

you want it handled as an exception-type request. it's the latest. And, if a number's not in the AMDF, you forget it unless when your supply request is checked against your DS's AMDF, you know That means that the numbers in the AMDF are IT . . . the last word. So, IS OUT: a. Updating. All segments of the AMDF will FOOT BAOT 2 BUSHES

THE WORD

unless otherwise stated in the letters of transmittal

over like or conflicting data published in other authorized Department of the Army publications

Data furnished in the AMDF holds precedence



THE PREVENTIVE MAINTENANCE MONTHLY IN THIS ISSUE

M151A1 Multituel Trucks GROUND MOBILITY 2-19, 37-46

New Fuel Fitters 10-1 Hydraulic Fittings 17

MI Collimator FIREPOWER 20-27 45 Cal

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47 AB-577/GRC 48 TT-76/1/QGC 48 Commo Scoum

XM27EL Subsystem AIR MOBILITY

EETT

5 KW Generatur 53 Engine Decai 63 GENERAL AND SUPPLY Generator Pub 64 WABCO Grader 64

Use of beats for printing of this publica-tion has been approved by Headquarters, Department of the Army, 25 February 1968. Supply 1, 4, 13, 14, 15, 17, 18, 20, 21, 22, 44, 45, 46, 53, 54

before they're printed. That includes

PS are checked out against the AMDF

brand new numbers, too.

Happy maintenance with happy

know that all FSN's that appear in

DISTRIBUTION. In accordance with re-quirements submitted on DA Form 124.

supply! 700-30 (Jun 68) to use with the P.S. - You'll need a copy of SB

Part Knox, Ky DS Magazine, Soft Half-Mast

40/21



## BONE YARD SUPPLY

After a while, you'll start leanin' on your cannibalization point for a lot of repair parts. This's part of the special maintenance policy you'll find in TB 750-98-23 (Dec 68), Appendix B. This's the same policy that spells out "maintenance expenditure limits" for the M38A1 and M151A1 1/4-ton trucks and others in the G740-, G758- and G838-scries 1/4-ton families.



You'll find your Prescribed Load Allowance of repair parts in the -20P. Now let's see what's really under all that OD paint, starting at the front.



YOU

HERE AGAIN? ... YOU PRETTY

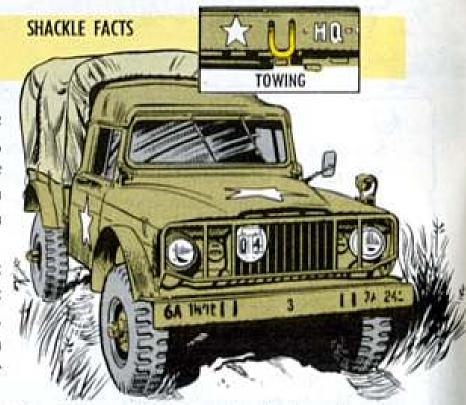
STEADY

CUSTOMER,

JOE!

When you're not using those front shackles for towing, they stay mounted behind the bumper. Then they don't mash into the bumper if you happen to "kiss" another vehicle.

For towing, you remount your shackles hangin' out through the bumper slots. Then you can hook up to 'em with the towbar on an M62 or M543 5-ton wrecker.



Towing front-wheels-up calls for lifting with the wrecker hook at the center of the bumper after attaching the towbar to the shackles. When towing your 5-quarter backward, make sure the towbar's hooked to the shackles under the rear bumperettes—not above, or the towbar will mash into your 5-quarter's tailgate.

To tow rear-wheels-up, loop a tow chain through your 5-quarter's towing pintle and over the wrecker's hook





— with the towbar latched onto the shackles under the bumperettes.

You hang your front shackles out through the bumper for flatcar tiedown. If you have your shackles behind the bumper, they'll strain against the bottom edge of the bumper and bend it.

## **BRUSH WITH RUST**

Take a squint at that tubular brush guard. If you've got one without drain holes, make holes like the new production jobs have . . . it'll save you from rust problems.



Lug nuts need plenty of tightening to keep your wheel snug on the hub—300 lbs-ft.

If you don't have a torque wrench handy, just figure that's about as much torque as the average guy can put on with the truck's OEM lug wrench—but no standing or jumping on the wrench.

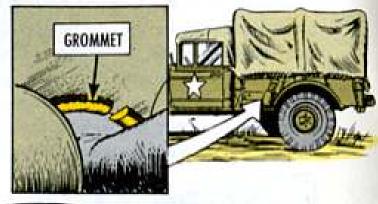
And make sure the studs are centered in the lug nut holes before you tighten the nuts down. If you don't have full-circle support on those nuts, you'll find your wheel bustin' up around the holes.



DRAIN HOLES



If you get a new 5-quarter, check rightaway to see that the rubber grommet's installed proper-like where your fuel filler hose comes through the body. If your grommet's slipped part way out, the sharp metal edge of the hole will slice right through your flexible filler hose. Work the grommet back in so it





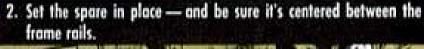
There's no need to run your spare tire retainer bracket up as far as you can muscle it. Some guys've bent the retainer clean out of shape—even running the mounting bolt right through the top of the frame.

Here's the right way to install your 5-quarter's spare tire 'n' wheel:

Turn the bolt down —
just far enough so
the retainer can latch
onto it.

BOLT BUSTIN'

THRU FRAME





3. Latch up the retainer bracket to the bolt.

4. Now take it easy when you're tightening 'er up. When you've got the bolt turned up so the retainer's pressin' good'n'snug against the tire, quit! This pressure will act just like a split lock washer to keep the bolt from backing out.

### FROZEN NUT?

You can't see it, but there's a nut welded inside the frame where your spare tire retainer bolt screws in. If you don't keep a little lube on that retainer bolt, it can rust and freeze in the nut. Then when you try to turn the bolt, the nut busts loose—and you can't get the bolt out. So you're in a fix.

But here's a fix for that fix. Cut off the head end of the bolt. Fish the other

end of the bolt (with the nut) out of the frame. Get a new 9/16 x 12 UNC hex nut and weld it on the outside of the frame, in line with the hole. Add a new bolt, 9/16 x 12 UNC, 5.06-in long and threaded 3.72 inches (you may have to add threading to get this much). Then you're back in business.

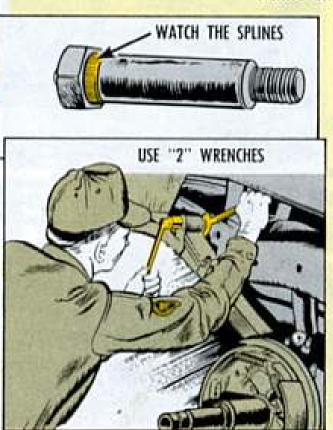


## EXTRA SPARE TIRE

Nope, your 5-quarter's spare tire 'n'wheel won't fit the 3/4-ton trailer you're towing. So, if you're going on a long haul, your CO may want to authorize you to carry a spare tire'n' wheel for your trailer. Your "can" point should have plenty of spares — tires'n'wheels from 3/4-ton trucks. And you'll need a lug wrench to fit, too.



### SPRING SHACKLE BOLT



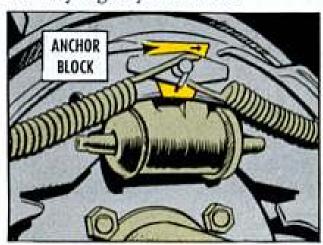
Pity that spring shackle bolt when some guys get ahold of the head end with a wrench and give it a twist—they shear off the splines that hold the bolt firm in the shackle. Then, if it's put back in this shape, spring action will probably turn the spring on the bushing where there's no lube. The bushing's supposed to turn on the bolt where there is lube.

Save the splines by holding the head end of the bolt steady with one wrench while turning the nut off the other end with another wrench. Puttin' the bolt back, hold the head end with a wrench and turn the nut on with your other wrench.



#### GIVE 'EM A BREAK

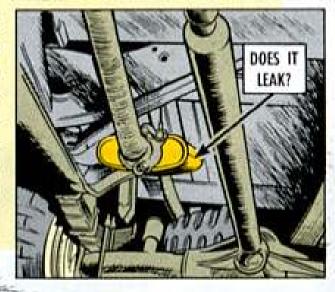
Brake shoes on your 5-quarter are different from what you'll find on other tactical wheeled vehicles—the front, or primary, shoe in each wheel has a shorter lining than's on the rear shoe. Make sure you install 'em that way—and they'll give you a brake.



And if you happen to have that brake shoe self-center anchor block off the backing plate, make sure you put it back with the arrow pointing toward the front of your 5-quarter. Otherwise, your brake shoes won't fit against the drums like they're supposed to — and you'll get quite a surprise when you want to stop quick!

### A REAL GASSER?

Now for a look at your muffler. Some have cropped up with leaks along the seam. A little leaking's no sweat, but a lot of that carbon monoxide gas pouring out right underneath your 5-quarter can put you to sleep permanently—especially if you're sittin' still with the engine running, like during radio operation.



I TELL
YOU
GEORGE...I
HEARD A
PUFFING
ALONG THE
SEAM OF
THE
MUFFLER.

MAYBE WE SHOULDA GOT A NEW ONE! Next stop — your rear transmission support.

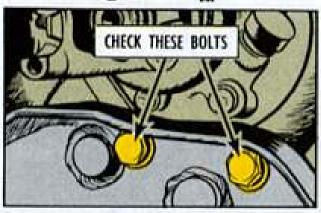
Lube seeping down around here may mean the support bolts that hold the rear mount to the transmission are loose. Get 'em checked or tightened. And make sure there's a breather on top of your transmission.

Speakin' of transmission lube, too much GO (gear oil) can mean no go. Your LO says to fill your transmission just up to the fill hole. It's not easy to get in more—but it's been done. What happens? Gear lube works out of your transmission and into your clutch. With a slipping clutch, you go nowhere—except into the shop for replacement of the clutch.

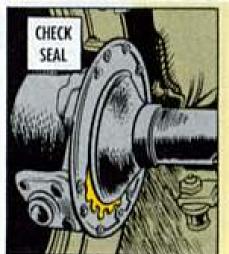
So take it slow'n'easy when filling your transmission—just to the fill hole and no more!







Another thing that'll put the skids on your clutch is forgetting to take the drain plug out of the bottom of the flywheel housing. With the plug installed, any oil getting into the housing will build up and give your clutch a bad case of slip-itis. Unless you're fording or driving through a lot of water that flywheel housing plug stays in your glove compartment.



## SLOPPY KNUCKLES?

Scoot up'n'peek at your steering knuckles. You may find 'em slopped up with GAA weepin' out. Or it may be GO seepin' out of the differential past the inner oil seal. This stuff'll thin your GAA so you have both runnin' out.

So you have to clean and repack. And be sure to check the inner axle shaft seal — replace it if it's bad.

Now back on your feet'n'let's hang into your 5-quarter's engine compartment.



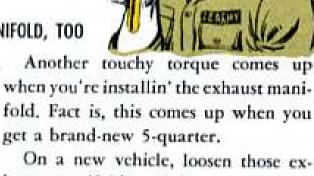
#### **COVER CAUTION**

Take a gander at your cast aluminum rocker arm cover. You're probably wonderin' about cast aluminum crackin' if you turn those cover retaining nuts down too far. You're so right!

That's why this should be stencilled on your cover: RETAINING NUTS 5 TO 7 LB-FT TORQUE.

Any more'n that 'n' she'll split like an overripe melon! Or, if she doesn't bust, she'll spread and leak oil like crazy.

## EXHAUST MANIFOLD, TOO

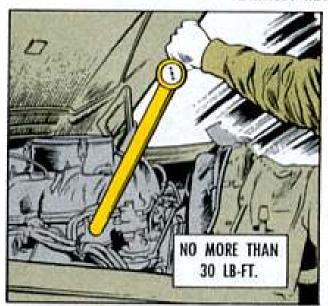


TO TLES.FT

RETAINING MUTS

On a new vehicle, loosen those exhaust manifold retaining nuts and retighten 'em to 25-30 lb-ft. Do 'em in the right order — like it shows in fig C-3 in your -20 TM.

