

Issue 129

PS

1943 Series

THE PREVENTIVE MAINTENANCE MONTHLY



"BRUCE
AND I WENT TO
THE MOUNTAINS
TO GET SOME
OF THE BEST
SUNSHINE
AND WE'VE
BEEN VERY
SUCCESSFUL
IN
MAINTAINING
OUR
MOUNTAINS."

WATCH YOUR
METERS—

OPTIMUM

When your handy books read printed at that big word, "OPTIMUM," Sgt. Red-Nose pointed up them, all his. Webster's says it's the amount of something that's most favorable to some end.

And that's exactly what some of the Army's maintenance "checks" have been doing since "Operation ABAP" rolled out last year. They have been figuring out what the optimum (sorta like "best-effort") intervals for scheduled maintenance services ought to be.

Now, the word is out. Some "optimums" have been found.

For example—

On October 22618 (28 Apr 62) told you some of critical wheeled vehicles to drop the Quarterly and do it every six months instead.

On May 22622 (28 Apr 62) changed the intervals in TM 25-5000 on administrative vehicles. For instance, they'll get inspected at 4000 miles with the amount of time making no difference.

The oil drain intervals on your tank and big tracked vehicle engines and transmissions are being extended.

And . . . more of technical manuals and lubrication orders are getting changed. You may have some more already.

WHAT'S ALL THIS MEAN TO YOU?

WHAT'S ALL THIS MEAN TO YOU? IT'S THE ANSWER TO THE QUESTION YOU'VE ASKED YOURSELF: "HOW CAN I GET THE MOST OUT OF MY CAR?"




PLEASE DO NOT REMOVE THIS PAGE FROM YOUR COPY OF PS. IT IS THE PROPERTY OF THE PUBLISHER AND WILL BE REPRODUCED IN THE NEXT ISSUE OF PS.

THE FOLLOWING SCHEDULES apply to the 1962 Army

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FOR MORE INFORMATION ON THESE SCHEDULES, SEE THE FOLLOWING PAGES:

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Get your share of the information that's in PS.



FIREPOWER

FLAMING!

You can't enter the spade on your 110-mm M20 self-propelled gun or your 4-in M29 self-propelled howitzer if the spade cable's broken. How likely that'll happen, tho, if you use it right.

Want you want to make sure you've got the right cable.

All of the M20's and M29's should have been equipped with a high-tensile-steel spade cable. They replaced the original 14-in three-pair line. If you don't get pieces, give a bottle to your chief vehicle support unit and they'll put it on for you.

Once you've got the handle, it's in cable, it is just a matter of operating right.

Remember, your turret has got to be at 20000 degrees elevation before you try to raise the spade. If you don't have the spade connected with the turret the spade handle won't engage right.

Once you have the spade hung into the rear of the vehicle, shift your spade into OFF position . . . but quick!

Cover the turret like a sly devil to keep it from stalling when it's pulling the spade right against the rear of the vehicle, but don't cover your look. Shift into OFF the second you have that spade hung into the spade handle. If you can't have it hit, get immediately with good bearing to that you in.

Suppose you get no warning the turret or back up the vehicle when the spade is down. Then you just withdraw the pulley from the tractor's leg and tie it out of the way. If you leave her hooked up, you're asking for a snagged-cable—can't



SPARE THE SPADE CABLE

meanwhile except a snagged wire or log. Keep the cable wound tight on the drum. This stops a lot of trouble before it starts. Slightly letting go of the brake handle is okay to keep the spade in line. Full might snap the cable. Put the brake on gradual like.

Don't overwind and get stuck in the cable. This could give you trouble when you raise the spade. The cable might jump-out of the drum and wind up on the stick when the spade's raised. This would put a sharp kink in the cable and it might snap under a sudden strain.

Special your cable often, and if don't get some kinks, straighten 'em out. Strands are often cut when you put a load on a kinked cable.



TO HAVE IN MARCH 1945.

In cool cold weather you might have to warm up the cable before you try to get the handle over.

If you keep the cable snug around the pulleys it won't wander down to the side and get jammed.

TAM 9-2008-110-11 (Jul 50) has all the dope on this cable business. Keep your cable in shape. Then you can lower the spade and calmly see how the boom do you.

NO HIT 'ER!

Some heavy-handed types are doing themselves dirt by smacking the operating handle on their M24 firing mechanism instead of grabbing hold of it and moving it with a steady push or pull like you've supposed on.

The handle'll snap off if you hit it too hard or use sudden-like — and sure thing you know your piece's hot to punch.

If this would give to you use less and you have a brand M24 on your hands, don't forget your Ordnance support guys are the only ones who can fix it for you.



CHECK THAT LOOP



Tired of fuggin' your M4 tripod around under your arms because you're afraid the wire loop on the carrying strap's gonna lean and drop the whole works on your pet ears—like it has on some of your buddies?

Could be nobody ever checked you that the loop goes into the opening at the base of the bludge—not on top.

Here's the right way to rig the loop of the carrying strap for the tripod of the M4 aiming device. Pass this poop around to other members of The J-CI 66.



Incorrect use of the loop—
loop fast to top



M4 loop fast to
side of tripod



Use up the full wire loop,
upside and upside down

Simple, right? OK, now check the loop on the tripod cover strap. Give it the same treatment and your cover-buddy's legs are even.

RIGHT TIGHT TO SIGHT

It starts out a man—when he goes to turn the brightness adjustment knobs on his M13-series scope finder only to find they're loose.

Being so low this happens (since the screws, which've supposed to hold the knobs tight) work loose, the answer is to put a drop of shellac on the screws about you tighten 'em.

You can get 7½-oz cans of the stuff under ESN 808-B-144-0077 (DNC)—it's listed in Federal Supply Catalog CROSS-6, Vol. 1, dated Apr 61—or pick up a small jar on local pushers.

Shellac gets the real work done for the job in cause—if the knobs have to be pulled at a time that one drop of alcohol on the screws will dissolve the shellac and make for an easy removal operation.



SHALLAC
ON
SCREWS
AND
PUT A
DROP OF
ALCOHOL
ON THEM



A WISE CHOICE?

A completion wedge in the win-ought, do it. Close the breechblock on your M44 machine, however, all the way... look the breech-opening lever right before you insert the primer.

Why?

Cause the M54 firing mechanism on these primers doesn't have a safety like the old T55's had. Which means the M44 can let the primer to move what position the breechblock's in.



This applies as well to the M54 self-propelled 111-mm gun, the M55 8-in self-propelled howitzer and the M56 280-mm mounted heavy gun.

If you need another "why", look it

Change 1 (28 Aug 61) to TM 7-2100-210-2 (15 Jul 59). And this warning is related to those up to change to all TM's dealing with these weapons.

TM
7-2100-
210-2
15 JUL 59



NEW
8-14
M54/T



NEVER TURN IT

MR. TURTLE'S

Let's face facts.

Some plugs can be inserted—and some can't.

Take the safety plug in the recent flying lesson of the B21 115-man multiple rocket launcher . . . this baby is strictly the female pull-out type.

And trying to turn it is a good way to find up the operation.

The plug's mighty important.

It's the go-no-go safety device that makes or breaks the firing circuit.



IT'S IMPORTANT.

It - **is** the important and later on.

Don't - **is** the safety and it's hot.

No screwing around here—please.

To complete the firing circuit, slide the key and keyway and push the plug into place.

To make the launcher safe, just remove the plug by pulling it straight out.



REMOVE SAFETY PLUG . . . NO FIRE PLUG



KEEP IT LOOSE



It's been said before, but it's worth a repeat: Keep the spindly valve on your M16 rifle loose as a goose when using the M7B grenade launcher.



You should be able to rotate the valve any time without its horizontal white plastic double-wed finger preventer.



The valve should go in far enough so the roll pin sits the grooves on the opposite side of the gas chamber. If it won't, valve seat surface's built up between the valve and the gas cylinder.

Hardly getting a head of steam are here full against I and tapping it a few times will release it ... without having started head.



If you still have a hard time turning the valve by finger ... by using a coin, a cartridge rim or your M16 rifle modification tool.



