

# PS

## THE PREVENTIVE MAINTENANCE MONTHLY

Issue 18 1964 series



"...Observe starting action or loosening... note any excessive pull or shimmy... and when chronic failure results from subjection to extreme conditions, report of such chronic failures should be made on DA Form 468...."

## For The Lack Of A Nail...



What was the simple...

Just down, quietly, smoothly, horse motionless...

Responsible maintenance placed in work.

But it was only then...

Keep your work things, your spare parts, and your horse well shod!

Like the mare about the stall missing from the barnyard and

how the shoe was lost, how the horse and rider could

be managed under increased loads... how the horse was lost.

## Today work is not so simple.

You have tools and gear and plans and techniques and equipment complicated that you sometimes wonder what makes it tick.

With all this, thoughtful maintenance has become even more necessary for the safety of horses.

The track and the rails may roll, and the gut may start down... or every saddle, harness and every other object you will use go down the drain.

To keep 'em rolling and working is every body's job.

SHOCKS—Saw Wood again. And repeat.

Planes?—yes. Pliers?—definitely.

Sawpans?—and how. Fastenings?—Yes, so.

Clothes?—Right. Shoes?—Rightly.

Iron Calves and Corners?—Absolutely.

Especially for every body has a hand in keeping 'em rolling and working. (If you're people like parents, see that every thing is done just so.)

It's often by making sure tools in the right spots.

Or keeping in good.

Or adjusting the tool track.

Or cleaning the gut.

Or taking off the things you've got to do to keep your equipment ready for service.

So look at small or big, some gears, the right equipment... a horse is lost.

Look under the right gear, adjusting, greasing, tightening... make tools in use (and when it's over, you're off.)

## A Bottle Was Lost



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If you're with you, then you'll want to see the full content of this issue. For more information, contact your local office. For more information, contact your local office. For more information, contact your local office.

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*Conroy's Expertise Meets*



## THE M135'S TEMPORARY PARKING BRAKE WASN'T MEANT FOR PLAY

You want to know why I'm all hopped up and spooked? It's those lame-brain jobbers who ride in the M135 truck cab along with the driver and flip the temporary parking brake switch to the OFF position when the driver's not looking.

You know what happens? The next time the driver focuses on the brake pedal, there's a good chance of all the wheels locking right.

This isn't funny because if that M135 is slipping along, somebody'll go sailing thru the windshield, and if there's a human cargo aboard, they'll get stacked up like matches dumped out of a box.

That's what may happen if you're larky-larky out in the going around a curve. If you are, then you and your truck'll do some real do.

That temporary parking brake switch is to be used *only* when the hand-operated parking brake can't be used. You see, with a hydraulic transmission you don't have gears that can be set to hold the truck while you get out and check

the wheels. You'd need the temporary parking brake only when in a coon's age.

If you have to use that temporary brake, make it short. Because if it's left on for a long time you'll get a dead battery, the hand'll release, and you'll have a runaway truck.



Before starting out with your M135 reach down and make sure that switch is OFF. And make sure those jobbers keep their paws off of it.

# STUMPY

## CLANCY LOWERED THE BOOM

Dear Half-Mast,

I just received your new MHI wonder... stump-thing worked just but not when had no wheels. What would happen if the crane operator continuously raised his seat on the seat-like boom trailer when the boom was up and then, somehow, the boom got lowered?

The psychological and physiological reasons for seat operation have the name "stumpy" and will like to see some sort of protection device attached. Do you have any suggestions?

Christian, Gary

Dear Gary,

Fig. 1... we've just come up with the gadget you're looking for. It's a safety device attached to the boom (Fig. 1). Here's how it's made—first, get yourself a sheet of Magna-wood (MMA) or UHMW and drill holes as in Fig. 1. Then mount it to the boom as in Fig. 1. To do that you'll need three holes 1 1/2" (38.1) dia., rock washers and of course the holes in the boom that line up with the rods in the plan.

Half-Mast



How to level-up

## HEAVY TRAILERS



Dear Half-Ack,

We had trouble leveling our tractor up to the combination Union, Standard Cargo, #117. If the trailer is loaded, or we are on sandy ground, the supports don't hold the trailer up far enough to back the tractor under it. We took a 2x2 oak board and nailed it to the bottom of the supports (Fig. 1) which gave us enough rise and also kept the trailer level on uneven ground.

