

# How to get that -

# KNOW-HOW AINTENANCE

help on an extra tough problem. Right? maintenance know-how. But sometimes you do need a little If course everybody in your outfit's up-to-snuff on his

So, what do you do? Where can you get help?

Well, there are several places. Try these for size—

and men who are available to help you with your Ordnance nance and Post Engineers. or Engineer equipment. The same's true of your Post Ord-Your own Ordnance or Engineer units have trained officers

have you come to their shop for instruction. men or Engineers can visit your unit for a training session or got you stumped. Or, if you think your men need special training in some phase of their work, then these sharp Ordnance They can give you a hand with a maintenance problem that's

And, that's not all.

used and how to use and operate it right. And they'll let you know it you're using your stuff right. They can tell you if your equipment's in the right shape to be

cians, and they work out from your Post Ordnance office. equipment are called Ordnance Corps Maintenance Technitanks, vehicles and the like. Those you find for Ordnance ply operations, and they'll show you how to do everything—like supplies and equipment. You can have them go over your sup-They're civilians — and top-notch specialists in weapons, Then, you've got some extra help at various Army posts. making out issue slips, keeping records and storing supplies. They'll give a hand in figuring out your unit's basic loads o

Ordnance equipment. They'll hold classes, give group instrucment in tip-top shape. tion—in fact, do practically anything to help keep your equip-These men'll give your unit special training in maintaining

Engineer unit to see about getting the help you need All you need to do is contact your supporting Ordnance or

# MAGAZINE

Issue No. 41

1956 Series

direct from Preventive Maintenance Agency, Raritan Arsenal Distribution is made through normal publication channels Within limitations of availability, older issues may be obtained Metuchen, New Jersey. ion of organizational maintenance and Published by the Department of the Army for the informa

# IN THIS ISSUE

# FEATURE ARTICLES

EPARTMENTS	Not Too Fast	Longer Life !	(Cartoon	Tips For Wh	The Shape T	Switchee The Rubber	Dirty Axle Breathers	Acetylene Pr	Storage Know-How	Tactical Or	and well as a second
15	Not Too Fast, Guy'nor (Engineers)	Longer Life For Magnetrons	(Cartoon Continuity)	Tips For Wheeled Vehicle Operators	The Shape Tells The Tale	Rubber	reathers	Acetylene Pressure Regulator	w-How	Tactical Or Administrative?	The state of the s
	42	37	21		18	17	16	5	•	N	

mie Ro	Contributions	ngineers	ublications	Irmament	talf-Mast	Connie Rodd	
Connie Rodd's Briefs	Su.		4			8	
÷							
48	6	8	38	36	29	•	

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

(100), Tog. Div (50); Brig (3); Regt/Gp (3); Bn (5); Co (18) except Cml Ca (3), Med Co (8), DM Co (3); Ft & Cap (5); Gom & Br Sve Sch (5) except Engr Sch (100), Ond Sch (25); USMA (25); Joint Sch (5); Specialist Sch (5); PMST (6); Dr. (25); Gom Deputs (5); Sup Sec, Gen Deputs (5); Deputs (5); All (5); RTC (100); Trans Terminal Cond (2); OS Sep Agencies (2); PG (5); Arsenats (25); DB (25); Craft Main Sta (3); Div Engr (2); Dist Engr (20); NG: State AG Special List, USAR; MI Base Comd (3); MDW (5); Armies (50); Corps (3); DIv (2) except Armd (275); Admin & Tec Svc Bd (5); Hg CONARC (10); OS Maj Comd (5); except G1 (2); SS, DA (1); Tee Src, DA (5) except COFENGR (75), COFORD distributed as follows: DISTRIBUTION: ACTIVE ARMY: Gen Staff, is approved by the Director, Bureau of the Budget [4 Aug. 53], and is The printing of PS Magazina, the PREVENTIVE MAINTENANCE MONTHLY

# HALF-MAST GIVES THE ANSWER:

of Questions on Whether Vehicles are TM 9-2810 and TM 38-660 Have Raised Plenty

# TACTICAL OK MINISTRA!



when to use one or the other, I'll and TM 38-660 (Preventive Maintenance for Administrative Vehicles)? I'm and Preventive Maintenance Services) go nuts. in a mess, and unless I find out soon (Tactical Motor Vehicle Inspections Just when do I use TM 9-2810

chauffering visiting VIP's around. are commercial sedans, which are TO&E MP outfit: Most of our vehicles used for a number of jobs including trucks. Seeing that the majority of We also have a few Joeps and 21-ton inspectors say that TM 9-2810 is and we've been gigged for it. The we've naturally been doing our mainthe book we should use. tenance according to TM 38-660 -the vehicles are sedans, though, This is how it stacks up in this

rooker, but I just can't see it. You'd better help me out. Maybe I've already gone off my

M/Sgt A.E.F.

Dear Sgt A. E. F.,

flops by supplying the right answer. I'll try to stop your lid from doing flip-When it comes to a problem like this,

assigned to do. is meant the primary job a vehicle is Used is the key word. And by used

or tactical operations, or the training of troops for these operations." use in direct connection with combat of AR 700-105 (26 July 1950) says, is a tactical outfit. Paragraph 2 c (1) they're assigned to a TO&E unit which tactically-used vehicles simply because commercial sedans or 1/4 ton Jeeps, are vehicles in your outfit whether they're ... Tactical use of a vehicle is any Your MP outfit is a TO&E unit. All

used ractically, because these're the problem. Your vehicles are all being vehicles you'll use in a combat or tacti-This goes right to the heart of your

they're assigned to your TO&E outfit, up and deliver groceries, as long as mercial sedans were being used to pick tor these operations. Even if your comcal operation-and you train the men of your outht in the use of these vehicles





they're considered tactically-used vehicles and will be maintained according to TM 9-2810.

of a vehicle is any use not directly connected with combat, tactical, or service unit operations or the tratively-used vehicles: "... Administrative-use training of troops for these operations." The same AR 700-105 says this about adminis

is not in direct connection with combat or tactical cording to TM 38-660-because they're assigned to post motor pool to transport your men to classes. This the post motor pool which is not a TO&E outfit. operations, and these trucks will be maintained ac-Let's say you get three 21/2-ton M135's from the

THEN ....THE TRICK
IS TO FIND OUT HOW
THEY WERE ASSIGNED. IF FRINSTANCE YOUR OUTFIT IS A TACTICAL UNIT

> and maintained administratively and a commercial sedan can be used and maintained tactically. So now you see that a 21/2-ton truck can be used

ministratively - used vehicles." equipment. TM 38-660 outlines procedures for adcedures for use with operational and organizationmotor vehicles. It does not apply to administrathe Department of the Army for taetically-used maintenance forms, records and reports prescribed by tively-used motor vehicles and materials-handling This is what it says: "This manual outlines the pro-TM 9-2810 explains its use right in paragraph 1 a.



\*16 Mar

# T'S RIGHT IN THE BOO

now-and yet everything you need to know about any kind of storage and how it affects your outfit is right in the book. The question of limited storage has been bugging people for some time

storage up to three years. more than 180 days, it goes into standby storage—and it can stay in standby 6 to AR 700-105 (Jan 54). If you're going to keep a vehicle in storage can keep a vehicle in limited storage up to 180 days-it says so in Change for a time-like when you don't have enough drivers to go around. You You can put a vehicle in limited storage when you don't expect to use it

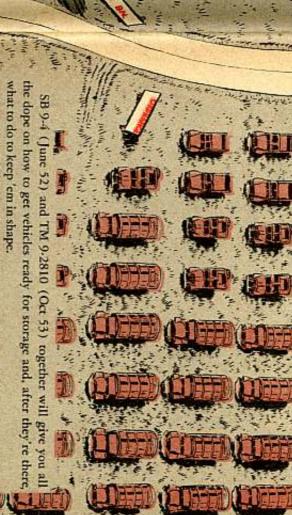
the using organization to which assigned." responsibility of vehicles stored under such authorization will remain with or the heads of technical services concerned in class II installations. The storage when authorized by Army commanders or overseas commanders, to user organizations and not required for use may be placed in limited storage. Just like AR 700-105 (26 July 1950) says: "The vehicles assigned It's up to the using unit to keep and maintain vehicles that're in limited

SALVANIA TATAL

INCIDENT MOTOR

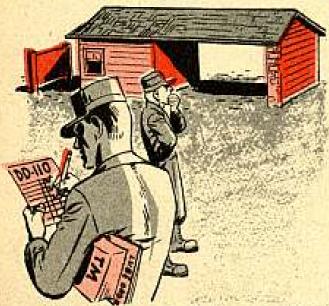
MAINTENANCE MAINTENANCE

8



while in this category.... The vehicles will be marked 'Limited Storage' and will not be operated which affords protection from exposure to the elements and to pilferage. will place the vehicles in the most favorable location available to him, be accomplished on all vehicles before being placed in limited storage, and daily A and weekly B or biweekly B preventive maintenance services to Here's what TM 9-2810 says: "The commander will require the complete

twice each month to detect corrosion and rust. When corrosion and rust in limited storage will be conducted (as called for in SB 9-4) at least 'Standby Storage' in accordance with SB 9-4. Visual inspection of vehicles days) the local Ordnance officer will be required to place the vehicle in "Where the period of storage must extend beyond 90 days (now 180 are found, corrective action will be taken at once."



This all means that before you put a vehicle in limited storage, it'll pull its daily, weekly or biweekly maintenance (whatever service is due). Look for a good spot—best place, o'course, is inside a building.



But if you don't have a hut, stick the vehicle on the best possible solid or paved ground you can find—and keep those tires out of any oil, grease or lube splotchin' on the land. AR 700-105 clues you in on location of vehicles in storage.

And then you go to SB 9-4, which'll tell you how to look over your trucks



while they're in limited storage and what to look for. You'll also find the pre-storage info laid out for you in this SB.