If the valve won't rotate to the locked position after compression, try putting a few drops of low viscosity oil the spindle valve and all tube. Then work the spindle lock and forth a couple times ... and wipe off any extra low viscosity.

If it still won't work right after all this, treat your M16 in to your support unit for a broken.

SAGGING FROM DRAGGING?



Your Hawk sails her mast way out aft like a mast on shore.

You take hold of a mast and try to drag it . . . and like us we it'll settle to the ground.

The same thing happens with the masts on board when you have any part of the masts on it. Try and pull it along and it's no even less than it'll get maddened and then maybe "let" down on the job. Trouble is, when the sea mast does this, it means a leg or two is bent. And if it "lets" down

way to lower them. Not so. That's the direction for tightening.

It means too that when you tighten the supports below the legs are in there, you can't get the legs all the way in. This sets up the legs for more trouble than they should be under.

So remember: Before you lower the legs in the supports, turn the locking bolts clockwise to loosen them. And once the legs are fully raised, turn the bolts counter-clockwise to lock the legs in place.



hard enough, the masts themselves won't be helped one little bit.

The chance of the sea mast coming to grief when you drag it along an even greater if the legs aren't fully raised. And because the locking bolts for the legs lock and unlock backward according to the normal scheme of things, some guys get started on the wrong foot when they go to lower the legs in the sea mast supports.

When they do it, now the bolts counter-clockwise—thinking this is the



As a double check . . . it doesn't hurt now to put a narrow strip around the leg—two inches from the end. The line will show just below the support if the leg is in as far as it'll go.

AWAY YOU GO

It's one thing to haul your equipment ... and it's another thing for you, personally, to get away with.

The air conditioner for your Mack heavy-duty diesel engine can do both for you, right enough. The air conditioner is built for cooling the BCC equipment. And it dies.

But when you run it without the BCC being grounded, you invite a job from upwards of 240 volts that could be making the rounds of the air conditioner and BCC frame.



To play it cool—make sure the BCC-grounding wire is installed before you apply power to the air conditioner on BCC.

IT TAKES CONNECTIONS

And without connections—like at the ends of your Mack loader hydraulic lines—the loader shows up on a double-line report.

Just ... you always remember to connect the lines after they've been uncoupled for any reason.

It's when the lines are connected and you go to raise the superstructure that you're leaving yourself wide open for a basketful of woe if you don't have your "shocking gear" in operation. The culprit in the situation is the almost-cylindrical load on the main support.

As the loader goes around with the support when the superstructure is raised, there's a good chance that a hydraulic line will get caught on it if the line's not held out of the way. And when this happens, you can bet your hat double-check that one of two things is going to happen.

Either the line'll slip off the loader

and you'll be home free ... or the ends of the line will be ripped out of their couplings.

Why take a chance?





FOR SLANTED

SLOTS

Sometimes things are easier if you have a down-hill drag.

But that's not the way 'tis when you're adjusting the blower belts on your Miller equipment cooling system. See-Wag! Inc., 183-147 23rd St., M.

Your slanted base plate for the blower-drive electric motor was meant to let you slide the motor and adjust the belts like it says in para. 415 of TR 9-1478-245, 100'1 (Oct 58) and para. 416 of TR 9-1478-251-26/1 (Feb 61).

But this is one down-hill drag that's likely to get you in place.

With the motor installed on this diagonal down-hill case, sliding the base plate may get you only a slight wobble with no belt adjustment.

When this happens, you can get the belts in adjustment with no wobble by slipping shims between the motor and its base plate. It's likely, then, that you'll also need longer cap screws to hold the motor in place.

Here's how:

Can and shape the shims you need from steel strip, carbon cold-rolled, 3024 10011 408-4247. Ask for the number of feet needed. The strips are 1-in wide by .003-in thick.



HOW HERE'S THE WAY YOU ADJUST THE BELTS

When you take out the old cap screws, hold on to the lock washers and flat washers.

Slip shims between the motor and base plate to give the motor the "lift" needed for proper belt tension. Use as many as you need.



Attach the motor to the base with the four new cap screws. Here's where you use the washers you saved from the old screws. Cap screws at the rear can be installed inside if you slot the heads so you can install 'em with a screwdriver.

If the console allows on the motor within the cap panel, loosen the clamps



at the ends of the motor and motor it all the console about the top of the panel. Then tighten the clamps.

Give the screws holding the motor to the base a final check for tightness—remaking sure the belts now have the right tension.

While you're about it, check the blower shaft to see if rubber couplings are installed in the yellow-block frame gas lines the supply system without 'em. And make sure the yellow block bearings are right.



The motor's lock has to be tightened by moving in the same direction that the blower turns.

You also can use shims to adjust the belts on the centrifugal fan of the pressure heater in the branches. When the belts need adjusting, just slip shims between the motor and the base plate on the side of the motor against the blower assembly.

That'll get the lift and tilt needed for proper belt tension.



Dear Editor,

We used to spend a couple of hours in removing the B-14, removal master delay timer from our P-14 Hercules missiles . . . making the quarterly check on it . . . and then putting it back in place.

One time, however, when we got hold of a salvaged 7-pin connector cable and made a pigtail connector subject that let us make the check without removing the timer from the [sic].

The first thing we did was remove the male connector from the end of each cable. Next we stripped about an inch from the end of each conductor . . . and then twisted and attached the bare wiring to give us our pigtail.

The last thing to do is trace each conductor from the female connector through to each pigtail . . . and then mark each pigtail—A through F—in match the letter in the female connector. Wrapping the letter on a piece of paper . . . wrapping the paper around each pigtail . . . and then tinning it in place with collophane tape will do the trick.

All you have to do to make your continuity checks on the timer is hook up the female connector to the JTP male plug on the timer and touch the conductors one by one to the pigtail and be each check.

Yours G. E. CAPTAIN
SUNFROG AFB



(Ed Note—You've come up with a neat timer to that worked out by other methods. You can save even more time by taking out the timer and leaving it out—once it goes bad. After all, it's only used for low altitude firing missions—something the Navy doesn't have any

scopes. It would be up to your support unit to take care of the cables that feed into and out of the timer. Give the support people a break, too, by not calling them to remove the timer until it does go bad.)

WEEKLY VENTING... WHEN NEEDED

When an A/C system drive motor in your Mini system gets a leaky seal, and you'd best look to your venting SOP.

Could be you're not venting the gas less correctly, or maybe not often enough.

Excessive air pressure can build up during normal operations, and the oil's way soap out is to have the seal. You can spot a leaky seal easy enough... will get along out the exhaust ports.

Excessive pressure is more likely to build up when the temperature is changeable (like during spring and fall weather). You can help ease the seal (and make repairs and/or maybe replacement), by making sure the gas has a vented weekly when the temperature is unpredictable, and monthly when the temperature is more constant.



DO NOT BURN THROUGH OIL
OR OUT OF PIPES...



And, Please! When you open the air-vent valve, there may be some oil in the vent pipe... and it may splash out. Well, don't panic and close the air-vent valve too quickly. Let the oil flow. To properly vent the drive-motor gas, have you have to let all the oil drain out of the pipe... before you close the vent valve.



... THEN
CLOSE
VENT
VALVE

REPLACEMENT **BLUES**

50755



Get immediate replacement blues with your aircraft and maintenance tool list! Like new—your mechanics won't see the **REPLACEMENT** tips in the simplest screws, drives an **ITEM 1120-580-81140** faster than you can order 'em!

And, to add salt to the wound, most times it's only a couple of screws/drivets in the set that need replacing . . . but **ITEM 1120-580-81140** gets you the entire full set.

Well, blow those blues out the window. Here's the answer to that part of your problem—separate **ITEM**'s for each screw/drivet in the set.

The sets help and replace only the screws/drivets you need.

REPLACEMENT SET—ITEM 5120-028-024

ITEM 5120-028-024



ITEM 1120-028-071



ITEM 5120-028-070



ITEM 5120-028-028



ITEM 1120-028-071



ITEM 5120-028-070



The **EC**, a Defense Supply Agency (DSA) item of supply, is listed on page 1180 of the new-type Federal Supply Catalog (20-500), Vol. 3 (200 10-1-C6-1-SL) dated May 1954.

