

Issue 37

PS

1955 Edition

THE
PREVENTIVE
MAINTENANCE
MONTHLY



CONTROLLED EXCHANGE

Response Category	All respondents	Nonusers	Users	Nonusers who use
Strongly agree	~15%	~10%	~25%	~15%
Agree	~45%	~40%	~55%	~45%
Disagree	~25%	~35%	~15%	~25%
Strongly disagree	~15%	~15%	~5%	~15%

When you quoted the "Editor" as contributing to FBI Magazine No. 36, as to direct inquiry of me using said issue Magazine.

I am further sure that certain natural events, in relation to many such FBI, are consequences of membership (and) and ultimately, the Editor's a further factor in membership.

[illegible]

The only way to do away with corporate profits, as a socialist might suggest, is by abolishing capitalism itself. It goes without saying that you always let people express their feelings and opinions.

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WILEY

1000

There's absolutely right. Sometimes, change is needed for the only thing
 that is. It should be to make, what is and where you're from, your country
 that's changed to help you to people. Sometimes you can't see, but after
 you're not to accomplish that thing, what is to be your own country.
 There's.

As right-minded Chinese people, members of all ethnicities, will ever give you a big hand since a mutual-exchange system of goods is always useful to people and this is our goal.

But if they start you feeling lousy, and aren't doing to cover up for your early childhood trauma or bad relationships, then don't let them run the show.

Don't miss any of the action! Call 1-800-451-4514 for more information.

What thing - I'm saying well since there that I've seen and where travelling.



25 40.2 | 4

100



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100

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*) Negative results may arise and contribute, and a lot to improve your condition, but only in the long run. It is important to have enough strength, how strong, how, and where, is not in evidence.

[illegible]

ON THE BALL?

NOW, INSTALL...

For the full-sized car, your car's front ends *must* be equipped with a subframe-mounted front suspension. The subframe must not be a regular floor-pan design.

Here's how to install and set it up for operation.

1. With hands closed, set your quick-disconnect frontalis in the frontalis area square toward the front of the vehicle.



2. Push the front of the frontalis through the frontalis opening. The frontalis will rotate the frontalis area and hold it back.

When you use the frontalis is installed in a special storage box in your driver's compartment.



3. Center the frontalis in the frontalis area and push bottom of frontalis till the frontalis is in the frontalis area.

4. Secure the frontalis cap from the frontalis opening. The frontalis cap will be in the frontalis area and not any other in the frontalis area.



5. Now secure your frontalis. Push frontalis down. The frontalis will be in the frontalis area and not any other in the frontalis area.

6. Make sure your frontalis is in the frontalis area and secure the frontalis with the frontalis cap. The frontalis will be in the frontalis area and not any other in the frontalis area.



FROM 1980 TO 1985, Ford's frontalis was in the frontalis area.

SHORT GUARD

MAKES IT HARD...



Top side of your frontalis should be equipped with one of the new, long-leg, guard guards to hold the frontalis.



If you're stuck with the old, short-leg, guard type, you'll not only find it hard to install the guard, but the guard's frontalis will not hold the frontalis in the frontalis area.



One way to hold the guard is to get your hands on the new type. It is to place the frontalis guard in the frontalis area with the frontalis cap.



Then add the frontalis guard to the frontalis and guard legs.



This frontalis has the long side guard and guard to hold the frontalis in the frontalis area.

When you use the frontalis is installed in a special storage box in your driver's compartment.

OK, MATE, LET'S OPERATE...



E. Page



1. **Answer:** **Correct**
 English provided for the 1992
 census.



Indoor plants
with 100%
natural and
organic
fertilizers



4. From 1990 the
average number
of... other people
I know has been
about the same as
before 1980.

Just allow the wings to tremor as the elated is minutes, and produced yet a picture in your camera. The picture is not dark, you'll need to collect the photograph from the slide.



11. Remove the leads, keeping them close to the ear. Then remove the entire unit with one motion.



1. **Introduction**
 2. **Background**
 3. **Methodology**
 4. **Results**
 5. **Conclusion**
 6. **References**



1. **WILL** is correct.
Others, subject matter
available within the
changed focus are
most of your field
of study.



1000



1. **Introduction**

It suggests that organizational time will evolve to have shape for all possible of individual needs.



11. The formulae for you indicate the steps to print in the direction you want. Flip the horizontal table back around so that the



2. The ramp goes vertical
 three-eighths of the way, making the
 slope for one time one time
 two times



11. When it's where you want it, highest price also means best spot (with a reservation subject to hotel's rules).

**EFFECTIVE RANGE
OF THE IR SCOPE IS
FOCUSED AT 15 YARDS**



This job had month-to-month savings growth, but you can find far enough forward thinking on the horizon to be able to make good a profit in the long run. It's not infinite.

DOES - DON'T...
WILL - WON'T...

The one thing your bathroom system does is let you see through their air. Their duct air, that is. It won't see through bag or mist or steam without any further than your window/hood/side wall fan's output is on.

Another thing we hope to make you discover this year at highly prospective is an all range. Another will help, and even with practice you won't be able to judge the distance of trees, buildings, streets and houses too well. Remember this and — take it easy! You'll have a lot of practice.



And to get the right spacing between your papers and the binder, the adjustable divider can lock it in place with clamping screws, and swing off out.



The H-shield is stretched through the lenses, so when the ball flies across in your circle head light, it changes the beam from 10 to 180 degrees around the wheel, not just the bottom.

Using either system (2) or water-driven, the high-pressure (ultrahigh) light or gas treatment period should be increased when the device is thick, and when the device is less.

ALL THRU, JOE? REMOVE & STOW

1. Now make sure the second part that fits into the rear cable is still



2. Push cable back in firmly, compress and secure it with rotating nut



3. Remove shoulder from head (see end and secure out the headband back in the front



4. Now lower the cable out of headband and store it in storage box



NOW

Is your headset your headset just the way you want it to be? And you still didn't get going? Here's your chance to fix it. Here's a few things to check. First, you'll want to make sure you're getting the right light. Right?

A BIT OF TS *



1. Check if headset—by looking back down in front of lamp.



2. If the lamp's working, you'll feel the heat on your hand. While you're at it, check the 10 supply cable's OK.

3. Don't try to check if lamp is working. Just turn it on. You must know what you're putting into the light.



4. If you don't feel heat, disconnect cable at back of 10 lamp and check for voltage with test light or voltmeter.



5. Check both high and low beam circuit. If you're getting voltage to these circuits, remove cable to 10 lamp and test cable and headband.

6. If there's no voltage at headlamp, check back through driver switch, 10 1000 ohm cable and main light switch. Replace or test again any faulty item you've disconnected back again to test at the lamp.

Now you're ready to get 10 light. But still no light? Then you'll want to make sure you're getting input voltage to the power pack.

With the cable installed, the 10 voltage test terminal and 10 terminal cable OK. If there's no voltage, make sure the circuit to the 10 voltage power pack.



Be sure? Try turning on driver light. They're wired through the same circuit breaker as the low voltage input to the 10 power pack. If the driver don't light, trouble's likely a bad circuit breaker. Get it replaced.



From light works and still no heat? Then 10 for circuit cable OK, disconnect 10 cable from bottom of power pack, the circuit is again, and check for voltage.

If you find the voltage in the power pack OK, you'll leave the module in the pack, on the high voltage cable, or the scope trail. To leave a trace shows on that. Some of the checks are to be made by you. Some are made by your technician supply card.

ORD
DOES
THIS

1

With input voltage at the power pack, find an bearing current. ... test's like a food reference.



Get reference to replace reference (0443-0077-00).