We also had trouble with the jacks being torn up faster than we could repair them. The jacks wedge in the wheel and the jacks are split, don't do anything else they can get to pry them out. The prying tears the bottom board in pieces. We took 1/2" angle iron, long enough to go all the way across the bot-

tom of the jacks, and welded it to the metal supports to give a strong prying surface and save the jacks.

LE B. B. III



Fig. 1—To keep from getting bogged down, support your trailer supports with a plank.

Dear Le B. B. III,

Well, Sir, it sounds like you're keeping your trailer on the level and using jacks. But, as far as that plank stretched

across the bottom of your leveling supports as a permanent fixture, I'm afraid you'll run into trouble. It would not be a road-scraper when the going's rough

and you have enough worry about clearing the supports with outside' on their bottom. Best make it a reasonable plank, so it can be moved when traveling.

8. on any of your 12-in. rollers, you're having trouble with the landing-support feet pivoting right out from under the supports when you load 'em on rough, hard terrain, here's a production fix you could try.

Take four pieces of angle iron  $1\frac{1}{2}$ " x  $1\frac{1}{2}$ " x  $\frac{1}{4}$ ",  $3\frac{1}{2}$ " long, and weld one to the front and back of each foot directly under and against the tubular section of

the landing support (Fig. 2). These braces will stop the feet/boots they pivot far enough to undermine the supports.

For another production fix on the collars, here about you welding stops on the gate pins so they're less likely to wedge in their sockets (Fig. 3). The stops would also give you prying surfaces if you need it. Looks like it would be easier than running angle iron along the bottom board of each gate—and that's a lot of iron, too.



DETAIL OF ROLLER BEARING  
 1 1/2" x 1 1/2" x 1/4" ANGLE IRON



FRONT VIEW



TOP VIEW

Fig. 2—A small piece of angle iron will keep your roller support feet in place.

DETAIL OF GATE PIN  
 1 1/2" x 1 1/2" x 1/4" ANGLE IRON



Fig. 3—A little metal, used in little weld jobs, is stop on those wedging rollers.

## Counte Rodd's "SHORT 'N SWEET DUPT"



### Capacitors only

If you've been running hot-wired-out capacitors-with-leads over your left shoulder while your right hand reaches for the customary replacement, now's the time to change the habit. It'll be any day now that your requisition gets you capacitors only. No more leads attached.



When the capacitor comes out, nothing happens to the wire, anyway. Just strip

the lead close to the capacitor, peel back a little insulation, and crimp or solder a terminal on the bare end. If there isn't a terminal available, wind the naked wire around the screw in the new capacitor.

As a matter of fact, the capacitor you think is a special deal probably has a good substitute in a practical item—what you're wanting, but no replacement is quite right in your own backyard.

The first replacement to get this economy pinch happen to be used with the latest control-box on MINI medium tanks—but tomorrow it might be another capacitor and another location and an other vehicle. This business of substituting work on capacitors-with-leads and replacing them with a standard hot-capacitor is being done wherever possible. So consider yourself alerted, and check your bulk supply of lead wire and terminals.

## Wired gears

If you can't tell which hole from a hole in the ground, you might have trouble in identifying gears as shown in TR-Quad 114 dealing with availability standards for auto drive gears.

Somebody's gears were mixed up the job are finished. The descriptions under illustrations #1 and #2 should be exchanged. Correctly, #1 is spiral bevel gear and #2 is spur gear.

Confused? Not our mistake!



## Change the clips

Sometimes along the line a bunch of retaining clips that are on the usual spacers under the cargo body of your M156, J15, etc., and tracks didn't get changed down.

These spacers are the two wood ribs which run lengthwise under the cargo body on top of the truck's main frame. When you crawl under you'll see that four retaining clips have been welded to the cargo body above each spacer but may not have been fastened down. They're there to keep the spacers from slipping.



If the spacer hasn't shifted, do your old a little and tap the retaining clips down with a hammer before they do. They'll hold fast (Fig. 1).

But if the spacer have shifted, you'll have to locate the hold-down holes, jack the body up and drive the spacers back in place. Then hole 'em down tight and level down the clips.

If a spacer comes out, even an only one out, it'll probably cause rumples in your body's mobility. The spacers are in there to cushion the body against the main frame in rough going. Along with the springs in the hold-down holes, they let the cargo body roll with road-bulges.

