

PS

THE  
PREVENTIVE  
MAINTENANCE  
MONTHLY

Issue 37 1954 Series



1

## REAL SMOOTH...



Now a real smooth outfit the other day. Park battalions, it was. They could pick up and hit the road any time they got the word "Go."

Whoa, how low they do (A-B-C).

Every man—yes, every man—knew exactly what equipment he was responsible for, what he had to maintain and what he had to have ready for moving at a moment's notice. And he knew what he had to do when the order came to roll.

Every man, every tank, every weapon—every piece of equipment that outfit had—was constantly ready for combat.

## BATTLE READY OUTFIT



These men trained every day like the enemy was right over the next hill or down the road a few miles.

They weren't too tough with their maintenance men or their equipment and ready.

Their outfit was right anywhere, any time—under any conditions.

Can yours?

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November 1977

148th Issue

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The magazine needs your ideas and contributions. Just to give you some suggestions, we want to see: **Big Red Mail, 100 Pages, Member Meeting Cards, Member News and Address and Mail Instructions.**

It's time for you to get involved. Write a letter to the editor, make a suggestion or tell us what you think. We'll print it if it's good. We'll also print it if it's bad. We'll print it if it's just plain silly. We'll print it if it's just plain stupid. We'll print it if it's just plain boring. We'll print it if it's just plain annoying. We'll print it if it's just plain insulting. We'll print it if it's just plain offensive. We'll print it if it's just plain disrespectful. We'll print it if it's just plain unbecom-  
ing. We'll print it if it's just plain inappropriate. We'll print it if it's just plain unacceptable. We'll print it if it's just plain unacceptable.



Some on the ball. I saw tracks before have been blowing their tops because the tracks were blowing their bottoms.

They were working 'em up with Ford's Right

in the crankcase.

As nice as they could figure, it happened on the early model 1-tonners when gas vapor in the crankcase mixed with sparks in the distributor. If your habits are in that class, you'll save some the long drive, so here's how it goes:

The gas leaks through the two pastures, out for cooling, out for pressure relief, and you look the gas leaks through the pastures first each when your truck is parked, pressure can't build up in the fuel system.

Two—if the right side and the pressure relief valve on the fuel tank valve, pressure builds up in the tank with enough force to push the gas into the pump, past the air filter, and down the backwashfield where it finally seeps past the piston rings in the crankcase.

The fumes coming from the crankcase work up the vent line and over into the distributor, cause the distributor and crankcase are both vented on the same line. When you start the vehicle the action of the breaker points for the fumes, and the vent lines act as a fuel to the crankcase. The explosion that takes place can really wreck the distributor of your engine.

An original MRO, Old 1164-1161 (25 Apr 64), should have been applied by now on all trucks not already fixed in production. It'll eliminate a couple of possible causes for the trouble.

Better breathe folks blowing bottoms —

## TWO-WAY FIX HALTS FIVE-

If for some reason your truck's still waiting for the MRO, it might be wise to do this:



Disconnect the fuel line and hose from the distributor and from the above to the crankcase fuel return. (But that would have to be with plastic. It'll be removed when the MRO is applied.)

USE ONE OF THESE TWO MRO'S



The MRO will seal your distributor with the directly into the top of the air filter. That'll give the distributor the same vent line that it needs down.

## TONNER CRANKCASE EXPLOSIONS

YOU CAN DO THIS



Remove the return on the fueling valve and stick a 1/2" in. vented plastic plug (Old Truck No. 1000-000000) in the line opening the more you don't get anything in the opening of the distributor.



Keep the opening clean so it's clear the return air flows. Have the MRO applied as soon as possible to save you gas heating (more you can't have a water-proof distributor. It's a real disaster.)

DOES THIS



The MRO also gets rid of another possible source of explosion by sticking two flame arresters in where the crankcase vent line goes into the intake system.

LATE MODELS HAVE THIS



The late model fitting of the product distributor will leave the distributor as it was made but it will be topped into the air cleaner on the left side of the air filter. If you find the line in the position, don't put in the MRO applied.

The protection by will also have the flame arresters installed.

RIGHT USE AND CARE PAY OFF

# WHEN YOU NEED A

# WINCH



## IN A PINCH

WILL THIS WINCH DO THE JOB? OR DO I NEED A Bigger One?



### INTRODUCING

A WINCH-DESIGNED FOR "LIFTING" OR "PULLING" WITH GREATLY IMPROVED BRAKE AND SAFETY FEATURES.



#### BRAKE SHAFT FOR BRAKE



WIND DOWN AND HOLD THE WINCH FROM KICKING.

FOR WINCHES NOT THIS SIZE (SEE LISTING)...  
NOT THE WINCH OPERATOR BUT THE OPERATING LEVER.

#### SAFETY BRAKE FOR MANUAL START



WIND DOWN AND HOLD THE WINCH...  
...WIND DOWN...  
...WIND DOWN...  
...WIND DOWN...

#### SPROCKET FOR THE EQUIPMENT OR 1-TON WINCH



THE OPERATOR WILL BRING THE WINCH TO THE POINT OF THE CABLE AND HOLD IT ON "OFF" POSITION.