When a truck's in standby storage, there're certain things you've got to do to her to keep her engine in shape. This is all given in SB 9-4. If you haven't got a copy of this SB, order one right now. The distribution formula says outfits as far down as company are authorized to have them.





Here's a small reminder on spark plugs for your military trucks.

AEHICTE	M38 (1/4-ton)	M38A1 (1/4-ton)	M37, M42 Series (3/4-ton)	F-6001 T 60000	M44 Series (2½-ton)	M39 Series (5-ton)
SPARK PLUG	В	8	A or B	A or B	A or B	A or B

Spark plug A—Plug, Spark, Ord Stock No. H004-7524258 (Ord Part No. 7524258).

Spark plug B—Plug, Spark, Ord Stock No. H004-8357724 (Ord Part No. 8357724).

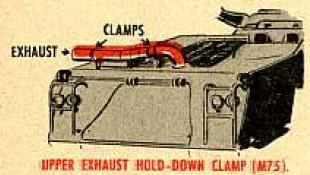
Here's what to do when your vehicle's supply manual lists both plugs...

Spark plug A is the colder plug of the two, and can be used when eliminating such conditions as spark knock or pre-detonation.

Spark plug B, the "hot" plug may be used as an "optional plug" for your machine. These "hot plugs" are to be used when you see signs of the "cold" plugs fouling out. Go by the instructions in the TM of your vehicle before changing from one spark plug to another to eliminate pre-ignition or detonation. This hot plug'll burn up excess oil and gas wastes, keeping them off the electrode. It can be the answer to your prayers when the engine is acting up and you need to go.

# Hold er down

Best keep a good eye on those holddown clamps on your M75's upper exhaust pipe—and keep 'em tight, like the TM says. A loose pipe flopping around



can cause separation of exhaust ball joints, let heat and flames escape, burn out your upper hull wiring harness. Tch. Tch.

# Hold 'er new?!

She may do some rarin' if you're not giving her the attention she deserves. It's your machine gun that you have to keep your eye on. Make sure you're not trying to put her thru her paces with something she can't take.

For instance, there is a blank firing attachment (Ord Stock No. A006-8412139) you've got to use on your .30-cal M1919A4 machine gun when you fire blanks. The filler piece of this attachment fits in the feedway of the gun and won't let you feed in a live round when you're firing blank ammo.

So—you just never fire blank ammo unless you've put this filler piece on your weapon though the gun'll operate without it if the short round stop has been installed according to MWO Ord A6-W14.

# M62 transfer case bearings

You guys with the M62's listen to this: You might risk transfer cases failure by running your crane too long without moving the truck.

It works like this—when you are using your crane, the transfer case is in
neutral, as you know. Well, the bottom
gears, which are in the lubricant, are
not turning. But the top shaft is turning
in its bearings. So there is no splash of
oil coming up to lubricate the bearings
on the top shaft. Lube gets up there
from running the truck, but after it
drains down, you've got dry bearings.
This is very ungood.

Until something can be done to correct this problem, you'd better be sure



you move the truck a hundred yards or so between each lifting job—also before you use the crane if the truck has stood all night.

Another thing that'll help, when you're working with a crew which is pulling a power pack or something like that. Take your main transmission out of gear while you're waiting for 'em to break the connections and so on, or better yet, shut the engine off.

# It'll stretch!

So you've been cutting those rubber draft pads to put them on the brake and clutch of your ¾ ton 4x4 truck M-37, M43, and then wiring them back together? And you're ready to give your truck back to the Indians 'cause those draft pads will not stay put?

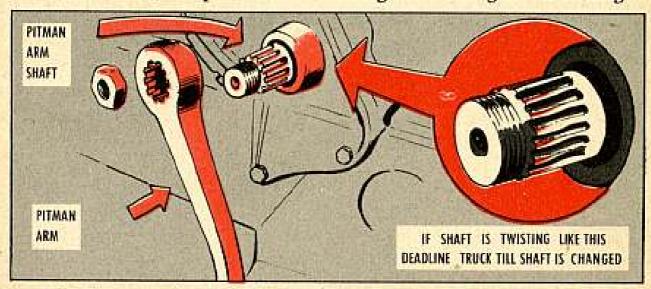
Well, keep it a while longer. Here's what you can do—soak the draft pad (Ord Stock No. G741-7351174) in hydraulic brake fluid, then stretch it over the pedal. It's a tight squeeze but it'll go. You can use liquid soap or even plain old soap if the brake fluid isn't handy but it'll take a little more elbow grease and a few extra cuss words. When you get it over the pedal just slide it on down and through that little hole in the floorboard and you're ready to take off.



Better make sure you're not getting those pads on upside down. The flat side's supposed to fit tight against the back of the floorboard, so make sure the cup part goes over the pedal first.

# Watch that shaft

Keep your eyes on that pitman-arm shaft in your M133 series 2½-ton GMC truck. There've been reports of them twisting and breaking off—no steering.



Keep inspecting that shaft like it says in TB 9-819A-17 (12 Nov 54) to make sure it isn't twisting. If it is, deadline the truck until you get the shaft changed.

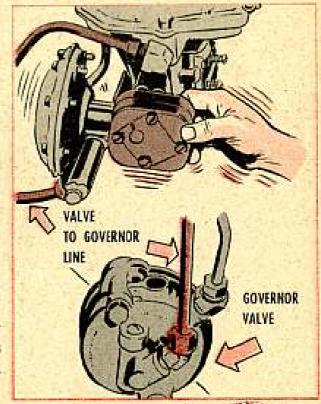
# Limp Governors

A loose governor leaks vacuum and it's got to have that vacuum to control your vehicle.

Keep an eye on the governors on your 2½- and 5-ton M-series vehicles. Their mounting screws (inside the governor's throttle-valve-body) sometimes work loose from vibration, and the governor assembly loses its grip.

To test for looseness, grab the governor by the diaphragm-end and gently try for up-and-down play. If it's solid, OK. Otherwise, report it to Ordnance.

It's also important to keep all governor air line connections tight. Any loss of vacuum will affect the proper operation of the governor system.





When running oil-pressure checks on your CD-850 tank transmission, you may have a tough time loosening test plugs while the slush-box is hot. 'Specially if they're the hex-socket plugs found on the early 850's. Hear guys have been breaking hex-plug wrenches left and right on those babies.

Secret of success here is to break all the plugs loose first—while the power pack's cool. Just a half turn or so—on each plug you're going to remove for the testing. Then they'll come out easy, as you go through the checks.

Later transmissions come fitted out with hex-head test plugs—which helps the situation considerably. They're Ord Stock No. H006-0283190.

You'll see a TB one of these days on replacing hex socket type plugs with hex head type plugs

# Sufficiation!

It's downright dangerous to run your 2½- ton G742-series trucks when their crankcase breather assemblies are blocked with dirt, dust and grime. You ought to give this breather the same care you give your truck's air-cleaner breather.

You take off the entire breather unit (it's held by only four cap-screws), empty the oil and clean the element and canister carefully with solvent. TM 9-8022 (17 Dec 54) para 164 goes into this a little deeper. Give 'er good oil (the same kind your engine gets) and replace the unit.

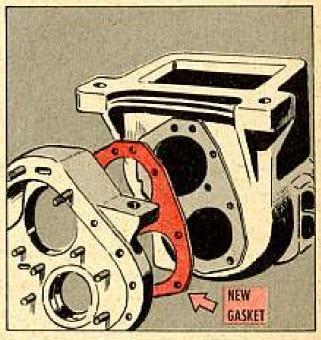
Then you're in business.



# Leaky draggin'-wagon

Some 12-ton, 6x6, tractor trucks, M26 and M26A1, are leaking lube between the auxiliary transmission and transfer case. It's happening on the early production models that don't have the ½-in boss on the left rear flange of the auxiliary transmission.





You can fix that leak right up by using MWO Ord G160-W5 (15 Aug 55). It tells you how to put a new gasket between the auxiliary transmission and transfer to stop your draggin'-wagon from making a leak. This MWO is in the urgent class, so you'd better hop to it.

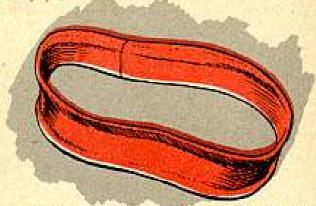
Flapper dapper

When it comes to those 4x4's, 6x6's and those big old jobs that go pa-ch-u-u-u-u, nothing'll put 'em on the side-lines faster than a tire without a flap.

Tire flaps protect your tubes from getting chewed.

You should get a new flap with all new tires. If you get a used or rebuilt

tire, you should also get a flap-but if you don't, contact supply and cite OTAC Instruction #755-1 (8 Aug 55). This ought to bring it on the run.



# The tricky shoe caper

Changing hand-brake shoes on the G742-series, 2-1/2-tontrucks, can be a crazy, mixed-up situation unless you realize a few things. And here they are....

There're three transfer-assemblies you can use. You can put any one of the assemblies into any one of the trucks.

There're also three pairs of handbrake shoes you can use. But the kind of shoes you use all depends on the kind of transfer-assembly you've got. In other words, you've got to put the right shoes with the right assembly. All this will be shown in the next revision of SNL G742.

To make things a li'l clearer, here's a chart showing which hand-brake shoes go with which transfer-assembly. If you get the wrong hand-brake shoes with the wrong assembly, they won't fit.

# G742-Series, 2-1/2-ton Trucks

TRANSFER ASSEMBLY (Ord Stock No.)

G742-7412632 and \*G742-8331825

G742-7372006

(Ord. Stock No.)

G742-7368680 \*\*G744-8380558

G742-7521287

OUTER HAND-BRAKE SHOE (Ord Stock No.)

G742-7368679

G742-7521280



- \*This transfer assembly is the latest one. It supersedes transfer assembly, Ord Stock No. G742-7412632 which, in turn, took the place of transfer assembly, Ord Stock No. G742-7372006.
- \*These're the latest shoes. G744-8380558 supersedes inner handbrake shoe G742-7368680, and G744-8380559 supersedes outer hand-brake shoe G742-7368679. When it comes to levers, lever G742-7521449, which is now obsolete, can be used only with shoes G742-7521287 and G742-7521280. When the new type shoes are used, you got to get yourself lever G742-7368683.