## Winch cradles plate

Here's news for the boys who tighten down the tracks with winch-brake adjusting bolt all the time a tractor.

Ordinarily is installing a cradles plate on the winch-brake-cum-curve of cargo tracks about how tight to turn the bolt.

So, if you have a track around without a cradles plate on its winch, see if Ordinance can put the plate on the job.



## Just water—not acid

The only drink your batteries need is water.

Some people have been ripping the apple-cake by giving them a ring of acid, but it isn't according to Hylex, because batteries that you get have already had their dose. The only time acid is added to a battery is when it's removed from the depot dry-charged or when a battery expert decides it needs some. Delco-Ramco takes care of that for you. If you happen to add more sulphuric acid, you're upsetting the chemical balance of the cells, and it's bound to go floppy long before its time.

To cut down a jug of sulphuric acid around your motor pool or shop, to keep some joker from killing good batteries, print a small sticker on it that says:

**SULPHURIC ACID**

**CAUTION**

not to be added to  
batteries

## Hydraulic help

When puzzling over what kind of oil goes in the hydraulic system of your M11 Dump? The higher octane TYP 9-1487D (Jan 55) says it's hydraulic oil, petroleum base (DILS).

But, if you try to get petroleum base oil and find yourself up the creek, use seasonal grade OE. Some that's given in the M11 Hydr. dump DC — it'll run your hyd.

How much . . . it holds 57 qts. When you're filling or checking, take a good reading on the reservoir, oil-level-gage and get the levels at the proper marks (Fig. 1) to be sure you're safe.



Overfilling builds up about a 20 lb excess pressure that has nowhere to go because the system isn't vented. But it finds a place to go when you remove the filler cap—which can be dangerous. So remove the filler cap slowly to allow gradual escape of any excess pressure.

## Point need a boot?

You have wondering why a rubber boot was added to the boot control valve spool on the M11 dump?

Yep—just like a Band-Aid keeps dirt out of a cut finger, this boot was put there to keep dirt and corrosion from the exposed control valve shaft—especially when operating in dirty or sandy country.

You'll find these boots on M11's with serial No. 98788 to 100000 inclusive and on 'em all after serial No. 107674.

If you're picking up and dropping your load in the dusty, sandy country, better check to see if your vehicle needs this rubber liner (Stock No. 6714-01-0000) to keep things clean.

### Trips ticket holder

Check some ideas in the Air Army for this one. Whenever a driver gets the key to an administrative vehicle from the dispatcher, he gets a little plastic and fabric envelope slotted right to it (Fig. 1). This envelope is about the right size to hold the trip ticket folded over, and keeps it from getting lost or messed up on the trip, and gives protection when all the drivers come in for their regular runs at truck roll.

The plastic face lets everyone read off the vehicle number and the driver's name without taking the ticket out of the envelope, and if an Oil Pan stamp is needed, it too is put where it can be seen through the window.

These envelopes can be run up in a few minutes by the upholstery shop, from scrap materials. The pattern is the same as is used for map overlays.



### How angled crutches

Some army gurus in the Fort Belvoir Ordnance shop got tired of using a conventional crutches under the lighter military vehicles. He had to hold his head up to see, but didn't have room to sit up. So he made a game that tilted his head about 10° and has a piece of sheet metal to give him a back rest. He made it so it can be removed when not needed. Looks like (Fig. 4).



### Weight correction

The road weights for the G-truck M37, shown on page 9, in S-600, are really "curb weights" in round figures, because they include full equipment, personnel, and some empty payload. The Vehicle's Weight and Dimension Data Plate has the correct figures for road weights (which, of course, does not include weight of personnel).

#### M37 Weight

Empty	2917 lbs.
Cross-Country	2417 lbs.
Highway	2017 lbs.

#### M37C Weight

Empty	3407 lbs.
Cross-Country	2907 lbs.
Highway	2507 lbs.

*Distinguished Driver's Award?*

## IT'S IN THE BOOK



Every now and then, loud, plaintive cries are heard from the back country to the effect that everybody gets to wear a nice, shiny badge, but the driver, and that poor guy who does all the hard, day-in, day-out work to keep 'em rolling, the motor mechanic. The infantryman gets his long rifle, the combat medic gets his wreathed stretcher... so how can a top-flight truck-jockey or wrench-juggler show that he knows his stuff?