Now stick to that torque limit any time you're installin' the exhaust manifold.

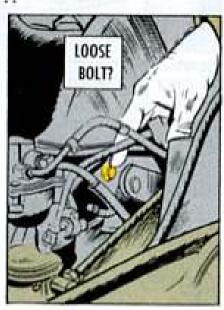




Whoops—before you lay that hood back down and button 'er up, there's a plain ol' bolt down in there that could have an interesting story to tell. It's that top left mounting bolt on the timing chain cover.

Your timing chain comes within a hair or two of hitting this bolt under normal engine speed. But if you rev up your engine too high, the timing chain may reach out and run against this bolt — and back that ol' bolt right out!

But, if the bolt won't stay tight, have your support check for a bad timing chain tensioner.



## ... FIRE UP



Your -10 TM tells you all about startin' and operatin' your 5-quarter.

It does not tell you to hit your gas pedal before you turn 'er over — and that's because you're s'posed to leave that gas pedal alone until your engine's running.

Maybe in your own bucket o' bolts you like to give that ol' pedal a slap with your foot before firin' up, but if you try this stunt with your 5-quarter, you're almost sure to flood 'er. Then you'll have a wait before tryin' again to start 'er. Just give 'er some choke — 1/2 way in warm weather. All the way out in real cold weather.



You might be surprised someday when you turn off your ignition switch—and find your engine just won't quit. Nope, it's not spooks—it's dieseling.

Probably your timing's off and your idle speed's too high. So get your timing set right — 5° BTC. And your idle speed should be set at 600-650 RPM.

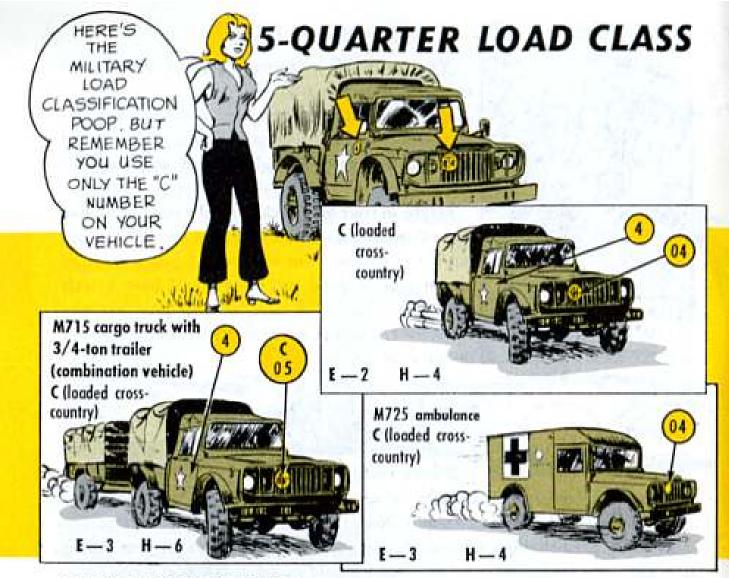


## SPECIAL IDLE

But 600-650 RPM idle isn't fast enough when your 5-quarter's totin' the 100amp alternator kit and you're operatin' radio equipment. Too low an idle will foul up your spark plugs in short order.

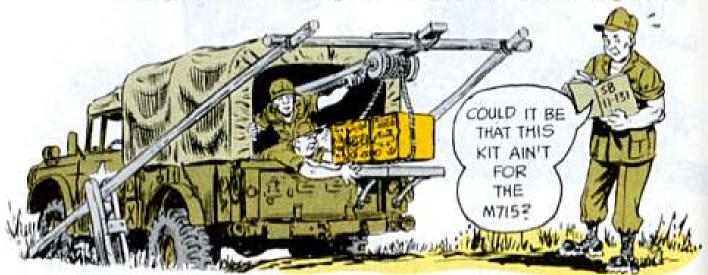
You can beat this, though—TB 750-981-3 (Jul 68) says to get a hand throttle installed when radio operation calls for a higher RPM. The hand throttle should be adjusted so you can maintain an idle of 1,000-to-1,500 RPM during radio operation.





M715 COMMO GEAR GIVING YOU...

## INSTALLATION AGGRAVATION?



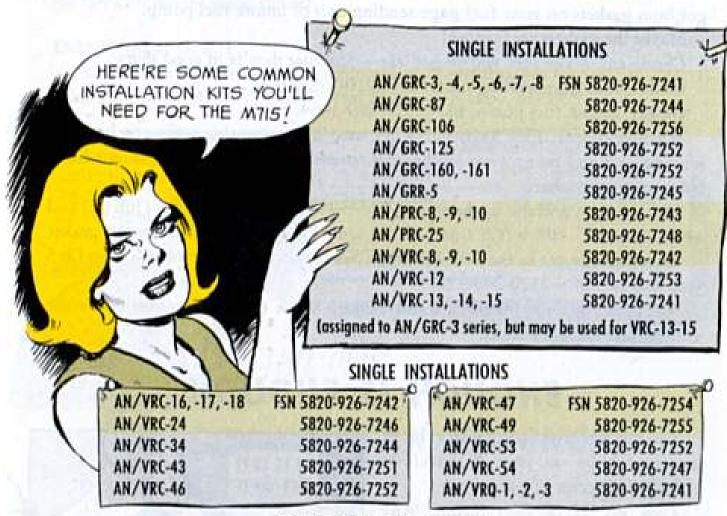
You may've already found out the hard way that commo installation kits for your M37 (G741 series) 3/4-ton cargo truck aren't right for the new M715 1-1/4-ton job.

Hang in there. With few exceptions, help is coming. A revised SB 11-131 is on the way with listings for the M715 and other new vehicles.

No kit is planned for the Angry-46, because the Standard B set is scheduled to be replaced by the AN/GRC-142. Which means you improvise, should you lose your M37 to an M715. It's a matter of lengthening tie-downs and adding a few 2 x 4's around the Angry-46 shelter.

For the present the Angry-142 and the AN/GRC-122 radio teletypewriter sets will be installed on the M715 in the S-318 Shelter, which was designed for the M37 3/4-ton. Which means you've got to improvise to install the shelter, just like with the Angry-46.

The AN/GRC-19 radio set installation kit for the M715 is available under FSN 5820-937-9847.



## COMBINATION INSTALLATIONS

Combination installations are made by requisitioning the kit for each radio set. In cases where retransmission is required with the AN/VRC-24 in combination with the GRC-125, GRC-160, -161, VRC-12, -43, -46, -47, -49, -53, -64 and -65, you need the kits for the specific sets plus Combination Kit No. 32, FSN 5820-926-7250.

Request Combination Kit No. 24 for the VRC-43. It has the same FSN as Kit 32.

Installations with the GRC-87 or VRC-34 in combination with other radio sets need specific kits for each set plus Combination Kit No. 31, FSN 5820-926-7249.

MULTIFUEL TRUCK ...

## **FUEL TANK GASKETS**



There's no mystery about fuel tank leaks on your multifuel truck — if you've got bum gaskets on your fuel gage sending unit or intank fuel pump.

Maybe the gaskets are missing!

Check 'cm. Make sure you've got 'em - and that they're in good shape:

Gasket, fuel gage sending unit, FSN 2910-753-9072.

Gasket, intank fuel pump, FSN 2910-269-3464.

Washer, copper, FSN 5310-753-9073, used with mounting screws on both the sending unit and pump (you might be surprised how many trucks've got leaks from missing washers).

These gaskets and the washer are in TM 9-2320-209-20P w/Ch 1 (Jun 65) and TM 9-2320-211-20P w/Ch 1 and Ch 2 (Apr 67). Except the fuel pump gasket hasn't shown up yet in the 209-20P, but your support can get it for you from Ch 3 (Sep 66) to TM 9-2320-209-35P.

Natch, if you've got a truck-tractor, dump truck or wrecker, you check the gaskets on both fuel tanks.

**ENOUGH IS ENOUGH** 

You can't go overboard with exhaust manifold bolts on your M151A1 or other G838-series 1/4-ton truck.

They get 12-16 lb-ft torque. Any more than that and vibration will cause 'em to shear. Then you've got a big job getting the bolt ends out of the cylinder head.

When you're tightening up, be sure you don't confuse them with some cylinder head bolts, which can take much more torque. Check page 2-109 of TM 9-2320-218-20 (Aug 68) before you tackle your next exhaust manifold job.





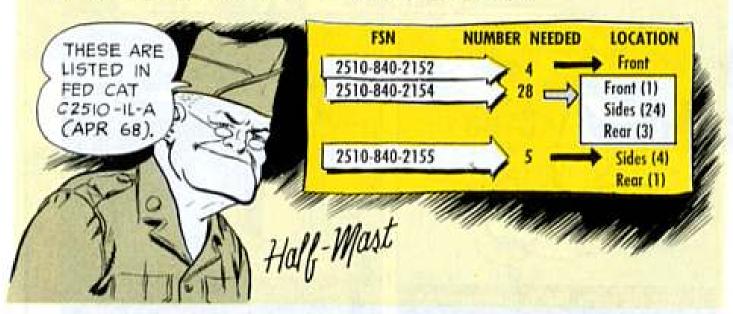


PS 186 gave the FSN's for complete panel assemblies for our M127A1C 12-ton stake semitrailers. However, since we can have the panel boards locally made, can you give us the FSN's for just the metal stakes?

SSG G. E. P.

Dear Sergeant G. E. P.,

Here's the poop on complete replacement of metal stakes for your M127A1C (and also for the M127, M127A1 and M127A2C) trailers:



# CHECKING LEAK CHECKERS

No, Sir-e-e-e! Definitely not.

That's the word for everybody when it comes to using compressed oxygen for testing gas tanks or radiators for leaks.

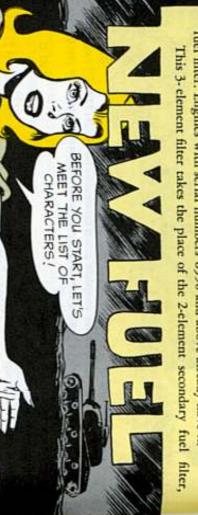
Here's why:

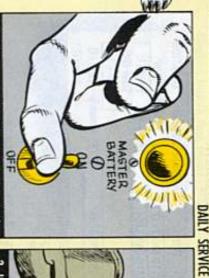
When oxygen comes in contact with the oil film in the radiator there'll be a messy explosion. Or, if some oxygen remains in the tank or radiator, the thing can explode when the welder goes to work on it.

So make a note in the noggin': If you ever see anyone reach for oxygen to check leaks - because there's no air compressor handy - halt him fast. Remind him he can use the air system on the nearest truck to test for the leaks.

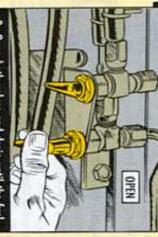


If you have an M60, M60A1 or M48A3 tank, an M728 CEV or an AVLB you already have (or you may get through engine retrofit) the new water-separating fuel filter. Engines with serial numbers 8950 and above already have it.

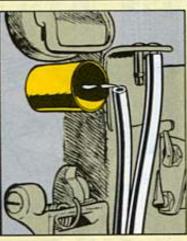




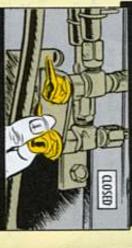
 With the engine OFF, turn master switch ON. (You have to do this so the fuel pumps will start working because you need their pressure to push out the fuel-water mix.)



Open both valves and drain until the fuel runs clear with no water in it.



Unwind the tubes from their brackets and place them so the fuel-water mix drains into a container.



4. Shut off the valves and the master switch and put everything back in place. (Note: Make very very sure that you have the valves closed. If you forget, fuel will shower over the engine.)

and here's what you need to know about it:

You drain condensate from it daily after operation at the same time you drain the primary fuel filter. The drill is the same whether you have the fuel/water separator or secondary fuel filters and it goes like this...