### TO PULL OUT CABLE FROM DRUM (STARTING FROM "OFF" POSITION)

1

**DRUM CLUTCH LEVER:**  
DISENGAGED TOWARD "WINCH AS FAR AS IT'LL GO."

2

**DRUM LOCK KNOB:**  
PULL OUT, TURN 1/4,  
TIGHTEN COUNTERWIND  
FOR... OR RELEASE



### IF WINCH IS EQUIPPED WITH SPOOLS

1

**TENSION LOCK-RINGS:** PULL OUT, TURN 1/4

2

**TENSION LOCK-RINGS:**  
PULL OUT

**TENSION LEVER:**  
PULL UP

3

1/4 TURN UP. IT SHIP AND LOCK IN "OFF" POSITION



4

**SPROCKET (SHIFTS) END OF CABLE AND HOLD UP!**  
KEEP IT TIGHT AS CABLE IS WINDING ON DRUM.

THE "OFF" POSITION (FOR THE WINCH)  
CABLE TO BE... IS... IS...  
PULL CABLE TO THE WINCH



That steel cable pays on your front-end (and rear) boggers. Like a good woman, she's a pain (or to have around) in little cases and attention's often kept for dependability. So know all you can about her... how to use her right and how to keep her in shape to do the job.





**TO STOP WINCH MOVEMENT.**



**1** PULL  
CABLE



**2** PULL  
FOR TO  
STOP.



**ATTENDING DRIVER  
MAY REMOVE  
WHEEL LOCK FROM  
IN PLACE**

**TO PAY OUT CABLE**

**DRIVING AND UNDER LOAD**



**1** PULL  
HANDLE



**2** PULL  
FOR TO  
STOP



**IF SPOOLER EQUIPPED**

**3** PULL  
HANDLE

**4** PULL  
CABLE

**5** PULL  
HANDLE

**6** PULL  
CABLE

**FOR SPOOLER 1-4 TO 5  
STOP. IN PAUL, CABLE LOCK**



**7** PULL  
FOR TO  
STOP



**8** PULL  
FOR TO  
STOP

**FOR FOR CABLE  
TO HOLD CABLE**

**OPERATED UNDER POWER WITHOUT LOAD—KEEP CONTINUOUS  
MATERIAL TENSION. NO CABLE WON'T LOOSEN.  
CABLE ON END**



**WHEEL ON WHEEL ON WHEEL  
THE CABLE WON'T ONLY FOR  
THE SPOOLER... HAVE  
CABLE ON END WITH CABLE  
CABLE ON WHEEL  
AND THE FOR  
CABLE.**





TR-3 and TR-3L are the best on-vehicle assembly and cable care. But team with these extra pointers for adapting to local conditions.

## CABLE

USE 1 OR 4 FOR  
PURE OPERATION

OR



IF NOT AVAILABLE  
... USE OTHER CABLE  
GUL'S BEING  
THE BEST

IN ANY AREA, PARTICULARLY IN THE NEW WORLD, MAKE SURE A QUALITY CABLE MEETS ALL THE SPECIFIC REQUIREMENTS.



1. CABLE TERMINATION MUST BE DONE PROPERLY TO AVOID THE LOSS OF SIGNAL.

2. WHEN THE CABLE WITH ITS SPECIAL JOINTS

### ORDERING

- A. GUL Cable No. 1417-001 - 1702  
B. GUL Cable No. 1417-010 - 1800  
C. GUL Cable No. 1417-010-001

3. IN ANY LOCAL MARKET WHERE THE BEST CABLE WITH SPECIAL JOINTS ... MAKE SURE YOU GET THE BEST.



## REPAIRS

TR-3 AND TR-3L  
REPAIR-PROOF,  
ELECTRO-LOCK  
KIND OF WORK



UNITS HAVE  
REPAIR-PROOF  
REINFORCED  
WELDED JOINTS  
WHICH LAST FOR  
10 YEARS

WHY ON THESE REPAIRS  
THE JOINTS STAY DOWN BUT  
THE ... FOLLOW UP DATA  
THEY STAY  
THEY STAY  
THEY STAY  
THEY STAY



CONNECTIONS  
ELECTRO-LOCK AND LOCK

LOCK  
RE  
REPAIR  
REPAIR  
... BUT  
REPAIR



WHICH ACTION GROUP  
STAYS IN BEST  
UNDER CONDITIONS  
OF LOCAL MARKET USE

IN CABLE WORK  
THEY STAY—STAY BY THE  
BEST MAKE SURE OF IT



**WINCH TIPS**

**A LIFELINE FOR THE WINCH'S SAFETY TAILS**

IF YOU WILL BEAR THE BURDEN OF  
HEAVY LOADS HUNG ON THE WINCH,  
IT SHOULD BE BUILT STRONG.

A COMBINATION WINCH WITH AN  
ADJUSTABLE HOIST TAIL WILL  
BE THE BEST CHOICE.

LONG FLANGE HOIST AND  
LONG TAIL TUBE AND HOIST WIRE.



MAKE TO ORDER  
THE WAY IT GOES



WINDY DAYS  
BEWARE



IT'S  
DANGEROUS

THE POINT TO BE  
OUT OF OF WIND.



KEEPING RECORDS  
OF LOADS TAKEN ON



DON'T BE A  
DUNNO



KNOW  
THE TAG  
USE TAGS ON  
EVERY TAPE  
AS ONE OF THEM



DON'T BE  
CRAZY UP



BE CAREFUL  
OF THIS

GET IN LINE



BEFORE  
PLACING

WINDY  
DAYS  
BEWARE  
AND  
WINDY

BE THE DOWN  
PLACE



THAT'S A GREAT  
REASON

USE  
WINDY  
DAYS  
BEWARE  
FOR DUNNO



WINDY DAYS  
BEWARE OF  
YOUR WINDY  
WINDY.