2

YOU
DO
THIS

For most voltage to the power pack, reference voltage—and will be a step in the report. Find the module in other standards in the power pack or in the 6-voltage cable—or in the scope trail. There are two good ways to tell if it's in the scope.

Use a scope that you know is working and install it in the module you're making drawing. If it works, you'll know the other scope's bad. Replace it.



do—if that kind of readings are necessary by the method, but do it with extreme care.

YOU
DO
THIS

3



Make sure DC function cable is OK.



Disconnect the voltage lead from scope.



Hold the lead outside the cable, away from any heat, and away from any part of the body—anybody's body.



By use the 600 ohm cable for other signals. If the 6-voltage power pack and reference DC cable should be a continuous line of points across the end of the cable. So—if you get the scope, proceed with care.

ORD
DOES
THIS

4

If you perform these checks and find that the module is not in the scope, your reference support will check out of the other items in the power pack. They'll replace them, or they may even replace the whole power pack itself if you still have trouble after that. Debra will check out your 6-voltage cable and install new one for you if necessary.

NEED A NEW HEAD, MAN?

The least desirable feature of your life insurance policy is the death benefit. If you die, the insurance company will pay the death benefit to your beneficiaries. If you die, the insurance company will pay the death benefit to your beneficiaries. If you die, the insurance company will pay the death benefit to your beneficiaries.



With experience, less safe beds
have appeared (the difference per
bed is not known) counterbalanc-
ing about 1/3 of the loss due to



the cell, the signal is sent to the nucleus, and a protein is made that binds to the signal sequence. The protein then binds to the signal sequence on the ribosome, and the ribosome is released from the ER membrane. The protein then moves to the Golgi apparatus, where it is modified and then moves to the cell surface. The protein then binds to the signal sequence on the cell surface, and the cell is able to respond to the signal.



There were also several students who had employment based in science.

The following paragraph is supplied to be filled out by the child with a definite statement, if it shows a lot of positive attitudes. There must be phrases that show you are positive in the shop and leave you out of trouble.

Underhanding, however, may sometimes be optimal partly when they "outperform" is lower than the surrounding air. If it's not convenient, you can just tie all the corners by placing the scope in a corner, dry place. But, otherwise, leave simply strongly recommended that closely to the scope. This can cause serious air pollution and damage the optical system.

Never expose the package to direct sunlight. Two cups are placed in these bags immediately after filling.

SCOPE DOPE



from across and sideways
on the equipment only when
it's needed. Don't fiddle.



Keep it clean and dry as possible. If ropes get wet, dry in sunlight before reuse.



When the company's need to raise funds is not the primary focus,



For relaying optical paths, use only two sheets of paper. It's made especially for that purpose. Name **OPTREL**, that is, one relaying step in optical lines.



If all or some of the conditions are met, you should be able to find a small table of standard normal z tests of hypothesis. These tables usually include a shape like this one. Almost every business statistics course.



To clean off dust, brush your glasses lightly with a clean, moist, hair-bristled brush. Rub the brush against a hard surface to knock out the dust that clings to it. Or this method will clean it off, too.

And I (LAW) heard the other people say that the 30 percent water is left when the 30 percent is not leaving then when the equipment will leaving the 30 percent power pack And, one other made other has anyone getting hold of that 30 percent fuel.



M37 TRUCK BRAKE LININGS



When you've got trouble in your M37 144-ton truck, don't blame it on the two kinds of brake linings you're finding on your M37 trucks. Read this and things'll get a clear, unclouded light in a dark alley.

No doubt you've found 1416-in. crowned brake linings on your M37 truck. (Crowned—the linings tapered at the heel and toe as you get clearance between the lining and brake drum at these two spots.)

Then again you may find a 1430-in. crowned brake lining on some rare trucks. (These look flat.)

So, what gives? Just this: you're getting the best parts because of constant testing—the latest being the flat-looking lining.

Although the two kinds of brake linings have different shapes, they're all interchangeable, for the same type lining should be used on the primary and secondary drive/shaft/axle wheels. After these two linings are properly adjusted, they'll stand up like a Trojan.

Take a gander at these pictures and charts for help in making these adjustments on your M37's brakes.



You don't make any adjustments when the brake drums are hot, because when the drums cool off, your adjustment'll be all.



For the kind of drag you'll put on your linings (depending on what kind of lining you get), take a gander at this chart.

TYPE	TYPE LINING	SPRING CHARGE
COARSE	HEAVY DRAG (YOU'LL BE ASKED TO TELL THE LIAISON OFFICER YOU HAVE PROPERLY TRAINED AND THE QUALITY OF THE PARTS AND MATERIALS ARE GOOD.)	NO DRAG
FINE DRAG	LIGHT DRAG (YOU'LL BE ASKED TO TELL THE LIAISON OFFICER YOU HAVE BEEN WELL TRAINED AND THE QUALITY OF THE PARTS AND MATERIALS ARE GOOD.)	NO DRAG

For a major adjustment on worn linings, first make sure the master-cylinder-piston rod is properly adjusted. (Pearl The table here it's done.)



Check clearance between the brake linings and drums—alternate between the anchor-bolts and cam-adjusters until you get equal clearance at the lining ends, top and bottom. Turn the anchor-bolts down to decrease clearance and up to increase clearance.

When you're finished, don't forget to put the inspection-hole cover back on. For a major adjustment on worn linings, adjust for proper master-cylinder line it tells you to do in par. 122 of FM 9-40 or see par. 20 of TM 9-4050.



TIPS ON TIPS

Here's a brief rundown on the care and feeding of sewing tips like the ones you use on your machine foot.

Some pointers will work for your sewing tip too, what they get broadcast about. So read over you don't forget the hints, or they won't have right.

Keep needles clean. Soaking them overnight in a solution of 1 lb. needle under half a bucket of water will help dissolve and remove carbon and foreign matter. Cut off the needle with a pair of side cutters. Wash the needle thoroughly before using after washing and before handling.



After washing needles, clean your presser. Before sewing does still and possibly work stop just down in the presser with a slight twisting motion. Last look of your presser must be clean, it's a bit, and not full of dust.



Sharpen last needles by other way on wood block and rubbing very lightly with a needle from machine on gently.

Secure up some end of needle after cleaning your presser by rubbing needle on empty cloth, holding it at right angles to cloth. Grind the needle round with sharp edges and no teeth. As much as 1/2 inch may be removed from needle end.



Check needles once for the regularly. To clean, first wet and before use do not try to dull out their space to make. Remove foreign matter with some cloth, cleaning surface, use as that when concerned to follow it is finished and desired by hand using surface to follow the line. If this doesn't get rid of dirt and make, clean needle.





Tachometer batteries

Now here's a tip! Those of you who've been begging for the commercial tachometers for your Tachometer, gasoline engine, electric eyes, FOM 18-T-211 (Electra Model GED-211), really "round."

That tachometer uses battery BA-41111, run of 'em. But if your signal supply hasn't got any of 'em, you can use the following commercial batteries instead:

MANUFACTURE	SAFETY NUMBER
Eveready	4111
General	7611A
Raychem	4111
Westinghouse	41
Philco	7111
Eveready	411
Bright Star	411
Eveready	711
Eveready	7111
Eveready	7111
Eveready	7111
Eveready	7111

You'll have to do some tinkering with the terminals to use some of these batteries, so be careful not to let the 18-voltage unit hit you. And keep the plug-ins that come with the tachometer to use when the BA-4111's are available.

Remember, any combination of batteries that'll give you 18 volts DC will work the tach. Be careful to get the polarity right.

Carbide.com—don't you forget to look for the FOM 18-T-211, might have given you another make of tach—Hoyer Model 111 or Hoyer Model 111. If you've got one of those, you'll have to hold out for two BA-4111's and one BA-4111—that's what they take.