It's part of Tool Kit, Guided Missile Maintenance, Organizational, Assembly (NSA), **ITEM 4910-001-0117** (24 9-4-0211-A417), as well as Tool Kit, Accessories Maintenance, Organizational, Set No. 1 Common, **ITEM 4910-074-0014** (20 9-4-0714-A40), and Set No. 2 Common, **ITEM 4910-114-0010** (24 9-4-0714-A40).

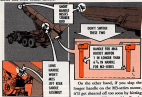
NO SWITCH-ER-OO, OK?



Yep, our knock-off switch handle'll fit in place of Fisher's—but it won't get your Hueser John swinging like a top.

Speaking, of course, about the spin-cocked ignition handle for the M3-series and 1956 model cars.

If you hook up and put the shorter handle on the 1956 model, it won't reach the make-or-buy. So-o-o, it won't get shaved off and across the switch as Hueser John takes off. Handle. No spin.



On the other hand, if you slip the longer handle on the M3-series model, it'll get shaved off too soon by hitting the left rear axle's assembly. Handle. You'll get premature ignition of the spin system, which could mean, at best, the wheel'll wobble like mad, or, at worst, it'll come right off the side of the launcher and . . . phew-wheeee!

(So, again: Don't switch 'em.

The handle for the M3-series . . . Part No. 3002834 is 4-1/16 inches long—a big inch shorter's the switch handle . . . Part No. 3002832 (1954 3002-806-0140) for the 1956 model cars.



LUBE YOUR GENERATOR?

Does the generator on your tactical wheeled vehicle get lubed or not?

It all depends on the make of the generator.

Delco generators found under GM 3008-750-6790 (7001796) are sealed and prelubed so you don't need 'em.



Auto-Lite generators listed as GM 3008-750-6790 (7001796) are supposed to be lubed by support before delivery to units. If they're not lubed, they can give you a peak of trouble—burned out shafts and bearings and like that.

When the support people do lub the oil packet in the drive end with 4 1/2 ounces of an excess CI selenopowder of GM 30 engine oil (MIL-B-1181). They also put a new "O" ring gasket on the oil discharge plug when they screw it back in. Another thing they do is put half an ounce of high temperature ball



bearing grease in the space behind the bearing cover of the commutator end head. All the steps on this is in para 27 and 30 of TM 9-2008-209-34.

If you think your Auto-Lite generator can't cut the mustard like it ought to, have your support check the generator oil and grease.

This applies to Blawie wheeled

vehicles of all sizes from the quadricycle to the 30-tonner. It's also OK for the Landie, Transporter, Self-Propelled, Earth Mover, XHP1012.

One other thing that might draw you . . . Some of the earlier supply manuals list only one number, OEM 2820-727-6790 (75143411), under which either a Delco or an Aamco-like generator could be listed. If you're in doubt which generator you have, just eyeball the generator data plate. They'll clue you in.



RUB-A-DUB HUB

Leaking wheel hubs in recent wheel-end vehicles could mean the hubs are packed with too much grease.

Ask any old timer and he'll tell you there's been a change in the method of packing grease in wheel hubs. When packing wheel bearings with GAA, the old method of packing the hub full is now taboo. A full hub of grease only brings on leaks . . . and leaks are number-one-hub problems.

The new and approved method of packing wheel hubs is to rub the hub with a thin smear of GAA . . . one over 1/16" inch thick. Just enough to keep the hub from rusting.

If your vehicle's TM or any of its changes doesn't mention this method, then go by TM 5-275, "Lubrication of Defense Material," (Jan 63). It covers many details of lubrication not found in specific vehicle publications. Get a copy and keep it near your grease rack.



HEATER MOTOR

WANT THE LOWEST PRICE HEATER MOTOR FOR THE 30-DOZ. MFT. SERIES? (INCLUDES PARTS AND LABOR) TRY DELIVERING TO YOU: (CALL)



HEATER MOTOR with
single dip.



- GM72 25-ton series (M11 except the A1 model)
- GM74 7-ton series
- GM79 25-ton series (M11 series)
- GM78 15-ton series (M11)
- GM81 25-ton series (M11A1)

The EM used to be 2540-1180419, now it's EM 2540-820-8991. The EM is for the heater assembly only and not for the whole heater's line. In the TB 9-2811 series for each vehicle. In other words, it's for a replacement heater.

Before you start asking your supplier for a replacement heater assembly it may be a good idea to look over your heater and see if the breakdown is the one listed on mine. If that's the case, then we are asking for a complete heater assembly—with your support to get a replacement motor that comes under EM 8208-512-8115. It costs less.

EXPANSIBLE

YAN PUBS



Dear Half-Mast,

... We've recently been issued Truck, Van, Expandable, 24 van, M202 van Body, Van, M4. Our problem . . . what organizational publications cover the M4 van body that's on this truck?

I can't find anything about the van body in either O&M Pamphlet 3364 or the book outside TM on the van body.

Are there any parts on the van?

(200) J. W. S.

Dear Miss J. W. S.,

Yes there are . . . but you have to go all around the back and come in through the back door to find them.

To start off you'll have to keep in mind that the van body is constructed on different types of chassis. In this case it's a truck and contractor.

The publications that belong to the M4 van body handled on the M204 truck chassis which makes up the Truck, Van, Expandable, 24 van, M202 are—

TM 9-2330-200-12/1 (20 Jan 91),
Operation and Organizational Maintenance Instructions.

TM 9-2330-200-21P (4 Oct 65),
Field and Depot Maintenance Repair Parts and Special Tools.

Since there has never been a change in cover the basic M202's -200 spare parts manual for this van body, you can see Change 1 (27 Apr 62) in TM 9-2330-200-21P to get information on field collocation repair parts for the M4 van body.

This Change 1 is for the M4 van body mounted on the M204A1 trailer chassis. The repair parts are the same for the van body regardless of the chassis on which it's mounted.

Half-Mast

HOW TO HANDLE IT



Dear Wash-Car,

I need a switching handle for the fuel and shut-off valves on my M37 Tank Tractor. I can't find the handle listed in the TM supply manual. Is there any way I can get one or I am likely to damage the shaft if I don't have the handle in line with it?

SP-4 ARL

Dear Specialist [E.E.],

You're right, they don't list it in a separate item in the supply manual, as you can't order it. This is because they figured it was a non-wearing part that would last the life of the vehicle.

The best bet would be to have your God supply connection cut from some

junkyard vehicle. They can do that under AM 790-58 (2 Mar-59) and Change 2 (20 Mar-60) which says that parts and assemblies can be substituted provided you can't order them through normal supply channels and provided you meet them.

You fit both qualifications, so ask



WASH, FUEL SHUT-OFF
FROM 2750-70-1004

WENT IT UNDER
THE SHUT-OFF TO
THE FUEL VALVE

NO, SUBSTITUTION
IS OK FOR THIS
PART. BUT YOU
MAY HAVE TO
ORDER IT
SOMEHOW.

your supply for the item on a DA form 1546. The supply sergeant will mark CP on the form to show he used the substitution guide to get the part from. He has to do that on the non-order supply lists or keep their records straight.

Getting parts from the "junkyard" has been done for years but AM 790-58 gives you a way to do it legal like. It can be a big help in getting parts you need but which the supply manual don't list.

Just in case the junkyard is fresh out of the particular item you want, you have to order the whole assembly through regular supply channels. This may mean expensive but it costs less in the end because supply don't stock every part especially just on the chance that somebody might need it sometime.

In your particular case, the vehicle assembly is called Water, Fuel, Shut-Off Assembly and is listed in TM 9-2328 211-20P (May-55) as FM 2920-700-1004.



CANVAS

SAVER

Maybe it isn't just air getting.

But it's just as easy to put the canvas back in the right way. And having 'em in the right way runs more wear and tear—usually more—on the canvas covering such vehicles as the M37 Service cargo truck and various trailers.

The back can be twisted to the way here assemblies and makes with their heads on the outside or inside of the vehicle. When the heads on the inside, the ends of the back run—in just the right spot for the canvas to rub against them. And it doesn't take much shaking to work a slip into the canvas.