THIS TAG IS YOUR  
WINDY AND ONE OF  
THE TAGS OF  
THE WINDY TAG  
WINDY IS



## Gaskets? Ask it—

Here's how to find your auto gaskets.

Circle 144 on M38 and M38A1, it's not listed in your Oct 7. Get it under this: Gaskets, flange, drive, axle shaft, Oct Stock No. G740-71/2011.

If you run into any other trouble, spare your TM at saying you have no time to.

And if it's the drive flange gaskets for other models than you need, maybe this'll help:

	MODEL	PART NOMENCLATURE	OLD STOCK NO.
	1 1/2 TON M38	GASKET DRIVE FLANGE	G740-71/2011
	1 1/2 TON 44, 45, M38	GASKET DRIVE FLANGE	G740-71/2011
	1 1/2 TON 44, 45, 46	GASKET DRIVE FLANGE	G740-71/2011
	1 TON 34, 35, 36, 37	GASKET DRIVE FLANGE	G740-71/2011

You'll see the gaskets listed in the next revision of Oct 7 SVE's G740, G741, G742, G743, G744 and G745.

## To the engine's heat

Should your M38A1's head flange pins come loose from its flange, weld it tight up again. Whether you use an electric arc-welder or oxy-acetylene is your choice. The electric kind will spot the head heavily. But unless you're careful, it can put a hole through the head because its heat is so high (Fig. 2).



With the gas welder, you'll probably have to replace the area. While it's a

little more work, you're less likely to put yourself in a hole.

And speaking of the 'A's head, getting rid of its ratchet is easy, too. Just knock out its bushings and push them tightly against their stationary members. Then while you're holding it this way, have another guy tighten 'em up.

## Dial jockeying

It may be called a clutch dial—but it must also work.

After replacing an M38 truck's dial, a lucky-coupler's adjust-the-clutch pedal. It's examined in a close and focused supply had handled his own drive as old World War II (WW) model, instead of 1946,

Odd block No. 6746-7271561. While they may look alike, the old model's too thick to be the clutch release. He returned it to supply, got the right one and everything worked out OK.

Getting an old model disk won't trap you often, but it's something to look for when you're in a tight pinch's clutches.

## Identify yourself?

Before you work yourself into a lather over a no-good, locked-up instrument, or light, or gadget in your 12-volt system . . . here's a tip: Maybe it isn't the instrument at all. Check its odd-wire speed connector in the gully circuit.

Sometimes if you break the Douglas connection, clean up the ends and the

lower connection real good, and then you're back together it'll do the trick. Not worth a try.

## Read-the...barometer!

Tankmen, hear this: Your TM may not be too specific on the subject, but you gotta monitor those tank-current indications at least once a week to keep 'em in shape.

They need five to ten minutes working to spread the oil around, keep the clutches free and healthy, all the sealed surfaces working smoothly, and cut down the danger of rust.

Before cranking your turret, be sure to start LRT just-unless the main engine is running. This'll prevent any unhealthy drain on the batteries.

## Adjusted adjustment

It can't even be a knock-out! The hand brake flex cable on your 12-volt tracks needs washing. It stretches a little each time the brake's pulled on and after outside the hand brake lever adjustment.

To keep things in shape, you've got to do this:



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## Joint trouble

Before you know, or if you've had constant-velocity joint trouble on your 2-1/2-ton, 6x6, Ford, Ken, have Oshkosh maintenance check the front-wheel running angle.

If the scope isn't set to give more here than they should, there's a chance that the two sections of the constant-velocity joint might become damaged. A setting of from 26° to 29° is allowed on that running angle but staying closer to the 26° is best, just like TR 9-813-6 (18 Mar 71) tells you (Fig 1).



What happens is that the joints get clipped and the chips get in with the balls in the joints. This sets up a wedging action which could cause the joint to bear open.

## Blind rivets

There will roll-out out with timing marks you can't see. And when your timing's off, less oil pressure, mechanical stress, overheating —the works— are your reward.

To make sure you can see what you're doing, the latest M8A1's have metal indicators on their timing gear covers. There are two arrows that point up and's, it's, or her's about correct timing. One arrow's set for top center and the other for 1° before top center.

Maybe you've seen me around. If you'd like to get me for your M8A1, keep your eye out for an MWD. I'll tell you what to ask for and how to install the indicator on your Jeep. With it, you'll no longer have to live with a vehicle that won't give you the right time.

## Side splines

If your M8A1 truck's front knuckle and body are cracking open, give it the real —a 1/4 inch out. Sharpest weld's chisel in and grind them smooth.

Then weld the rod across the knuckle's web which when it breaks the Jeep's body. And reinforce the body so that joints with 1/2-inch angle iron. Now weld the reinforced knuckle to the reinforced body and paint it all nice and gray-like.

The extra ligatures may not hold in forever. But meantime it'll keep you from splitting your sides.

## Clutch cap screws

On some of the 1-tons, guys forget to remove the three cap screws which hold the clutch-plate to a partially reformed position for ease of assembly.



Here's the late word on —

## TRACK SUSPENSION LUBES



If you've been tracking your machine to keep up with lube specifications on your full-track steel roller. The latest word is standardization.

For all the suspension systems listed in the chart, there are now only two oil weights to keep straight: OE 100 for temperatures above  $+10^{\circ}$  F, and OES for temp ranges below the zero mark.