# WELDERS, CUTTERS-HO!

You got an acetylene pressure regulator, Ord-Stock No. 45-R-3502 (comes in 2nd Echelon God Set No. 5, Oxy-acetylene, 41-T-3545-14) made by the S-S Company of Brooklyn?

Then quick like a bunny check its diaphragm assembly.

Seems that some of these S-S babies slipped through minus a diaphragm support. With no support, the neoprene gets banged up on the seat pin, gas starts leaking, and first thing you know—y'don't know nothing.

ADJUSTMENT KEY

UPPER BONNET

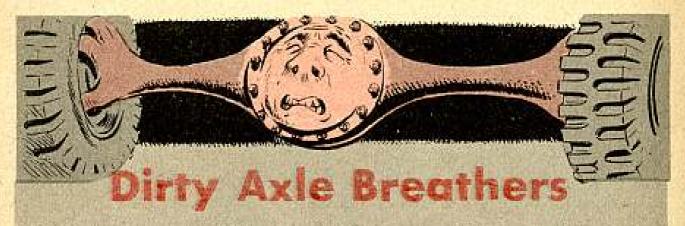
NEOPREME DIAPHRAGM

DIAPHRAGM SUPPORT SHOULD BE HERE

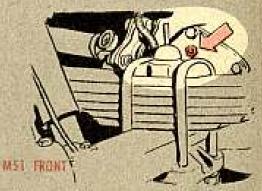
Just loosen the adjusting key and screw off the upper bonnet. You should find a diaphragm support between the neoprene diaphragm and seat pin. It'll be either a flat metal disc or an inverted cup, about 11/8 inch in diameter.

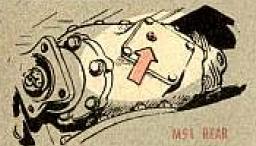
If it's there, you're OK—just put 'er back together right and relax. If it's not, turn the whole regulator unit over to Ordnance—fast.

Only S-S Company regulators are involved. (The name's stamped on the upper bonnet.)
But—if there's any doubt about the regulator you've got—check it. Just takes a minute—and you'll know.



Seems that several units had a rash of axle oil-seal failures during a recent big maneuver. When they ran down the cause, it wasn't the seals at all. Seems the trucks were running day and night, on the highway and cross country, as you will in maneuvers, and everyone forgot about mud on the axles and differentials.



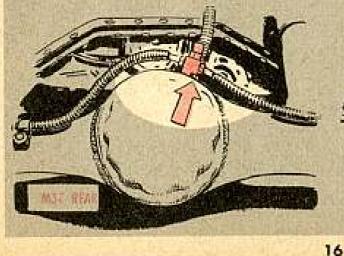


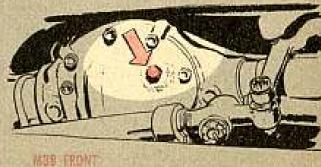
So, the mud was caking up and clogging the breather-caps. With a clogged breather and lots of hard running, pressure built up in the housings, and pretty soon the lubricant was blown out through the seals into the brake drums.

Of course you won't let this happen to your vehicle-and to help you keep your breathers open, here are some of the spots to look for. If you don't have time to clean the whole axle-assembly, at least check the breather-caps each day while operating in mud.

Soon, you'll see a TB covering this subject.







# SWITCHEE THE RUBBER

17

Wondering where that grease you see around your G742-series 2½-ton truck's speedometer adapter is coming from?

Well, you're getting that mess because a small rubber seal-part of the sleeve and seal assembly (Ord Part No. 8380685)—was put in bassackwards. This was done in some of the trucks after serial number 133127.

Before ripping her down, tho, better make sure that grease you see is transfer lube. That adapter was built with a pressure relief hole to let the excess grease you put into the adapter flow out when pressure goes up that's natural. But it's just not natural to have transfer lube flowing—means that rubber seal is wrong and has to be switched.

Here's how—take the adapter (Ord Stock No. G742-7065893 or G742-7061216) from the adapter-sleeve-assembly like it tells you in TM 9-8022 (Dec 1954) para 223. Take a look at the rubber seal—if the lip of the seal is facing out, you've got to turn it around so the lip is facing inward (toward transfer case).

You'll soon see this poop in the form of a TB.



to get 'em mixed up, and get reaching for a road-wheelcy about shapes when you're know their differences it's easy look a lot alike, and if you don't tank. Lifters for these two tanks lifter for your M47 or M48 You've got to be real choos-

SHAPE

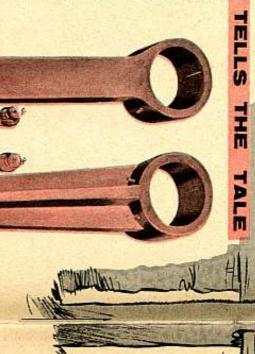
here's how you can tell the liftand level your good eye on 'em, If you lay 'em side-by-side yourself a mess of sweat.

arm is off-set a few degrees. arm. On lifter 41-L-1390-150 road wheels) has a straight (for all M48 road wheels) the the M47 intermediate and rear Lifter 41-L-1390-100 (for

of the arch that y'don't find on the M47 tool. Right? couple of nibs on the track side note that the M48 lifter has a base of the tools, and you'll Now take a squint at the

to use the M48 tool on the M48 tank and save the M47 tool for the M47 tank danger comes in ... it could slip on you. Only way to avoid lifter trouble is track-link-binocular-section, where it doesn't fit at all. And that's where the the end connectors like it does on the M47. You can only get it to set on the When you use the M47 lifter on the M48 tank you can't get it to anchor on M 48

lifter with the name of the tank it belongs to. If you can't tell the lifters apart by their shapes, play it safe-mark each



Dear Half-Mast,

NEUTRAL STEER

age a tank? sive use of neutral steer damgive us the answer: Does excesbattling over-maybe you can Here's a question we've been

> PEDAL FOR IDLE FOOT OFF ACCELERATOR

> > 2 SHIFT LEVER AT MEUTRAL

Sfc T. F.

Dear Sfc T. F.,

ing neutral steer, you shouldn't is asking for trouble. Right? have any trouble there. But if you use your head in us-Excessive use of anything

with it. on a dime. And, always go easy somebody how you can twirl necessary-not just to show in a tight spot. Use it only when a special purpose-when you're Just remember it's there for

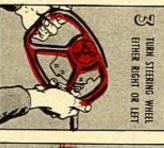
rubber-and especially hard on Pivoting is hard on track

you're going to toss a track. final drives-even under the best of conditions. And if you prod her too fast,

clutch disks, helps keep down wear and tear. a full steer-by twisting the steering wheel hard over. Then make the pivot by revving up with your accelerator-easy like. This fully engages the steering The right way to pivot a tank is to leave the engine at idle till you engage

really do your transmission dirt. Chuck it. It's stuff like slip steering in neutral that'll









DEAR HALF-MAST...ON OUR M48 TANKS, THE TRANSMISSION-SHIFT-LEVER HAS A HAND-GRIP THAT HAS TO BE SQUEEZED FOR SHIFTING INTO THAT HAG TO BE SQUEEZED FOR SHIFTING IN IO
REVERSE. THE SPRING ON THE HAND-GRIP (LATCH)
KEEPS BREAKING.... LET'S DRIVERS SHIFT TO REVERSE
BY MISTAKE WHEN THE TANK'S MOVING FORWARD.
WHICH IG HARD AS HECK ON EQUIPMENT AND ON
ANYBODY WHO HAPPENS TO BE IN THE
TURRET... ANY IDEAS?
SGT. R.J.K.

Dear Sgt R. J. K.,

Sure have. Been several suggestions for fixing that spring latch. Best one, though, is in MWO Ord G254-W1 (11 Feb 55), cooked up to lick the problem once and for all. This directive's classed Urgent and should be getting to your Ordnance support outfit any time now.

Tell your guys meanwhile to: WATCH THAT SHIFT!



# LI'L JOE

DEAR HALF-MAST...THE MANUAL FOR OUR
M48 TANKS (TM 9-7012...PAGE 412) GIVES
THE AUXILIARY ENGINE OIL CAPACITY AS
4 QUARTS. THE LUBE OFDER (L0 9-7012)
CALLS FOR 312 QUARTS.
WHICH ONE'S RIGHT?

Dear Sgt T. A. H.,

They're both right.

A new or rebuilt Detroit Diesel Li'l Joe (Model A-41-2) should get 4 quarts of the right grade oil. That'll bring it to the FULL mark on the dip stick. But when you drain for regular servicing, not all the oil will run out of the nooks and crannies of the engine, oil lines and filter. So-refill to the proper level takes just about 31/2 quarts.

Keep that in mind, and you'll not overfill.

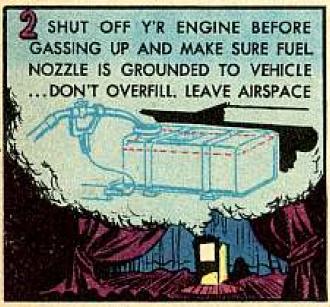
You'll see more dope on lubing Li'l Joe on page 20, PS Issue 36.





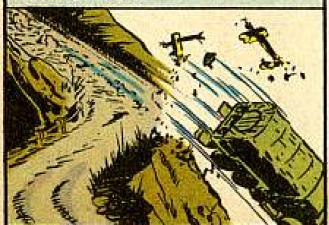




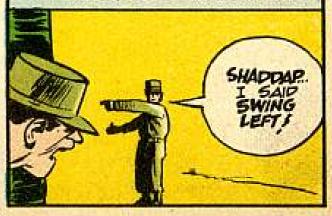




UP OR DOWN HILLS, SHIFT TO A LOWER GEAR, NEVER GO INTO NEUTRAL OR THROW CLUTCH IN, OR CUT OFF IGNITION



S COME TO A STOP BEFORE SHIFT-ING INTO OR OUT OF REVERSE. WHEN USING A GROUND GUIDE...HE OUT-RANKS THE DRIVER DURING THE OPERATION, SO DO WHAT HE SAYS.