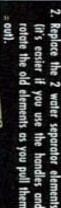


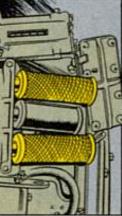
In case your AVDS-1790-2 or 1790-2A lacks these handy drain tubes and valves, get your smiling tracked vehicle mechanic to apply MWO 9-2300-382-20 (Jan 68) while he can still get the MWO kits for free. With the tubes you can drain your fuel filters without having to take off the bulkhead access plates.

# QUARTERLY SERVICE

Every quarterly service you replace the 2 water separator elements. You'll need Kit: fuel/water separator, FSN 2910-801-1152 (5702738). This kit contains 2 water separator elements (11602062) and the preformed packing for the cover (11610232).









17

6

 Check the preformed packing in cover. If it's in good shape, leave it alone. If it's damaged or has lost its snap, replace it.



5. Screw the cover back on again.

 Fill the separator with fuel to within one half-inch of the top if it's below that level.
 (You do this by putting the master switch ON which starts the fuel pumps.)



ANNUAL SERVICE

Leave the center (fine screen) filter alone unless you want to replace it. This is done once a year. If it's removed by mistake you have to treat it like a new center filter. To replace this filter you first take the power plant out of the vehicle and then you do this . . .

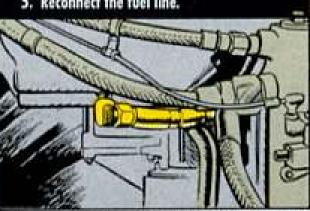
- After cleaning the fuel/water separator cover and the area around it, remove the cover.
- Disconnect the fuel outlet line at the elbow on the bottom of the separator unit and drain the contents of the separator into a container.



- Cap the line and be careful not to let any dirt get into the line or into the separator when the cover is off.
- Clean the inside of the separator and install new elements.







During the annual service when you replace the center filter element you will also be replacing the 2 water separator elements so do steps 2. through 5, the way it said under QUARTERLY SERVICE.

The center filter is in supply as Element: fuel/water separator (fine), FSN 2815-808-2421 (11602061).



## PLEASE DON'T SCREW'EM



There's always an exception to the rule!

When you're pulling your PM services, you usually draw up on holding nuts, bolts, fasteners, etc., - just to be sure they're tight.

With the sleeve-type hydraulic fit-

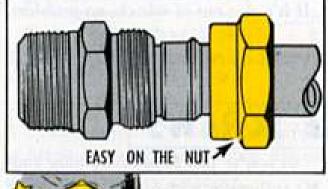
tings that connect up the hydraulic lines

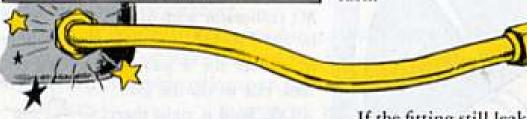
Somebody gives 'em just one more twist -for good measure-and you've got a leaker.

The rule of thumb for hydraulic fittings is this: If they're not leaking, leave well enough alone!

The sleeve nut for hydraulic fittings is preset with an initial torque when it's made. Which means it's ready to do its job with a minimum of extra torque after the connection is made.

You start the nut onto the fitting and turn till you feel a rise in torque - from this point, give the nut just 1/6 more turn (no less) and no more than a 1/3 turn.





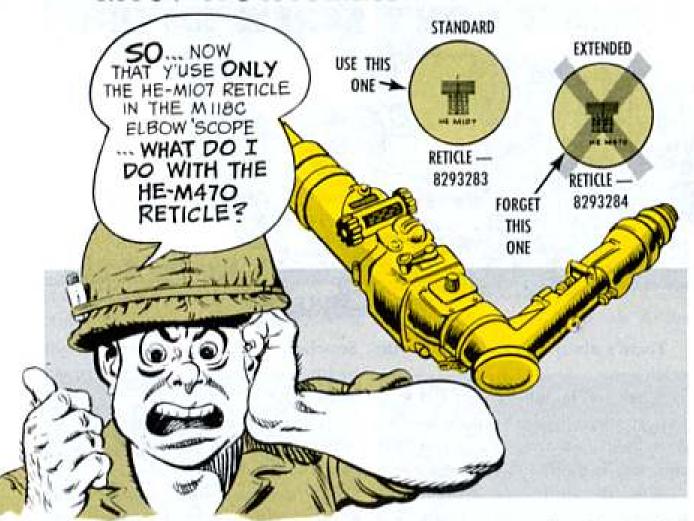
in your combat vehicles, drawing up on that nut could be your undoing! So hold one, Podner!

Most of the leaks that develop in hydraulic lines can be traced right back to overtightening of these connections.

If the fitting still leaks after applying the 1/3 turn, give it a wee bit more turn.

If you go past the 1/3 turn just a bit too far, the sleeve'll keep biting into the tube and rupture 'er innards. A little vibration and you've gotta leaker on your hands.

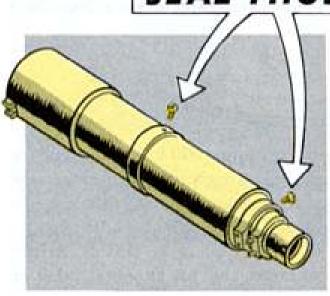
# M109 HOWITZER HAPPENING



Nothin'. Turn the reticle selection lever to the HE-M107 and let the HE-470 stay there, out of sight and out of mind. If it's also out of whack, no problem. You don't need to have it replaced.

New M118C's will have one blank reticle and that's what old M118C's will get at rebuild.

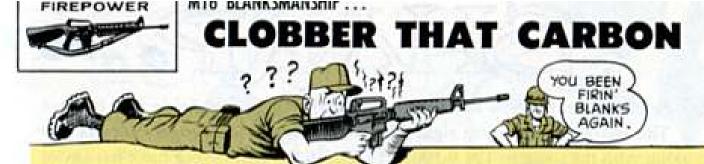
# SEAL THOSE SCREWS



So you've just finished flushing your M1 collimator with nitrogen like it says in TM 750-116, and now you're about to replace the 2 pan-head screws you took out to do the job.

OK, hold it right there!

Be mighty sure you put a dab of sealing compound (MIL-S-11031 . . . FSN 8030-275-8110) on the threads of both screws before you work 'em in. Otherwise, moisture could sneak right back in there and fog up your gem again.

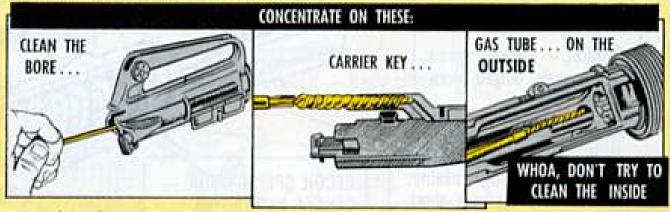


No two ways about it. When you fire blanks in your M16A1 rifle. You gotta knuckle down for real on your cleaning.

Reason: M200 blank ammo fired through the new XM15 blank firing attachment (FSN 1005-921-5481) blankets the innards of your weapon with carbon especially the bore, gas tube and carrier key.

And, if you don't get this carbon out after every firing session, your M16's gonna poop out on you. So, here's what you do:

Do the best cleaning job you know how before and especially after firing blanks. Follow Table 3-1 in your TM 9-1005-249-12 (Aug 68).



Use bore cleaner (FSN 6850-224-6656 . . . 2-oz plastic bottle) when you get to the cleaning right after firing. But, if the carbon gets a chance to "set," get your armorer to help you use P-C-111 (FSN 6850-965-2332 . . . 5-gal pail) on it.

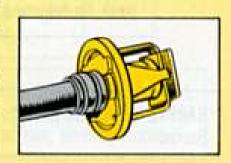
Next, if your rifle starts to get sluggish—even after you've given it your best A-1 cleaning job—get it to your support outfit pronto. After about 2,000 rounds of blank firing it'll need a new gas tube and it'll have to have its carrier key taken off for expert cleaning.

Finally, if your M16's scheduled to go with you to where the action is—and it's fired more than 500 rounds of blank ammo—make sure you first get it to support for a complete going over. Real important!

## A WORD ON THE XM15 BFA

No sweat putting the blank firing attachment on. Hold it so that its flanges line up with the annular grooves on the flash suppressor. Then force the ring over these grooves and snap the lock. To take it off, release the lock on one side at a time.

But easy all the way, both ways. Right?





Sure you are, but how sure are you about that .45-cal spitfire in your holster? This chart will show you right off if your shooter's up to snuff. It sorta tags along with the scoop in TM 9-1005-211-12 (16 Sep 68). If your piece has any of these defects, get it to your armorer for a working over.

FRONT SIGHT — Misalined, loose, burred, not square.

SLIDE—Cracked, especially at ejector port; interior grooves and ejector port burred.

BARREL BEARING — Cracked, bearing lug busted, burred, badly worn.

BARREL — Pitted, burred near muzzle; bulged, worn lands.

RECOIL SPRING PLUG AND SPRING — Plug retainer busted; spring weak, short, bent, not latched, assembled wrong to guide.

RECOIL SPRING GUIDE — Cracked, badly burred.

SAFETY PLUNGER — Tube loose, spring weak, slide stop burred.

MAGAZINE CATCH - Damaged, won't work.

bent, burred

SLIDE STOP PIN - Worn,

RECEIVER — Cracked; slide mating grooves worn, burred; slide stop notch badly worn, oversized.

SAFETIES - Burred,

cracked, won't work (check 'em all, too).

worn, k right

EXTRACTOR — Badly worn,

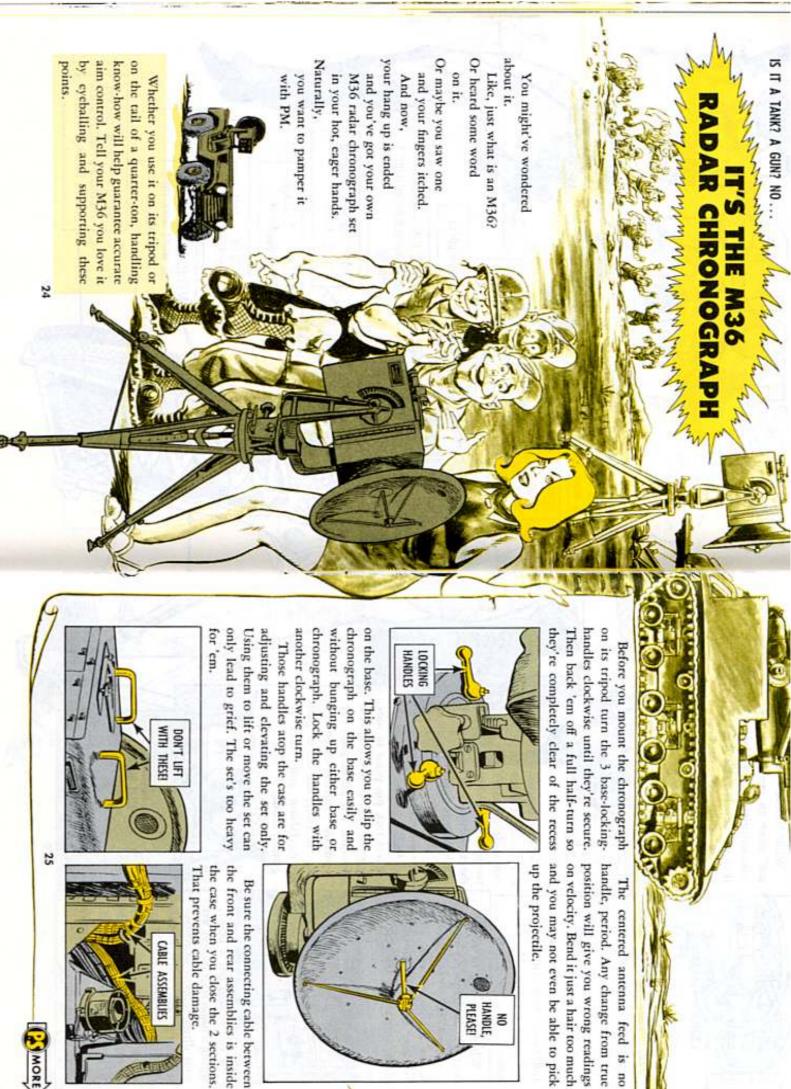
MAGAZINE — Tube, base and follower burred, dented: spring weak, bent.