So look over your vehicles . . . and make sure the heads of the back face the outside at both the front and rear. It's worth the few minutes it takes to set things right.



So look over your vehicles . . . and make sure the heads of the back face the outside at both the front and rear. It's worth the few minutes it takes to set things right.

SEAT BELTS FOR BOLTS



Dear Half-Mast,

We have noticed that some of our M111 and M113 2 1/2-ton trucks have the lock-plates on each front wheel, mounted in such a way they lock the bolts in the front drums locking plates.

Our question is . . . do these lock-plates belong on all our 2 1/2-ton G140 series trucks or just on certain production models?

TM 9-8000 (Rev 11) does not say or show anything about these lock-plates and we can't find them in the supply manual either.

Any help on this topic will be appreciated.



Sp-5 R. D. L.

Dear Specialist R. D. L.,

To be blunt about it . . . these lock-plates belong on all 2 1/2-ton G140 series trucks. The lock-plates are there to keep from losing a front wheel and spindle due to loose and abused front locking plate/bolts.

Here's the background on the lock-plates; they were installed by a M1000-M, M1001 (M1001-God 10740-0110) which has long been cancelled. When the M1001 was cancelled it was felt that all G140 series trucks get the fix . . . but it looks like some trucks were missed. It's possible some of the trucks in storage were overlooked and didn't get the M1001 applied.

The lock-plates are in the supply manual; they're in Ord T 10L G140

(Apr 87) on page 50 and listed as STRAP, locking, drum drum bolt, P30 3240-005-01-01.

Before you install the lock-plate, inspect the bolts locking plate to see if the ball balls have been sheared due to movement of the locking plate and if the balls are worn or damaged, change all parts that look bad.



When you install the lead-plum, connect only two bolts at a time. Start with the pair at the 1 and 2 o'clock position and install the lead-plum—then go to the bolts at the 7 and 8 o'clock position. This way, most of the lead-plum are installed.



Before getting the bolts back, cover a light coat of Loctite Compound (PN 244-211-2291) on the threads.



BEFORE GETTING THE BOLTS BACK, COVER A LIGHT COAT OF LOCTITE COMPOUND (PN 244-211-2291) ON THE THREADS.

Fast Fact

BITE ON THIS!

Dear Editor,

Creating a good metal-to-metal connection on the pointed surface of an M111-series 1000 gal tanker that doesn't have a built-in vent is a bit of a tricky business.

To make sure there's no slip-up, we came up with this idea: We bolted a piece of metal web cold-chamber honey ground tubing to the tank's first bar where the dog chain used to hang. This strap will accommodate the grounding wire at underground storage facilities and service centers.

The strap should be at least 8 inches long so the operators can reach it without crawling under the tank.



Since we've installed this strap our men don't have to struggle trying to get that important line into ungalvanized metal and we don't have to worry about slippage and electromagnetic sparking.

Capt. W. G. Hoyt III
APO 402
New York, N. Y.

Old Man—looks fine, Sir. If my wife's handy, my help first of copper wire will do. This strap or wire will also work great with the ground wire my uncle fabricated while following the steps in TR 5-2,600,211-20, 21 Jan 59. You must be careful, Sir, that you get a tight, non-free connection of the welding.



LOCK-PIN



Are you using the pin for locking the windshield in the upright position on your Mini? No!

Anyway, some of them are coming up missing and when you try to replace 'em, you find they're not an item of supply—can you even get 'em.

So, now you realize that they're not an item to be monkeyed with. You make sure they get you back into their hinges and safety-pinned in place, because all you can do with the last case is to cannibalize an identical 'em.

Some some guys're trying to yank the pin out the hinge hole by using the small chain hooked onto the pin. All

you'll do have is end up with a head full of loose chains . . . don't yank on it!

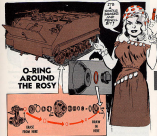


The chain serves as a means of keeping the safety pin around.

Use the windshield to act as a hinge the tension of the pin while you pull it out.



Take care of 'em, 'cause that's all you'll get.



O-RING AROUND THE ROSY

Does Fig. 15 in TBM 5-2980-209-20F (OIL SEAL) have you talking to yourself?

That's the photo that shows how the parts fit in the left front road wheel assembly of your BSA-associated personal motor.

All you have to do to make the photo right is to cross Item No. 11 and draw it in again where it should be, between Item No. 10 and Item No. 1.

Like the new caps, Item No. 11 is TBM 5155-905-4111, Packing, Performance O-ring, 1/4 dia., 1/4 M (581841). However, it is used as a seal for the oil filter

plug on the road case fork-ops.

That's not part in the position where Item No. 11 is shown in the photo. The design people originally planned to have one and that's why the photo was taken that way. However, they found they could get along without it, so it never was a part of the production vehicle.

This happened too late for the TBM to be changed.

Meanwhile, don't be looking for an O-ring at the Item No. 11 position. You won't find any.

THE OLD
WEAKER TYPE

M113 PC ANCHOR SCREWS

THE NEW
STRONGER TYPE



Only* used the dogs in PS 113, page 11, about the new and stronger version but anchor screws for the M113 PC?

Well this is some most of the reason . . . Only now the dogs in that are the early production vehicles, M through M114, all of the old, weak version but anchor screws should be taken out and replaced with the new, stronger type.

Easy to tell which is which. The weak ones have three radial lines on the head and the strong ones have six. The strong ones you want are listed as

PSM 5305-015-0155, Screw, Cap, hexagon head alloy-2, oil or zinc plated, M-10UNF-2x42.

In some old supply guides they are also listed under the title of PSM 5305-022-0221, but it means the same thing. In fact, some only the new ones will be in the supply system . . . but that won't help you if you break one of the old bolts, particularly if you have to drill it out or pull the engine to get it in.

So-o-oo, your best bet is to pull out all the weak, old bolts before they break on you and replace them with the strong PSM 5305-015-0155 jobs.

Mail said?

HOT NEWS ON HEATERS

Dear Wolf-Heart,

What PSM do we use to order the personal dealer kit for our M113 PC and what authority do we quote? TM 9-1300-104-10P-0100 011 has PSM's for individual parts but nothing for the whole kit.

Capt. T. B.

Dear Captain T. B.,

PSM 2540-007-1429, Installation Kit Heater, Vehicular, and PSM 2540-007-1430, Installation Kit, Engine Heater Preheat, are the two kits you order and



EE 9-11 is your authority for ordering them.

Be sure you use the latest edition of EE 9-11 180 (at 60¢) because it gives the latest rules on getting those ties, including compartments where they're required.

When you put in your order, you also need to know what insurance funds to cite.

July 1984

LIGHTNING PROOF

Dear Staff-News:

We're wondering what would happen in a tank and in case of the tank get hit by lightning?

PA, W. & C.

Long answer, see a previous issue.

James Earl Ray
paroled 1990

Dear Private W. & C.:

There's a lot more to it than you think that the tank would get hit in the first place. A tank is so low it's a good target for lightning. Trees and things like that are over 100' high.

If a homemade tank got hit the lightning would flow along the outside of the tank and ground out through the tracks. Even though there is rubber in the tracks, they are grounded.

It wouldn't be easy to hide under a tank in an electrical storm or hit against the outside of it. But inside a homemade tank, even though you are touching the hull, you should be real safe.

July 1984

REMEMBER THIS

NO
LIPPING
HERE

THAT'S
WRONG



Western Cold (normal),
Strategy: M1's tank will not start.

Procedure: Restarting (normal).
Result: Trapped!

What happened during the slow starting job was a bitter experience for everybody in on the deal.

Three of the crew are now dead—because they'd decided that the best place to retire was right in between the two tanks.

It all happened something like this:

The live M1's was headed nose-to-nose with the cold one. When the dead tank didn't want to start, the driver in the live vehicle decided to back away.

He had kept his tank running at a high idle (about 1200 RPM) which is a normal run-during-cold spell so his engine wouldn't stall on him.

Now, when he went to back up there were two things wrong—the didn't drop the idle and the brakes were not on.

To put 'er in reverse, the shift lever had to travel down the LOW and HIGH positions. With his tank at high idle, the second he got 'er in LOW she jumped ahead.