AT NIGHT OR IN A FOG, IF YOU LOSE SIGHT OF YOUR GUIDE...STOP UNTIL YOU CAN SEE HIS SIGNAL.





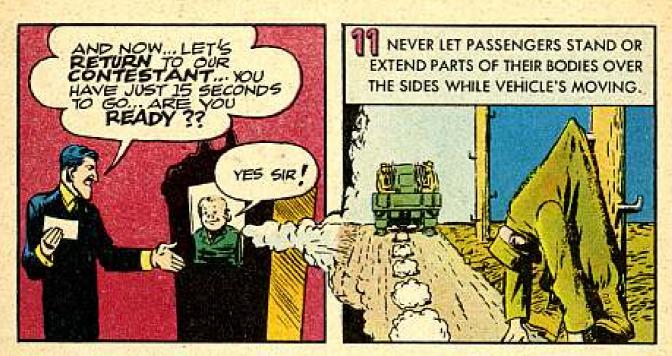




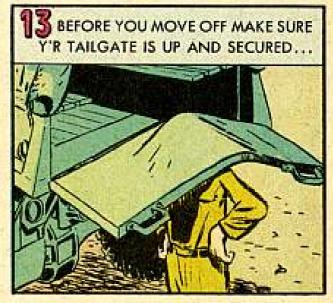


nt rely upon chance or on fate To want to be sure that you'll rate Know her needs and demands book ahead---make your plans

COPYRIGHT 1956 BY WILL EISNER

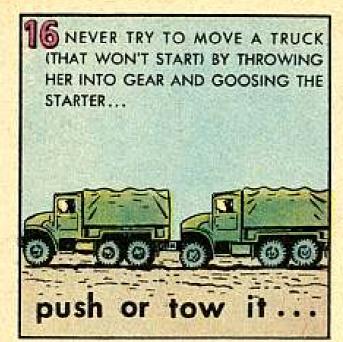


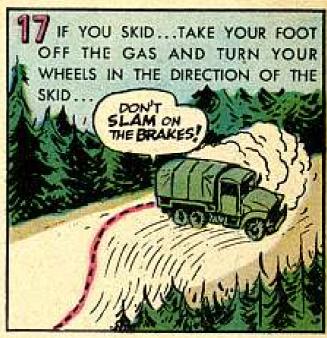


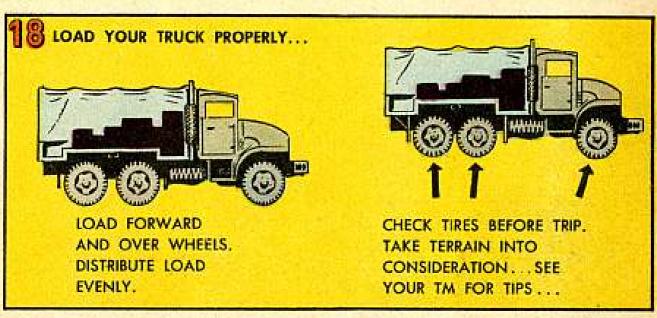


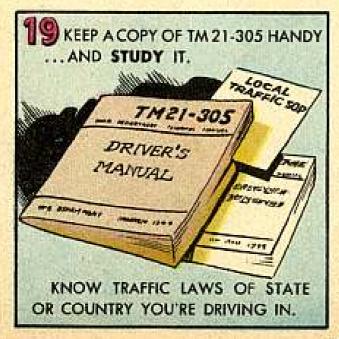




























# SKYSWEEPER TAKES NEW FORM

Dear Half-Mast,

MEATURE CLOSE FOR PROPERTY SEPORT

Are Skysweeper failures reported on DA Form 468 or on DD Form 787? TM 9-3027 (May 55) and TM 9-6081-4 (March 55) say to use the 468, but an inspector recently told us to use the 787.

Exactly what equipment does the DD Form 787 cover, and where do we find into on its use?

Lt E. W.

Dear Lt E. W.,

Stick to DD Forms 787 and 787-1

(Electronic Failure Reports)
when reporting each Skysweeper electronic item failure.
These forms are for specific
types of equipment, and they
were perged to the Skysweep-

use to	These forms are for specif			
- Jailures	mile Drive order seems		ipment, and the to the Skyswee	
HARTING III	Committee of the Commit	were pegged	to the skyswee	
Toulty material	The captain or our on	FART OF THE OF THE PART	MANUAL CONTROL STATES OF THE PARTY OF T	
FIG. II IF BUTON OF THE IS NOT THE	tarnet   militare m m	Lance Lance	П- П-	
Poor in a sample between	TO MANUAL OF THE PARTY OF THE P		- 1000	
workenan and a series		all		
and wear	THE WAY	a will		
ground the a section to		7:15		
Marandous		位置	William Parket State of the Con-	
ditions	DD 787	DIRECTORNIC FAILURE	шрыт	
contro				

DA. II., 468

er's T38 fire control system by AR 700-39 (4 June 55). However, when such failures are recognized as, or indicate unsatisfactory design of the material, faulty material or

poor workmanship, too much wear or deterioration for the time the equipment has been in use, a hazardous condition, unsatisfactory operation, and anything that happens that seems to be important enough to report...you report all these on DA Form 468.

You can read all the new dope on the UER in AR 700-38 (1 Nov 55).

The equipment that's to be reported on these 787 and 787-1 forms may brake fast and hard, the trailer jackchange from time to time, but when that happens a new regulation will be issued to cover the changes. Keep your eyes peeled.

At present these forms must be used to report electrical failures only on the following equipment:

Ordnance Equipment T33/M33 and T38 Fire Control Systems Signal Equipment Radio Set, AN/VRC-19 Switchboard, telephone, manual, SB-22/PT

Remember, these new forms don't replace the DA Forms 468. They're used for a different purpose, so before you fill in a 787 or a 787-1 be sure to check the latest copy of AR 700-39. The AR will tell you how to fill in electronic failure reports and where to send 'em.

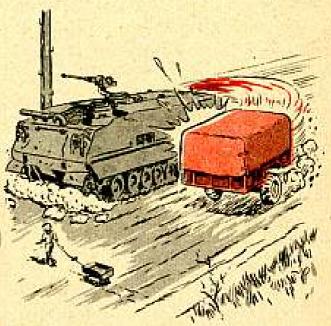
Half-Mast

### TRAILER TROUBLES

Dear Half-Mast,

In this infantry outfit, we've been towing our M104 and M105 trailers with the M75 personnel carrier. The M75 basn't any brake lines, air compressor or air linkage. You can see our problem.

Every time one of our drivers bits bis



knifes, creating a definite safety hazard. There's no way we can get out of towing with the M75. So, Sarge, can you think of anything we can do to make this towing safer?

Lt P.C.W.

Dear Lt P. C. W.,

First off-there's no use denying it but that M75 wasn't built for towing trailers. There are certain times when you have to tow with it, if you get special authorization. But even the she wasn't built for towing, there's no reason in the world why the M75's 42,000 pounds can't handle a ton-and-a-half-trailer.

Why is your outfit having trouble? Well, sir, you've done said it yourself—"every time one of our drivers hits his brake fast and hard ..." That's the meat of the problem right there.

The fact is that no vehicle is meant to be cowboyed, especially a vehicle you're using to tow a trailer. If a driver takes a turn or jams on the brakes when going like a bat-out-of-Hades or does some other foolhardy thing, that trailer's going to come up front to see what's going on—brakes or no brakes. No trailer is meant to be towed that way, and no towing-vehicle is meant to be driven that way.

Half-Mast

## PIN POINTS

Dear Half-Mast,

We've been getting quite a lot of trouble from a little item in the front winch on our 5-ton trucks. It's the pin (steel, straight taper groove 3/16 x 13/4) that holds the yoke shifter shaft to the clutch yoke. It keeps shearing — and tying up a truck for a few hours each time it has to be replaced.

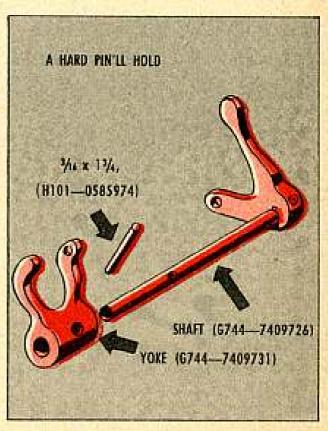
First we figured some eager beavers were using a heavy foot instead of a hand to engage the drum clutch. But we found that the pin can shear with no more than the twist of an average wrist—'specially if it's done in a hurry. (You get quite a bit of leverage in that shift-lever set-up.)

Any ideas for beating this rap?

CWO S.E.N.

Dear CWO S.E.N.,

Most people find that when the winch is kept clean and well-lubricated, and gets careful treatment—like's specified in TM 9-8028—the pin'll hold up for ordinary operations.



But where well-cared-for winches get such rugged use that the pin still shears, better get your mitts on a hard-metal pin for the job. It's Ord Stock No. H101-0585974. It'll be in the next 5-ton SNL's.

Haff-Mast

### CLEARED

Dear Half-Mast,

We've been having quite a confab on the valve clearances given the M38A1 Jeep. According to TM 9-8014, the intake valve gets .018-in clearance and the exhaust valve .016-in clearance. In other words, the intake valve is set for .002-in more clearance than the exhaust valve.

This seems kind of strange to us, because in most engines it's the other way around—the exhaust valve gets more clearance than the intake valve. No one seems to have a good explanation of this. So, we ask you, Sarge—why does the intake valve on the M38A1 get more clearance than the exhaust valve?