Badly worn, busted YOU FAHR'D SIX BARREL LINK AND PIN HOLE ... BUT. Misalined, not square. REAR SIGHT loose, burred, TIMES ... SLIDE STOP — Badly worn, won't hold slide; notch burred, deformed. CHAMBER notches chipped, worn. HAMMER - Cracked; in spring. FIRING PIN — Blunted, busted, not assembled right Badly pitted cracked, rusty. FIRING PIN STOP ped, burred. SEAR — Badly worn, chip--Burred PAYS OFF ... PM AGAIN! COUNT

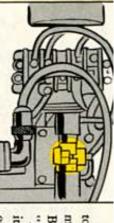
weak; lip deformed, broken
BARREL LOCKING RIBS—
Burred.

23

GRIPS — Plastic cracked, checkering badly worn; screws, bushings loose.



MORE

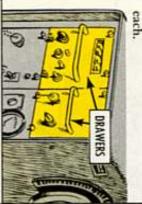


voltage multiplier and power around it cool and careful the klystron, AFC,

IT ON

and your training. No short You're messing with up to minal boards TBI and TB2. 1,000 volts. Stick with the TM Especially dangerous are ter-

of the contacts at the rear of power supply drawers, slide fier, digital display indicator or ing the audio frequency ampliem easy to assure alinement When removing or replac-



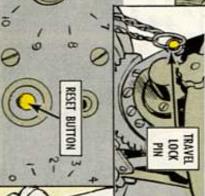
tureproof, FSN 5930-501spring tension reset button, get nates the problem of broken or 9-1290-325-35P and climi-(Switch, Pushbutton, Moisit with the better micro-switch your direct support to replace weak springs. 1749). It's on page 40 of TM If you've still got a pesky,

> "3" or "4" on the scale. Leave mike sensitivity control button. ton" steer an eyeball to the operate. it on "0" and your set won't Best position for this dude is While you're "on the but-FSN 1290-WARNING



position, so be sure sion from guntire ing handle is tight. the elevation lockcan shift the set's Shock or concus-

vents the naturally off balance another. The pin in place pretion, falling and otherwise set from dipping out of posiing the M36 from one spot to travel lock pin prior to movgetting damaged. And . . . never overlook the



big problems. power source is 400-cycle before using it . . . or prepare for Big caution: your set uses 400-cycle current. Be sure your

M36 BIIL. The cable assembly looks like so: Special Purpose, FSN 1290-167-8311, recently added to the Which brings up an all-new cable, Cable Assembly,



BEHIND DECAL

cycle spare FADAC generator. The assembly is connected becable assembly allows you to use the standard 3-KW, 400and the power cable of the M36. tween the FADAC generator adapter (FSN 1220-799-8913) When your HF-0.5 MD generator set is not available, the

(TM 5-6115-211-10 gives you the know-how on this). tion prior to using the cable assembly with the chronograph Be sure to set the FADAC generator to 3-phase configura

the case sore-thumb style, ready to damage itself . . . or you pose, FSN 1290-850-6006). Like, it juts out from the side of ... by snagging anything that comes near it. A cable to avoid is the reliability rater (Cable, Spec Pur-

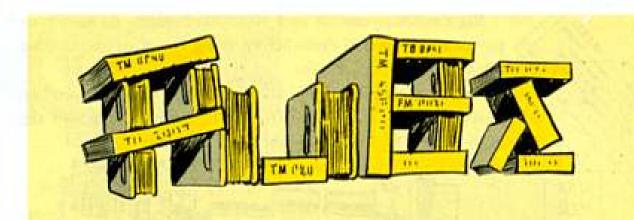
mand sometimes daily cleaning. get damaged. your M36'll heat up or otherwise silt, etc. can clog the filter and de-Climate, the situation, insects, dust, TM 9-1290-325-12/1 (Jan 68). ing heed to the poop on page 47 of a matter of common sense plus pay-Ignore the filters and the guts of Keeping your air filters clean is

cially important during checks, wouldn't be elevated. Metal in when the antenna normally or using the set. This is espeantenna while you're checking metal objects in the path of the the way gives you false read. A. Yo Finally, be sure there're no



AIR FILTERS

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This is a selected list of recent pube of inferest to organizational maintenance personnel. The list is compiled from recent AG Distribution Centers Sulletins, For complete details see DA Pam 310-4 (May 68), and Ch 3 (Nov 68), TM's, TB's, etc.; DA Pam 310-6 (Jul 68), and Ch 2 (Jun 69), SC's and SM's; DA Pam 310-7 (Dec 68), MWO's.

#### TECHNICAL MANUALS

TM 1-10H-33C-24P CJ, Feb. OH-23 TM 1-225, Dec. Novigotion TM 3-1040-209-12 CZ, Jan. M10-8 Main Armoment Much Flowe Thrower TM 3-4240-202-14, Nov. CBR Mask Field ABC-M17 and Accessories TM 5-7410-209-20P C2, Jan. Medium **Full Tracked Tracture** 1M 5-3805-237-12 C2, Jun, Forth Maring Equip Graders TM 5-3805-238-13, Oct. 2 Wheel Trans Dolly for Use With 18 Cu Yd Cop. Hydraulic Operated Scroper TM 5-3805-239-20P, Dec, Eurth Making Equip Londen TM 5-3820-210-20/2 C2, Jan. Barber-Greene 410-3G Screening Unit TM 5-3895-272-20P, Dec. 10-20 HP AS GED Gos Eng. TM 5-3895-288-20P, Dec, Model KA-60 Feeder Aggregate TM 5-3895-370-20P, Dec. DED Mill KA-60 Aggregate Dryer TM 5-3895-333-15, Dec. Pile Driving TM 5-4120-229-13, Nov. 9,000 BTU Floor Mid Air Conditioners TM 5-4310-276-25P, Dec. 5 CFM Air Compression TM 5-4320-235-20F, Dec. Patrol. Centril Pumpi TM 5-4320-252-14, Dec, Fresh Woter Cantril Pumps TM 5-4520-209-24P, Dec. 60,000 BTU Spain Heaters. TM 5-4940-200-25P, Dec, Shop Equip Sel No. 3 Truck Mid Contact Moint TM 5-6115-275-25P, Dec. 10 KW 60 Cyc Gen Sets TM 5-6115-282-20P, Nov. 3 KW 60 Cyc Eng Dryn Gen Sets TM 5-6115-321-15, Nov. 30 KW 60 Cyr Eng Dryn Gen Sets TM 5-6113-329-25P, Dec. D.S KW DC Gos Dren Gen Set TM 5-6115-345-12 Cl, Jan, 15 KW 60 Cyc Eng Drvn Gen Sets

TM 5-6115-407-15, Jun. 150 KW & Up Eng Devn Gen Sets TM 5-6115-434-12, Dec, 100 KW 60 Cyr Gen Sets TM 5-6665-202-25P, Dec. Land Mine Detection TM 5-6675-210-20P, Dec. Surreying Equip Telescope TM 9-1010-207-12 C1, Dec, M5 40 MM GL TM 9-1400-425-20P, Jan, Redeye TM 9-2300-257-10, Dec. Operator's Manual for M577A1 Corriers, M132A1 Flame Thrower, M106A1, M125A1 Mortor, M113A1 Personnel and XM741 20 MM AAA Gun Chussis (XM163 Weapons Sys) (Vulcon) TM 9-2320-230-ISC, Dec. M656 5-Ten Cargo Truck, XM757 Tractor Trk. KM791 Expans Von Trk TM 9-2320-244-20, Oct. M715 1 1/4 - Ton Cargo Truck and M.725 Ambulance Truck TM 9-2330-286-14, Nov. M131A3C **Fuel Serv Semitrailer Tunk** TM 9-2350-215-20 C4, Dec. MAO. M&OA1 Tanks TM 9-2350-215-ESC CZ, Dec. M60. M60A1 Tooks TM 9-2350-217-20 C4, Jan, M108 and MIDS Hawitteen TM 9-2350-222-10 CA: Oct. M728 Combat Engineer Vehicle TM 9-2350-223-20 C5, Jun. M41A3 Took. TM 9-2350-300-20P, Nov. XM163 SP 20 MM Antiolecraft Arty Gen TM 9-6115-202-24P, Dec, 577, 577A1 Corriery TM 9-7022-C19, Jon, M48A2C Combot Tonk TM 10-500, Nov. Airdrep of Supplies A Laurin TM 10-500-10, Nov. Airdrep of Supplies & Equip Ripping 14 - Ton Utility Trucks TM 10-500-13 C3, Jan. Airdrep: M101 14 - Ten Corpo Trailer TM 10-5410-221-24, Nov. Rigid Construction W/Air-Lock Expondable Shalter Tents TM 11-1520-210-20 CI, Dec, UH-1D TM 11-5820-601-12, Dec, AN/FRR-79 Radio Receiving Set TM 11-4125-239-20-1, Dec. FU-544A/A Generator TM 55-412, Nov. Aircraft Instruments TM 55-1510-201-20, Jan, U-8 TM 55-1510-202-10, Dec. O-1

TM 55-1510-209-20P C2, Feb. U-21 TM 55-1520-206-20PMD, Dec. OH-23 TM 55-1520-204-20PMP, Dec. OH-23 TM 55-1520-209-10 C4, Dec, CH-47 TM 55-1520-209-20-1 C6, Dec. CH-47 TM 55-1520-209-20-2 C4, Dec, CH-47 TM 55-1520-209-20P-1 C14, Feb. CHAZ TM 55-1520-210-20F-1 CZ, Feb. UH-1 Series TM 55-1520-214-CL C1, Jon, OH-6 TM 55-1520-217-20P-1, Dec, CH-54 TM 55-1520-219-20PMD, Dec. UH-LA & B TM 55-1520-219-29PMI & -20PMP, Dec. UH-1A & B TM 55-1520-220-20, Nov, UH-1C TM 55-1520-227-10 C17, Jan, CH-47 TM 55-1520-227-20PMI, Dec, CH-47 TM 55-1905-217-12, Dec. 1CM-8 TM 55-2210-216-20F C2, Jan. Rail Equip

#### LUBRICATION ORDERS

LO 5-2005-201-12, Dec. 25 HP Gos Outboard Mater LO 5-3810-289-13-1, -3 & -4, Dec. 12 % - Ton Crawler Crane Shavel LO 5-3820-239-12-1, Dec. Earth Boring Equip LO 5-3825-209-12, Dec. Road Charles favir LO 5-4610-208-12, Dec. 410 Gal/Hr Water Purification Unit LO 5-4940-220-12-1 & -2, Dec. Trk **Mtd Contact Maint Shop Equip** LO 5-6115-434-12, Dec. Gas Turbine Eng Dryn Power Unit Util Pack LO 9-1430-502-12, Dec. Howl LO 9-2300-224-12 C4, Dec, M113, M577, M577A1 Corriers, M106 Mortor, M132 Flore Thrower

#### MISCELLANEOUS

DA Form 2028, Dec, Recommended Changes to Pubs 58 700-20 & Ch 1, Jan, Logistics 58 740-6930-97-E01, Jan, Part Driver Testing and Training Device 5C 3990-97-C1-E06, Dec, Rigger's Cargo Set 5C 4940-97-CL-E42, Nov. Auto Mechanic's Tool Set TB 55-1300-206-20/14, Feb, UH-1 Series TB 55-1520-206-20/9, Feb, OH-23 TB 750-98-23, Dec, M151 Truck TB 750-992-4 C4, Feb, EW EIR







Dear Sgt Half-Mast,







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TREAT YOUR TENT WITH TEXTILE PRESERVATIVE COMPOUND, FSN 8030-264-3840,
(5 GAL) DILUTED WITH STODDARD SOLVENT,
IT'S FLAMMABLE AND IT'S POTENT, SO
ALL FIRE (INCLUDING SMOKING) IS OFF
LIMITS! SEE CHANGE 4 (JAN 68) TO
TM 10-269 (MAY 64),
PARA 40, ON
HOW TO DO
IT.