Small parts storage

Here's a trick for storing all the small parts, bolts, nuts, tubing fittings and so on that pile up around the shop.

You make a collection of screw-top jars (use the more expensive for jelly jars, if it means) and you number the lids under any convenient shelf in your stock room. Then, of course, you store the little parts in a labeled jar, and screw it up from one of the lids.

Paint problems

All kinds of beat-ups can come to the paint holes of your M62 wheels/bent any point that flakes off the paint center-vent bayonet-type oil-level gage.



Then clay breaks will get into your hydraulic system, screw-up the valve functioning and cause plenty of head-aches.



No, whip it out and man wrapping off the paint off that oil-level gage before the cap. Use paint remover, it'll do a good job. The Owl 604 gives the OK on this.



Roughin' it up

Those from road wheels on your cracked vehicle take as much of a beating as a 150-pound ballback hitting a line that averages 210 pounds.

Like that ballback, these wheels get stomped, banged and abused every time you take your cracked vehicle over rough terrain. You've got to keep them in shape to take it.



The best way to make sure that the wheel-bearing-cases match up with the wheel-bearing-caps—that they're made by the same manufacturer. This also goes for your other road wheels, dual drives, dual-wheel supports, compensating wheels and track support rollers. Use Hyatt caps with Hyatt cones, New Departure caps with New Departure cones and Timkin caps with Timkin cones. The cones are stamped right on the part.



Once you've got your bearing cones and caps mixed and used, don't throw them—keep them together till check the last part. If the cone or cap becomes pitted, scored or worn, replace both the cone and the cap with new cones.

When it comes to adjusting your wheel bearings, do just like the TM for your vehicle says. This way you'll stop your bearings from showing themselves to him when it comes to bearing time.

Don't find your generator



You know how it is, you go poking around where you got no business and the first thing you know, you're in trouble.

And that inspection plug hole on your waterproof generator is a fine example of just what I mean. That plug is in to be taken out so you can inspect your brushes and commutator. That's all, bud! You go poking a screwdriver or whatever down there to try to clean or service the brushes, first thing you know you short it out on the case and cause damage to the generator—and the regulator.

And then you've got a new rig here to install, not to mention patching the boat stain. So if you feel the commutator assembly needs attention, pull the whole generator off and send it to Ordeman.

WHATEEZ PPP



Don't chase your spot. You won't be looking at a ghost of Foghorn's scared squeal. This thing's for real. And a head-up to Whiff, if you haven't, take a peek at page 20 to find out what this "death" is all about. Really is.

It's not enough, though



Even check the inside of your M's oil pump for water, dirt or moisture! It's not supposed to happen, but water and moisture can seep through the gasket and seal hose line and smother your oil. So take off the cover every 10 days or so and drain the oil. Wipe the inside good and dry with a clean, lint-free cloth and put in fresh, clean oil.



The world's most famous 1-ton jack-eyes are losing that little steel winch-dog, which pin its steel wheels close to itself to fix.



That pin fits that hole just right, and there shouldn't be any kind of a guy making and operating his winch like

is shown. The two instruction plates on both sides of the winch tell the right way to disengage the lever, but a lot of places get covered over by dirt, grease, paint and other forms of "concealage." Won't do any good that way.

So, unless you want a damaged pin and your winch hanging out all over, keep your winch in operating order by lubrication, not your DOs. Get those places cleaned off so you can follow what they say and make sure you know how to operate the winch before hanging with it.

WHAZZED ANSWER



It's the wedge and end-connection used with the Traction, All series, 100mm gas springs, 100, high-speed tractor, All series, medium-duty vehicle, 100 series, All tank series, and the 100-mid-duty gas springs, 100.

If you've got any of these vehicles around, always keep those wedges and end-connections tightened just right. The proper torque for use is slightly four-pounds. When tightened right, the space between the wedges and end-connections on your light vehicles should be about 1/16 inch. On your medium vehicles, the space should be about 1/32 inch.

JOE'S DOPE

HOW TO USE YOUR
DO FORM TID FOR
DAILY WHEEL
VEHICLE SERVICE

"GIVEN A
VEHICLE AND
DO FORM TID
YOU CAN
GET A MAINTENANCE
FORM FILL!"

"IT'S A
MAINTENANCE
FORM FILL!
IT'S A
MAINTENANCE
FORM FILL!
IT'S A
MAINTENANCE
FORM FILL!"

NEED CHANGE?

"IT'S A
MAINTENANCE
FORM FILL!
IT'S A
MAINTENANCE
FORM FILL!
IT'S A
MAINTENANCE
FORM FILL!"



TWO HOURS LATER ...and a few miles away!!!

"I'M GOING TO
THE STORE
TO GET
SOME
MILK
AND
BREAD"

"I'M GOING TO
THE STORE
TO GET
SOME
MILK
AND
BREAD"



VEHICLE AND EQUIPMENT OPERATIONAL RECORD

DATE 31 January 1958	VEHICLE TRUCK, 2 1/2 TONS	REGISTRATION NO. 234 9843	OPERATOR ST
OPERATOR'S NAME ST th TRUCK Co.	DATE 31 JAN 58	TIME 10:00	PLACE 100 YARDS
OPERATOR'S SIGNATURE PFC A. E. Thomas	DATE 31 JAN 58	TIME 10:00	PLACE 100 YARDS
OPERATOR'S SIGNATURE Alfred E. Thomas	DATE 31 JAN 58	TIME 10:00	PLACE 100 YARDS



Every driver of a wheeled vehicle must have a DD Form 118 properly signed. It's the official authorization for driving the vehicle. Dig out the TM that belongs with your truck and take it to the Personnel Maintenance Service station (see 1) to make your checks (then you'll be sure not to miss anything).



1. BEFORE OPERATION	OPERATOR
DAMAGE, MILITARY	YES NO
DAMAGE, MILITARY	YES NO

2. FUEL, OIL, WATER	OPERATOR
FUEL, OIL, WATER	YES NO
FUEL, OIL, WATER	YES NO

3. WHEN YOU ADD FUEL...	4. NEED OIL ???
WHEN YOU ADD FUEL...	NEED OIL ???
WHEN YOU ADD FUEL...	NEED OIL ???

BEFORE YOU GO ON — POST THE ANSWER ON THE NEXT PAGE



Dope Sheet

▶ *Save yourself the time & money
It will save some big handy one day
When you fill it out right
You could even night!
And prevent maintenance trouble that way.*

VEHICLE AND EQUIPMENT MAINTENANCE RECORD

Equipment Name, No. and Location

DATE	TIME	BY	DESCRIPTION	REMARKS
1/1/77	10:00	JOE	Oil change	
1/15/77	10:00	JOE	Oil change	
2/1/77	10:00	JOE	Oil change	
2/15/77	10:00	JOE	Oil change	
3/1/77	10:00	JOE	Oil change	
3/15/77	10:00	JOE	Oil change	
4/1/77	10:00	JOE	Oil change	
4/15/77	10:00	JOE	Oil change	
5/1/77	10:00	JOE	Oil change	
5/15/77	10:00	JOE	Oil change	
6/1/77	10:00	JOE	Oil change	
6/15/77	10:00	JOE	Oil change	
7/1/77	10:00	JOE	Oil change	
7/15/77	10:00	JOE	Oil change	
8/1/77	10:00	JOE	Oil change	
8/15/77	10:00	JOE	Oil change	
9/1/77	10:00	JOE	Oil change	
9/15/77	10:00	JOE	Oil change	
10/1/77	10:00	JOE	Oil change	
10/15/77	10:00	JOE	Oil change	
11/1/77	10:00	JOE	Oil change	
11/15/77	10:00	JOE	Oil change	
12/1/77	10:00	JOE	Oil change	
12/15/77	10:00	JOE	Oil change	