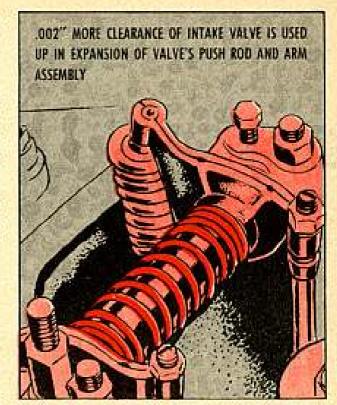
Sgt H.H.

Dear Sgt H. H.,

Quite right—the specs for the M38A1 call for .002-in greater clearance for the intake valve than the exhaust valve. The reason . . . the A1 has an F-head engine—the intake valves sit in the top of the combustion—chambers (head) and the exhaust valves sit in the bottom (block).

That intake valve is operated by a long push rod and an arm assembly which hooks up to the camshaft. The exhaust valve has no push rod or arm assembly but is operated by a screw and tappet—it's closer to the camshaft than the intake valve is.

The valve clearances are set when the engine's "cold"—like it says in TM 9-8014. When the engine warms up to its normal operating temperature, the metal within the block reaches its fullest expansion—heat does it. If your valves are set correctly, the .002-in difference between the two is taken up after this expanding process has reached its peak. In other words, the .002-in more clearance given the intake valve allows for



the expansion of that valve's push rod and arm assembly. This expansion closes the gap.

Half-Mast

INSTRUMENT GREASE

Dear Half-Mast,

Ever since I've been associated with the M33 fire-control system there's always been a problem of acquiring Grease, Aircraft and instrument, FSN 9150-261-8298. There must be a legal substitute for this item. Can you tell me what it is or where I may find the information?

WO M. R.P.

Dear Mr. M. R. P.,

There's no substitute for Grease, Aircraft and instrument. But here's something that I would suggest tho—order the 8 oz. tubes, FSN 9150-261-8297, instead of the larger amount.

In the first place, there's a greater supply of this size tube than the pound cans. Then too, this grease goes a long way.

As you probably already know, this grease is now a Quartermaster item but carries the same federal stock number.



### ANCHOR POOP

Dear Half-Mast,

Is there any poop out on the M62 wrecker? I particularly want information on the use of the ground anchors and the outriggers. My TM 9-837 seems sorta weak on this.

Sgt D.R.D.

Dear Sergeant D. R. D.,

You're right—TM 9-837 didn't go into the use of the wrecker equipment and OVM to any extent. However, it has been superseded by TM 9-8028 (June 1955). The new manual gives you quite a bit more on setting up the wrecker for recovery work. Look at the sections beginning on page 66.

WHAT'S THE SCORE?



Dear Half-Mast,

What's the score? I have a TB Ord 560 dated 13 May 1954 which says the tire pressures for the M38 and M38A1 Jeeps are:

Highway			 	. 25
Cross-cour	ntry		 	. 25
Mud, san	d, or snov	и	 	. 10

But the new TM 9-8014 (April 55) for the M38A1 Jeep and the M170 Ambulance gives this information on tire pressures (page 300):

Highway	28
Cross-country	22
Mud, sand, or snow	15

Now—which do I go by? If the TM superseded the TB, then why didn't it say so on the first page of the TM?

Sgt C.L.B.

Dear Sgt C. L. B.,

That TB Ord 560 is still as good as gold (or uranium) and the TM is being revised to show the same tire pressures that are in the TB. But until it is you'd better jot down somewhere that you go by the TB.

Half-Wast

Dear Half-Mast,

Since MWO G740-W8 came out telling us to remove the corner brackets on the battery frames of the M38 Jeep, we've been having trouble with damaged batteries. After you tighten the nuts that hold down the battery frame, the frame tilts and cuts into the battery. And what's more, the battery bounces a little when you drive over rough roads, causing a short on the terminals.

What do we do now, Sarge—put back the brackets?

Sgt A.K.S.

Dear Sgt A. K. S.,

Nope. There's a new MWO coming out to correct this trouble. It calls for placing an angular bracket in the middle of the frame between the two brackets that were removed.

Here's what you do: Make sure brackets A and B are removed from the battery frames under the hood and the cowl. Make two angular hold-down brackets from ¾ x ¾ x 1/8 in steel angle (Ord Stock No. H010-0120080) or from scrap or any other available material.

Drill two 16-in diameter holes in both battery frames and in the angles. (Be sure the holes line up.) The last thing to do is secure the angle to the frame with two rivets. This'll provide equal stress to all four sides of the battery and'll keep your batteries put.

Dear Half-Mast,

My Jeep distributor breaker points are bugging out because they're constantly being saturated with oil. Can't figure it.

Here's how I've been lubing that distributor: Soak the wick with PL (oil, lubricating, preservative) and smear a thin layer of GAA into the shaft's lube hole every six months or every 6,000 miles.

Could it be that I'm putting too much lube on the wick, or what?

Put W. D.

Dear Pvt W. D.,

If you're lubing the distributor the way you say and your points get oil soaked, chances are the distributor base seal is leaking. This lets oil work up the distributor shaft and gather in the base, with the wick trying to absorb it all. The wick acts like a sponge, but it'll hold only so much. When she's soaked,

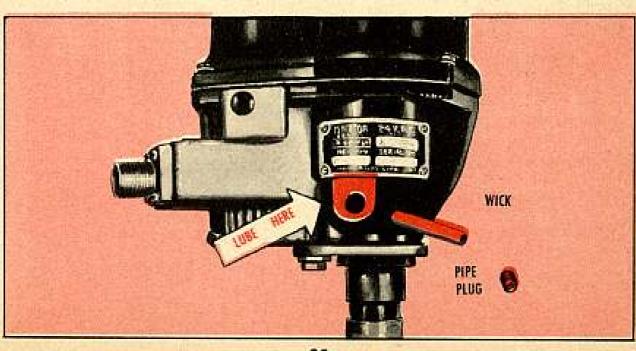
the oil's got no place to go; so it just gathers up until, z-i-p-you need new points.

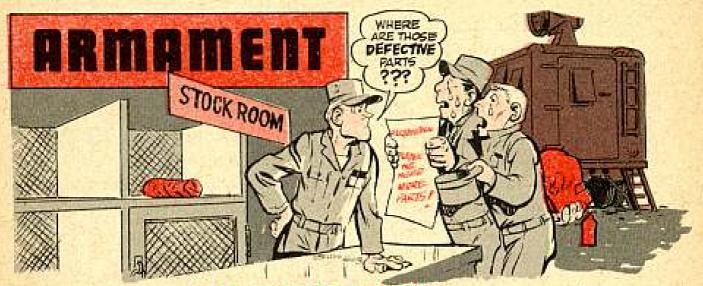
The thing to do is get that busted seal out of there and put a new one in. The Ordnance stock number for the seal on both the M38 and the M38A1 is the same—HO13-7351671.

There's a chance you may get excess oil in the base without having a busted distributor. This is the oil that runs off from your wick after lubing. So, every so often, maybe once a month, remove that base drain plug and let the oil drip out. You'll know if you have a busted seal by the amount of oil that comes out. Give your distributor vent line a look-see also to make sure it isn't leaking.

This dope applies to the distributor on your M37, ¾-ton trucks, which is the same as on the Jeep.

Half-Mast





# DO A GOOD TURN-IN

This is no time to hide those brokendown chassis and parts for your M33 and T38 fire control systems. Keep those repairable parts around and you'll only clutter up your trailers and stock rooms and goof up the overall supply picture.

Once upon a time there were enough stocks of chassis and parts to go all the way around. But as tempus fled, that stuff has been going out without enough unserviceable equipment being turned in. If this keeps up you may not be able to get parts when you need them.

So please, if you're hoarding M33 or T38 FCS parts that need repair, turn them in. You'll help most with turn-in of complete assemblies.



When lubricating M41, and M47 tank guns—and them only—spray some OHC (MIL-0-6083A) through the gun shield opening onto the recoil slide surface.

It keeps the surface lubricated and also prevents rust and corrosion. If you don't have MIL-0-6083 A, use PL Special.

There's been talk that some guys are using MIL-0-5606 for that recoil slide surface. Stop that—quick like. The 5606 stuff doesn't contain any preservative compound and could let rust creep in.

'Course, 6083A is only for temporary use. It's not the right lube for a gun that won't be used for a long time.

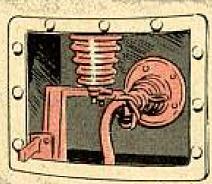
# LONGER LIFE FOR MAGNETRONS

Dirty hot boxes are making our magnetions disappear like a re-up bonus. Seems too many magnetrons (types 5780 and 5795) in the NIKE and T/M-33 fire control systems are discarded as unserviceable when they're really not.

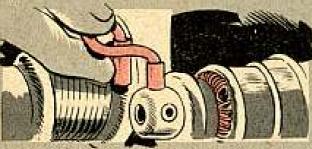
Trouble is, the hot boxes are so dirty the magnetrons can't work right.

A weekly checkup and cleanup will let 'em last from 700 to 900 hours. That's a real good deal, 'cause magnetrons cost more than any replaceable item in those FCS's.

Every week, or four times between paydays equally spaced, do this once-over:



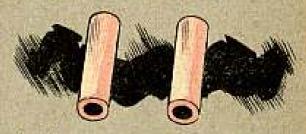
 Inspect magnetron hot boxes for cleanliness. Look sharp for tiny bits of metal around the glass envelope on the connector. Keep that hot box clean as your mess kit at Saturday morning inspection.



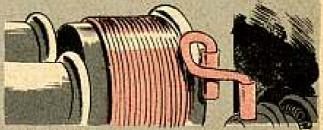
2. Check dress of filament leads. Remove sharp bends, points (fine wires jutting out from stranded leads) on soldered terminals. They cause corona discharge, which is happening when you whiff a clean, fresh smell around the hot box when the magnetron is operating. It'll cause loss of heater voltage.



Clean filament connectors. Polish connector contact surfaces on terminals and at magnetron input point.



 If you've got to replace insulated or ceramic beaded filament leads, be sure the substitute is the exact type.