Y'check the suspension as C service (250 miles or monthly). If the oil's low in compensating rollers, rockers/links, or track support rollers, add enough to raise the level to the top blue plug hole. If wheel arm supports take oil, fill 'em to plug level. Always allow enough

time for lube to seep through right-tilting oil passages. Then recheck the level.

Some of the machine makes have their suspensions equipped with nylon bearings—which require no greasing. They're cleaned with a rag dipped in light oil when run. If they have ball or needle bearings—with grease fittings—check the Greb or 'em at each C service.

Except for the M47 tank case foot-casts with charts, all the final drive sprockets use uniform OE 100 for temps above  $+32^{\circ}$  F, OE 10 for  $+10^{\circ}$  F to  $-10^{\circ}$  F, and OES for  $0^{\circ}$  F to  $-40^{\circ}$  F. Check 'em weekly and before operation. Drain and refill at afternoon C service.



### LUBES FOR SUSPENSION OF TRACKED VEHICLES

VEHICLE	SEA	OE 100 (32°F to 100°F)	OES (10°F to -40°F)	SEE THE "LUBES" CHART
Series 100 2500	Roller/Track Support Rollers Trolley Roller/Idler Cast Trolley Roller/Idler Ball Trolley Roller/Support Linkage Trolley Roller/Link Cast Trolley Roller/Support Arm Bearing	Track Support Rollers (except Bush) Ball/Journal Bearings Trolley Arm Bearing Trolley Roller/Idler Bearing		Series 100
Series 100 3000	Roller/Track Support Rollers Trolley Roller/Idler Ball Trolley Roller/Support Linkage Trolley Roller/Link Cast Trolley Roller/Support Arm Bearing	Track Support Rollers Ball/Journal Bearings Trolley Arm Bearing Trolley Roller/Idler Bearing		Series 100



Here's an on-going  
way with you...

# TANK DRIVE SPROCKETS

There's a way to get the most use with the least trouble from your tank track drive sprockets. Here's how:



FIRST, YOU'VE HAD A  
DUZED FOR CRACKING  
SPROCKET WEAR. IT'S  
EXACT TO NAME.

Get jobs a piece of brass about the size of a  
cup for the flat track to rest on.



Hold it against the contact area that the sprocket teeth, contact and wear the surface of the contact between part of the track.



Complete the brush the gap by wheeling and  
the wear line of the track.



Then use the pipe down to the surface using a  
pipe, using the contact teeth, an ammonia gas  
brush to clean the teeth.



Make this a regular use of the contact area  
with the face of the sprocket and the contact  
area is cleaned to its use, not wear.



Use your job a good track, but avoid gaps  
for a clean your sprocket wear at the contact  
area.

Finally, the brush yourself wear on the  
side of the sprocket teeth.



When you find the wear on the driving side  
around the wear on the driving side is a track  
around the sprocket and on the other side  
the track is the gear.

Good luck to the tank is the best way to  
the sprocket and the sprocket is the best.



When you find the wear on the sprocket  
area, it's time to replace the sprocket. Replacing  
a sprocket is a task that requires a lot  
of attention to detail.

It's important to do it right when you  
replace the sprocket and you should use  
the right tools and techniques to do it right.  
Good luck to the tank is the best way to  
the sprocket and the sprocket is the best.







WELL, ALL I CAN SAY IS THAT YOU'VE GOT TO CHECK EVERYTHING. YOU'VE GOT TO TRY IT. MAYBE YOU'LL FIND THE SEAL. THAT'S ALL I CAN SAY.

Unlogging a plugged vent may release the internal pressure and stop the leak... if the seal is still in good shape.

OH, PERHAPS THE LEAK COULD BECAUSE THE SCHEMATIC SHOWS...



For example, the Transfer Case

is leak from the upper support-retainer's base. This may look like a leak in the lower oil seal.



WIPE EVERYTHING CLEAN AND FIND THE LEAK FIRST.

IF THE OIL SEAL HAS A SLIGHT LEAK, A PRESSION OF A FINGER UNDER WHERE IT'S NOT SHOULD BE ENOUGH TO STOP ON THE OIL SEAL.



AN OIL SEALING OVERHAUL, AND JUST TO HAVE THAT GREAT NORTH OIL. JUST DON'T MAKE MISTAKES.

DON'T WORRY ABOUT THAT. WE'LL GET IT FIXED. DON'T WORRY.



BUT WHEN YOU'VE MADE THE A SLIGHT LEAK, REPLACE THE SEAL. DON'T TRY TO STOP ON THE OIL SEAL. NOW INSTALL A NEW SEAL.

WE'VE GOT TO GO NOW.





# JOE'S Dope Sheet



SEEP

GO

Don't decline your truck or your jeep  
Cause your oil-seal shows signs of some seep.  
But a streaky wet leak  
Needs attention this week  
Or the hespill bog down to a creep.

LEAK



NO

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





You got to keep in mind that all tanks are supposed to hit a little goo go by. That's how it lubes itself.

At least, a **SHOR** is a light smear of lube on the spot that collects dust, leaving a **slime** or **dark spot**.



You have a **LEAK** when enough lube gets by to flow in a **rust channel** . . . sometimes lube flows to nearby areas.



Even if lube can't **seep** enough to **push** the flow in it is still a **leak**.

AND THAT'S NOT A **CHANGE!**



THAT IS TO SAY, WE'LL CHANGE IT TO **OH, MY! YUCKS!** A **CHANGE!**

**LEAK!** A **CHANGE!**



**OH, PEEWEE!** WE'LL CHANGE IT TO **OH, MY! YUCKS!** A **CHANGE!**



**LEAKY COURSE! BY** AND A **CHANGE!** AND **TO YOU, BY**



# SUPPLY & DIRECTIVES

ALL ABOUT

DR. FORAN AND...