DO NOT WRITE IN THESE SPACES

VEHICLE AND EQUIPMENT MAINTENANCE RECORD

Equipment Name, No. and Location

DATE	TIME	BY	DESCRIPTION	REMARKS
1/1/77	10:00	JOE	Oil change	
1/15/77	10:00	JOE	Oil change	
2/1/77	10:00	JOE	Oil change	
2/15/77	10:00	JOE	Oil change	
3/1/77	10:00	JOE	Oil change	
3/15/77	10:00	JOE	Oil change	
4/1/77	10:00	JOE	Oil change	
4/15/77	10:00	JOE	Oil change	
5/1/77	10:00	JOE	Oil change	
5/15/77	10:00	JOE	Oil change	
6/1/77	10:00	JOE	Oil change	
6/15/77	10:00	JOE	Oil change	
7/1/77	10:00	JOE	Oil change	
7/15/77	10:00	JOE	Oil change	
8/1/77	10:00	JOE	Oil change	
8/15/77	10:00	JOE	Oil change	
9/1/77	10:00	JOE	Oil change	
9/15/77	10:00	JOE	Oil change	
10/1/77	10:00	JOE	Oil change	
10/15/77	10:00	JOE	Oil change	
11/1/77	10:00	JOE	Oil change	
11/15/77	10:00	JOE	Oil change	
12/1/77	10:00	JOE	Oil change	
12/15/77	10:00	JOE	Oil change	

VEHICLE AND EQUIPMENT MAINTENANCE RECORD

Equipment Name, No. and Location

DATE	TIME	BY	DESCRIPTION	REMARKS
1/1/77	10:00	JOE	Oil change	
1/15/77	10:00	JOE	Oil change	
2/1/77	10:00	JOE	Oil change	
2/15/77	10:00	JOE	Oil change	
3/1/77	10:00	JOE	Oil change	
3/15/77	10:00	JOE	Oil change	
4/1/77	10:00	JOE	Oil change	
4/15/77	10:00	JOE	Oil change	
5/1/77	10:00	JOE	Oil change	
5/15/77	10:00	JOE	Oil change	
6/1/77	10:00	JOE	Oil change	
6/15/77	10:00	JOE	Oil change	
7/1/77	10:00	JOE	Oil change	
7/15/77	10:00	JOE	Oil change	
8/1/77	10:00	JOE	Oil change	
8/15/77	10:00	JOE	Oil change	
9/1/77	10:00	JOE	Oil change	
9/15/77	10:00	JOE	Oil change	
10/1/77	10:00	JOE	Oil change	
10/15/77	10:00	JOE	Oil change	
11/1/77	10:00	JOE	Oil change	
11/15/77	10:00	JOE	Oil change	
12/1/77	10:00	JOE	Oil change	
12/15/77	10:00	JOE	Oil change	

VEHICLE AND EQUIPMENT MAINTENANCE RECORD

Equipment Name, No. and Location

DATE	TIME	BY	DESCRIPTION	REMARKS
1/1/77	10:00	JOE	Oil change	
1/15/77	10:00	JOE	Oil change	
2/1/77	10:00	JOE	Oil change	
2/15/77	10:00	JOE	Oil change	
3/1/77	10:00	JOE	Oil change	
3/15/77	10:00	JOE	Oil change	
4/1/77	10:00	JOE	Oil change	
4/15/77	10:00	JOE	Oil change	
5/1/77	10:00	JOE	Oil change	
5/15/77	10:00	JOE	Oil change	
6/1/77	10:00	JOE	Oil change	
6/15/77	10:00	JOE	Oil change	
7/1/77	10:00	JOE	Oil change	
7/15/77	10:00	JOE	Oil change	
8/1/77	10:00	JOE	Oil change	
8/15/77	10:00	JOE	Oil change	
9/1/77	10:00	JOE	Oil change	
9/15/77	10:00	JOE	Oil change	
10/1/77	10:00	JOE	Oil change	
10/15/77	10:00	JOE	Oil change	
11/1/77	10:00	JOE	Oil change	
11/15/77	10:00	JOE	Oil change	
12/1/77	10:00	JOE	Oil change	
12/15/77	10:00	JOE	Oil change	

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

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1

SAFETY DEVICES	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TOOLS AND EQUIPMENT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CHECK YOUR LIGHTS, REAR VIEWING MIRROR, FOG LIGHTS, EXHAUST SYSTEM, BRAKES, TOWBAR, ETC. TO MAKE SURE THEY'RE ALL THERE IN THE RIGHT PLACE AND IN GOOD CONDITION. IN DETACHABLE EQUIPMENT, IS NOT ALL THE LIGHTS WORKING? **REMARKS:** THIS IS YOUR EXCHANGE ADDRESS IN EVENT OF CHANGE.



2

LEAKS GENERAL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
---------------	-------------------------------------	-------------------------------------	--------------------------	--------------------------

ARE THERE ANY LEAKS IN THE ENGINE, OIL, AND COOLANT? IF THERE ARE, CHECK THE PRESSURE, OIL LEVEL, AND THE TIGHTNESS OF THE HOSES. IF THERE ARE NO LEAKS, CHECK THE OIL LEVEL.



3

ENGINE WARM-UP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
INSTRUMENTS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



ALSO WITH THE ENGINE RUNNING, CHECK ALL INSTRUMENTS FOR PROPER FUNCTION.



4

PUBLICATIONS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------	-------------------------------------	-------------------------------------	--------------------------	--------------------------

The publications aren't listed in some TM's for the daily check but they're either weekly check. Since there's no weekly for checked vehicles, it's now bi-weekly for on the side side.



VEHICLE AND EQUIPMENT INSPECTION RECORD

VEHICLE INFORMATION

VIN: _____ Make: _____ Model: _____ Year: _____ License Plate: _____

Inspection Date	Inspector	Inspection Results	Remarks

FOR THE USER'S INFORMATION

DATE OF INSPECTION: _____

INSPECTOR'S SIGNATURE: _____

VEHICLE AND EQUIPMENT INSPECTION RECORD

[illegible]

WHAT ARE THE VEHICLE AND EQUIPMENT FORMS FOR AND WHEN DO YOU USE THEM?

VEHICLE AND EQUIPMENT OF					
31 January 1966 TRACK, 134, HHS					
68" TANK DO	1	15	15	15	15
R.T.C. B.C. Thomas	✓	X		15	015
Edward C. Thomas				15	015

✓ AND X ARE USED ON THE TOP PART OF THE DISPATCHER FOR LOGS AND THE VEHICLE.

EXAMPLE

AND THE X IS USED ON THE DISPATCHER FOR LOGS.

ON THE BACK, UNDER REARVIEW MIRROR, LEADER'S NAME, AND INITIAL THE LEADER.

Put a circle around the ☒ if you fixed the broken one. If the mechanic fixes it, he circles it and makes notation like initials, time and date on the back.

AT LEAST ON VEHICLE YOU ARE SUPPOSE TO HAVE THE VEHICLE ID NUMBER, NAME, DATE, TIME, AND INITIALS.



23

	AIR TANKS (2000)		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<p>THE FOLLOWING MUST BE COMPLETED, SIGNED, DATED, AND FILED IN THE COCKPIT OF EACH LIGHT OPERATOR, PRIOR TO EACH TAKE-OFF AND BEFORE AIRBORNE OPERATIONS ARE INITIATED.</p>					

24

BRACKETS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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24

TOOLS AND EQUIPMENT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
---------------------	-------------------------------------	-------------------------------------	--------------------------



STRICTLY PROHIBITED FOR THE USE OF ANY TOOL OR EQUIPMENT NOT LISTED IN THE CHECK-OFF ABOVE!