Simple, friends. Just take a long look at par 24, Sec. III, AR 600-70. There's the solid, shiny reward for the driver or mechanic who's

proved he knows what he's doing. It's in the book, so you motor officers who want to show that hard work really does pay off, here's your cue. And you first-class drivers and mechanics... maybe your motor officers have

been too busy doing their jobs to have thumbed through their regulations. You could remind them. And don't make the mistake of under-rating the Motor Vehicle Driver's (and/or Mechanic's) Badge. To wear one, you've got to be plenty good, because the qualifications are high and lesser badges need not apply.

# WHAT'S THAT KNOCKING IN MY ENGINE?



Joyride jay can spot a knock in an engine a mile away. What he hears is knock from one of the company jays, he pulls something about "This '48 Old Army gasoline?"

What Jay doesn't know is that gas lines probably isn't the trouble. Several other things can make an engine knock. Some of these you can't control, others you can.

You can't do anything about these:

**Humidity**—did you ever notice how much quieter your Old Chevy runs in a rain than in dry weather?

**Temperature**—You are more likely to get a knock in hot weather than in winter, due to higher engine temperatures.

**Elevation**—Some gaslines will take you through the mountains nice and quiet-like, but down at the seashore will make your engine sound like a jackhammer.



You can do something about these:

**Engine temperature**—Knock can come from an engine that gets too hot because of a clogged radiator, faulty thermostat, bad pump or loose fan-belt.

**Carbon**—An engine that's backslap with carbon may give a knock.

**Carbon**—If it's run for too long a minute, you may get a knock.

**Disributor timing**—Knock can come from a spark that's advanced too far. And you'll also lose power. Too—the advance mechanism may be out of kilter.

**Driver habits**—The driver who accelerates with the gas pedal jammed to the floorboard is asking for knocks. Also, the lug who lugs the engine down in its near-stall-but gap before shifting gears will hear pounding in his head—his **drum** hear pounding on his head.

**Kind of driving**—Excessively slow speed driving on the gas or in gear is likely to cause accumulation of carbon deposits which may help to develop knock.

**Man**—What can you do about it?

Get yourself an engine check, including the carburetor, distributor, plugs and cooling system. When it's lined up the rest is up to you. Avoid long engine idle periods. They cause carbon formation in the combustion chambers. The main thing is to watch your driving habits. Avoid jolt-like starts. Select the right gear for your load and speed. Watch the tachometer (if you have one).

The right kind of driving will knock most engine knocks right out of your head.



### TRAINING THE FEEDBACK

Dear Half-Mast,

We're on the receiving end of their questions:

Why are the tire pressures unequal on the truck, 44-psi M18 and the trailer, 44-psi M100? The sizes are the same and it is required that the space be used for either. How would you use the spare space on the trailer with its 28 psi? Do you know the answers?

Maj. A. P. D.

Dear Maj. A. P. D.,

Well, Sir, they don't call me the Answer-Man for nothing. The 28 psi prescribed for the M100 in TM 9-804 has been changed to 28 psi by Change 3-CB Apr 54 to the TM. And Change 1 (1 Apr 54) to TM 9-875A sets the tire pressure for the M100 trailer at the same figure—28 psi. So let me see the manual and you'll stop all the questions.

This 28-psi pressure for 44-psi truck and trailer tires applies to both highway and cross-country operation. You reduce it by 10 psi when you're rolling in mud, sand, or snow.

*Half-Mast*

### STURDIER ARM

Dear Half-Mast,

What is the story on the doubling in the steering after arm on our M17's and other Dodge vehicles? We are wearing our spats a lot of them, and can't find any listing in our Ord T. 500, G-741. We took the matter up with our Field Maintenance Unit, and they couldn't get it either, but did give us a whole new arm. It seems silly to replace the whole arm when the bushing is all around.

W/O McC.

Dear Mr. McC.,

You did just right when you had the whole steering after arm on your M17 replaced. You could have done this yourself, because it's right there on page 68 of your Ord T. 500, G-741 (May 53). "ARM, after, w/BALLS and BEARING, any (Original) PN 1041-737000." You don't worry any more on this, but you can get it when you need it. After all, a loose bushing gives lots of warning before it is completely unworkable.