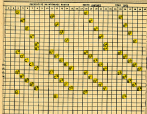


**H**ave you ever been in an experimental service center where jobs to be completed and bills for B.C.D. and Dr. Foran for your relation.

The theory is that up the really water water paper. Even at that a customer takes 100 days 400 up to. To keep your close, use the method along with your 100 B.C.D. The 100 isn't covered when a line you put down approximately—this means to keep your trade and work in top shape.

This method tells how to plan your, avoid it means without taking off your legs as it goes along, and show to show that 100 value that have come. This paper.

Make your time the way it shows on page 12, 13 and that that you...



That your method is at least one month or so. The way the working of your relation will be spread out and they will change the methods they need not be a 100 or else job.

That work is it with parallel like above that the work is (approx) the same method on the water will look.

When one of your relation is away from home and has been arrived when early, make sure you apply the info on to your own.



Here's how this schedule works for wheeled vehicles. The *B* service is to be due once every two weeks. Based on a five-day work week, this means that you schedule 10% of your vehicles for *B* service each working day.

Number the *B* services from 1 thru 11, starting with the last *D* service. On a time basis, this means when your 10% comes due, your *D* service will be scheduled instead, 'cause six months have passed since the last *D* service. This will save you from working down there on the left-hand page of the year.

After you've decided the date for each one, pencil it on the right-hand page of your notes.

Your *C* service for wheeled vehicles is due every 1000 miles. But if your vehicle averages about the same number of miles during a certain period (for example, 1000 miles in three months), then you could schedule on a time (three-month) basis.

If you've got a vehicle that usually racks up 1000 miles in one month, then schedule the *C* services on a monthly basis, or on even numbered *B* services. This will work unless more mileage is put on the vehicle and opens the applicator. In that case, you'll have to go by mileage. For the relevant information, consult your back on schedule. You've

allowed 10% on *C* vehicles on any time between 500 to 1000 miles, and 5% on *D* which is between 1700 to 2000 miles.

When you do a *C* service (1000 miles) instead of a *B* service, make sure you schedule *B* next, 'cause when you go to *B*<sup>2</sup> you'll know your next service will be a *D*.

And here's how you number your *C* services, starting with the last *D* service (*D*<sup>1</sup>, *C*<sup>1</sup>, *C*<sup>2</sup>, etc.). Since you do your *C* service every 1000 miles, then the next *D* service should follow every *C*<sup>2</sup> service.



If you've a vehicle that has gone more than 8000 miles in less than six months, then you'll schedule a *D* service after the *C*<sup>1</sup> instead of after the *B*<sup>2</sup>. You start a new count of *B* and *C* remembering that you do *D* service.

Number your *B* services *B*<sup>2</sup> and *B*<sup>3</sup>. The *C*<sup>1</sup> tells you that you should do the party of 1,000-mile service. This gives you something there as many as 12 miles to find out.



Here's how you schedule your tracked vehicles.

Schedule your tracked vehicles as the workload will be evenly divided. Since the B service is due every five working days, schedule 1/5 of the total number of tracked vehicles each work day.

You also number these services. When you're scheduling remember that every B is followed by a C service because one month has passed since the last C. So B services are numbered from 1 thru 5.

Every third C service (the third monthly service) will be a D or quarterly service. Number your C services 1 and 2.

Since you do most things at your quarterly (Q<sup>4</sup>), semi-annual (S<sup>2</sup>), third quarter (T<sup>3</sup>), and annual (A<sup>1</sup>) services, number your D services 1 thru 4.

So far so good for scheduling. Now let's see it.



Your C and D services on track vehicles are based on mileage as well as time. You'd better look at your mileage record to see if that track vehicle is ready for the C or D service on a mileage basis. If your service fall due on a mileage basis rather than a time basis, try to do it as close as possible to the scheduled date and do the highest type of service. Remember, you've got infinite wear on tracked vehicles, too. For

C service it can be done between 200 to 275, and for D service between 712-1000.



You don't have to number B services on motorcycles—since they are done every two weeks—only one will be scheduled between your monthly C service.

Your C service is governed by both time and mileage so your parts can always be scheduled for a C service on a monthly basis if they do less than 1000 miles a month. These are numbered from 1 thru 1.

And you people less familiar or experienced service sections that only do C or D services—figure that part of the score that covers these services. And you'd better make sure your water filter with the mount cover that's kept by the company, troop or battery unit to which the vehicle belong.



You keep your completed G4, 400's for six months, after that shove them in file 15.









### COLD TRANSMISSION

Dear Half-Mast,

We have trouble with our GMC Hydra-Matic transmission not warming up fast enough in cold weather. Is there's what we do?

Start the engine and run it about 10 minutes. Keep the transfer shift-lever in NEUTRAL and the transmission in P-2 LOW RANGE. We run this way until the engine reaches operating temperature. By doing this, the cast oil-pump is put to work and the oil is circulated around the radiator in the transmission, causing it to warm up faster.

Do you see anything wrong in this method?

T. J.

Dear Mr. T. J.,

Not a thing wrong with your method, but... if you've drained your air tanks at the end of the day's run, you wouldn't

have to do this. While running your engine the usual way and building up air pressure the next morning, you'll sit there long enough to build the air temperature to about 60° F. That's warm enough for your straight winter oil.