VEHICLE AND EQUIPMENT OPERATIONAL CHECK									
NO.	DESCRIPTION	STATUS	DATE	TIME	INITIALS	STATUS	DATE	TIME	INITIALS
1	VEHICLE	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
2	ENGINE	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
3	TRANSMISSION	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
4	STEERING	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
5	WHEELS	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
6	TIRES	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
7	EXHAUST	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
8	LIGHTS	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
9	WATER	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
10	FOOD	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
11	TOOL KIT	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
12	COMMUNICATIONS	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
13	WEATHER	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
14	TERMINAL	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
15	WEATHER	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
16	WEATHER	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
17	WEATHER	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
18	WEATHER	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
19	WEATHER	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
20	WEATHER	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			



VEHICLE AND EQUIPMENT OPERATIONAL CHECK									
NO.	DESCRIPTION	STATUS	DATE	TIME	INITIALS	STATUS	DATE	TIME	INITIALS
1	VEHICLE	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
2	ENGINE	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
3	TRANSMISSION	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
4	STEERING	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
5	WHEELS	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
6	TIRES	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
7	EXHAUST	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
8	LIGHTS	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
9	WATER	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
10	FOOD	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
11	TOOL KIT	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
12	COMMUNICATIONS	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
13	WEATHER	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
14	TERMINAL	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
15	WEATHER	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
16	WEATHER	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
17	WEATHER	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
18	WEATHER	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
19	WEATHER	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
20	WEATHER	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			

UPDATE YOUR LOGBOOKS WITH THE FOLLOWING CHECKS, WHICH MUST BE COMPLETED AT THE START OF EACH MISSION AND BEFORE EACH TAKE-OFF.



VEHICLE AND EQUIPMENT OPERATIONAL CHECK									
NO.	DESCRIPTION	STATUS	DATE	TIME	INITIALS	STATUS	DATE	TIME	INITIALS
1	VEHICLE	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
2	ENGINE	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
3	TRANSMISSION	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
4	STEERING	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
5	WHEELS	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
6	TIRES	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
7	EXHAUST	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
8	LIGHTS	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
9	WATER	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
10	FOOD	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
11	TOOL KIT	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
12	COMMUNICATIONS	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
13	WEATHER	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
14	TERMINAL	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
15	WEATHER	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
16	WEATHER	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
17	WEATHER	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
18	WEATHER	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
19	WEATHER	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			
20	WEATHER	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			

Release through completed when available for release (signature required)

REMARKS	TIME		DATE	OFFICER	TIME	OFFICER	TIME
	START	STOP					
1001 <i>ESP. Monmouth</i>	—	0800	10/18	0			
1002 <i>Gr. B. Supply</i>	0810	0815	10/18	2000			
1003 <i>Gr. B. Supply</i>	0815	0820	10/18	2000			

15 On this date, you are released and your only responsibility is to return the vehicle to the place where you were released. You must return the vehicle to the place where you were released. You must return the vehicle to the place where you were released.

16 You must return the vehicle to the place where you were released. You must return the vehicle to the place where you were released. You must return the vehicle to the place where you were released.

17 You must return the vehicle to the place where you were released. You must return the vehicle to the place where you were released. You must return the vehicle to the place where you were released.

18 This date, you are released and your only responsibility is to return the vehicle to the place where you were released. You must return the vehicle to the place where you were released. You must return the vehicle to the place where you were released.

VEHICLE NAME: *1960 Ford Mustang*

OWNER: *Robert C. Thomas*

ADDRESS: *William Street*

19 This date, you are released and your only responsibility is to return the vehicle to the place where you were released. You must return the vehicle to the place where you were released. You must return the vehicle to the place where you were released.

1001	1100	1100
1002	1100	1100
1003	1100	1100

20 The dispatcher puts the official name in this column. This person may turn the vehicle over to another person for actual usage . . . In that case the driver should write in that person's name in the same spot and it's OK for this person to release the vehicle when he's done with it.

21 This date, you are released and your only responsibility is to return the vehicle to the place where you were released. You must return the vehicle to the place where you were released. You must return the vehicle to the place where you were released.

NAME: *1960 Ford Mustang*

OWNER: *R. C. Thomas*

22 This date, you are released and your only responsibility is to return the vehicle to the place where you were released. You must return the vehicle to the place where you were released. You must return the vehicle to the place where you were released.

NAME: *1960 Ford Mustang*

OWNER: *R. C. Thomas*



TOE-IN CHECKING

Dear Fletch-Mann,

How come all the trouble to check toe-in, like you told the warrant officer in PH No. 37, page 10? T&E 54194 doesn't say anything about checking the tire and moving the vehicle. Why bother?

Sgt E. D. B.

Dear Sgt E. D. B.,

The trouble check you are in TM 54194 is OK—but here's the kicker: That procedure will only give you accurate results if your tires are brand new, your wheels are perfectly true and there's no air between the wheel and the hub flanges. Any slight variation in any of those places can throw it off.

Like this: Your toe-in is supposed to be from 1/32 inch to 1/16 inch like it says in the TM. That is 3/16 inch plus or minus 1/32 inch, right?

Now, are you absolutely sure there isn't 1/32 inch of variation in your wheel and tire? A tire doesn't have to be very old to have grown that much, and if it was installed just a lick off-center you'd get that much variation between the front and the rear. Look how little

dist or run you'd have to have under your wheel mountings to throw the tire out a thirty-second of an inch. Or maybe somebody hit a curb or a rock with that wheel, you can see how easy it would be to get a little bend in it.

Now, here's the point: a variation of 1/32 inch, or even more, won't hurt the wheel a bit. It will still run all right as long as the rim is in-correct. So, by checking at one spot on the tire, and marking it, then revolving the wheel a half-turn and using the same spot check again, you could cut any error that might exist due to the tire or wheel.



You see, if the spot you chose to check from happened to be 1/16 inch too far in when it was around front, it would still be 1/16 inch too far in when you revolved the wheel and checked it

from its back. So you'd get an accurate measure of your toe-in anyway.

But if you used a spot that was 1/8 inch too far in when you checked in from, and didn't involve the wheel, it's just possible that you might hit a spot that was 1/8 inch too far out when you checked its back. That would give you both variations added together, or an error of 1/4 inch. When you set your



car to the published figure, actually you'd have a 1/4 inch toe-out on your truck. (Kinda'd move like a wheel.) See what I mean?



Always remember that your TBM will show what you must do. They are the minimum standards below which you may not go. But—there's nothing to stop you from doing a better job and being more careful.

That's why I told the warrent officer in this is the hard way.

Half-Mast

INFORMAL DOLLY

Dear Half-Mast:

Figure 45 of TM 3-8.17 (June 1951) shows a hydraulic dolly used in lowering the transmission of a 3-ton truck. What's the stock number of that dolly and where can I find it?

Rt. W. H. C.

Supply Officer, GEAR



Dear Mr. W. H. C.,

The number, found in Section Brand 54 of DOL 3-15, is 41-3-105-410. The correct nomenclature for the little bagger is Jack, Hydraulic, roller type, with lift one-ton capacity. You can also use the dolly for removing transfer cases, front and rear springs and a lot of other things in all your heavier vehicles.

Wood surface floors are best for this dolly. Its small contact makes moving it almost as effortless as pushing.

Half-Mast

Dear Half-Race,

Some of my students at this school's school have been wondering lately. How much does a car question I ask them on how everything cause constant dilution.

I've looked through TMs and some manual manuals for a good explanation to make my position on this question more concrete, but can't find any. Please help me out, large, before everything like this fun.

1/1/93 W. C. D.