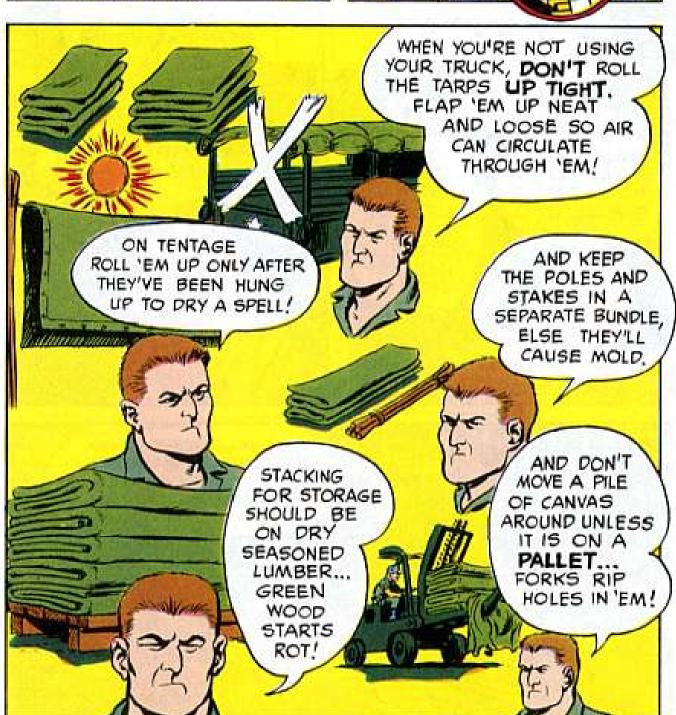


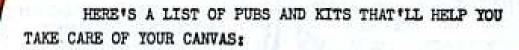












TM 10-269, (May 64), Ch 4 (Jan 68)

General Repair for Canvas and Webbing FM 20-15, (Sep 64) Pole and Frame Supported Tents SM 10-4-8340-All, (Jul 63) Tentage Repair Kit,

FSN 8340-262-5767
Fed Cat C5325-IL-A, (Jan 68) Kit, Slide and
Top Stop, FSN 5325-898-4411

TM 10-8340-211-13P (Aug 67), Ch 1 (Mar 68)



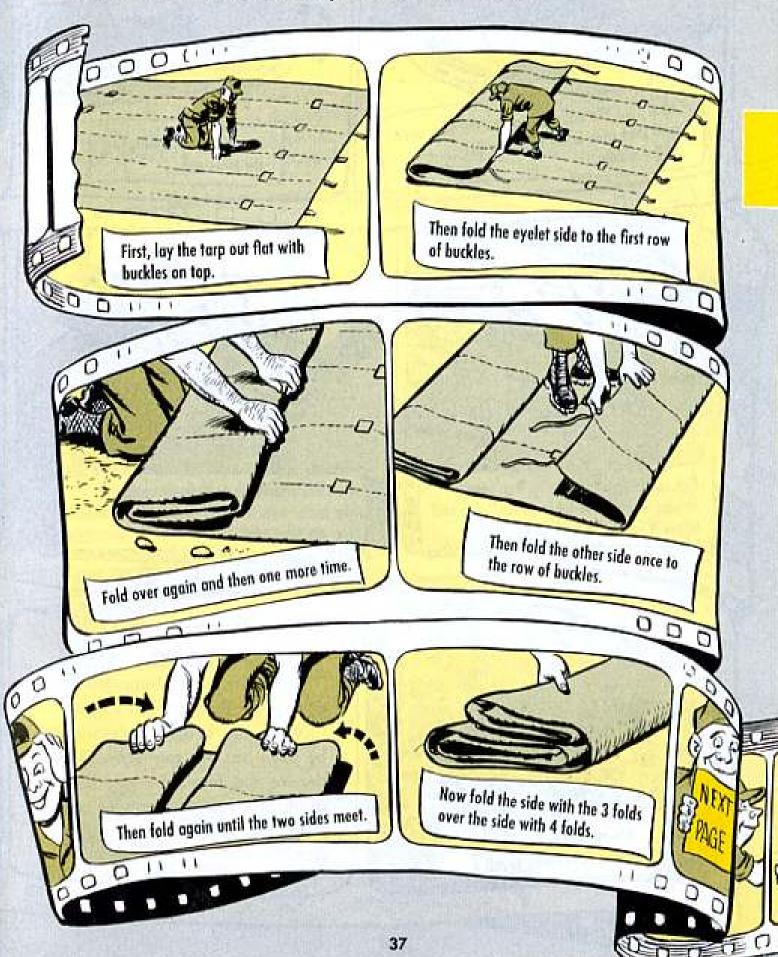


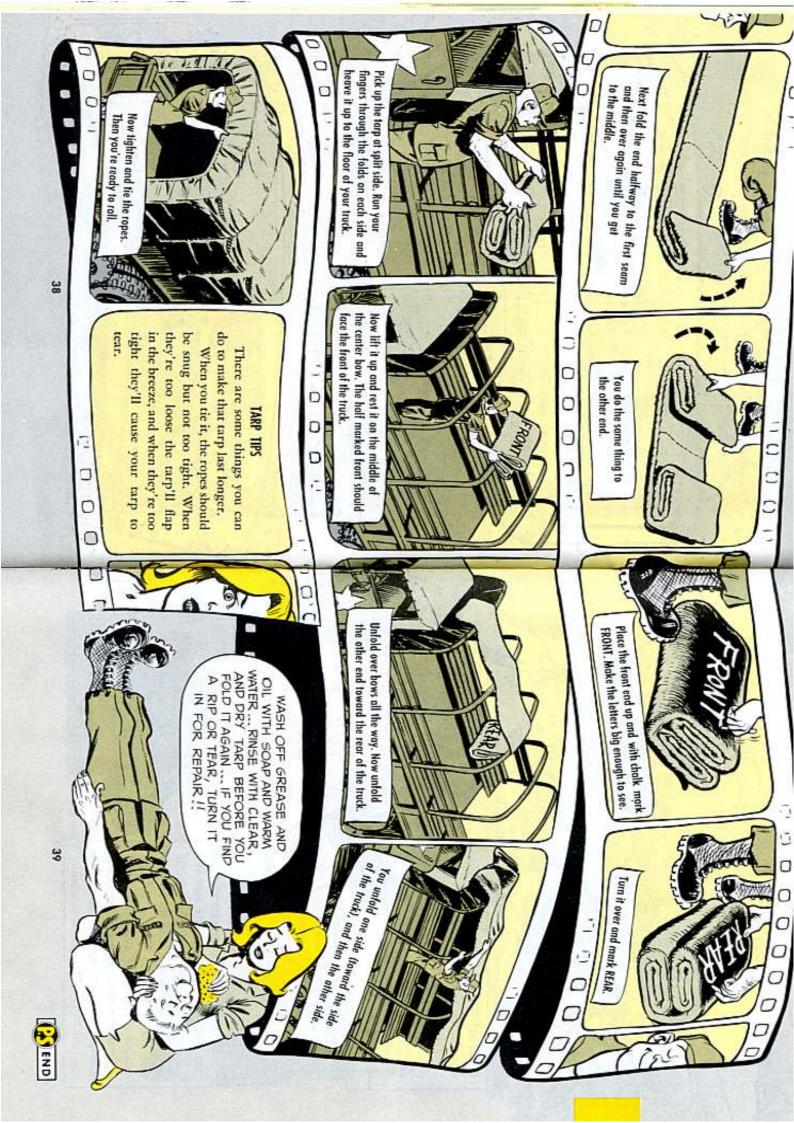




## TARP TOSSING MADE EASY

Putting that tarp on your truck is a one-man operation, but it sure is a heckuva lot easier to do it once you know how to fold it.







cargo NET — The cargo net won't work right unless it's positioned inside the bracket arms and all the snaps are secured. If the net runs under the bracket arms, change it.

work
the
the
c secket

FRONT HEADLIGHTS-

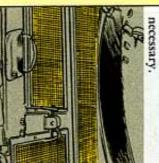
Strictly

SURFBOARD WINDOW—Not for stepping on. Cover it with cardboard or protect it in any other way your local SOP calls for.

ENGINE EXHAUST—Water gets into the exhaust when you wash your vehicle. If enough water gets into the engine that way you could bend a rod. So make a cover out of some waterproof material for the engine and heater exhausts or tape 'em up when you wash the vehicle.

water can—Keep the straps tight on your 5-gal water can. Otherwise, vibration against the bracket could cut a hole in the bottom of the can.

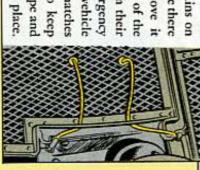
debris screens are handy for keeping out junk. You can help keep 'em in shape by not walking on them any more than necessary.



ENGINE

sure the battery and air cleaner access doors are shut before you traverse your turret. The bustle racks can crush a lid left in the upright position.

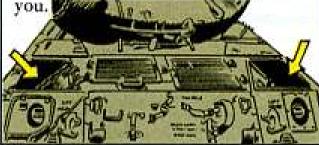
safety CHAINS—The chains on the turret ring screens are there so the driver can remove it from his side or the rest of the crew can remove it from their side. That gives an emergency escape route in case the vehicle is hit and some of the hatches are out of business. So keep these chains in good shape and don't wire the screen in place.

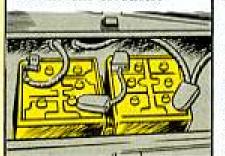


BATTERY CHARGE—A good battery charge is important because if battery voltage is low your gunlauncher tube can lose its elevation and drop suddenly and without warning. BATTERY OPERATION—Like it tells you on page 2-29 of your -12 TM, don't operate the M551 on battery power alone. Idle your engine at 750 RPM when you're drawing current from your batteries.

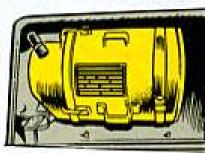
If the batteries are taken out of the vehicle (like for cleaning) make sure they are put back right. If battery polarity is reversed you can damage electrical circuits.

DRAIN HOLES — There's a drain hole in the battery compartment and one in the air cleaner compartment. Keep 'em unclogged, they'll do the job for





ENGINE AIR CLEANER—Take a couple seconds to check your engine air cleaner every day. If the indicator shows green, it's OK. If red shows, the filter element needs to be cleaned or replaced.

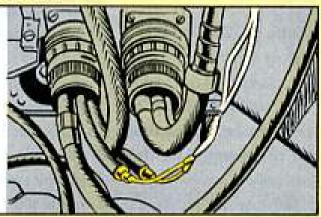


STAB MODE—Use stab mode to track your target. Under no conditions do you fire your main armament, either a conventional or missile round, while your vehicle is moving in the stabilized mode. Bring the vehicle to a halt before you shoot.

This applies only to main armament. It is OK to shoot the machine guns while the vehicle is moving in STAB mode.

## **GROUND-HOPPING**

GENERATOR HAZARD—The 2 small wires on the line from the generator to the voltage regulator don't have much slack so they tend to pull out when you remove the power pack for ground-hopping. With these lines disconnected, the generator won't charge your batteries.