*Half-Mast*

### IN THE AIR

Dear Half-Mast,

After about a half-hour argument for us? When we put our aircraft equipment on Mads should the tire pressure be reduced or left as it is? Some say one way, some say 'other.

Sgt T. J. H.

Dear Sgt. T. J. H.,

Ta' guess keep those tires at road pressure all the time for a very simple reason. When ya' get orders to go you gotta go... and in a hurry. No time to run around pumping up tires. Of course, if the gas is being bled off for storage, the tire pressure should be reduced like it says in TB Ord 163.

*Half-Mast*



## TECHNOLOGY



Dear Half-Mast:

Does the Austin procedure in TM 9-2134, for the 2-1/2-ton Hydraulic truck work? It looks like the torque nut got in the way of the front-wheel's nut.

CPTG W. J. M.

Dear Master W. J. M.,

It works all right. But you gotta take off the gage before you move the vehicle forward—or the torque nut'll stop you.

With its professional's look as equal distance off the ground, put the gage on at the front and chalkmark its position. Then take off the gage and move the vehicle about 1/2-wheel revolution forward. Now replace the gage in the same chalk mark—making sure the chalk's ends are the same distance from the ground as before. The marks should come out below the propeller shaft and above the torque nut.

*Half-Mast*

### 2-1/2-TON TRUCK HABS

Dear Half-Mast:

The mechanics here have been wondering why the new 2-1/2-ton trucks do not have their fan blades spaced evenly. Could you give us some ideas for that?

Sgt E. G. T.

Dear Sgt E. G. T.,

There's a good reason. If those fan blades were evenly spaced you'd most know about it because it would sound like a drum.

As for balance—when the fan was designed it was balanced both statically and dynamically and should give you no trouble. Just look out of balance—fan it's much quieter.

*Half-Mast*

### CHANGED SPARK PLUGS

Dear Half-Mast,

We've been having trouble with our speed-playable springs corroding and sticking to the plugs. As soon as we can't separate 'em and have to get a new cable and plug. We found a white powdery substance on the cables' cadmium-plated springs, which seemed to cause the trouble.

Is there some barrier-co-cables compound we can use to keep the springs so deep from corroding?

H. J. P.

Dear Mr. H. J. P.,

You see Green, silver, Cad Shell No. 14-G-108, 8-oz tube, all it's contained, then use Compound, Insulating and Sealing, Cad Shell No. 11-C-1008-700, in 8-oz tube.

Just put it on the springs at your regular C maintenance intervals.

*Half-Mast*

For a "Fast-Chief"  
M-4 high-speed tractor

## WATCH ITS TRANSMISSION OIL-LEVEL

Dear Mr. H. T.,

You ought to check the transmission and differential oil level on the high-speed tractor when it's hot. To check, let the oil fill to hot, and the tractor's level is up level.

Check the oil level, however, 100 hours after it's at work, but just before work that is hot 5 minutes before you will use. And make sure's more just like the engine's hot work work. Therefore you work used and employed in, fill up with 10 quarts of oil—don't what is taken. A hot check to be sure don't fill, and you've got it.

Check the level every day. And within one minute after stopping your engine. The oil should be at normal operating temperature to be on the level. Then add oil if necessary to bring it up to the gage's FULL mark.

**Service-Station Oil**—Like the differential, the M-4's service-station needs a hot oil change every 100 hours too. Dump the gear by leaving a gear and help through the container's discharge and service-station work. Then screw the drain-back again, start and run the engine at half-throttle (1000 RPM) and pour about 10 quarts of oil. That should be the amount.

Next, engage the service clutch to get the temperature starting, and check the oil level. You've got 10 quarts in there. Inspec is 10-12 quarts, but with 10 you won't need to use you don't drain all the old oil.

Keep running the engine until the container's pressure-gage shows normal (100-110 pounds—with no needle below 1), and read the oil temperature then. At that point, lower the engine speed to 1000 RPM.

Now level off. Adjust the oil level to the normal way marked to the dipstick's FULL mark.

To be sure you don't go off half-cocked, check the container's oil level before you get every day—with the oil hot, the engine check engaged, and the engine idling. Then if it needs it, add oil up to the FULL mark.

**Final Note**—To check the work, change your final drive's capacity and lower one. Check in hot and cold with 10 quarts of the stuff. And like the others, check it every day and keep it level to the plug hole.

You'll keep your tractor happy as a new-born babe—if you change it regularly and keep it full. TM 9-131 dated April 1954 for the formula.

*John Deere*

# ARMAMENT



## 120-mm WATER TROUBLES

Water getting in the base assembly of the 120-mm gun mount's remote-control system (RCS) might be the thing nobody wants.

The water is either getting in around the shaft packing (Fig. 1) or is formed by condensation that's collected over a period of time. To get rid of the bug, keep a close check on the packing and

replace it if it's not up to gas.

It'd also be well to remove the pipe plug that's in the bottom of the base assembly (Fig. 2) as part of your daily preventive maintenance work.

That'll let out any moisture that happens to get in the box. Put the plug back in at the end of your daily check.



# AAA WHEELS TAKE GAA

That's the latest dope on how and what to use in greasing the wheel bearings on your aircraft's landing gear. You get reviews on your AAA TM's, LC's and TP's.

Take off the wheels according to the TM for the AAA equipment you're working on.

Clean all the old grease from the wheel bearings, drum, axle nut plate, nut, anti-spindle washer, hub cap, hub and axle spindle with kerosene, mineral-spirits paint thinner (Eng Stock No. 53-7879/788/788) or dry-cleaning solvent (QMC Stock No. 51-B-4185-1).