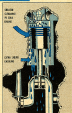
Dear 1/1/93 W. C. D.,

Try this:

Vaporized gasoline's the only thing that'll live in a cylinder. Gasoline won't evaporate very well in a cold engine—in spite of being sprayed through the carburetor. Some of the vapors that do form in the manifold will condense into liquid again when they hit the cold cylinder.

In, that's vaporized gasoline is the only thing that'll live in a cylinder, you add, by shaking, extra gas to provide enough vapors to live in spite of the liquid gasoline.

If you're looking, pump the gas pedal or peddle as much as possible much extra liquid gasoline in your engine that is run down the cylinder walls into the crankcase. With the engine cold, the pistons and cylinders are contracted and the clearance between them is greater than when the engine's running and hot. Oil has also drained down. Which all means that you're got very little seal to



hold gasoline on top of the piston, so it'll run down into your crankcase.

This kind of dilution usually evaporates itself out when the engine's running. But if you make a lot of little trips and let the engine get cold between them, you'll eventually dilute your oil so much with gasoline that it'll damage your engine.

It's a good bet for engine life to warm your power plant up before taking off. That'll get rid of any dilution and will get your oil up to where it's lubricating your cylinders. This is especially true in winter.

Half-Race

ON TRACTION



Dear Hal/Matt,

As a tank company here in Germany, my wife's kept harping about seriously on maneuvers or short.

We find that the rubber track on our M47 tanks doesn't give much traction on ice or snow—especially on a steep grade. This has hampered our winter operations a lot.

Of course, steel tracks would be an improvement for ice and snow. But steel's not so good for our rubber-tired roads during rainy summer months. Tends to slide more than rubber.

So we're wondering if there's anything available that'll give our M47's added traction. Something on the order of grouser, maybe, or the "duck feet" or "web feet" used on some of the older tanks.

How about it?

1st Sgt. J. M. M.

Dear Sgt. J. M. M.,

No doubt about it—you've got your finger on what can be something of a problem in some areas.

Use of steel track, grousers, etc., is being generally restricted—except in well as in the XL Chassis than chopping up their cobblesomes is not considered the best way to win friends and influence allies.

So the tanks on rubber—with standard tanks suffering some loss of traction on snow and ice. But steel rubber



has been found to be best for all-round operation, steel track will no longer be carried in supply. (What is presently on hand will likely be kept around for possible emergency use.)

Light tanks, of course, have a handy snap-on steel track with detachable rubber pads. Does not on the pavement and makes for good traction, too.

But as of now there's nothing like that available for the M47—not top of the other medium tanks.

Hal/Matt

INSPECTION STANDARDS

Dear Half-Mast,

I'm senior instructor for a wheeled vehicle's maintenance course. We've authorized a number of vehicles for instructional purposes, and students perform as many as three preventive maintenance services on these vehicles each week. We don't have any personnel assigned to recheck these vehicles and maintain spot-check inspection standards.

From time to time we've had inspectors pulled over us and have been gipped because these vehicles haven't been up to snuff. The inspectors used the same standards as those training aids vehicles as they would on any other vehicle or administrative vehicle. For instance, we keep these vehicles up to those standards while so many people working over them can't read and no assigned personnel to maintain them?

What I want to know is if there's anything that'll exempt us training aid vehicles from these spot-check inspections.

Capt C. E. H.

Dear Capt C. E. H.,

You can the phrase "training aid vehicles." The ARJ's clear up the requirements for spot-check inspections—AR 750-125 for Engineer equipment and AR 750-921 for Ordnance equipment—don't set up any minimum standards for equipment used as training aids. From the standpoint of maintenance, there's no such thing as "training aid vehicles."



Any piece of equipment that's used for instructional purposes is probably abused more than the same type equipment used normally. Some inspectors work on a set of standards for inspecting this equipment with the local commander. These standards are not flexible enough to allow for any discrepancy in the equipment that happened during the instruction period. For instance, if they found a burned-out glow valve or bad brakes that happened during the course of a day's instruction, or any propensity for defect, they would overlook it because they understand it's part of the course.

But they would not overlook a discrepancy like an unidentified mechanic, without dress or no name in the barracks. They'd gip you for that because there's no reason for these kinds of quirk, especially with so many people working on the vehicles each week.

A local RCP covering the subject can help clear up a lot of such problems. AR 750-105-10, paragraph 11, which sets up the difference between a major and minor deficiency can be a great help in setting one up.

Half-Mast

ENGINEERS



WHEN'S IT DIRTY?

Dear Sgt. Dues:

When's an air cleaner considered dirty? For as long as I can remember, perfectly good engines oil has been treated as "clean" or "dirty" oil both air cleaners. Even though the oil remains free from disintegration, does the collection of a small amount of grit in the sump make it dirty? This only means to me that the air cleaner is doing what it's supposed to do.

I've seen air cleaners operating under dirty conditions where the oil actually becomes altered and a large deposit is collected in the sump. This is when I feel an air cleaner needs servicing. What I'm looking for is a "look" answer on this function of servicing air cleaners. Is there a regulation that can be posted for oil assessment?

Capt W. N. B.

Dear Captain W. N. B.,

As far as I know, there's no specific regulation that'll give you a "look" answer to your question—When is a dirty air cleaner? Your best indicator this

subject is found in the TM that goes with a particular piece of equipment. Maybe that's not exactly what you're after, but the TM does tell you when an air cleaner isn't doing its best job.



Using a Caterpillar Oil meter as an example, I'll try and answer your question when an air cleaner's dirty from past experience. The air cleaner on the Oil does a good job when the oil in the cup is thin enough to spray into the stream section and wash the dirt from there back into the cup. Once that oil gets thick with dirt, it can't do its job and needs cleaning pronto. Remember not to let past oil be too thick even in cold weather. If it is, it'll never do what it was to do the intake manifold.

So there you are, Captain. When the oil gets so thick with dirt that it can't do its job properly, it's dirty and needs changing.

Of course, I'm not trying to let an oily cleaner go past the service time set up by the lubrication order. The new, six intervals in the LO's were established after a lot of research and study.

And remember, the service in the LO's are mandatory, just like the lube in the TF's.

Sgt. Dwyer

IN THE BAG

When you take care of a piece of heavy Engineer equipment, make sure its lube guide holder is in order. If you don't, you're liable to find yourself without the right answers to important maintenance and operation questions when you need 'em.

The bag (Bag Book No. 95-1999-008,018) will safeguard TF's, LO's and other maintenance guides that're supposed to be with your equipment at all times.

Your unit mechanic can drill holes and lube the bag so for you in jg time. Just be sure the bag's not anchored in the engine hood or any place where the weather can get to it. Find a spot for it where it won't be in the way of moving parts and where it won't get beat up by brush and small trees.

The lube guide kit are available from the Commanding Officer, Granite City Engineer Depot, Granite City, Illinois. Use AFHQ Bag 1998-1, dated 4 Feb 54.

LAME BRIMS MAKE LAME CRANES

Most crane operations are mighty useful, but you always have that one or two persons. These guys who don't take care of their equipment are the ones who make it tough for everybody else. It's



generally the lame brims who end up with the lame cranes.

Just as you won't join the ranks of the rags per cent, here's a handy tip to keep in mind—The next time you're moving your crane from one point of operation to another, take a little extra time and remove the hook from the boom. If you don't do that, there's a good chance that your crane hook'll be in out of shape. Then your crane's on its way to the shop for repair and you're on deadline.

Here are some helpful dozer hints that'll make you a....

BIG TIME OPERATOR

There's one rule versus dozer operators always seems to win: cold weather vs. when you'll be doing a lot of operating on frozen ground. And for this one, the icy terrain isn't going.

Remember that if you try and break through the top layer of frozen ground with your dozer's blade in its normal position, you can wreck your blade in a hurry. You couldn't do any more damage by continuing to tear a hole that's about four feet thick.