I looked back to see just where the bushing for this arm did show up, and

it's on the Depot stock. The idea is this, the man you replace is not staying away, it's sent back to the Depot where they have the tools to do a precision repair job.

THE JOURNALIST HAS  
 A BUNCH OF  
 THE "GOLDEN" ONE



By the way, you want to be sure to get the "SNAFT, Silver one," G241-717388 which is the last item on page 70 of the Ord 2, SMC 11-760 to replace it. The items there, on your new one, will last longer.

Flash-Matt

### SEAN BIRKING

Dear Flash-Matt,

We drive our buses as much as 150 miles a day over good level metropolitan area with numerous landmarks, one-way streets and highways, some of which are up to six lanes wide, without the aid of outside rear-view mirrors. Crossing lanes without mirrors is nerve-racking and hazardous because of blind spots.

The boys who drive our buses feel they should have outside rear-view mirrors to prevent any possible accidents, but we can't seem to find any

direction that indicates so is required. How mirrors. Can you help us on this?

Sgt G. L. D.

Dear Sgt G. L. D.,

There is a rough one . . . outside rear view mirrors are classified as minor tools, and SB-715-118-00 gives all instructions on how to get accessories on local purchase.

But here's the rough part—the order has gone out to Class 2 installations saying that non-essential accessories such as grill guards, outside rear-view mirrors, windshield wipers, back-up lights and emergency brake warning lights are not authorized for procurement.

The order goes on to say, "A minor essential accessory is one that is not important to the highest degree and not indispensable to the comfort and safety of human beings and/or proper operation of the vehicle in operation."

So long, if you can convince your old man that rear mirrors are essential, maybe he'll be able to get them authorized by writing to the depot and



quoting Chevrolet letter CCCC 35113, dated 1 Dec 68, that says "an adequate field of view is the most, provided by rear view mirrors in a safety requirement." Do also you could buy them yourself.

Half-Mast

#### FE VERSUS OE 10

Dear Half-Mast,

There is considerable discussion here as to the compatibility of Oil Engine OE 10, Quac, Mobil-D604 and Engine Oil Preservative FE, Quac OE Army 2-1261.



This has come up because the new Allison crank-drive transmissions that we get in our tanks have FE 10 in them and we are in doubt as to whether it's better to flush the FE from the transmission before refilling with OE 10 or to let oil drain and settle?

Can you enlighten us on this?

Mr. W. A. M.

Dear Mr. W. A. M.,

Yes, you . . . these two oils are compatible because basically they are the same. FE is just OE 10 into which a preservative formula has been added.

As for flushing preservative oil from your new Allison transmissions, it isn't necessary because the amount of FE that remains in the engine, tank and transmission will do no harm when they're mixed. If you did flush out the transmission, the flushing compound might get in the torque converter and it's impossible to drain the torque converter without completely disassembling. So don't flush—just drain it out.

Half-Mast

#### SPINDLE WHEELS

Dear Sgt Half-Mast,

Could you tell me why my 61-62 Ford's front wheels have a tendency to continue turning when I lock it up? Does it have any harmful effects on the vehicle?

Sgt R. L. D.

Dear Sgt R. L. D.,

Sounds like your front axle drive is engaged at the wrong time. This could damage the drive mechanism—especially the gears and bearings—over its normal life span on the tires.

When the front drive is used on hard surfaces made under normal conditions, torque builds up in the power axle, and when the vehicle is lifted causes the wheels to spin a little. This wind-up isn't as likely over rough roads for



more torque is relieved when you're bounding over that kind of terrain.

Like it says on page 18 of TM 9-406: "The lowest drive should be used only in all-terrain operations, slippery roads, steep grades, or starting hard pulling and deep water fording."

*Half-Mast*

### 3-CYCLE OR 4-CYCLE

Dear Half-Mast,

I was taught that the M46 tank has a four-cycle two-cycle engine. The manual calls it a four-cycle engine. The people I talked to around here say it's just considered a four-cycle engine but actually it has only four strokes and two cycles.

Can you set me straight on this?

Sgt T. S. H.

Dear Sgt. T. S. H.,

Here's one . . . that engine in the M46 tank is an air-cooled 4-cycle engine. You're confusing cycles and revolutions. An Otto 4-cycle engine (named for the guy who invented it) is our most common engine. It's the one that

has four strokes—two revolutions—for each explosion. You know, intake, compression, power, and exhaust.