 After the magnetron lives to a ripe old age, check the LIA LIB coil assembly before installing a new one. If the coil has discolored duo lateral windings, resistors, or capacitors—it's shot.



# SUPPLY MANUALS

WEIGHT PRESENT OF A CASE OF THE CASE OF TH ers 7 SM. 4-6 Cal 30 Can machine, Discoving Missign4 Health; and Missign4, mr. Impost, machine gan cal 30 N2 Jan 55 151 of all iterrs, pilcing guide

of D 7 SM C-20 Handler, pack 75 cm MAN/
of D 7 SM C-20 Handler pack 75 cm MA MC 55
of D 8 SM C-20 Handler pack 75 cm MA MC 55
of D 8 SM C-20 Handler pack 75 cm MA MC 55
of D 8 SM C-20 Handler pack 75 cm MA MC 55
of D 8 SM C-20 Them gan [10] Cli 11, combo
gan, WY [12] ELI 12 J. 13
of D 8 SM C-20 Them gan [10] Cli 11, combo
gan, WY [12] ELI 22 MC 50 cm gan [12] J. 17912,
of D 8 SM C-20 MC 50 cm gan [12] J. 17912,
of D 8 SM C-20 MC 50 mC 50 mC 50 mC 50
of D 8 SM C-20 MC 50 mC 50 mC 50
of D 8 SM C-20 MC 50 mC 50 mC 50
of D 8 SM C-20 MC 50 mC 50
of D 8 SM C-20 MC 50 mC 50
of D 8 SM C-20 MC 50
of

53-Mardware, abrashes-Class 535-metal resetting Sep 55

080 \$-3-4, C1, List, pricing guide-major items, major combinations, Oct 55 dep a set was wat wit, ring, 150 call ma-ORG 1 SM1 4-93 M1, 50 cal, machine gus, A4 (7344875), (8346119), Sep 15 080 8 SML 3-48 Mt. 50 cat, machine gun, Al (7045650), Sep 55 3 SHL 8-28 (TO 11W3-2-2-14) .30 Cal. car N1, M1A1, M2, Aag 55

DED 2 SM, F-322 SEEDE, M-90C, M-90C, Oct 53 DED 1 SM, F-323 SEEDE, M-90C, M-90C, Oct 53 DED 1 SM, F-323 See 2 Range, finder (4221, Det 55 089 T SM, F-323 Alming circle, N2 (12), Sep 55 Oct 55

# TECHNICAL MANUALS

9-0015 by finder 14215, 14 55
9-0015 by finder 14215, 14 55
9-1015 Stynawages their toly Hi, carpo pitting, 15 by face 15 stynawages their toly Hi, carpo pitting, 15 by finder 15 stynames their toly in the 15 stynames the

9423 31/243 2 wil cit rei in wow, Auf 35 94041 275ga/perhair nur liqdichelde electedrie withertid preus jet stin citi Clarite Md saddro (446286 973) (cin-46 0-1001-10, Auf 55

5-236-1 American ephemetis and almanac-1957 5-3385 Generalor set, elec, part, dui-dryn, skib-mtd, Consolidated Diesel mod 1760, 23 Jun 55 5-3040 Generator, acetylene, gas, port, Sight Feed mods M-12-SP and M-12-PS, 9 Aug 55

# ORDMANCE MWO's

YISWI Drigh maint assy spot look set. Nike issaatia.7: Correct dello, imus optimum per-ternance, 9 Sep 55

167 m fit M46 tanks, M46At, M47, M48, where oil cooler anay to reduce vibrat,

G1-WF4, G1 2-1/2-bon 666 bits M315, M215, M215, M215, M225, M227, The butcher M221, M216, M227, The butcher M221 and John period camiler fields Modelly Homess front, rear planetary units, 0 Sep 25



crydr cupata deer, if Apr 35

0346-W23 5-bpt did (N chass M139- Rodate and pair ration when used w/chassistermid 782-em of letz W228, F sp 13-0346-W3 3-1,7-box did gp 10, M135- Instal electric for HI bibact (all, clear its of lowed with, F sip 55-

CTB-WDD 2-17-ton 605 tets M125, MC21, MC21, MC21, MC22, MC22

ASO-W42 40 mm deal auto gan M2A1 Strengthen Manh suppessor prongs, F, Oct 55

031-W38, 61 240-em how M1: Relocate lan-yard lag, F. Oct 55 F307-W18 Remote coety any M2A1: Protect Via Semete c of lagneter ampli, f.

F336-W1 Range finder T41. Modify range finder T41 to range finder N12, B, Oct 55

VISA/MTQ; Chassis M44, M45, M45; tractics M46, M275; install suppl for Irrefi case top corr gasket, F Oct 55

The Guided Mittalle acid sover XM2, had XM3, Correct defice laser optimum.

O Aug 55

CT-N2 105 cm of N27 Anno barried to patroll and rate 1198 [186] int ppol, cavag and design the property to N27 to

access to note on eng year smill bells, 55

F343 W3, Y4-W3 AA FCS W33C, M33C, Nike 1, guided miss are drain belease belton comp of acc rad ant, F, Oct 55

PRIVATE STATE THATE TAILD, Modely straight from TAILD, Modely straight from TAILD to come from M22, 0, 045, 565, 6621, 6

# HERE'S A LIST OF ADDITIONAL OFFICIAL PUBLICATIONS ON ORD-OF INTEREST TO A LOT OF YOU

grade we was to be not included before other waste angle that, 0, Oct 55 grade to be the proof of the proof of the seat bridge piret, 5, Oct and proof of to seat bridge piret, 5, Oct and proof of the bot the lested buttery hold

BAI 14-ten toh and MIZO front life habe bales in handbrake handle

Q387-W1 35 page that (Southern Carch mod South-An Carch Market South to get a more brilliant light, 7, 50 p. 5

# TICHNICAL BULLETINS

IR 9-1788A-1 13-00\* high-speed for MSAI cits, pipeli sits, \* aug 55 IR 9-70021-1 Aug 51-1448 persel carrier MSS benergy satured pers per pt. 0 Aug 55

The core title decisions, 10,035-4, AV-1700 series from general Cross field-translated the core from 197-19 (10 at 23-23-15) Media for the core from 197-19 (10 at 23-23-15) Media for the core from 197-19 (10 at 23-23-16) Media for core from 197-1

TB 9-1879-2/1 Break in and care of rebber tracks 0, 0ct 55

to 3-2130-102 Oct whi web recision rear main spring seed 6, Oct 55 spring 1-20 feet 6, Oct 55 oct 3-244-1 75-erm rifes M20, 171612; Repair even shaulders on breechblock, breechblock hings 6, Oct 55

anon shauden on brechbioo, brechbioos, hinge 8, 00155 TB 9-8234-1 FCS bits M244, M2441, M254, M259, M252. Presention of root leakage 0,

TB 083 582, 61 Lacquer and its application 0,7,8 Oct 55 親 r one 457, Ct vehicles with 24-voit electrical change procedities, maint, storage of new per 12-cell lead acid storage batteries. 250, Nr. 0, Oct 15. 080 322 (TO 36721-4-1-5) Clean and present takened with fact tanks D, Oct 55

TB DBD 597-25 (TD 34Y2-1-523) Pressure steam channer (Dayton Mrd. Co., mods HB-Ob LHB-OBD) (4940-258-9785); Robid standards Oct 55 etily scabbard M8 series D, Oct 55

TO 080 397-30 (TO 3474-3-1-143) Paint stray Deviltats Co med PMBC-310 No. 58-71, 4940-257-4473; and PMBC-310 No. 45 E. 4940-251-8124- and PMBC-310 No. 58 E. 4940-261-4435; Rebid standards D. Oct 35 END NEW 80 597-31 Motor with within (Suprime ment Corp. med AW-2) (4910-254-8853); standards 0, Sep 55

The enth Stitut Holls being much Hammon Frost new and 2509, 40 ± 100:: Read stand-ands 0, Sep 50 The enth Stitut New good poes mater with Lift Clade Holls Co med 250 th 210 ± 8, 4910 221-1826) oper mater 0, Oct 55

18 083 617 Coelimental 12-cyl engines mod AV-1790-28, AV-1790-7: Improve spatk advance gov assy 8, Oct 55 ORD 619 Carbridge, Mt., TSSE2 for 75-mm n 10367; Calibration data for certain lots t 55

# LUST ORDERS

LO 9-2712 SP Gar, 195-etm., 197, Mar 55 LO 9-8292 Novy, 6, Silon trit convert imede M197, M196, Jul 55 LO 9-8236 Trailor, cable rest, 3-1/2-1, 2-eth, mod 310, Jul 55

10 sulph Britter. The and Labe. Her short, and the state of the state

# SUPPLY BULLETINS

SR 9-122 Ord Corps adopted thems of mutheries Sep 55 SS 3-81 imp rep, repacking autom byd brk cyl edgs, F Aug 55 SB 3-35, G1 inspection of small arms gages D, tree 55 SB 9-117, C1 Repair, replace parts for communication on the SS ss, rep. repacking autom byd brk cyl

9-124 install maint instor lastru for Oct yes bank englines stock sen 0244-7721225, 62,7196577, 0202-7356932, 0252-6379827, 92,82276947 in resuable metal completents of stock no. 0202-8660709 D, Nov. 53

NOTE-On 18's, S8's and MWO's



Dear Sgt Dozer,

I'm trying to find out if Pioneer tool sets are Ordnance or Engineer equipment. I also want to know if the handles on the individual tool set items should be painted or cleaned and then have linseed oil put on.

Over here in Europe, Ordnance says to paint the handles, while the Engineers say clean them and rub them with linseed oil. Who's right and what gives whom the authority?

Sfc T.H.C.

Dear Sfc T. H. C.,

Your question's a little difficult to answer, because it gets kinda complicated.

The Engineers have the storage and issue responsibility for the Pioneer equipment sets, but not all of the items in the set are Engineer equipment. Some hand tools, for example, have to be requisitioned for replacement stock from Ordnance. Remember that the Corps of Engineers stocks and issues the complete sets only. The sets are listed in the appropriate ENG 6's.