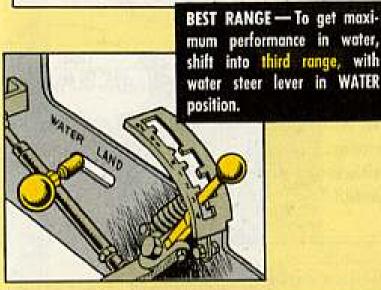




TURBOCHARGER—When you have the power pack out of the vehicle the turbocharger is likely to pick up some dirt or rags or whatever. When operating the power pack out of the vehicle, install the air cleaner the way it says in fig 9-10 of your TM 9-2350-230-12 (Jun 66).



WATER STEER LEVER — With the water steer lever in the LAND position, you have pivot steer in first range and in both reverse ranges. With the water steer lever in WATER position you also have pivot steer in second and third ranges.



stowing down — In water you can go into either R1 or R2, but R2 gives you more stopping power. Likewise, when you're in reverse, you can slow down by going into 1st (low). Whenever you make this shift in either direction, first hit your footbrake hard to stop the track.



commander's hatch—During water operation the commander's hatch should not be in the full-open position so the loader can get out of his own hatch in a hurry if he has to.

Even on land the commander has to be careful about having either half of his split hatch in the full-open position. He can seriously hurt a loader if he swings his cupola around too far. If the loader and commander work together on this there's no danger.



SHIFTING NECESSARY — As soon as you get your vehicle out of the water, shift the water steer lever into the LAND position. If it is left in the water position the vehicle will have pivot steer in second and third ranges. This could cause an accident if you tried a turn at high speed.



GUN/LAUNCHER—After cleaning the bore of the gun/launcher, lightly coat it with PL (lubricating oil, general). This is important because the plug does not keep all the water out. Unless you oil the bore you're likely to get rust and pitting.

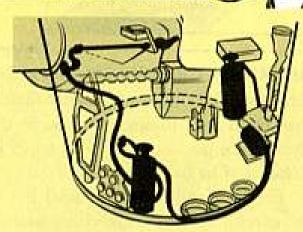
The shell cases of the conventional rounds are hurt by oil, so all oil has got to be out of the chamber before you fire.

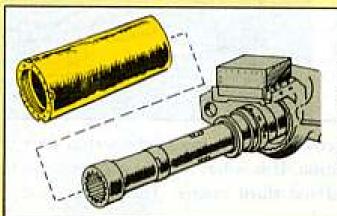


BREECH CHAMBER—The beveled back edge of the breech chamber needs to be cleaned daily if the gun is fired. All oil has to be removed from both the bore and the chamber before you fire either the missile or the conventional round in the gun/launcher.



2-BOTTLE SYSTEM—The air compressor should start automatically when the air pressure gets down to 2800±100 and stop when the pressure reaches 3200±100. If the air compressor does not work right, order a new one under part number 11644482.





BORE EVACUATOR—(Vehicles with serial number 699 and below) keep it clean because a dirty one could cause a flareback. Clean it for 3 days in a row every time you fire.

#### MISSILE SYSTEM SELF-TEST

Suppose you get a red light when you flip up the system test switch?

This is supposed to mean that the part of the system that is red-lighted is not in a GO condition.

Before you call your over-worked mechanic make sure the part is really defective. Remember, you can also get a red light if you do the test wrong.

Here're some common, easy-to-make goofs that will give you a "no go" on the test even though the parts are really all right.

Red Lights Shows On	What Is Really Wrong	What To Do
Tracker	ALIGN lever was in the left position instead of extreme right when test was made	Put lever in proper position and repeat test
	or	
Trocker	Check-sight bulb is burned out	Replace bulb and repeat test
Sig Data Conv	ERROR lever was in the right position instead of the left when you did the tracker align test	Correct lever position and repeat both tests
	or	
Sig Data Conv	ERROR lever was in the left position instead of maximum right on the systems test	Correct lever, repeat test
Tracker and Sig Data Conv lights both on	Gun out of battery or In battery switch broken	Find out which, make adjustments and repeat test

Careful on this: Remember that your XMTR switch is not to be left ON for more than 15 seconds while testing or you could burn out the transmitter lamps.

#### SUPPLY WORD

REPAIR KIT—The fiberglass repair kit for your flotation barrier comes under FSN 2540-929-8363. Page 9-152 of Ch 1 to the -12 TM tells how to make repairs.

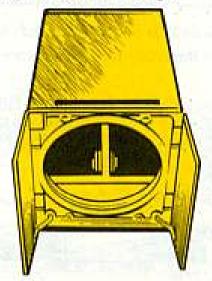


Careful stowage is important for the M551 because the left (loader's) side of the basket is open and stray items can fall through. If some metal object (say a wrench) hits the power cable brush it can burn up batteries, master relay and other parts causing thousands of dollars worth of damage besides putting the vehicle out of action.

Signal flags and a gunner's seat backrest have got tangled up with power cables and even, in one case, a roll of green tape caused a lot of damage.

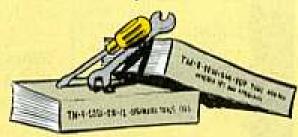
AN/VSS-3 SEARCHLIGHT — Your M551 vehicles may be equipped with one of these little beauties. Until you receive the TM on the light, remember these 2 important points:

- Do not look directly into the light from close up when it is in operation.
   The high intensity visible or infrared could cause blindness.
- Do not turn off the vehicle power source until the exhaust blower has stopped. Otherwise heat could build up in the light and blow it up.



#### FIRE EXTINGUISHERS —

The portable extinguisher is a throwaway item. Order a new one as FSN 4210-555-8837. For now you turn the main extinguisher back to supply when empty and order a new one as FSN 4210-930-2625. Other parts for the system are on pages 111-112 of TM 9-2350-230-25P/1 (Jun 66).



SPECIAL TOOLS AND EQUIPMENT: They're listed in 3 different TM's. Here's what you check to make sure you have everything that's coming to you:

- TM 9-2350-230-12 (Jun 66), pages 8-2 to 8-5.
- TM 9-2350-230-25P/1 (Jun 66), pages 107-112.
- TM 9-2350-230-25P/2 (Jun 66), pages 69-71.

Organizational Maintenance tool kits for the M551 are:

Set A — FSN 4910-903-0587 (10947686). Set B — FSN 4910-903-0588 (10947687).

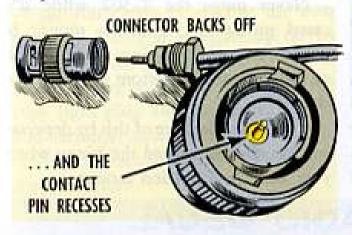
Supplemental tool kit (authorized only for MOS 45G20 personnel on the M551) FSN 4933-921-7335 (5910355).



You say you put the connector in the slot but all you ever got was low RF output?

That's not exactly peanuts, but if your connector's on the end of a new CG-1773A/U RF cable, some pertinent PM might net you better output.

Like every Joe knows, the CG-1773A/U is a popular attachment for items like the AT-912, etc. But the connector (UG-88E/U) on some new production models is so stiff it backs the connector head far enough off the retaining nut to recess the contact pin . . . which naturally is a drag on good RF output.



Naturally, too, this limits the performance of your AT-912 . . . or any other antenna system you use it with.

The easiest fix for this dude is to take two wrenches and back the connector onto the retaining nut real firm like.





Then, make sure you can turn the connector without backing it off. It's good policy to make sure the nut is snugged up every time you connect the cable.

Part of the trouble is caused by bevelled insulation on some of the connectors.

The bevel jams the nut firmly into place, allowing the connector to back off from it.

Older cables don't have the bevel and are slightly different in other areas.

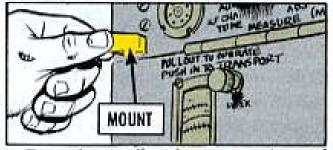
An improved cable (CG-1773B/U) is on the way and will replace the CG-1773A/U. The B model has a better RF connector . . . which should eliminate some of the everyday problems of the A model.

Whether you've got a new or old connector, next time your RF output ain't what it used to put, give the ol' connector a shot in the rear nut.

#### AN/TRC-35, AN/TRC-36... YOUR WOBBLY CHASSIS



Naturally, you wouldn't take a chance on wobblin' the upper chassis of your T-302/TRC transmitter while the T-302's bein' shipped or handled for storage in transmitter case CY-1341/TRC.



But a loose vibration mount (caused by rubber-gasket suction from the inner case cover) can cause trouble by accidentally unlocking the front portion of the upper chassis and lettin' it wobble around.

That could spell damage to components — o'course, not on your T-302, but howsa 'bout some of those other Joes?

They oughta get the word. So tell 'em, huh?

Never move the T-302 while it's cased unless the vibration mount is pushed in and engaging the shoulder of the studs in the bottom of the upper chassis.

You can make sure of this by depressing the chassis toward the hinge when you lock the vibration mount.

#### NO-ZAP RADIO DECAL

For a 3 1/4 by 1 5/8-in, red and white decal which reads: "WARNING DO NOT START VEHICLE WHILE RADIO IS ON," fire off a DA Form 2407 work request to:

Commanding Officer
Sacramento Army Depot
ATTN: Director of Maintenance
Sacramento, California 95813

WARNING
DO NOT START VEHICLE
WHILE RADIO IS ON

The adhesive-backed decals can be had for three cents each. Give the wording, size and color on the 2407.

Stick 'em as close to the starter switch as possible, so's they'll grab the vehicle operator's eye.

# DISCONNECT... NOTHING'S WRECKED

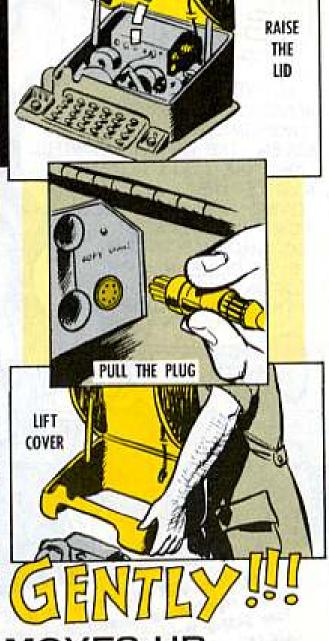
It's easy enough to take off the dust cover to your TT-76 ( )/GGC teletypewriter perforator-transmitter.

All you've gotta do is jerk the -

Whoa now, whoa now, whoa now ... that's not right ... you don't jerk anything!

What you do is remove the dust cover's P12 copy light plug from the J12 connector of the power supply and terminal unit. Then — and only then — do you carefully remove the dust cover by lifting it straight up off its rubber mounting grommets.

Any lifting before you disconnect the copy light plug and the power supply and terminal unit connector is apt to crunch or mangle either the plug or the connector.



#### THE MAST MOVES UP

Mast AB-577/GRC is coming up in this world . . . you don't have to scan the Angry-50 ( ) TM's to dig up installation info on the mast — the AB/577 has a TM all to itself.