The 2-cycle engine fires every two cycles, or one revolution. This is done by having no valves and putting the new charge in at the bottom of the piston travel. The exhaust is driven out the other side of the cylinder at the same time. So—the up-stroke provides compression, and the spark sets off the power stroke near top dead-center.

Almost the only 2-cycle engines you'll find today are in outboard motors, some little motorcycles and power lawn mowers. In general, if you have to mix the oil and the gasoline, you're dealing with a 2-cycle job. If the oil goes into a crankcase, it's a 4-cycle job. For more deep on automotive principles dig out TM 9-1708. It covers the subject well.

Large, with no your manual. It's your best bet for basic info.





# SUPPLY & DIRECTIVES



**BEND AN  
EAR**



**HERE'S HOW  
TO GET**



**NEW  
SHOP SETS  
FOR  
FIELD  
STORAGE OF  
SPARE  
PARTS**



If you've had trouble getting Shop Sets 21 and 22 for field storage of spare parts, hold an ear. Here's the latest scoop.

The Supply Sets at Forward Ordnance Depot say that these shop sets are brand new. They replace Sets "C" and "D", Stock No. 41-G-4800 and Tech No. 41-G-4800 respectively. The old jobs listed in Paragraph 2 of Ord 6, 59L, N-21, have been declared obsolete and canceled.

Instead of Ordnance Maintenance Set "C", you now order Shop Set, Field Maintenance, Spare Parts Storage, Set No. 1, Stock No. 41-G-2990-300.

The replacement for the "D" set is Shop Set, Field Maintenance, Spare Parts Storage, Set No. 2, Stock No. 41-G-2998-312.

If you want an idea of what these sets contain, look at the tables printed opposite. Remember—the Ordnance Corps is responsible for the initial issue of this set, including the accessories which are items from other technical services, like those hand lamps, for instance. For replacements within the set, requisitions should go to the technical service concerned—in the case of the handlamp, to the Engineers.

Either set can be mounted on any 2½-ton 6x6 truck with a flat cargo bed. The truck, of course, is your regular WDMV vehicle.





'S OF

# ARMY SUPPLY MANUAL GROUPS



Get acquainted with your Oid letter and number groups and you won't have to guess where to find what you need when you want it.

## ITEM GROUPS

**A Group**—



Automatic guns (including automatic rifles, machine and submachine guns); aircraft machine guns and cannons (up to 40mm); mortars (up to 4.2"); related auxiliary equipment; automatic anti-aircraft material (up to and including 40mm).

**B Group**—



Small arms, hand arms, semi-automatic rifles, pneumatic projectors, grenade and rocket launchers, bazooka, trench knives, arm chests, lockers and racks.

**C Group**—



Light and medium field artillery (including guns and howitzers from 57mm up to and including 155mm howitzers); aircraft cannon (over 40mm); park artillery (including howitzers and carriages); park load accessories, sublimar mounts; aircraft artillery (including guns and airplane cannons); airborne artillery (including guns, howitzers and carriages).

**D Group**—



Heavy field artillery (beginning with 155mm gun and 25mm anti-aircraft gun).

**E Group**—



Searchlight artillery power plants.

**F Group**—



Sighting and fire-control equipment, lighting devices, time interval meters, and watches.

**G Group**—



Automotive material.

**H Group**—



Standard common items including hardware, straps and leather pieces (except electrical fittings and glue material); pipes, tubing, hoses and fittings; miscellaneous pipe material (wires, ropes, threads, glass); ferrous and nonferrous metals (rods, bars, plates, strips, sheets and shapes); articulation bearings; oil seals; tires, tubes and repairing materials; batteries; lubricating fittings, oil filters, and cleaners.

- J Group** → Common tools and machines.
- K Group** → Clearing, preserving, lubricating and welding materials.
- L Group** → Targets and target material.
- M Group** → Ord unit tool, load and supply guides (not otherwise classified). M Group SNLs pertaining to T/DMR units will be canceled when the current information has been transferred to J Group SNLs.
- N Group** → Ammunition, fuses and primers for medium and major caliber artillery, anti-aircraft artillery, and heavy field artillery.
- O Group** → Ammunition, fuses and primers for rifle and medium caliber field artillery and mortars, land mines, and demolition materials.
- P Group** → Bombs, mines, and torpedoes for aircraft; grenades, pyrotechnics, guided missiles and rockets including fuses and primers.
- Q Group** → Small arms ammunition.
- R Group** → Army aircraft.
- S Group** → Guided missiles.
- T Group** → Captured foreign material.
- U Group** → Obsolete general supplies.