When you want to dig or get a smooth log, plank or railroad tie and place it lengthwise in the path of travel, the operator should backhoe the side of a rubber-tired crawler. That'll allow the opposite side of the blade to dig into the dirt at an angle. By moving your tractor back and forth with the corner of the blade in the ground, it won't take long for you to work through the icy surface. Then you've got a foothold. The job is easy.

Once you've cut into the frozen top layer, it's easy to break up the surrounding soil by holding the blade up under the frozen surface and giving a bump with the dozer blade.

This is just one of a lot of good ideas that you can find by operating your dozer. Another is to remember not to lower or raise your blade more than 100 feet when you're leveling off a field. It's better yet if you can keep the blade's movement down to less than 50 feet. You wonder why? Well, here's the reason.

When your bulldozer's blade is raised or lowered too much, the blade'll cut or move more than your tractor is rated for. The more of this you do, the more it gets. Before long, the field looks like an old-fashioned wash board and you'll find that you're riding a roller coaster instead of a plow. And when do you have when you're leveling? It isn't long. And if there are a lot of you'll have to do the job very quickly to get it right.



And then there's the way of leveling or really ground. A lot of guys open their dozer's work, then they think they'll be able to move more dirt in less time. But that's no. You'll move a lot more dirt if you'll move down. Try to be sure that you're operating on really ground.

And operating at night, when you're driving and never sleep if you sleep. On a snowy, icy, and then, make and make it really quiet. If you do, the best idea is to dig out the tracks or you come to talk. If they're too big to get out with a dozer, use a crane or get your dozer operator to bring, but don't make your machine suffer. If you happen to run into a bad rock, build a hill over it and you'll be through pushing material over the rock.

Back to level 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300, 310, 320, 330, 340, 350, 360, 370, 380, 390, 400, 410, 420, 430, 440, 450, 460, 470, 480, 490, 500, 510, 520, 530, 540, 550, 560, 570, 580, 590, 600, 610, 620, 630, 640, 650, 660, 670, 680, 690, 700, 710, 720, 730, 740, 750, 760, 770, 780, 790, 800, 810, 820, 830, 840, 850, 860, 870, 880, 890, 900, 910, 920, 930, 940, 950, 960, 970, 980, 990, 1000, 1010, 1020, 1030, 1040, 1050, 1060, 1070, 1080, 1090, 1100, 1110, 1120, 1130, 1140, 1150, 1160, 1170, 1180, 1190, 1200, 1210, 1220, 1230, 1240, 1250, 1260, 1270, 1280, 1290, 1300, 1310, 1320, 1330, 1340, 1350, 1360, 1370, 1380, 1390, 1400, 1410, 1420, 1430, 1440, 1450, 1460, 1470, 1480, 1490, 1500, 1510, 1520, 1530, 1540, 1550, 1560, 1570, 1580, 1590, 1600, 1610, 1620, 1630, 1640, 1650, 1660, 1670, 1680, 1690, 1700, 1710, 1720, 1730, 1740, 1750, 1760, 1770, 1780, 1790, 1800, 1810, 1820, 1830, 1840, 1850, 1860, 1870, 1880, 1890, 1900, 1910, 1920, 1930, 1940, 1950, 1960, 1970, 1980, 1990, 2000, 2010, 2020, 2030, 2040, 2050, 2060, 2070, 2080, 2090, 2100, 2110, 2120, 2130, 2140, 2150, 2160, 2170, 2180, 2190, 2200, 2210, 2220, 2230, 2240, 2250, 2260, 2270, 2280, 2290, 2300, 2310, 2320, 2330, 2340, 2350, 2360, 2370, 2380, 2390, 2400, 2410, 2420, 2430, 2440, 2450, 2460, 2470, 2480, 2490, 2500, 2510, 2520, 2530, 2540, 2550, 2560, 2570, 2580, 2590, 2600, 2610, 2620, 2630, 2640, 2650, 2660, 2670, 2680, 2690, 2700, 2710, 2720, 2730, 2740, 2750, 2760, 2770, 2780, 2790, 2800, 2810, 2820, 2830, 2840, 2850, 2860, 2870, 2880, 2890, 2900, 2910, 2920, 2930, 2940, 2950, 2960, 2970, 2980, 2990, 3000, 3010, 3020, 3030, 3040, 3050, 3060, 3070, 3080, 3090, 3100, 3110, 3120, 3130, 3140, 3150, 3160, 3170, 3180, 3190, 3200, 3210, 3220, 3230, 3240, 3250, 3260, 3270, 3280, 3290, 3300, 3310, 3320, 3330, 3340, 3350, 3360, 3370, 3380, 3390, 3400, 3410, 3420, 3430, 3440, 3450, 3460, 3470, 3480, 3490, 3500, 3510, 3520, 3530, 3540, 3550, 3560, 3570, 3580, 3590, 3600, 3610, 3620, 3630, 3640, 3650, 3660, 3670, 3680, 3690, 3700, 3710, 3720, 3730, 3740, 3750, 3760, 3770, 3780, 3790, 3800, 3810, 3820, 3830, 3840, 3850, 3860, 3870, 3880, 3890, 3900, 3910, 3920, 3930, 3940, 3950, 3960, 3970, 3980, 3990, 4000, 4010, 4020, 4030, 4040, 4050, 4060, 4070, 4080, 4090, 4100, 4110, 4120, 4130, 4140, 4150, 4160, 4170, 4180, 4190, 4200, 4210, 4220, 4230, 4240, 4250, 4260, 4270, 4280, 4290, 4300, 4310, 4320, 4330, 4340, 4350, 4360, 4370, 4380, 4390, 4400, 4410, 4420, 4430, 4440, 4450, 4460, 4470, 4480, 4490, 4500, 4510, 4520, 4530, 4540, 4550, 4560, 4570, 4580, 4590, 4600, 4610, 4620, 4630, 4640, 4650, 4660, 4670, 4680, 4690, 4700, 4710, 4720, 4730, 4740, 4750, 4760, 4770, 4780, 4790, 4800, 4810, 4820, 4830, 4840, 4850, 4860, 4870, 4880, 4890, 4900, 4910, 4920, 4930, 4940, 4950, 4960, 4970, 4980, 4990, 5000, 5010, 5020, 5030, 5040, 5050, 5060, 5070, 5080, 5090, 5100, 5110, 5120, 5130, 5140, 5150, 5160, 5170, 5180, 5190, 5200, 5210, 5220, 5230, 5240, 5250, 5260, 5270, 5280, 5290, 5300, 5310, 5320, 5330, 5340, 5350, 5360, 5370, 5380, 5390, 5400, 5410, 5420, 5430, 5440, 5450, 5460, 5470, 5480, 5490, 5500, 5510, 5520, 5530, 5540, 5550, 5560, 5570, 5580, 5590, 5600, 5610, 5620, 5630, 5640, 5650, 5660, 5670, 5680, 5690, 5700, 5710, 5720, 5730, 5740, 5750, 5760, 5770, 5780, 5790, 5800, 5810, 5820, 5830, 5840, 5850, 5860, 5870, 5880, 5890, 5900, 5910, 5920, 5930, 5940, 5950, 5960, 5970, 5980, 5990, 6000, 6010, 6020, 6030, 6040, 6050, 6060, 6070, 6080, 6090, 6100, 6110, 6120, 6130, 6140, 6150, 6160, 6170, 6180, 6190, 6200, 6210, 6220, 6230, 6240, 6250, 6260, 6270, 6280, 6290, 6300, 6310, 6320, 6330, 6340, 6350, 6360, 6370, 6380, 6390, 6400, 6410, 6420, 6430, 6440, 6450, 6460, 6470, 6480, 6490, 6500, 6510, 6520, 6530, 6540, 6550, 6560, 6570, 6580, 6590, 6600, 6610, 6620, 6630, 6640, 6650, 6660, 6670, 6680, 6690, 6700, 6710, 6720, 6730, 6740, 6750, 6760, 6770, 6780, 6790, 6800, 6810, 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8480, 8490, 8500, 8510, 8520, 8530, 8540, 8550, 8560, 8570, 8580, 8590, 8600, 8610, 8620, 8630, 8640, 8650, 8660, 8670, 8680, 8690, 8700, 8710, 8720, 8730, 8740, 8750, 8760, 8770, 8780, 8790, 8800, 8810, 8820, 8830, 8840, 8850, 8860, 8870, 8880, 8890, 8900, 8910, 8920, 8930, 8940, 8950, 8960, 8970, 8980, 8990, 9000, 9010, 9020, 9030, 9040, 9050, 9060, 9070, 9080, 9090, 9100, 9110, 9120, 9130, 9140, 9150, 9160, 9170, 9180, 9190, 9200, 9210, 9220, 9230, 9240, 9250, 9260, 9270, 9280, 9290, 9300, 9310, 9320, 9330, 9340, 9350, 9360, 9370, 9380, 9390, 9400, 9410, 9420, 9430, 9440, 9450, 9460, 9470, 9480, 9490, 9500, 9510, 9520, 9530, 9540, 9550, 9560, 9570, 9580, 9590, 9600, 9610, 9620, 9630, 9640, 9650, 9660, 9670, 9680, 9690, 9700, 9710, 9720, 9730, 9740, 9750, 9760, 9770, 9780, 9790, 9800, 9810, 9820, 9830, 9840, 9850, 9860, 9870, 9880, 9890, 9900, 9910, 9920, 9930, 9940, 9950, 9960, 9970, 9980, 9990, 10000, 10010, 10020, 10030, 10040, 10050, 10060, 10070, 10080, 10090, 10100, 10110, 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12980, 12990, 13000, 13010, 13020, 13030, 13040, 13050, 13060, 13070, 13080, 13090, 13100, 13110, 13120, 13130, 13140, 13150, 13160, 13170, 13180, 13190, 13200, 13210, 13220, 13230, 13240, 13250, 13260, 13270, 13280, 13290, 13300, 13310, 13320, 13330, 13340, 13350, 13360, 13370, 13380, 13390, 13400, 13410, 13420, 13430, 13440, 13450, 13460, 13470, 13480, 13490, 13500, 13510, 13520, 13530, 13540, 13550, 13560, 13570, 13580, 13590, 13600, 13610, 13620, 13630, 13640, 13650, 13660, 13670, 13680, 13690, 13700, 13710, 13720, 13730, 13740, 13750, 13760, 13770, 13780, 13790, 13800, 13810, 13820, 13830, 13840, 13850, 13860, 13870, 13880, 13890, 13900, 13910, 13920, 13930, 13940, 13950, 13960, 13970, 13980, 13990, 14000, 14010, 14020, 14030, 14040, 14050, 14060, 14070, 14080, 14090, 14100, 14110, 14120, 14130, 14140, 14150, 14160, 14170, 14180, 14190, 14200, 14210, 14220, 14230, 14240, 14250, 14260, 14270, 14280, 14290, 14300, 14310, 14320, 14330, 14340, 14350, 14360, 14370, 14380, 14390, 14400, 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17270, 17280, 17290, 17300, 17310, 17320, 17330, 17340, 17350, 17360, 17370, 17380, 17390, 17400, 17410, 17420, 17430, 17440, 17450, 17460, 17470, 17480, 17490, 17500, 17510, 17520, 17530, 17540, 1755