The question as to whether the handles should be painted or rubbed with linseed oil has been a matter of personal opinion for a long time. But the latest scoop says that the handles will be dipped for a minimum of three minutes in a solution of DDT and kerosene as often as needed. This mixture is just a common insecticide which is available at all posts, camps and stations.

The mixture can be obtained in a 5-gallon container from your Quarter-master unit under Federal Stock No. 6840-253-3892. It's called Insecticide, DDT, liquid, 5% DDT.

This info is hot off the griddle and you won't find a written directive for this method of handle preservation. However, all items furnished by the Corps of Engineers should get the insecticide mixture treatment. Of course, it's another story if the item belongs to Ordnance. Then it's up to the local Ordnance officer.

Sgt Dozer



Dear Sgt Dozer,

I'm always having trouble with the rewind starter on my Mall chain saw. When we replace the parts it still carries away again real soon.

Sgt H.M.R.

Dear Sgt H. M. R.,

There isn't a whole lot you can do about that Mall chain saw starter. It's a bit light, no doubt of it. But if you install a new one and then make a practice of sorta coaxing it around until you're sure you have the starter engaged right, and have the engine coming up on compression, then you can give it a real good yank without hurting it.

If your engine doesn't start, go back to the slow and easy way of doing things until you feel the compression again before you give the next strong pull. Easy does it.

Sgt Dozen

# Mud Can Mean ..... FROZEN TRACK ROLLERS

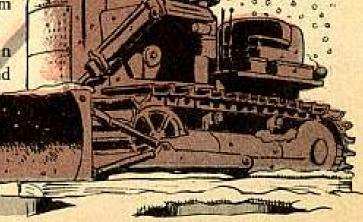
Mud plus freezing weather will always give your tractor a hard time. Frozen mud can tear up tractor hardware in a hurry, so that's why you want to be extra careful when you park your tractor in such muck. The best bet, of course, is to keep from parking your tractor in mud, but lots of times you can't help it.

If you do have to park your machine in the mud, get a couple of timbers and run your tractor up on 'em. Then, when you're ready to move the next day, your tracks won't be frozen and you can skim right out.

You know what happens when frozen mud settles around rollers and

carrier rollers? It locks 'em tight. If you run a machine any distance with frozen rollers, the track rails'll rub over the rollers and wear flat spots on 'em. When this happens, the rollers are practically useless.

It'll take a little extra time and effort, but give the track assemblies a good cleaning after running in mud. You'll find the job a short one compared to the time it takes to free a frozen roller.





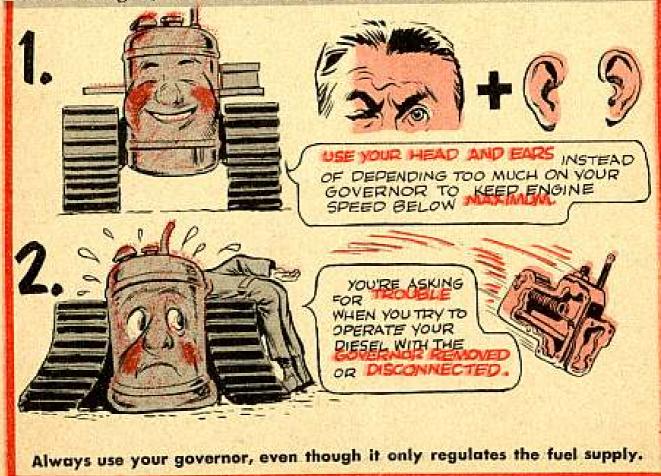
A traffic cop won't pull you over to the side of the road for it 'cause it can happen sitting still—but you're a genuine mechanical menace when you overspeed a diesel engine.

A lot of people think they don't hafta worry about overspeeding diesels because of the governor. But they do!!!

The governor is an absolute essential to a diesel engine, and without it, the engine would either run away or stop. But still, the governor is just a guide or helper.

The main causes of overspeeding usually can be traced right back to the operator—his carelessness and inexperience.

Remember five important points and you'll cut down your chances of engine overspeeding. Here they are:





And be sure you're using the right gear, too. That load you're carrying could push the engine over its maximum speed.

WATCH THE
TACHOMETER
WITH AN EAGLE-EYE
WHEN YOU'RE RUNNING
THE ENGINE WITHOUT
A LOAD ON IT





That's when the governor's likely to let the engine overspeed. Of course, you should use the tachometer at all times. But don't forget—those vehicle tachometers sometimes take a whale of a beating. It's always good practice to periodically check the vehicle tach against a test instrument.

5. PULL THE EMERGENCY STOP CONTROL IF YOUR ENGINE STARTS TO RUN AWAY.

Do this only in emergency, though, 'cause using the stop control to turn off an engine that's running normally might eventually cause other troubles. Then you might not have the stop control when you need it most.

Remember, whether the engine is new or rebuilt, it carries a warranty. That means the manufacturer will guarantee all parts for a certain period of time. But if those parts go bad as a result of overspeeding, the manufacturer might cancel the warranty—even if you overspeed during the first hour the equipment's used.

How's the manufacturer or engine dealer to know the damage has been caused by overspeeding? It's easier than you think. The tachometer red needle isn't the only way to tell that an engine's been operated over its maximum. Nope, you can't protect an engine warranty by just resetting the tachometer.

A close inspection of the engine by the manufacturer can turn up plenty of evidence that you gave her more than she could take.





Here's a case where you can be the dentist. Yep, you ought to take a regular look-see at the bucket line's digging teeth when you're digging with the Barber-Greene 44-C ditcher.

If you don't check those teeth regularly, they're liable to wear down and you'll find yourself scooping dirt with the stub or bucket instead of the digging edge.

Everybody's interested in getting a job done in a hurry-but in the right way. If you replace worn teeth more often on the ditcher, you can dig more trenches in a shorter time.

Just remember that when you dig with dull teeth, you're putting a much heavier load on the ditcher's engine and transmission.

In case of an emergency or while waiting for replacements, digging teeth can be re-stellited-or built up-by your shop if they're not worn too badly. So, if the teeth on your ditcher are worn, get 'em replaced right away. You can do your digging job faster-and easier.



TECHNOCAL BUILDERING

\$-5605-1 freq Conventers, mir gen sets, 15 and 30-KW, 60/400-cy, 19 Oct 55

5-9715-1 Preservation of Engr mech equip for storage, 19 Jul 55

5-5262-6 Generator set, elec, port, dal-dren, skid-mid, Sheppard mod 166

5-9179-1 Ditcher, plow type, East Texas Engre mod 56-8, 14 Jul 55

5-5182-1 Engine, gasoline, LeRol mod H 2000 5-5214-1 PMS generator set, elec, port, del-dren, skid-mid, Cummins mod NHRSQA-603-100

5-1485-8 Mixer, concrete, 7 cu ft, Jaeger mod

5-5148-1 Ges set, elec, port, 60-cy, Carson mod Pt-79-F, 14 Oct 55 5-5438-1 PMS, Campresser, 6 CFM, Lynch Mod PG-10-AC (G-10-6), 23 Sep 55

5-9090-1 PMS, ice plant, frick mot 5a5-AU,

5-1374-1 PMS, breaker, paving, Synfron mods PB-51, Style 1870, 11 Oct 85

5-5023-1 Gen set, elec. port, dsl dryn, Buda med 8DCS-1125, 18 Oct 55

5-2063-1 PMS, distillution, pas-drvn, skid-mtd, 60-GPH, Badger mod SU, 27 Oct 55

### LUBRICATION ORGERS

5-5081 Generator set, port, pas-divn, skid mid, 5-km, Kohler mod SMH81, 7 Jul 55

5-5099 Compressor, air, trinmitt, del-dren, lby mod WK-80-315, 12 Jul 55

5-5115 Compressor, air, trin-mid, del-drvn, LeRol mod 50002-C, 12 Jul 55

5-5364 Generator set, elec, port, dal-dryn, skid-mid, Cummics mod NHRSGA-601-100, 13 Jul 55 5-5327 Generator set, port, dsi-drys, skid-mtd, 50-kw, Bollinders mod 750, 7 Jul 55

5-9095 (ce glant, 1-ton, gas-driven, Reco med C 2000-550D, 16 Jun 55

5-9290 Winch, lowing reversible, one drum, 8600 to 12000 drawber pull tractor, front mid, for eath mod TD-5, Trotr, Gar Wood mod 14-8, rear mid, for trini mod TD-18 Trotr, Gar Wood mod T-5-RBU, 12 Jul 55

5-5565 Conveyor, crwir-mid, gas-drvn. 75-ton ph capacity, Barber-Greene mod 689, 24 Jun 55 3-5077 Generator set, elec, port, gas-dryn, skid-mtd, 1-1/2-kw, Homelite med 24A 120-23A, 16 Jun 55

### HENNICKL MANUALS

5-5115 Compressor, air, brit-mid, 4-wh, pneu-tires, dul dren, Leffel mod 50002-C, 1955 5-240 Guide to compilation and rev of maps.