Clean out every trace of the old grease and wipe the parts dry. At the same time be sure to keep the axient or distance off the brake lining or magnet (Fig 1).



Repack the bearings with Automotive and Airframe Grease (MIL-G-1034, Amcolmox II "Super" GAA). Make sure you work it in around the bearing rollers and all open spaces.

Coat the spindle and the inside of the hub and hub cap with the same grease with about 1/16-inch of grease. This is plenty to keep things from rusting.



The idea of packing the hub cap with grease has gone out the window. With too much grease in the hub you build up heat, blow the grease out, and wind up with grease-soaked bearings, shored electrical circuits—no bottom.

TM 9-2815-11 (7 July 52) also applies to AAA material anyway. It's been reclassified by DA Circular 78 (July 54). Use this method instead.



IS SHE IN OR IS SHE AWAY?

Here's one for you. Customers would like maintenance men.

Are you sure she's telling the truth? You've known her for years and always believed what she said, but should you?

You've got a way to make sure she means what she says—yes, you can seal your mail in our gags to have them checked to make sure they're not 'lyin'.

Just gather them up and send them to one of these places that's nearest you: Rock Island Arsenal, Rock Island, Illinois, ATTN: Gags Section; Springfield Armory, Springfield, Massachusetts, ATTN: Gags Section; and for the Fourth Army only, Red River Arsenal, Fort Worth, Texas, ATTN: Gags Section.

If you're in a European command send them to Springfield Armory, or if you're in a Pacific command send 'em to Rock Island Arsenal.

It's smart to spread these shipments out and not send all your gags to one place. That way you'll have some to use while the others are being checked.

Just to make sure the man who gets your package isn't confused, put this

note in your regular shipping correspondence: "These gags are to be checked and returned to this station in accordance with instructions in SD 9-79."

And any time you think she might be 'lyin', just grab her up and ship her off to be checked. Just to be safe, you'll always send 'em in at least once a year.

### RELEASE THAT HANDLE

Some like some 70-man and 90-man tank guns are being put out of service 'cause the gunners don't let go of the manual firing mechanism soon as they would gun off.

If the hand firing handle is not released after firing, what happens? When the next round is loaded the knock-back snaps up, knocking the live-blaze out of the trigger-line. It's either broken completely or so kinked up your gun won't fire. And heck, you've had it!

So let this down on your finger nail right now. Release the hand firing handle as soon as your second gun off. Or you may not get to fire the next one.

# BUBBLE DANCE

Dear Help-Must,

I'm in an awkward situation which has gotten MIA's attention. We have a check on our hand which makes sure we are dealing the amount we owe a partner's quotient of 2 of the job. The job at your location, we place the quotient (over the year) by the level, we place the quotient over the bubble by dividing by depending there we know the job rate and make the bubble in the quotient of the bubble amount we supposed to call what gets me in the bag that we make a check that bubble in the quotient some good bubble. If you they other any kind of a difference? It's a big bag to call the bubble amount of the bubble amount a check?

Post 6/12/12

Dear Mr. K. M. K.

Here's the letter on your bubble dance—

Looking your MIA's

over all reference is sure to make your comparison—be work the bubble dance.

Now that you have to be your place level, by day—

After reading the amount level make make at understand our (Fig. 1) as you're sure the quotient is accurate. To do that, make the quotient bubble on the learning blocks of your situation—this would only with the quotient. The quotient's OK, if the bubble will make up amount.

The given you your check on the quotient via.

But you ask about amount-level reference. The trouble is this—your amount dance's amount any reference, there is doesn't, it's natural for you to ask about "Just a hint."

Because of that, it's hardy for you to know the way of the work. In the amount that applies to your situation appears only, it will the difference help that a reference of one will be offered on a amount-level check.

Now that you've got the straight scoop, you know that doesn't we need to bother for help—because you've got the amount level check, you've got working help—because you've got the amount level check, you've got working help!

If you come out with the amount level check, you've got working help—because you've got the amount level check, you've got working help!

Help-Must



# ENGINEERS



Dear Sirs,

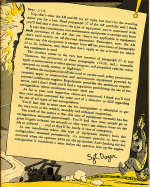
The steps in the extinguishers that in PG 26, page 177, don't apply to all vehicles. AM 125-124-1, C has pg 2 (which PG quoted) say that these regulations don't apply to engine equipment such as construction or maintenance parts designed for off-vehicle vehicles. And AM 125-124, para 27, says the same thing.

Could he've missed a regulation number or looked through everything and say's just a word on keeping fire extinguishers on or off the type of equipment? What's the case, anyway?

The engine is a individual inspection item and it can't help or hinder a question unless if you could quote us a reg to follow.

J.C.R.

# FIRE EXTINGUISHERS — WHERE AND WHY?



Dear Sirs,

First, they're not the AM 125-124, not at all, but don't let the wording throw you for a loop. Read paragraph 27 of the AM carefully and I think you'll find that it does cover the type of equipment you're concerned with.

I say the construction and maintenance equipment is exempt with both provisions of the AM that are clearly not applicable to equipment that's used solely on individual operations. However, even the AM 22 to 26, inclusive, say that the don't apply to the articles for which the equipment is used.

The obvious error in the way the section of paragraph 27 is set "However, the provisions of these paragraphs (12-75, 12-76, 12-77) normally apply to construction and maintenance equipment will prohibit vehicles when equipped for work, service, or highway."