The three crewmen never had a chance.

So here, remember this:

1. Never, never stand between two tanks while they're moving or being start-manned.

2. Always drive the live tank real close to the dead one when starting. If you're, under, under, and the driver will reach.

3. Put the live tank's transmission lever in the "park" position with the brakes applied.

4. Before you shift out of this position, be sure to keep the brakes ON, and reduce the engine RPM to normal idle.

5. Whenever possible, use the side-by-side position rather than nose-to-nose.



JOE'S DOPE

THE CRYSTAL BALL WON'T FETCH IT

SEEN? JERRY
PLAY JERRY?
YEAH

WELL, I
NEEDS LIME
SEE A
FOOTBALL...
BELIEVE ME!
NEEDS...

WONK BUTTERFLY... DAY
BUT PLAYING PEOPLE...
FRESH FLOW... SCOUNDREL
SUPPORT... AND

HEP?

...JIM
[SOUND]
PINKIE,
SERIAL NO.
[SOUND]

THREE FEET
JERRY
CAMP
NEED.
NOT'S YOU
LEAVING GO?
OH...WHEN I THOUGHT YOU
WERE THE "ADDRESS"!
THIS IS OBVIOUSLY HOLD-
DOWN... MY DUTY'S HOLD
UP AT LOTTA DAYS... GHOST
ON SHIRTS PARTS BUM
DUFFS BRAG!

THE GARD
SENT ME BACK
TO SCROLLS!
SOME SUPPLIES
GONE CAN HOLD
OUT ANOTHER
FOUR DAYS!
NOT KING
SUPPLY
SYSTEM
YOU LEAV
NEEDY?



WELL, TRUTH IS WE GOT A
GOOD SYSTEM-BUT, ER, WE
SORTA FOLL IT UP ONCE IN
A WHILE... IN THIS CASE THE
PLANNING WAS
WHERE IT STARTED.

COME WITH ME...
MY SYSTEMS WILL
GIVE YOU A
LITTLE ADVICE
...SHE'S GOT A
CRYSTAL BALL
NOT MAKE
USING LOOK
LIKE ABOVE.



I SEE IN YOUR RECENT
TRIP AN OFFICER PREPARING
TO GO OUT ON A TACTICAL
ASSIGNMENT... THEY ARE
LOADING SUPPLIES...

GOSH I'VENNA LIGHT
ON TH' SECOND
SCHEDULE STUFF
ANYCHA, SARGE?

NAH, WE DON'T REALLY
NEED IT ALL, IT WAS
CHECKED OUT YESTERDAY...
BEHIDES I LIKE LOTTA SACK
POOBY



AWH, NOW I SEE YOUR
COMPANY AT LOTTA DASH...
SHORT ON SECOND SCHEDULE
REPAIR PARTS... LOTS OF
HOON TO SLEEP IN TRACKS
BUT...



OH-CH-I SEE YOUR PLATOON
NEIGHNT VEH' HOOOON...?
YEE, NOW REPAIRS ARE
BREAKING DOWN... DASH
PREVENTIVE MAINTENANCE
IS TAKING ITS TOLLY



Joe's Dope Sheet

Crystal Balls Cannot "Dope" or Forecast,
Vital Parts that Will Fail or Won't Last
So, Don't Hit the Road
Without a Full Load,
Or You'll Run Out of Future-But Fast!



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

IF YOU WANT TO DISPLAY YOUR INTEREST IN THIS COLLECTOR'S BOARD, OPEN STAPLES, LET IT BE WITH IT ON.







AIR MOBILITY



COKED UP CHICKSAWS



Dear Windy,

We had an oil leakage problem on a high-rate and a low-rate R1100,1 engine in two of our Chickasaws (E15-110). On one bird, a cylinder dumped enough oil into the exhaust system to wet the inside of the collector ring. On the other, oil streamed over the outside of the exhaust pipe.

After changing the cylinder on the high-rate engine we found out that the rocker box lubricating tube assembly's internally valved steel P/N 110100 was plugged with carbon. In the oil that leaked past the valve guide into the cylinder and exhaust pipe.

On the low-rate engine we "bored" a cylinder change (and a lot of sweat) simply by room cleaning the mud on the spot.

But we're still puzzled as to what causes the carbon to form? Can you figure it?

Sp-1 M. G. B.

Ever Speculate M.D.R.

That's why the oil leaks to spot the reason for clogged rocker box drains.

On the low-rate engine, you can figure out that the clogged seal probably wasn't dressed right or overhead by your own cleaning job took care of it.

But on the high-rate engine, it looks like you had a case of too much coke

and carbon forming in the rocker box.

One of the main causes of coking is too much valve stem-to-guide clearance, especially on the exhaust valve. This lets hot exhaust gases into the rocker box, forming large amounts of coke and carbon in areas like the valve springs. The coke flakes off during run

slag of the engine and the larger chunks can block the oil holes in the drilled rods. Then when the engine is shut down, oil cures the carbon system because of the large valve non-to-guide clearance.

So, if you get more plugging, take the rocker box cover off that cylinder and take a peek for any large amounts of coke, particularly on the valve springs and washers. Also check your valve non-to-guide clearance by feeling the valve tip from side to side. You can really tell if there's too much clearance by comparing the valve tip with one on the choked up cylinder with that on the other cylinders. Course, if you do come up with too much clearance, you can't do anything about it except to change the cylinder.

If the clearance is OK then chances are the coking is caused by high cylinder temperature. This could be caused

by poor timing, lean mixture, leaking intake pipes, cylinder baffles installed wrong or long periods of ground run up. Correcting any of these possible conditions will stop the heavy coking and the rod blocking that goes with it.

By the way, the new P/M 1-41-5000 rods are drilled clean through so you can't have to take them out of the cylinder for a cross-cleaning.



USE GENUINE FLUID



Nobody knows how or when the hydraulic fluid in the main wheel shock went all covered Mikaweb's 1077-11 turned from red to a gray-black sludge—but it did!

A check-out of the sludge showed it had graphite mixed in with the hydraulic fluid, and you know what aviation developments that can lead to: run up axle, binding and sticking of the inner-cylinder, and a possible change in the metering strap.



Course you wouldn't fill the stock area with anything but the genuine, MBI-9-1086, hydraulic fluid—not when it's called out in TM

15-1730-204-30 (17 May 67), Chapter 2, Section II, paragraphs 2-12 and 2-14 . . . and shown on the same plans next to each stock area in the margin.

ARMY MESSAGE

X2 YOUR REQ

A replacement for your escape hatch pneumatic actuator on your M16A1 (FF-1)?

Don't waste any more standing requisitions and pay attention to this supply type code.

Need a replacement for your escape hatch pneumatic actuator on your M16A1 (FF-1)? Then cancel any outstanding requisitions and pay attention to this supply type code.

TMC message 2M3004-2077-1-01-2120 sets up a master code of "X2" for FMN 1680-867-0183 . . . actuator, pneumatic. And the "X2" code means this actuator is not needed as a repair part. So you're supposed to try to pick up a replacement from inventory as an EX item.

You only make out a requisition for the item when the escape hatch doesn't work out. And you'd better explain how come, because a justification has to go along through supply channels with each "X2" item requisition.

The instructions already in TM 15-1730-204-30 give you an authority for exchanging the books.

There'll be a AFMCOM supply letter coming out which will back up this TMC info.



ARMY MESSAGE
FOR INFO
NO-1181

Now your supply
don't do anything
and you'll find
within the 24-hour
time. Delivery made
anywhere you have
plans.





Dear Windy,

Is it OK to clean almost spark plugs? Sargent says they're a repair-by-replacement item that I say it's not so. Otherwise, why would the spark plug cleaning kit, P294-4110-740-0211, be in the organizational and job sheet in ESR 10-4-1140-468 (28 Mar '62)?

Dear Specialist D. M. Y.,

You're both right—depending on what type plugs you have in your head!

If you have the low-voltage platinum plugs you can put the pop back in 'em with your cleaning kit.

Say, for example, you have a Buick (E8-12), and she's kicking up a howl that you took to the ignition system. In Chapter 2, Section IV, Table IV, of

Ep. 4 D. M. Y.



can tell right off whether or not you have a platinum plug by finding your engine model and matching it up with the spark plug it takes.