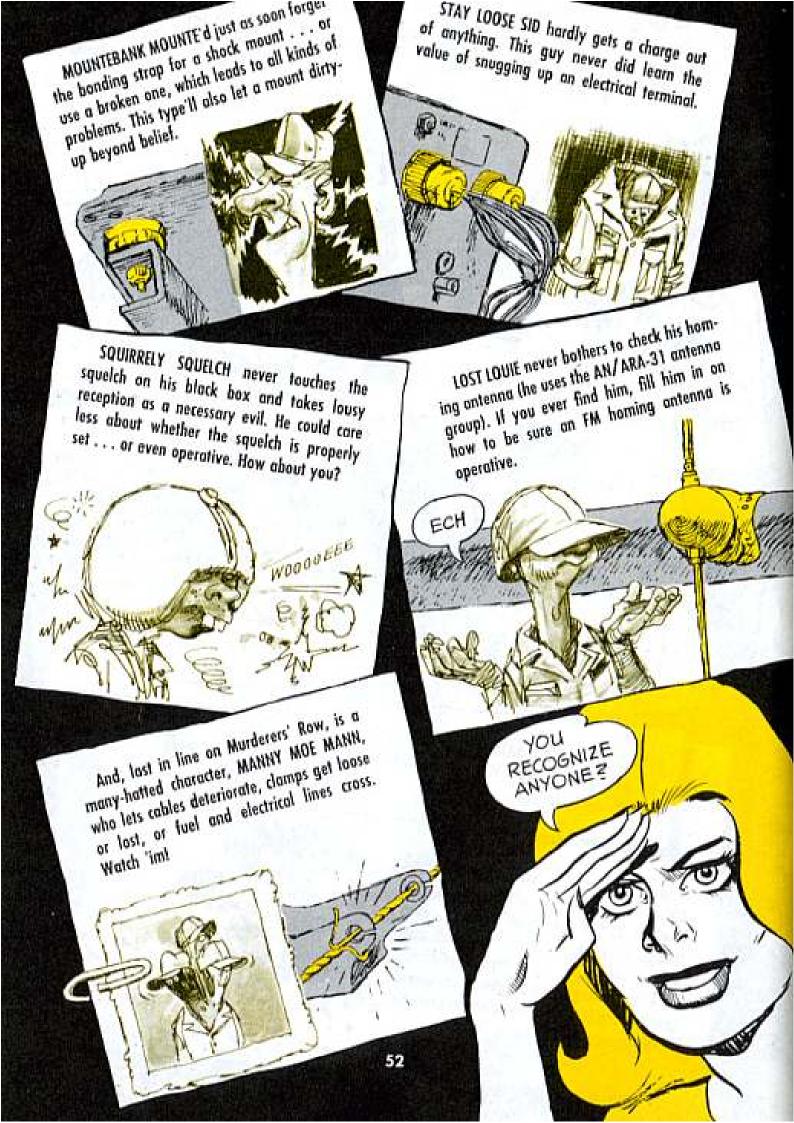
You can eyeball TM 11-5820-538-12 (Jun 67) for installation details, guying instructions — and the scoop on using the AB-577 with a T-bar to support a pair of AT-903/G antenna horns.

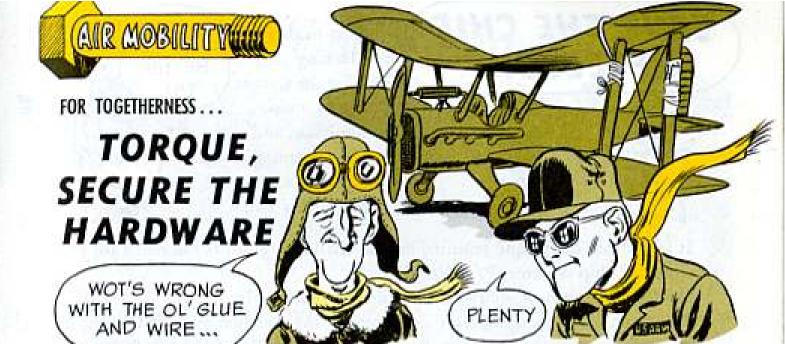
The AB-577 rates the new deal because it's now being teamed up with other radio sets besides the Angry-50's.

For the AN/TRC-24 radio set, you'll want TM 11-5985-295-15 (Apr 68). It covers the new antenna group, OE-15/ TRC-24, which will replace the antenna arrays that are used in the Track-24's C and D bands.









Glue and bailing wire hardware did a pretty good job of holding early aircraft together. Then along came the modern flying machines.

Keeping the vibrating, twisting, turning, rotating parts of a chopper in one piece called for special nuts, bolts, cotter pins and safety wire.

To keep a gear box or tail rotor, for example, from departing your bird in flight requires a lot of attention to those little jewels.

Like—every time you inspect your bird make sure every nut, cotter pin and safety wire is in place. Eye mating surfaces for chafing which would indicate loose study and nuts.

When you pull maintenance never reuse self-locking nuts and cotter pins in critical places. This includes flight and engine control systems, rotor, transmission and engine mounting systems and the like. You'll find this poop, and more, on pages 30 and 41 of TM 55-405-2 (11 Jul 66) on aircraft hardware and materials.

Be sure to use a torque wrench to get the proper torque called for by the TM for the specific type, make and series of your aircraft.

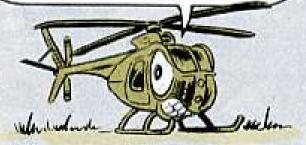
Don't take chances with those nickle-and-dime items. Make sure hardware stays put. A lost nut can cost you your chopper . . . even your life.

## TUBE IN SUPPLY

If you Seminole mechs need a replacement anti-icing fluid tube for the new-type propeller bulkhead, FSN 1610-842-6375 — travel tube, P/N B1887, FSN 1610-310-5912, is in the supply system. That's the one you want.



## SAVE THE CHIP DETECTORS



Nuts to those self-locking jobs holding the Cayuse (OH-6A) main transmission and tail rotor transmission chip detector wires . . . toss 'em!



It seems that the torque required on the self-locking nut is too much for the terminal of chip detector, P/N VC13C.

Result? A broken or short-circuited detector terminal.

To prevent this type of revoltin' development the Aviation Systems Command recommends you use lock washer, P/N MS35333-37, FSN 5310-579-0079, and nut, electrical, P/N MS20341-6S, FSN 5310-999-4031, to hold the detector wire. Torque the nut to 5-7 inch-pounds.

The parts are already in the supply system and will be authorized in a change to TM 55-1520-214-20P.

### KEEP THE PIPELINE FILLED

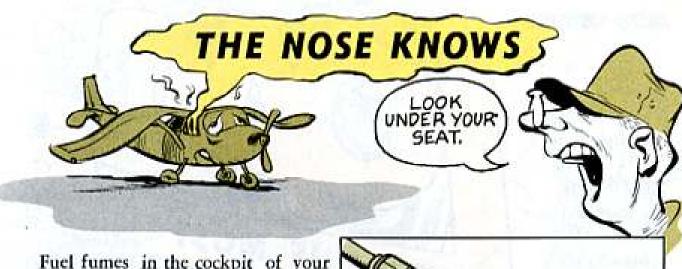


If you aircraft supply-types find yourself with beaucoup unserviceable Mohawk (OV-1) A-C generators, move 'em to depot for overhaul, pronto. Those babies are in short supply. AVSCOM Msg AMSAV-R-EV 11-1383 (25 Nov 68) gives more scoop on this A-C generator.

## PRE-OIL WITH STARTER

There's no need for you bird mechs to strain your eyeballs looking for a pre-oil connection to hook up a pressure tank on your opposed-type recip engine. You won't find one. Pressure-lube the dry gears and bearings by turning the engine over with the starter, according to the poop in each bird organizational maintenance pub and TM 55-405-5 (Sep 66).

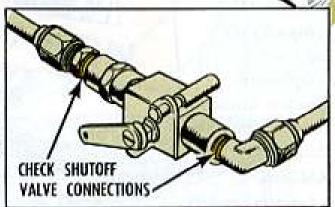




Fuel fumes in the cockpit of your T-41B Mescalero??

Follow your nose to the drip! drip! drip!

While you're checking out the fuel system, focus on the shutoff valve under the floorboard in front of the co-pilot's seat.



The connections on this baby have been known to loosen up due to vibration . . . could be a loose nut?

Re-torque the connection nut to the torque value specified in the maintenance manual—that'll stop the leak!



It seems like maintenance types are always tearing their clothes and coming up with cuts when working around Chinook (CH-47) engines with the cowling open.

The upper engine access cover and attached side covers are the chief culprits.

So, we took a file and rounded off the 4 corners of all 3 covers . . . gets rid of those sharp corners once-and-for-all.

One point, tho, make sure the corner radius is no more than 1/4-in maximum.

Norman J. Dunning

(Ed Note—Good going. The Aviation Systems Command goes along with your suggestion)



crew and pilot. You can install this system in 5 minutes or less. Just attach the mount assemment and several other differences that require special know-how from armament

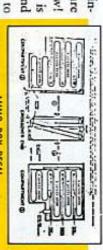
Loach. This takes a different type of installation, different sighting equip-

compartment and one on the bulkhead. Then mount the XM70E1 sight and secure the sight and mount and electrical connectors. Prestol rod assembly to the bulkhead with a bolt and quick-release pins and finally bly to the hard points with 3 quick-release pins - 2 on the floor of the cargo

on the specifics, but here're some timely PM tips that'll ease the way to better Your pubs - TM 9-1005-298-12 and -20P (May 67) - will clue you in

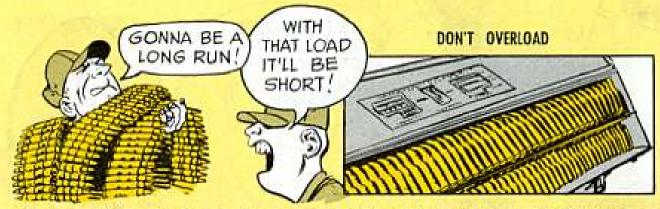
LOADING, AMMO TIPS

split a belt to get the full 2000 rounds preloaded belt. But you'll still have to easier if you have the 1500-round to load boxes right. Follow the arrow side of ammo box lid and you'll be sure Watch for long rounds. Your job is Follow instructions on decal on in-



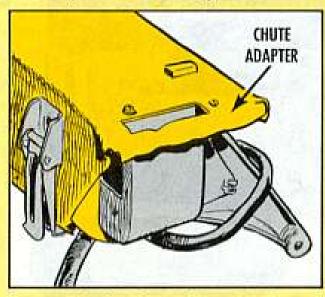
AMMO BOX DECAL





called for. So watch for the long round, Podner! And remember, NEVER load more than 2000 rounds, or the ammo will bind and cause a gun jam.

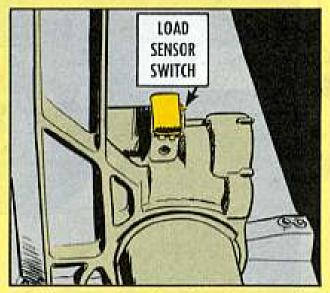
Slide loaded ammo box on to the mount. Be careful not to damage the low ammo load sensor switch. Lifting a 150-lb ammo box puts a strain on any Armymech — so you know what happens when it's dropped on the rear mount assembly. It'll bend every time.



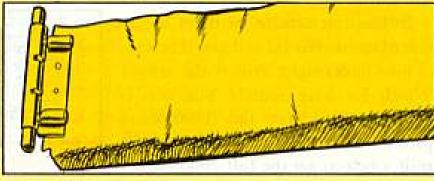
Eventually the chute adapter bends and then the ammo jams up the works.

If it does, try this fix. Reinforce the rear mount assembly by inserting a piece of scrap stainless steel—3 x 5-1/4 inches — under the skin. Rout out a hole for ammo to feed thru and drill 2 holes for screws to fasten the plate down.

Ammo chutes get the gentle treatment, too. Nicks and gouges cause jams.

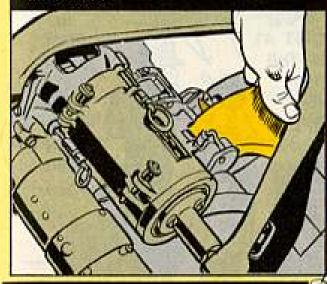


When you lay that heavy ammo box down on the mount, check to see that container is in full contact with the housing before you secure the latches. If the ammo container is cockeyed and the latches are tight the locator block can cause a heap of damage to the container.

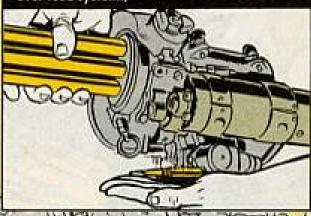


Final check: Be sure the lid is latched tight. Dust, dirt, debris are always being churned up by rotor blades and if enough get into the ammo box you'll have an ammo-blam-o for sure.

Hook up the ammo chute. Place ammo in the delinker.



Manually rotate the barrels until one round falls out of delinker. On the XM27E1 the delinker feeder system pulls ammo from the storage box. (On the XM21 you have a crossover feed system.)