"Whether the equipment is intended or used on road, where provisions normally apply to construction and maintenance equipment provided by motor, and I don't think you'll find a regulation prohibiting the use of the extinguishers when provisions restrict their use.

As far as your rule inspection observation concerned, I think you'll find the use of all types of the extinguishers.

You'll find that in some cases the fire extinguisher is subjected to get the strength of the engine, assembly and structural inspection.

The result of the engine is that this type of equipment normally has the provisions exempt permanently. You'll find that some people go to the gas engine vehicles but usually so they won't get taken down on the job or pulled . . . and so they'll be lucky to see of engines.

As the regulations within this type of equipment don't have the extinguishers exempt permanently, its exempt provision to have the equipment when the operator picks up the equipment. And, looking for the extinguisher is considered a item before the operator tries to the engine.

Sgt. Dwyer



1957

## RIDE 'EM 'COWBOY'



or—how the  
release kills the  
clutch on heavy  
Earthmovers



Riding the pedal (or controls) of the flywheel clutch on earthmoving equipment is no way to play cowboy. That clutch takes a lot of punishment under ordinary conditions, even if you're the engine's full power or run off that power whenever the operator wants to.

The life of that clutch depends entirely on the way you (the operator) use it. And turning on or cutting off the engine power to the transmission is not instantaneous. That clutch does some slipping during each engagement and disengagement.



This is where you have a chance to prove if you're a hero—or a villain. The

way you engage or disengage the clutch determines how much slippage there'll be. Partial engagements or disengagements always results in wear.

It's best to engage a clutch when the engine's running slowly. Know why? Less slippage than at high engine speeds. Usually, you can't always do it at low speed, especially when you've got a heavy load. But in many cases you can let the clutch out and then rev up the engine.

When you've got the clutch only partially disengaged, the release bearing comes in contact with the clutch-release lever. This runs down the pressure on the clutch plates, and you've got slippage that causes wear on the clutch and gears too. And the gas heater and heater. You get more heat, too, from the release bearing which runs when it's not supposed to. It's how long your clutch is gone on the days.

Now, that's what happens when you give the clutch a ride. Just keep in mind that the clutch pedal is not a foot-warmer. By keeping your foot on the floorboard, you can bet that your equipment's clutch will last a lot longer.



# CONTRIBUTIONS



WINCH LAYERS

Dear Editor,

We've had quite a number of winch failures on our 2-1/2- and 3-ton trucks. The trouble usually began with the automatic brake going wrong down by people not knowing what they're doing.

Here's a way to make the wretched people think twice before trying a wrench on that adjusting screw.



Make a protective shield for the adjusting screw and anchor it to one of the screw cap screws. The shield will

give you an idea how they're made and anchored.

Mr. F. Foster  
In Roswell, Georgia

(Old Motor-Glove good idea. Should save a lotta windows. MFD's Old 6742-877 and MFD's Old 6745-879 give you a custom plate for the M34 and M33, too.)

## MAKE WATER-CYLINDER OPTIC

Dear Editor,

How 'ya getting your cylinder down in the brake master-cylinder extension tube on the GMC 2-1/2-tonner to check the fluid level?

We have . . . and it doesn't work so good. We've fabricated a dipstick out of a thin piece of 1/8-in. stainless-steel wire that you can use. We allowed 4-1/2-inches for the part that goes down in the extension tube and bent one end over to make a 2-1/2-in. handle. We bent the long end of the wire and placed it about 1-1/2-inches of it that is a vice. The work in the vice also made the pyramid-like picture in the metal at the dipstick for an 8Fig. 13.





## *Connie Todd's BRIEF*



### *W211 receptacle error*

When you're loading human cargo and pulling trailers with your 2-1/2-ton W211 and the ball and prop-light cable is plugged in, you better instruct your cargo. Tell 'em not to step on the cable and not to step the ballgate as it when getting in or out of the truck. That'll break the pins in the cable and bend the receptacle.

### *Blowhole open ???*

It seems that at least one case has come along where the boys neglected to remove the shipping tape from the air cooling holes on the new 300-cu-in. main engine generators for the M4 tank. So the generator got oil hot and belched. Is this the boy who paid for it.

### *Light tank jump*

Adjusting the tracks on your light tanks can be a pain in the neck if you're not lops. PG 14 (Building Edition) gives you the straight dope on how to do it, as well as a handful other tips. What? Ya' don't have PG 14? Well, get drop me a line, man.

### *That patch kit*

If your Ordnance supply has been having trouble locating that new repair

kit you saw on page 870, PG 21 (Ordnance No. 12-C-2159-00), maybe requisitions haven't been going to the right place. They should go to Fort Belvoir.

### *Enough's enough*

Cost the holes of your wheeled vehicles with about 1 1/2-inch of grass—no more. The idea of pushing the hole with grass went out the window with the resolution of W 9-2815-11, Section II, para 2 of DR Circular 73, 2 July 1944, did the controlling. You can debate the item on page 12 in PG 11, too.

### *Powder's puffery*

Seems like some cheap hole have been losing their heads and tempering with the powder in the .30-cal. camera. That's dangerous for you and your buddy. It's best to have ammo done.

### *New supply SE*

You can now get DR 710-30-1 (20 Aug 44), covering supply and property accounting procedures for T-ONE and its derivatives... turn to page 984 of PG 21 and scratch out the DR number given in the second paragraph and write in the number of this new DR.



## HOW TO LIFT YOURSELF... BY YOUR BOOT STRAPS...

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