Your Buick may have an 18-100 or 18-104. The marks on these babies mean they're platinum, like it says in the legend of the table. So you can go ahead and clean 'em.

Change No. 3 to TB 80M 21-8 also has some really important poop added to paragraphs 17 and 18, Section VI, Servicing, of the book job. It's now OK to clean and reuse your low-voltage plugs.

Course the rest of the plugs in Table I are the massive-type and don't get cleaned up—just replaced.



The 71-1520-204-20 (3 Feb '61), you'll find cleaning of the plugs is now essential for an ignition problem . . . on the '60 in your toolbox.

But before you make with the cleaning kit, run your eyeballs over TB 80M 21-8, Change No. 3 124 Aug '61, Table I on approved spark plugs. You

Take the Pilot Log (1-101), in Chapter 3, Section V, on page 1-1 of TSM 11-25.10-201-20 (10 Apr 61), there's a replacement schedule which says you change the plugs every 200 hours. So, when you're on ignition problems and your troubleshooting chart says to change the plugs on the spot, you change 'em at the scheduled time.

You'll find the replacement schedule of your maintenance manual generally

has the prop on plug life, but there are exceptions. For example, you won't find a replacement in the organizational maintenance manual for the ignition plugs on the jet engine engine of an Cessna 441-B. That's because they're rated to last the service life of the engine. If a plug should go bad, you just change it.

Always Always

TEST FLIGHTS COUNT TOO

Dear Windy,

Let's say a PE was due at 10000 hours and was completed and test flown for 100 hours, then released for flying. When would the next PE be due, at 10100 or 10000 hours?

And suppose the aircraft was not released for flying, requiring a second test flight. When would the next PE be due?

By R. W. J.



Dear Specialist R. W. J.,

Doesn't matter how much test flight time you put on that aircraft after a PE, it's still part of the flying time being accumulated toward the next PE. According to TB AFM 23-67, the periodic time every 100 flying hours. In your next PE is due at 10000 in both examples you mentioned.

If you make test flights exceptions to the rule, then you'll be throwing your inspection schedule out of whack with the usual hours flown on that aircraft.

Always Always

"LEAN MIXTURES???"



Worn up during ground operation your O-400's engine has gone lean, the cylinder head temperatures are climbing, and she sounds like a coffee grinder?

And, to top it off, you followed the steps in the (bulletin) (10-8) trouble shooting chart in Chapter 3, Section III, of TM 55-1518-100-20 (5 Mar 62), without solving the problem?

Is that what's buggin' you?

Then these three baby hints on the "T" fitting in the fuel vent system system—could be the troubleshooting. This fitting has an orifice to limit fuel and vapor back to the tank's fuel tank. And if the opening gets clogged with dirt, you wind up with a lean engine and complications that can lead to a failed engine.

So how do you check the fitting? Simple. Just disconnect the fuel line

line and the return line from the "T". Then stick a small light up through the orifice and look into the "T" at the fuel return connection.

If the orifice is blocked, the light won't show, which means the "T" needs to be removed for a cleaning job. Just remember, tho, not to take the "T" out unless it's plugged. . . too many removals can damage those fine threads for you.

When you do find a plugged orifice, take the "T" out and work it in dry cleaning solvent, Specification P-5-601, until all the dirt is gone. Then blow compressed air through the "T" from the orifice side. Eye the orifice to make sure it's open, put the "T" back, and look up your fuel lines.

With the orifice unplugged, your engine will once again purr like a kitten.



IF YOU'RE NOT
DOING THE 'EM...

STORE YOUR DOORS

With your birds shackled, their tubular canopy doors—left and right—can't hit weather, they can come in for some pretty rough treatment unless they're safely stored.

Too many get left on tables, with all kinds of material piled on top... hung or leaned up against hanger walls, where they're bumped against by everybody and his brother... or just left on the floor in some dark corner of a storage area and maybe stepped on by accident.

Then, when it's time to put those doors back on your birds, the plowblades may be scratched up, gouged, broken... or the frames could be bent, cracked or dented so badly it needs a repair job before you can return it that door.

But you've got a better chance of keeping your doors out of the repair shop by building a storage stand out of scrap lumber. Like it up to you, depending on the number of vertical doors you need. To avoid scratching the paint

on the door frames, you might also line the slots in the rack with some felt padding.

Your doors will stay healthy all year round if you—mark 'em up! Besides, a rack cuts down the embarrassing possibility of losing one of your doors... which has happened to some readers' types on more than one occasion.



RWI-WISE



That's what you can get quick-like if you can be inexperienced hand to hook an RFI-WISE switchboard or a RFI-WISE telephone into a radio-line system.



Although the book says RFI's are supposed to be all the market except for existing programs, you guys who still have 'em for manual use (the lack of newer model phones) can work around for a while for a while for RFI.

What you've gotten used with the RFI-4 or the RFI-5 & the RFI-11/PT switchboard, the RFI-11/PT control group or the RFI-11/PT radio are covered.



Normally, you'd use the RFI-11/PT or the RFI-11/PT telephone instead of the RFI-4.

RFI-4 RFI's are available, but we can take care of the set quickly. First, you need hardware RFI-11/PT, RFI-11/PT-115-4(14), which obtained the old telephone key set-up for RFI-4 use in RFI.



Keep the phone's hook switch as ready to snap the radio transmitter from operating and place the RFI-11/PT switch in manual (indirect) position to avoid a line closure by the ring for holding coil. TM-11-111-11, page 15, page 15, file in the procedure.

To use the "R" you also need use the RFI-11. Radio circuit are not fed into the RFI-11.

You have an improvement in each the row, like an:

First, lift the top plate (up the R) and put the R on the top jack field section of the RFI. Hook the cover latch cable under the first member of the jack field section. Tighten the latch a half turn. Connect the EMERGENCY OPERATOR (hooking part of the switchboard to each other and the CIRCUIT

ALTOZ-POWER Ring No. 16 binding post (not of 12) to the EXTERNAL GENERATOR binding post at the rear of the operator's pack in the 8L.

Connect a START-POWER Ring No. 17 binding post in the 12 to the START GENERATOR binding post on the 8L. Connect the other START-POWER post to the +12V post in the 8S. Now, hook the operator's phone to the receptacle in front of the operator's pack on the 12, clamp the grade-to-rails contacts on the side of the 8L in any reach of the operator, and put the switch in locked position.



Then, as the rails circuit loops the 12, do it right as the rails transmitter will operate automatically!

TM 11-5005-100-11 will take you from there.

There are the best prices in making R/W work with recorded equipment still in use . . . or with the 8L-8L R/W-File, you see.

A KNOBBY PROBLEM

Dear Half-Mast,

Could you drop a little note to PT reminding operators not to force the frequency control knobs on the RT-44-101 radios?

We get lots in our shop because the knobs were forced and bent up the shaft. He cranking shaft, the cone assembly, or both. Usually, the dumb mistake when a cone knob slips . . . which is simple for us to put back in place.

But when the knobs are forced, we get a major repair job instead of a minor one. Sure, there's a little pressure needed to turn the knobs, but if the operators would ask for help or stop as they get unusual pressure, they could save a lot of time and money.

It'd be nice appreciate your spreading the word.

Sgt R. C. K.

Dear Sergeant R. C. K.,

You did a pretty neat job of spreading the word. Thanks good to me.



Half-Mast

QUICK—BEFORE IT DROOPS



To look at it pointed up there, even and unobtrusive, you'd think it could handle anything it might run into. But the AT-454A/ABC antenna on your aircraft might be getting a little soft in the shock—right before your eyes.

The in-flight flex and vibration of the AT-454A whip element may be breaking the nylon cord wrapping that helps join the Stripline whip to the mast base.

Which means you'll have to act quick like to keep from losing the whip and the use of the ABC-66 (1) radio.

Inspect the antenna base and check to see if there's any sign of the nylon wrapping wearing or breaking.

If there's any noticeable wear or weakness, remove the wrapping and re-



place it with electrical insulation tape or a plastic-type tape.