5-5237 Engine, dsl. Caterpillar mod 0-397, 14 Sep 55

5-9335 Sprayer, paint, port w/compressor, Devilous mod RM-615, 13 Oct 55 5-9507-2 Crane-Styl, PU, rev, Irk-mid, 20-ton, 34 cu yd, 22 Sep 55

### ING MWO's

1843-1 Grader, rd, mtrzd, dal-drvn, Rome med 412, 17 Aug 55

9258-1 Truck, refuse, Sicard Industries Inc mod Sanivan SM-4, 23 Aug 55 5061-5 Compressor, air, 1/8-m6d, gas-drvn, Lekol mod 210-G2 (105-GA), 15 Jul 55

### FMG 7 4 85

4059 Tamper, backfill, pneu, Lefoi mod III, 1 Aug 55

5647 Generator, acetylene gas, port, Marquette mod 612, 1 Aug 55

9512 Crane-Shyl, PU, rev. Marian mod 372, 12 Jul 55

### 1NG 7, 1 4 95

9530 Crane-Sheet, Pti, rev. triumtd, Schield Pentam med 88M-53, 8 Jul 55 1052 Stabilizer, soil, ést-éren, crw Harnischleger mod LA-88, 11 Jul 55



RED LINED

Dear Editor,

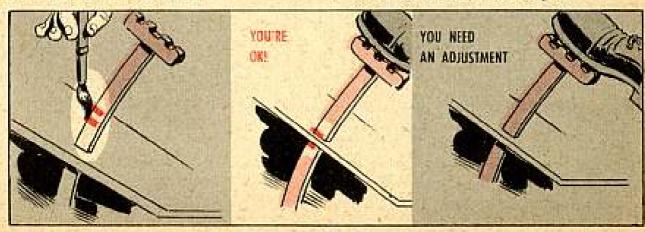
Keeping tabs on that clutch pedal free-travel in wheeled vehicles has been bugging guys for a long time. Think I've finally hit upon a solution—maybe one that all PS readers can use.

Go to your 'TM and get the clutch pedal free-travel spec for your particular vehicle. After you've got this, measure up along the clutch shaft from the toe board to the distance or distances mentioned in the TM and paint a red stripe on the shaft.

For example, the clutch pedal freetravel for the 5-tons is 1¾ to 2 inches. Using the method in your TM, measure these distances and draw two red stripes on your clutch shaft—one at a distance of 1¾-in above the toe board; the other 2-in above the toe board. As long as the toe board comes between the two stripes when the freetravel is taken up, you've got it knocked —your clutch pedal linkage is adjusted OK. And you don't have to keep measuring free-play with a ruler—a quick looksee will tell you where she stands.

> PFC M. C. McGilvray Ft Hood, Texas

(Ed Note—A real dandy, but why not a band the width of the tolerance for your vehicle. It might be easier to put on. You've got to do one thing—get the OK of your CO or Ordnance Officer before dolling your truck up like a Christmas package. You'll see a technical bulletin on this one of these days.)



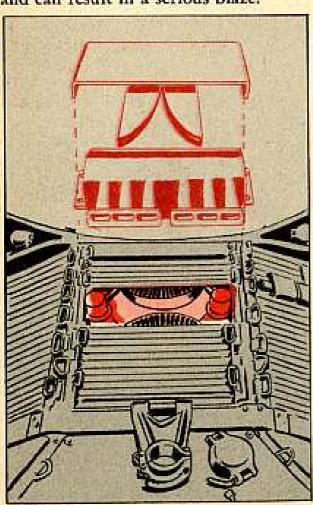
# MUFFED MUFFLERS?

Dear Editor,

We feel we've found a way to head off some of those engine compartment fires that occur in M48 tanks.

Checking a fire the other day we noticed that the exhaust stacks were badly battered from installing the top deck with the muffler attached. Since the stacks are jointed and movable we figure the damage occurred because they were not lined up as they should be when the deck's replaced.

With improper joining, fire is allowed to escape, scorch the shrouds and can result in a serious blaze.



So we now unbolt the muffler assembly from the top deck after the deck is removed, and put it back on after the deck is replaced—making sure to get a proper fit.

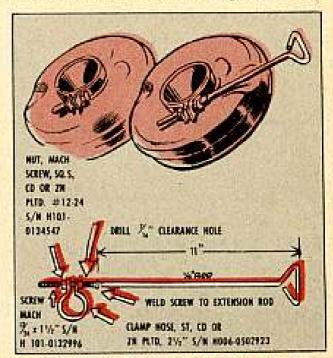
# Capt Raymond B. Green Fort Hood, Texas

(Ed Note-Looks like a good safety measure. Anything that'll quash a fire hazard is usually worth the effort. Also watch for this dope in the next revision of TM 9-7012.)

# ROD EXTENDER

Dear Editor,

The carburetor air-cleaner unit of the 5-passenger 4x2 Chevrolet light sedan, series 1500-1949-50-51, has a habit of working loose. The mounting clamp at the base of the air-cleaner is pretty weak



and is easily "stretched" out of shape under tension by the mounting bolt. Many times the bolt head cuts halfway through the clamp.

We extended the mounting clamp with a 1/4-in rod extension and welded it to the bolt head. This seems to do the trick. It also saves a lot of sore knuckles, since the conventional mounting bolt is rather hard to get at even with a screw-driver. Quite often the screwdriver slips out of the bolt head while loosening or tightening, which causes a run on "sick call."

Gerard B. Brault APO 500, San Francisco



CHAMBER BRUSH

Dear Editor,

To take the time and sweat out of cleaning 57-mm recoilless rifle chambers by hand, when they're extra dirty and incrusted, you need two things. Get a worn-down 90-mm brush that is no longer good for a 90-mm tube, and the portable electric drill from your organizational tool set.

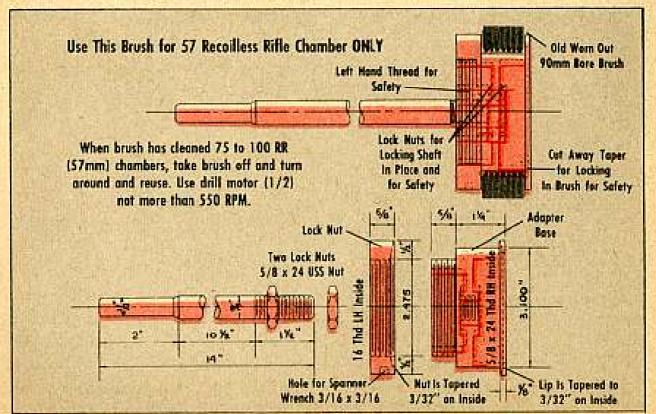
With the short-bristled 90-mm brush made to fit the ½-in drill (see sketch), just put bore cleaner in the chamber and

ream her out. The 57-mm bore brush is no help in cleaning the chamber especially extra dirty ones, and doing the job by hand is a hit-and-miss affair.

A rejuvenated 90-mm brush not only does the job faster, it cleans the hard-toget-at chamber better.

> Sgt William O. Hambrecht Ft Dix, N. J.

(Ed Note-Just proves there's always a way to do a better job faster.)





Who keep our guns and gear just fine
Who keep our guns and gear just fine
Who keep our guns and gear just fine

# Salt wash

Wash that stuff right outta your chassis. Get rid of any calcium chloride before it corrodes your bottom. You can easily spot this icy road salt on your undercarriage—it looks like a gray powder when dry. Use fresh water and lots of it.

# Keep your head

When it comes to that hood holder on your M37 3/4-ton truck, a guy can either use his head-or lose it. A gust of wind and an unsupported hood make a French quillotine look like a paring knife. You'll find that holder above your windshield -use it and don't lose it.

# Lo overhead

When the thermometer goes up, up, up. Or when the temperature goes down, down, down. There's a very good reason why you've got to lubricate your vehicle more often than it says in the LO. Unusual conditions such as heat and cold, extra long periods of high speed operation, sand, dust or water can cut down mighty fast the grease protection you get from your lubes. What to do when conditions change?

Your TM covers the ground pretty well.

# Window souen

A lot of door windows on the 5-ton and 2½-ton M34 series trucks have been breaking. The new "Urgent," MWO Ord G1-W69 (20 July 1955), puts a stop to this. Get your truck back to Ordnance post-haste and save yourself a cracked piece of glass.

# Rev it up

Let's knock this 5-ton truck governor setting problem once and for all. A lot of guys still have that governor set at 2400 RPM, following some old instructions that have been long superseded. These governors are to be set at 2800 RPM, like it says in TB 9-837-6 (22 September 1954). This poop can help stop a lot of clutches from going to pot.

# Gap-osis?

From your current M41 Bulldog tank manual (TM 9-730, June 51) maybe you've got the idea that the spark plug gap setting for Li'l Joe should be the same as on the main engine plugs. T'ain't so. As the next TM revision will show, the gap setting for that Detroit Diesel's (Model A41-1 or -2) plug is 0.017 to 0.020 inches.



Before any more buttoned-up winter operating of your M47 tanks, better make sure of one thing. Your Stewart Warner personnel heater should have an "O" ring gasket (G258-7700242) and washer (G248-7700243) to seal the exhaust outlet and mounting plate—and prevent leaks of carbon monoxide. If not—keep that crew compartment well ventilated till Ordnance has a chance to fix 'er up. There's an MWO on the way.

# Happy torquey

TM 9-8024 (Oct 55) on the hydramatic 2½-ton trucks tells you to torque the adjusting-nut to 60-75 foot-pounds when adjusting your wheel-bearings, and then back off ¾ths of a turn.

# No guesswork here

Why guess at the adjustment specs for your wheeled vehicles? Just keep a copy of TB Ord 529 (20 July 53) handy. You can get it on a "need-to-know" basis—as AR 310-90 (2 Dec 54) tells you. The TB deals with all your wheeled vehicles except the M38A1—use TM 9-8014 when handling this Jeep.

Need a rig for running your tank engines outside the tank? There's one out now that'll take care of just about any tank engine. Listed in the ORD 7 for your vehicle. It's: Kit, extension, electrical cables, it's fuel lines, Ord Stock No. 4910-383-3653. (Used to be Stock No. 41-K-86-860.) You coordinate with Ord-

# The missing one

nance to use it, natch.

The word's out that you can now get a variable load resistor (Ord Stock No. 17-R-6249) for making tests on your vehicle's 24-volt system covered in TM 9-8030. It belongs in your Tool Set, Organizational Maintenance (2nd echelon) Set No. 1, Supplemental.

# Duster juice

Place to check the no-load generator output on your M42 twin-40 (Duster) is at the accessory outlet receptacle—with the master relay switch OFF. On other track-wagons (see Page 5, PS #34) it's checked at the slave receptacle with the switch OFF. 'Course that's just for the voltage check—always keep the master switch ON for normal operation. You might want to read up on TM 9-761A.

