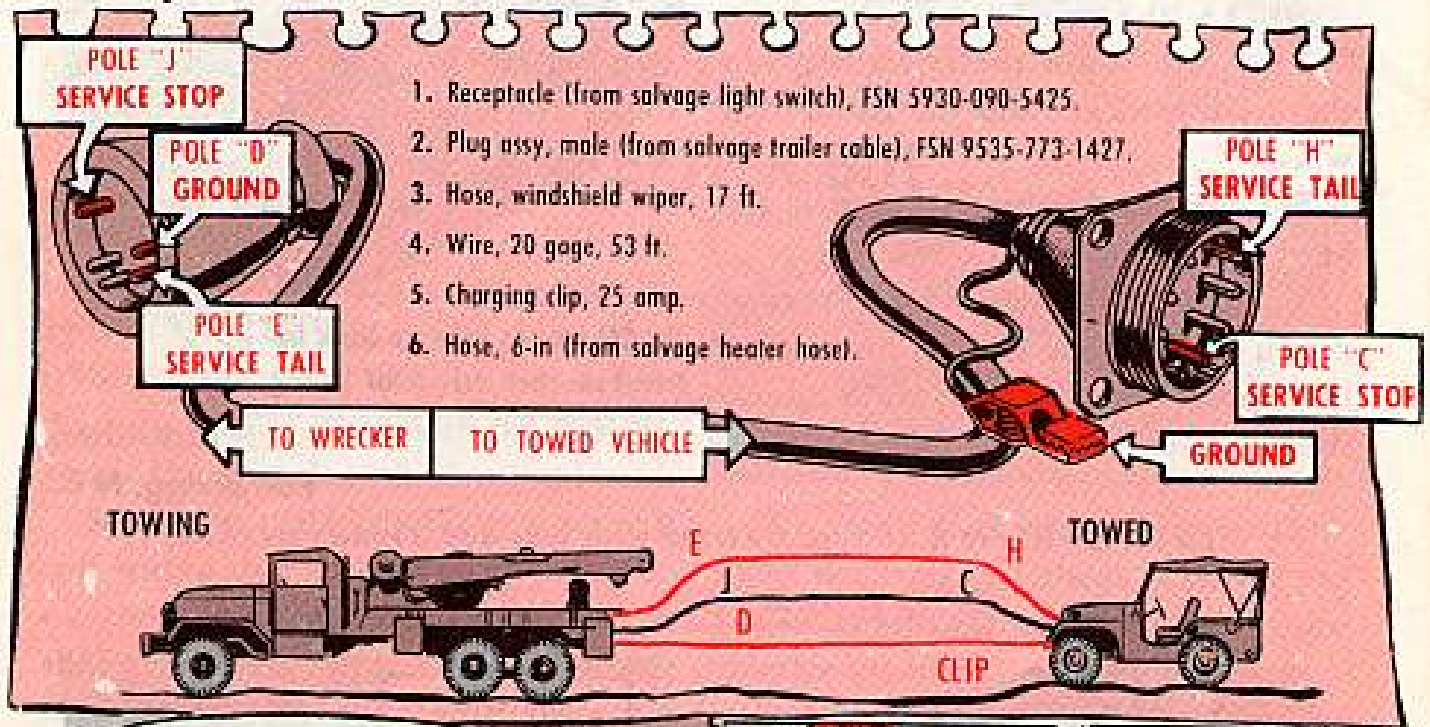
*(Ed Note—Righto . . . it's a sharp eye you've got. Note, tho, that the screws're tagged right in items A and H of Fig 102 of the TM.)*

# SAFE TIE, SAFE TOW

Dear Editor,

Here's a cable we've fabricated in our shop for use when towing a disabled vehicle. Plugging one end of the cable into the trailer receptacle of the towing vehicle and connecting the other to the harness back of the light switch on the towed vehicle gives us both tail and stop lights on the towed vehicle.

All you need to make one of these safety connectors is a little time and these parts:



(Ed Note—Good deal. But 20-gage wire's a bit light. You might use 14-gage wire like the TM's recommend for added electrical wiring. O'course, that would also call for a bit larger hose.)

# Connie Rodd's

## BRIEFS

I TOL' YA TO CHECK THAT VEHICLE BEFORE YOU LET CONNIE TAKE IT OUT IN THAT SNOW STORM LAST NIGHT!

### *Right ramp*

Get the right ramp for your M172 or M172A1 semitrailer. And here's the right name and number you'll need: Ramp, loading (welded), FSN 2510-353-6354 (ORD). You'll need two for each vehicle.

### *Shedding the light*

Looking for the word on just what military-designed transport vehicles you can buy directional signal kits for on local purchase and how to install them? Check SB 9-203 (July 1961) for the complete story.

### *Firing lock scoop*

Hey you artillerymen—have the new M34 firing locks on your M53 155's and M55 8-in SP howitzers got you a little on the confused side? The M34's replace the old T-95 locks and the complete scoop on them is hot off the presses in Change 2 to TM 9-2350-210-12.

### *Got your number*

Older model M49 and M49C gas tanker trucks still need the catwalk filter after you've had MWO 9-2300-217-30 (9 Jun 59) applied. Tankers starting with Serial No. M49265 (Studebaker or Curtiss-Wright) or No. 140700 (Reo) don't need the catwalk filter, 'cause they got factory-built changes in pipes and meters. Note this when you're using TB 9-2300-229-10/1 (19 Jul 60).

### *M60 tank tip*

Never, never, never keep the starter on your M60 tank grinding away after the engine catches on or you're likely to grind up the starter jaws. The same thing could happen if you hit the starter switch before your engine is entirely stopped. And any time you have to hit the starter again—because the engine died or didn't catch, or maybe your hand slipped off the button—**wait!** Wait **at least 10 seconds** before you try again.

### *A closer look*

You don't have to climb into your M7A1-6 tank flame thrower to study the flame gun operation plate. Change 3 (5 July 61) to TM 3-1040-206-10 gives you the info that's on the instruction plate... plus more.

### *Use oil, not grease*

Have you been using GAA in the road wheel hubs on your XM501E1 and XM501E2 Hawk loader-transporter—the way Note 5 says in LO 9-1450-500-10 (10 June 1960) and TM 9-1450-500-10 (13 April 1960). Take a look at page 83 in TM 9-1450-500-20 (26 May 1960) and you'll see it says to use OE in the hubs. Which one to use?? OE—that's what you use.

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

THIS  
YEAR  
WE'RE  
GONNA  
KEEP 'EM!



And  
Resolve  
**I** resolve to keep my  
equipment combat ready  
at all times.

**I** resolve to keep my  
publications for my  
equipment on hand  
at all times.

**I** resolve to remember  
KYCPHOI (Keep your  
cotton-pickin' hands  
off it) if I'm not  
authorized.

**I** resolve to follow  
my equipment's TM  
while doing  
maintenance.

**I** resolve to use the  
right tools in my  
work.