On delinker feeder be sure screw, (P/N 11697842), FSN 5305-898-6498, is safetied. If it backs out, clearing sensor will be out of business.



fitting screws are easy to reach.

TIP: The dust seal in the housing and tube assembly can work loose during operation. Check the whole assembly for security frequently - 'specially if you're operating in real dusty areas. If seals are loose or gone, sand and dirt will cause the gears to come to a grinding halt!

When the gun is in the full down position, the bottom quick release pin which secures the sight control rod - cannot be installed or removed. TIP: Reverse the sight drive fitting and install the pin from the opposite direction. Here's how: Remove adapter chute, then the nuts that secure the sight drive



ONE HARR)

IΜ CHECKIN 'M CHECKIN

NOTE: While mounting and hooking up cables be sure electrical current is off, 2 circuit breakers are pulled, ARMED/SAFE switch is in SAFE position, armament SYSTEM MODE switch is OFF.



PULL A MONTHLY CLEAN- AND-LUBE BIT ON THE BALL MOUNTING POINT AT EACH END OF THE SIGHT CONTROL ROD ... USING GOOD OL' GPL

I'M

YOUR

REPLACEMENT.

GREAT! JUST TIME.

GPL!

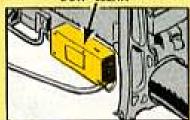
When oun system is not in use or is out of the aircraft — like maybe in storage — the sight control rod should be stored in the sight box.





KEEP CONTROL **BOX CLEAN** 



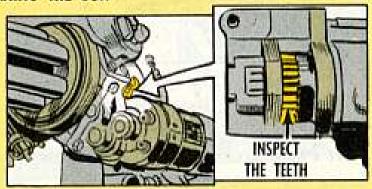


Keep moisture, dirt, dust, what-have-you out of the control box, connections and connectors. If the gun stops firing, trouble-shoot the ammo first . . . then the electrical system. Take a look at the P1 plug to see if you have a black receptacle - means a short for sure. Replace cable.

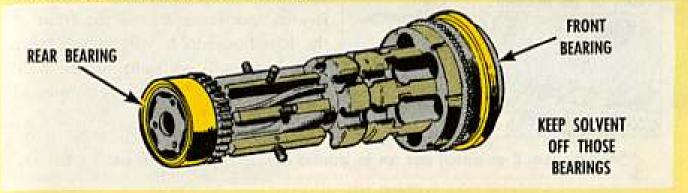
You'll have no trouble hooking up the 2 electrical connections on the control box assembly. Each connection is a different size and fits only one receptacle. The gun drive cable assembly, which has plug P1 at opposite end, connects to I1 and I3 goes to the XM70E1 gun sight.

#### CLEANING THE GUN

After removing the 3 large bolts that hold the gun drive motor on the gun, inspect all gears for burrs and broken teeth. Anything amiss here, notify direct support.



When removing grease build-up on the main housing assembly, keep all solvent off the front and rear bearings.



Decal data plates for electrical gundrive motor curl up after a couple of months use. This is the only place where serial number is found, so why not etch the number in the gun-drive housing?



#### XM70E1 GUN SIGHT

While mounted, just keep the beamsplitter and housing lens clean. Soft tissue or rag is called for. Never use greasy paper or rag.

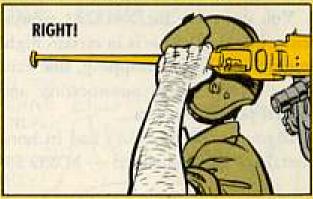
No grabbing the tapered arm way out on the end — it'll bend or break. Also this is no hand hold for pilot, crew chief, co-pilot or observer. When putting the arm in stowed position, place hand near lens housing and close firmly.

To remove the lamp housing, remove 3 screws.

The bulb (lamp) is a 2-filament deal and the light shines on the etcher filament. So when you check the lamp —

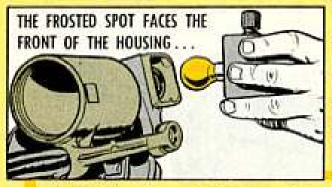






by flipping the lamp switch — and you find one filament broken, replace with a new lamp. A 1-filament lamp while hosing down a tree line is risky business. If it gets busted there's no way to sight. Right? Right!





If you have to replace the lamp — GE 844 — you gotta be sure that the frosted spot faces toward the front of the lens housing. It will fit the other way, but you'll get light out the back end . . . a real bonafide example of Murphy's Law\*.

\*Murphy's Law: If an aircraft part can be installed incorrectly, someone will install it that way.

#### **ROUND-UP TIPS**

When storing ammo boxes, never lay anything on 'em. Bends 'em up every time. A dented box will stop ammo feeding for sure.

Watch to see that all ball bearings on quick release pins are where they're supposed to be — in the pin — present and accounted for!

When you see the NO STEP sign anywhere on the system or the Loach, obey it.



You can't fire the XM27E1 subsystem while the Cayuse is in certain flight regimes — like slideslipping, sideward or rearward flight, autorotation and partial power descents.

If your minibird hasn't had its horizontal stabilizer modified — MWO 551520-214-30/6 — you can only fire the minigun at the 4000-rounds-per-minute

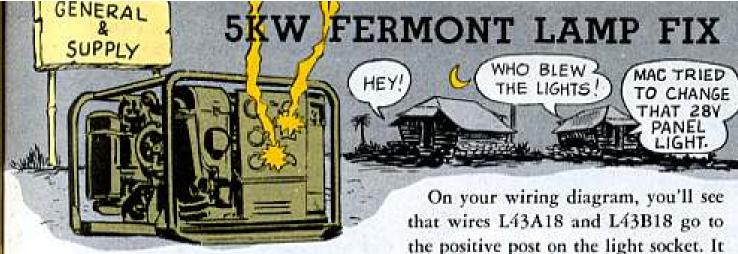


Pilots will have to hold back on the reins and use only 80 knots to push the Cayuse though the sky when the compartment doors are off and the cargo compartment is soundproofed.

If you have 40 lbs of fuel — or less — or when the low fuel caution light flashes, you can't do any uncoordinated maneuvers.

If the cargo compartment is not soundproofed, the Loach may be flown with all doors off or with crew compartment doors on the cargo compartment door off. You never fly the Loach with crew doors off and cargo doors on.



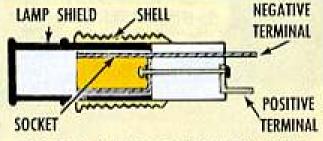


The 28V panel light on your 5KW SF-5-MD Fermont generator set can put your power pump out of business.

Some of these sets got out with the positive terminal on the lamp base wired to ground and the negative lead wired hot - to the (+) side, that is. If you try to change a burnt-out bulb and scrape the lamp shield against the socket, you get a direct short.

On these sets, any wire marked N is a ground wire, and you hook the N pole on this lamp this way to the lamp base. The "hot" or (+) wire goes to the center contact prong. Wiring is the same for HF set lights, too.

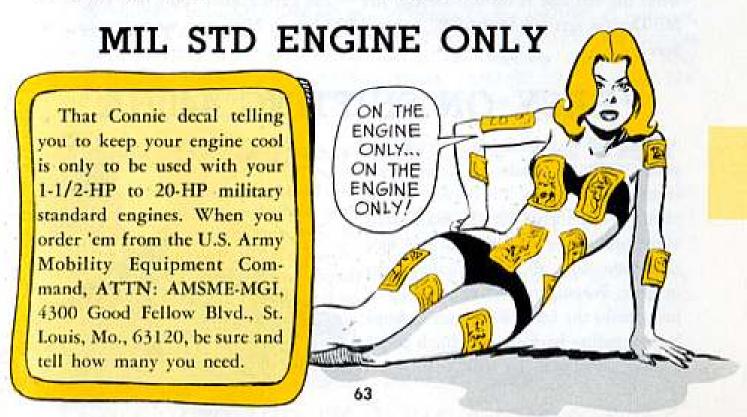
the positive post on the light socket. It



SOCKET IS IN DIRECT CONTACT WITH SHIELD. IF WIRES ARE REVERSED, A SHORT RESULTS.

is marked with a small (+) sign. Wires P31A18N and P31B18N go to the common ground pole halfway between your two panel lamps.

Check Figs 1-5 and 1-6 in TM 5-6115-332-12 for the diagrams . . . and examine both of those panel light bases while you're at it.





Want to get the jump on generator breakdowns?

You can head 'em off at the pass with the aid of TB 5-6100-201-15 (Jun 68) Scheduled Replacement of Generator Sets.

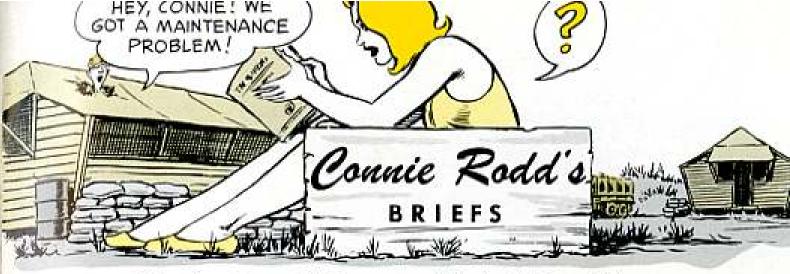
All the regs and supply dope you'll need to get new sets for old are right in the pub. Just fill out the forms and stand back—you want to give 'em room to park your new rig.

Besides telling you when and how you make the switch, the new TB gives a list (in Appendix II) of the whole Mil-Design generator family, tells you how much service you ought to get out of commercial (or Performance Spec) sets, what the red-line is on Mil-Design life—and even allows you a new engine on Mil-Design sets up to 10-KW every 1500 hours. Now you want egg in your beer?

## EASY ON SHIFTING 440HA

Head off transmission lockups on your WABCO Grader by using your clutch pedal right. Leave that pedal about 1-1/2 inches off the floorboard when braking or shifting while in motion. Otherwise, the transmission locks in gear. Forcing to relieve the lockup just breaks the lever. Free such lockups by just easing back on the clutch pedal a little . . . then make your shifts.





## Checkout on Sets

Your latest listing of components to be removed from equipment assemblages and sets and reported as separate end items is AR 725-8 (9 Oct 68). You need it to update supply and equipment log records. It includes FSN's, new and old LIN's plus makes and models affected. This AR supersedes DA Cir 725-11 (May 67) and USAMC Msg 19789 (Apr 68).

## Have You Heard ???

You're now authorized 5-ton motor vehicle maintenance trestles, FSN 4910-262-0392, in your common tool kits on an "as required" basis. Ch 3 (Dec 68) to SC 4910-95-CL-A74 (No. 1 Common) and Ch 3 (Jan 69) to SC 4910-95-CL-A72 (No. 2 Common) give you the word. You don't get the trestles with your set, but you order 'em if you need 'em.

## Canvas Cooling Caper

Been scorching the canvas tail on your PU-619M generator rig when you have to move in a hurry? Well, burn no more! Take off the exhaust pipe extension between moves. Just protect your hands when you remove the hot pipe, and reinstall it when you set up to work again.

## PLL For Reserves

AR 735-6 (Nov 68), Army Reserve Maintenance Repair Parts Procedures is needed along with AR 735-35 for setting up PLL SOP for the Reserve types. And, where the 2 regs disagree, the -6, has the last word.

## Need an Armored Car Radio?

If radio set installation units for your XM706E1 light armored car have you bugged, hang in there, friend. You need installation unit FSN 5830-135-0148 for the AN/VIC-1 intercom set; FSN 5820-935-8164 for the AN/VRC-47 radio set, and FSN 5820-143-3521, which handles all of the following radio sets: AN/VRC-46, AN/VRC-53, AN/GRC-125, AN/VRC-164 and AN/GRC-160.

## Diseard That Guard

Good, g-o-o-d news for all you radio repairman types who've been bugged by broken guards on AN/VRC-12 series radio set components.

The beautiful word is in MWO 11-5820-401-20/1 (17 Jan 69), which provides a set of handles.

Would You Stake Your Life wight now the Condition of Your Equipment?