If the whip element AT-454A has been damaged, you can replace it with P/N 1421-152-0499.

You'll want to make a note to give this antenna a little more regular attention than you normally would.

DON'T RIP THIS CORD

Flexibility is something the electrical cable on the LS-106/U head-speaker doesn't have. That's a right good point to remember when you're fitting the speaker around in your vehicle.

The cable's just not gonna stretch. If you slip the speaker to this speaker



less, the cable'll slip through its reinforced bushing. The friction of an inch you gain will pull the wiring off the post inside the speaker.

Result: Your speaker's got a case of the Sleep-Blower and your support's got work to do.

Your best bet when you're shifting positions is to keep one hand under the line and one hand on the cable. This way they'll still be occupied and functioning when they get to where they're going.



SPARE THESE SPARES



'Wonderin' what to do with those spare tubes you got with your JMW PDR-177 radio, are?

Well... the word is you turn 'em in to your direct support, since they're not for replacements at organizational level.

We're talking about the JMW type 50L2, 50T9 and 50M0 electron tubes, of course, which go by V182, V201 and V202 in your area.

Be extra careful handling that V182 — it's radioactive! If you break one accidental-ly, doublecheck TB SIG 229 15 Apr 62 before you handle it. Be a

TURN IN
THOSE TUBE
SPEAKERS!



good idea to check the TB even if you don't break one.

The war years supplied us the Navy with the tubes at running spare, and they took a wrong turn and got through to Army using radio the way, too.

Their replacement is a dual electron job. The V201 and V202 usually need recalibration, and you've gotta take the one spare, remove a circuit board, and then put in the V182. That's why it's higher-priority work.

So there... more in your spare and keep 'em.



THESE FINGERS CAN PINCH



When those big mechanical fingers of the antenna system for your AM/FM radio terminal want to reach for the sky, they don't like anything to get in their way.

Like the three air-strap straps for the footlock assembly and antenna arm, for example.



BE TWICE AS SURE

The brushes of the blow-off motor (B-1001) in your ABC-55 () radio set may go 120 hours between services—but again they may not. And if they don't, things can get mighty hot hot.

To play it safe—and maybe save some blow-off motor—give those brushes the once-over every 60 hours or so. TM 11-5811-221-24 (Jan 68) gives you the steps. Replace the brushes when they're worn to about a quarter of an inch.

Unless those straps are completely out of the way, you can get all sorts of damage when you raise the platform.

Your TM 11-5811-449-10 on the AM/FM radio tells you on page 49 to "Uniformly do these straps securing the footlock assembly and antenna arm and place them out of the way."

Your best bet is to go a step farther and remove the straps that you remove the footlock and flexible waveguide from the compartment. This way there'll be no chance of the straps getting caught when the platform goes up.

Just be sure you unlatches the straps again before you raise the antenna arm.



GETTING THE PIN POINT



Are you in the market for some pointers on how to ensure those small tube pins don't break off in their sockets occasionally in your AM/FM-8 and AM/FM-8 three .10 radio sets?

There's one easy way—guaranteed to get 'em out fast and damage-free.

Take your whole set to your support unit, where a few minutes with the proper tool will make the socket good as new.

Typical to pry the pins from the sockets with makeshift tools can only lead to bigger problems, and a lot more shop time for your set. These tiny sockets can't take much punishment.

WALK-AWAY FROM ANY TOOL THAT BREAKS OR PUTS IN EXCESSIVE STRESS ON ANYTHING YOU OWN!



REMOVE THE CELLOPHANE



Before putting in the battery, peel the cellophane cover off the socket . . . and then insert the battery plug.

If you force the plug thru the cellophane, boom! boom! it'll flatten out the

cellophane against the contacts of the socket. And that's miserable! you won't have—contact—when a good contact is exactly what you need.

WHO'D A-THUNK IT?



"You can't be a chemist unless you know how to use a chemical agent detector kit. And the only way to be sure you're using the right kit is to get the right kit."

ALWAYS INSURE YOU PROTECT YOURSELF WITH THE RIGHT KIT.

ONLY IF YOU KNOW THE RIGHT KIT.



M18A1
CHEMICAL AGENT DETECTOR KIT
FOR 600-674-8074



M18
CHEMICAL AGENT DETECTOR KIT
FOR 600-674-8074

There are two new chemical agent detector kits:

- M18A1, Chemical Agent Detector Kit FOR 600-674-8074.
- M18, Chemical Agent Detector Kit FOR 600-674-8074.

Both kits are for the same kind of detecting, and they're in the system to replace the old M18 detector kit. But, hold your horses . . . there's a big fat difference. The M18A1 kit has a much wider range of detection-capability. So, the kit you now get depends on the work you're in.

For example: The M18A1 is a smaller kit, and it's far easier to plan, carry, handle, handle groups or like-sized units, and also where authorized by TA. The M18A1 is a larger kit for use by units like the headquarters of a Chemical unit, the Chemical staff section of a division, Army or Corps headquarters, the Chemical School, CBR, education centers and the Chemical Institute with service schools. Both for the kits are: The C-18A1 will (FPM 6001-6001-1100) for the smaller kit. And the C-18B1 will (FPM 6001-6001-1100) for the larger kit.

There's also the M18 will kit. Chemical agent detector, M18, components (FPM 6000-6000-1001) which can be used for other detector kit. But, now this will. None of these will be used with the old M18 detector kit . . . except they're not for the old kit. And, you can't be better making the old will for the old kit 'cause it's no longer market.

SUPER SNOOPER

You'll never be a super snooper if you don't keep an eye on your M18A1 chemical agent detector kit. You're supposed to check the detector down on the parts in the kit and make sure you make more before it's close-to-the-old one.

You can now make sure you have more (2) in a kit by asking for FPM 6001-6001-1100, Chemical Agent Detector Kit, Chemical Agent, Standard Parts (18-A). You'll not have to make the C-18B1 will kit just to get these M18A1 will kit.



EASY AIR-BLEED



Take out a plug and put it back often enough and its head won't get rounded off.

That can happen and so: your wrench as slip ping on the air-bleed plugs on the raw water flow indicator on your Model 3000-CPH or 1000-2000 Max-Pac water purification units.

Once the plugs are rounded off, you're in for trouble when the flow indicator needs an air-bleed—the way it's called for its parts 11C31143 in TM 7-4010-209-12 (Sep. 61) and parts 12C31141 in TM 7-4010-209-12 (Jul. 61).

You can make the job a lot easier by wrapping these plugs for a pair of drain cocks.



What you need is Cook, drain, brass, 1/2-in. IT MFPL, see locally, straight now, 115 PM 1 ME. Spec. D-1305 Type 41. You get 'em thru Engineer repair parts supply channels, under P/N 4826-287-4267.

But they're listed now in GDS TM 7-1-C7-13-66, Vol. 1, Stock List (1 Nov. 67).

COCKS THAT DON'T DRAIN



YOU'VE GOTTEN TO BEHOLD THAT AIR LOCK IN THE VALVE.



On Max-Pac 1000-CPH and 3000-CPH water purifiers, your CY-45 flow control valves have drain cocks for dumping water when you shut the rig down—especially in freezing weather.

Trouble is, these cocks won't drain the valves without help.

The valves just sit there and hold water, until you break the air lock with a vent hole in the upper edge of the valve cover.

But first—before you reach for that 1 1/2-in. drill—take the cover down from the valve.

Otherwise, your drill will have right through the diaphragm. (A drilled diaphragm is bad news—see the warning that follows.)

After you drill the 1 1/2-in. hole, run a 1/2" NPT cap through it. Then all you need is a standard brass pipe plug or patch to re-seal the CV-41 valve when your Max-Fix goes back to work.



DRILL COVER FROM VALVE AND INSERTING THE DRILL HOLE PERPENDICULAR TO FACE OF COVER

SPRAY WAGON BACKSTRAP

Dear Editor,

On our Maxco W-1M1 water spray rig, pump pressure tends to force the swing coupling on the upper spray bar so far back it pulls the hose loose from the change.

First time this happened, the operator locked the coupling back in place with a length of locking wire.