#### obsolete groups

- QND 1**—Introduction (date is now being printed as M H B-25-39)
- QND 3**—List of current issue items and a book for requisitioning.
- QND 5**—List of all items (books and Cross Reference Lists and Obsolete General Supplies).
- QND 6**—Jars, kits and outfits.
- QND 7**—Organizational maintenance allowances.
- QND 8**—Field and depot maintenance allowances.

- QND 9**—List of all service posts.
- QND 10**—Ord unit tool, load and supply guides.
- QND 11**—Ammunition (which is being converted to Ord 3 and Ord 2 manuals without changing the information on the Group letter and number.)
- QND 12**—Obsolete General Supplies.
- QND 14**—Interchangeability list.
- QND 15**—Cross-reference list.
- QND 16**—Captured foreign material.

## PM BY MILES



Is your one of those on-the-go outfits with a batch of wheeled vehicles that need their 1000-mile services long before 90 days are up? Or with track jobs that do more than 100 miles every month? Are you having a rough time scheduling these babies for their PM needs? Well, not to worry because TM #2000 Oct. 5th gives a hard-anger of a way to keep yourself posted on those specific gallopers. Here's how it's done:

Take the right-hand page of PM rules WD AGO 480 and engrave a mileage chart. Just line out the numbers across the top of the page and put miles instead—from 100 to 1100, allowing two spaces for every 100 miles, and down along the left numbered column for the last three digits of the vehicle's number. (If by chance you have nine numbers that are alike, or three, put in the full number). The idea is to run a line out from the vehicle column and record its mileage.

As mileage is accumulated for

each vehicle, draw a heavy line to the right. (Might enter your starting mileage for each vehicle in the 100 column if you want.) As the line crosses within the 900-mile mark, then you can make your plans to call in the wheeled vehicles for their 1000-mile services. Like in the sample, wheeled vehicle on line #3 is entering the 900-mile zone—time to schedule even if the 60 days aren't up yet. And the one on line 4 is overdue. Planning in advance makes for a balanced work load and cuts down the gray hair.

This chart can be tacked up on the wall for quick reference; furthermore, charts can be extended to go for the 600-mile services if you want, then you can plan the PM services when the vehicle passes the 600-mile mark.

Incidentally . . . when making these mileage inspections, you should be filing in the new DA 480 or 481 forms. BK 790-135-2 and PS #36 give a good run-down on how they're to be used.

# JOE DOPE

IN THE  
SPRING  
A TUNE-UP

Eventhous its

**N**ow the sun...  
coasting, closer &  
from the far edge of our orbit  
warms sweet breath on the land  
Here a bird trills  
There a poppet glistens  
Now the winter hard soil  
yields to man

Over at mess hall 3  
a bud pouts  
An insect hums  
And the mess cgt.  
his heart aburet.  
with gladness  
sing.





## 1. ANTI-FREEZE



DRINK IT AND STORE IT IN JEFFY'S TANK. LONG DRIVING YOU GET FROM QM.



## 2. CLEAN & FLUSH COOLING SYSTEM



WHAT IF TH' VEHICLE  
HAS BEEN WINTERIZED  
AND IS EQUIPPED  
WITH A POWER  
HEATER?



THEN DO THE  
FOLLOWING...



**FIRST...**

CLOSE SHUT-  
OFF COCK CONTROLLING  
CIRCULATION OF COOLANT  
THROUGH BATTERY HEAT-  
ER PAD AND  
ENGINE HEATER.

TO THE  
AFTER ENGINE  
HAS BEEN  
STARTED.



**THEN...**

DISCONNECT  
ONE END OF THE TWO  
COOLANT HOSES.



... AND TAKE IT FULLY  
NEARBY SO IT'LL BE READY  
FOR NEXT WINTER.



**3. GIVE IT A WASHING**



AND WHILE YOU'RE  
DOING THAT, I'LL  
TALK UP THIS  
POSTER.



# JOE'S Dope Sheet

EVERYBODY KNOWS YOU ONLY  
ENO A SHREKING JOE  
EVERY 1000 BILLES.