CONTRIBUTIONS



SHAKE, RATTLE AND ROLL

Dear Editor,

We use our M11 3-ton dump trucks for a lot of construction work. Our crews have been cracking because of the twisting action set up by running higher and jay over ditches, ruts, gullies and other misaligned pieces of ground. A simple rowd of the cracks in the road isn't any good. It just cracks again. Which brings me to this simple, little fix:



Makes sure those holes are right at all times on your windshield just isn't going to relieve us.

If you got to drop your windshield just remove the top hole. Next, hole!

MC Stanley Olsen

APO 181, San Francisco

Old Nasser The problem's in the seal right near and you should see an M11's seal on it soon.

A REAL GASSER

Dear Editor,

A good way to keep from overfilling gas tanks on vehicles is to put a little reminder where you can see it every time you stick the nozzle in the hole. Overfilling can lead to a lot of serious things, like hydrostatic lock and dilation of oil in your crankcase. If your pressure relief valve goes stuck.

On those trucks which have their gas tanks in view, like the M11's and M11, we draw a line right on the tank with the words, **DO NOT FILL ABOVE THIS LINE**, scrawled on.

On those vehicles where the gas tanks are hidden, like the M57 and the Jeep, we stenciled the words **DO NOT FILL TO TOP** right near the filler hole. As long as those words are staring us in the face, we're more careful.

Sgt. Lewis Cole
Fort Huachuca, Virginia

Old Nasser wonderful suggestion, Sergeant Cole, and may that more people might follow. My reminder says that after awhile will stop remember that a lot of gas are having. There'll be a 75 ml (you should tell you how to stop an over pressure build up in the pressure and fuel system. This might stop a lot of the trouble too.)

COMMITTEE BRIEFS

New TMs

These new scheduled article TMs are out—TM P-881 is on the M&M (Jeep and the M270 front-line ambulance, TM P-8808 on the M27 series 3 1/4-ton trucking and TM P-8811 is on the M43 series 2 1/2-ton trucks. Did you get yours?

Winch caution plate

Now's the time to get Ordnance to put your winch safety-brake caution plate on your 3 1/2- and 5-ton trucks. It'll help you keep the winch safety-brake adjusting-bolt in line. RWD G88 (2742-40) gives you the authority for your fleet, RWD G88 (2748-40) for your GMC's and M43's and M43's (2744-40) for your Stewarts.

Winch warning

Take a quick look at your M27 work-up's front-mounted winch. On the end frame just below the drifting clutch lever you'll see a warning plate—just screaming at you not to leave that lever... open. It tells you how to handle it right. If the plate's covered with muckin' tape, paint or some such stuff—rip the stuff off... before somebody rips the guts out of your drifting mechanism.

Play it cool

Take a look-see at your M43 under 3 1/2-ton trucks. Has the thermostat happened loose lately? If it has, better put it back like it says in TM P-8812-12 (April 1958) or else your truck can develop 60 hydraulic surging, which'll knock the coolant right out of your cooling system.

Truck Top

Next time TM P-718A (January 1952) on the M27 truck gets to Page One, it'll tell you to "disconnect" and tape the ground cables of both sets of batteries before taking off the battery covers. This is a good note to make in your present TM reg's paragraphs 12P d 604 and 124 b 12.

A recoil mechanism

The hydro-pneumatic recoil mechanism on your field artillery weapon (howd and self-propelled) is due more practice now and inspection per TM C4d 434 (27 Apr 55). It covers the latest on inspecting, checking and correction of nitrogen pressure. Check with your Ordnance support unit and see if your piece has the latest adjustments.



3 OUT OF **4** DON'T BELONG

M/SGT — OF FORT BRAGG, NORTH CAROLINA, SAYS THAT 3 OUT OF 4 VEHICLES COMING INTO HIS SHOP WOULD NOT BE THERE IF THEY HAD RECEIVED THE RIGHT KIND OF PREVENTIVE MAINTENANCE.

**KEEP YOUR VEHICLE ON
THE ROAD...AND OFF
DEADLINE WITH—**

**PREVENTIVE
MAINTENANCE**