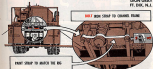
But the hardware he locked like

went on a thimble. So we got our mechanic to make a pressure fit with a piece of heavy wrap iron.

This strap iron brace fits close behind the swing coupling, then passes around the overhead agitator and is locked to the channel frame under the plowbar.

Painted to match the rig, this is a solid fix that looks like standard equipment.

UPON DEAR
PT. BOX, N.J.



WRAP IRON STRAP TO CHANGING PLUM

FASTEN STRAP TO MATCH THE HOLE

Old Man—Like the man says—do it right, and forget it. Just make sure it's behind or the spray bar is free to shift to right or left.

HOLD THAT CHARGE



Dear Staff-Master,

We've had trouble holding the charge in the Quick Aid Model CPS-2, 110-lb. dry chemical type fire extinguishers which were mounted on all our equipment.

New and refilled extinguishers charged to 120-130 lb. seem to lose pressure after knocking around with the equipment for a couple or three days. This means that either the gage goes wrong or the extinguisher is losing its charge.

The handle has a safety wire to prevent accidental release and the wire is still tight and unbroken in each case.

What's the answer?

SPC:B, A.

Dear Sergeant R. A.,

No sweat—like a lot of other things, it's all in the mounting. Be sure you mount these and similar type extinguishers right—with the safety clamp pinning the handle down snug, like so:



WHY HAS HANDLE CLAMP THE METAL CLAMP, OR WOODEN BLOCK THAT SUPPORTS THE HANDLE NOT BEEN CLAMPED DOWN?

Half-Officer

STILL A GOOD TRICK

Dear Editor,

Lately here in Korea we've been caught short with a loaded up generator and sawbars for our MERRY field range.

Here's an old trick from TM 18-750 (Jul 57) that can still save the day:

Get your support guys to saw the generator cylinder in half, take out the old steel wool and replace it with some new wool from your mess. Use a brown band-aid or the likes to stuff the wool in right. Then weld the ends together again.

Half get you
saw bar in half
too.



SAW IN HALF



WOL IN NEW HOLES



WELD IN NEW HOLES

WELD TOGETHER

Be real careful, though, you don't heat the screws at each end of the tube or you might keep fuel from flowing through it.

And watch out you don't break it in any of the old wool dust. Could give you real poisoning. Better do the sawing job ourselves so's the wind'll blow the dust away from your lungs.

SP-4 L. LOCKE

Korea

Old News—This'll work, but it's strictly an emergency deal since you should be getting new spare generators with each downing unit. If your back's to the wall and you have to go this route, wear a protective mask while you're handling that contaminated steel wool—with rubber gloves—and then be sure you decontaminate.

ADAPTER NEEDED

For the want of a nail . . . well, maybe you're not going to ride a horse.

For the want of an adapter . . . your equipment may be lost.

What? You have to use an adapter with the old style gas cylinders when you're using the latest gas shinkled welding set (FSM 5411-051-1411). You may have a Lincoln (FSM 5411-071-7072) or a Sigmatex (FSM 5411-031-7170), or some other set but you'll still need the adapter if you're using the old style gas cylinders.

YOU'LL FIND IT
EASIER TO
GET BY THE
OLD STYLE GAS
CYLINDERS
IF YOU HAVE
THE RIGHT
ADAPTER.



If you don't have the adapter, you can get it by calling for FSM 0120-041-0071. It's an Engineer-type supply item.

SLEEPING BAG PM



Your only (and only!) means of sleeping bag would be easy for long if you use it without its protective tent.

The tent fittings with the sleeping bag, but it has its own FOM, so it has to be ordered separately.

To protect your sleeping bag from damage, when you're roughing it, you need the wind resistant, water resistant sleeping bag case, FOM 8465-15C-4719 — see sleeping bag case, FOM 8465-187-8718.



Either case can be used with the large sleeping bags (FOM 8465-243-7900 or FOM 8465-243-8064) or with the regular-sized bags (FOM 8465-243-7900 or FOM 8465-243-8064.) For case, use and other info on the bags and cases see TM 39-775, pages 49 and 51.

COMMERCIAL PUBS



Everybody's getting in the act—work, almost everybody. Some walk five miles for their exercise, others hike fifty miles just for a bark, while some get no more exercise than "pushin' a pencil along a paper.

Others don't even push the pencil be-

cause they're not quite sure what to put down on the paper.

Take, for instance, you need a commercial manual. You can't do a real good maintenance job on some of your equipment, QM or TC equipment without one. But you don't know just how

to go about getting one.

You've looked all through the DA Pamphlet 518A, hoping against hope that it would be listed there—but no luck. This has only Army publications.

No, now what?

You ask your direct support for help. You fill out a DA Form 1340 asking for the manufacturer's equipment manual that you need. For the QM and Engineer types of commercial equipment you order the manuals just like repair parts.

Be sure that you include the make, model and serial number(s) of the equipment and major components. Also, tell whether you need a maintenance manual, operator's manual, or parts list.

If you ask your direct support for a

commercial manual for Quartermaster or Engineer equipment, then they'll support the manual from US Army Reliability Support Center, P. O. Box 110, Columbus 16, Ohio.

How about those parts and service manuals for commercial design vehicles that you ordered from Transportation—something new has been added. You can no longer get manuals from West Georgia, Macon, in fact, you can't get parts and service manuals from Army sources for commercial design vehicles manufactured before the 1950 models.

What then? You'll have to ask your support to buy them from the nearest authorized dealer, or direct from the manufacturer or the manufacturer's designated regional service representative.

A WORD ON WARNINGS



Flags . . . rebuses . . . signs . . .

There's a man when your vehicles are in no-go condition along the side of a public road or highway.

If you're in the habit of traveling all-year or clocking a lot of highway miles, get with your vehicle, then you should have a highway warning kit with sections, flags, or drums placed all the time—like it says in AR 160-11.

Convoys, too, should be prepared with one kit for every 10 vehicles, but use two kits every five on a convoy.

You can get the kit you need from regular QM supply channels under

800 505-3148115, Bohrer's Kit, Highway Warning. The kit is your safety.



IF TRIP GOES



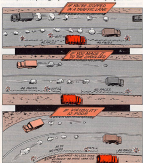
If your vehicle breaks down along the highway, try to get it off the traffic lanes and onto the shoulder of the road — if it's at all possible.

ing kit.

From roadside until sunset, you'll need reflectors or flares. During daylight, use reflectors or red flags.

Then, break out your highway warn-

Here's the way to place 'em:



QUICK, JOE, THE BRANDING IRON



Dear Staff-Master,

Is there any regulation on marking of hand tools?

Our tools seem to "wash off," especially the standard commercial ones like the unit bags at the self-service store.

Capt. W. F. C.

Dear Captain W. F. C.,

I believe that AR 711-9 (Feb 81) is what you're looking for.

In paragraph 9 it says: "In the current practical, all Government tools and equipment for which the Army is accountable will be so identified by marking with the letters 'US' or 'USA' or equivalent specified by the installation commander unless such marking would impair the utility of an item or another method of identification is specifically required by Army regulations or the Army Procurement Procedure, e.g., production equipment, motor vehicles, etc."

The AR doesn't go into detail as to what method of marking you'll use, so work up your own SOP.

Staff-Master

CARRYING A TORCH?



SUPPLY



When you see your buddy wandering around in a daze, maybe he's carrying a torch. No, he's not carrying a torch for the gal he left behind. He's

carrying a torch looking for some career options and working tips.

What he doesn't know is that he can no longer enter the career and work-

ACTIVE
INGREDIENTS
"PENCIL
MAINTENANCE
AND GREAT
KID STUFF"



ACTIVE
INGREDIENTS
"99% FUEL,
10% WATER,
10% MONEY"



THIS GROUP HAS

99%

FEWER
MAINTENANCE
CASUALTIES



"FRESH FUEL HAS BEEN SHOWN TO BE AN EFFECTIVE CASUALTY-PREVENTIVE FACTOR THAT CAN BE OF SIGNIFICANT VALUE WHEN USED IN A CONSCIENTIOUSLY APPLIED PROGRAM OF PREVENTIVE MAINTENANCE AND REGULAR PROFESSIONAL CARE."

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