**T**he army can give you the rules  
Fine machines and plenty of tools  
But you gotta pay heed  
To the use of your steed  
Use your head like they teach you in the schools.

... BUT JOE, WE  
JUST BEEN OVER SANDY  
TERRAIN... THRU TWO  
DUST STORMS... I CAN  
HEAR THE JOINTS  
GRINDING... THATS  
WHY WE GOTTA GIVE  
IT SPECIAL ATTENTION  
LIKE IT SAYS IN THE  
SHALL PRINT OF  
THE LO...

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

NOTE: IF YOU'RE  
REVERSE-THREADED,  
WELL, PROCEED!



#### 4. LUBRICATE



FROM END TO END  
JOB. LUBE THE  
LUBE CARTRIDGE BARS.

#### 5. RUST SPOTS



CLEAN RUST OFF  
WITH FINE SANDPAPER  
AND PAINT.

#### 6. ELECTRICAL



CRACKED  
LEADS OR  
CABLES?

#### 7. BRAKES



CRACKED BRAKE  
HORNS, HOOPS?

## 8. TIRES



I'M GOING TO PROBE OUT THESE WHEELS AND LOOK FOR NAILS AND STAPLES.

IF YOU'RE NOT CHANGING TIRES, CHECK WITH YOUR BOSS AND SEE IF YOU NEED THEM OR TURN 'EM IN TOO!

## 9. STEERING



LOOKER? HARD LOOKER? HOW ABOUT BRINGING 'EM?

## 10. HEADLIGHTS



WORTH DELAYING 'EM... DON'T TRUCK 'EM CHECKED.

## 11. BATTERIES



IF THE BATTERY IS FOLLOWING TO GO, GET THE BATTERY WIP AND RECHARGE IT IN THE SHOP. TIGHTEN UP ON IT.





# CONTRIBUTIONS



## TONGUE WRENCH ADAPTER

Dear Editor,

Considerable trouble from blown or leaking manifold gaskets as well as cracked manifolds is being experienced on the 8125 in the field. Most of it is caused by improper or uneven torques of the manifold stud nuts.

Here's a tool (Fig. 1) adaptable to the torque wrench which can be used to get the proper torque of 20 to 25 foot pounds on these manifold stud nuts. It can be made in an Ordnance machine and welding shop.

Howard E. Gray, DCT  
P. Leonard Wood, Missouri

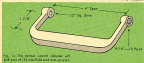


Fig. 1—This torque wrench adapter will pull your 8125 manifold stud nuts up right.

## CLIMBED-UP DIMMER SWITCHES

Dear Editor,

Some of the boys are getting a whole lot back in service now and then by working out the dimmer switch in cleaning solution. If the only thing wrong with it is some grease and dirt in the plumbing, this will sometimes get it back in service for awhile.

Ed Bacon Harding  
APO 319, New York

(Ed Note—dimmer's fine. As above, it costs very little to try before experimenting a new switch.)

## TIGHTEN STAKE BODY NUTS

Dear Editor,

Could be that the nuts on the carriage bolts that hold the body side rails and tramp area down together on the GMC 20,400 MCV-BD11 trailer haven't been pulled tight enough and properly seated. It's always good to give these retaining nuts a check for tightness and make sure its place. If you don't, you might find yourself heading down the road with your stake down and your nuts being jostled apart.

For Don R. Hanes  
APO, Maryland



(Ed Note...It's good PM to check any nuts like this and with them that get a good jangle around, it's even better.)

## THE TWINKING LATCHES

Dear Editor,

From being out in the weather, the storage box latches on the M17 tanks usually rust and stick so tight it's hard to get them to work. Most people pound them with a hammer . . . more often they snap off before they give.



Fig. 1—The screw makes the gap so wide the latch fitting hole should be drilled.

To remedy this nuisance, drill a 1/4" hole through the side of the handle directly above the spindle (Fig. 1); do this on every latch handle. This'll give you an opening for lubing the spindle and will stop the rusting and seizing. Then at your regular PM services give them a shot of oil.

If there are already frozen latches on your storage boxes, after drilling the hole, blow out the rust chips, squirt in some light penetrating oil, knock No. 14-C-2885-950, let it set awhile then tap it with a hammer until it moves freely. Blow them or out loop-it lubed.

L. R. Mayhew  
 Ft. Knox, Kentucky