

Issue 224

PS

1971 Series

July

THE
PREVENTIVE
MAINTENANCE
MONTHLY

NOW,
WOULD YOU
AGREE
THAT YOUR
MULTIMETER
KEEPS
CHARGING
UP?



CONSTRUCTION
IN THE 1970s



These items might be called a look into the Army's maintenance future.

The key word is "module." A module might range anywhere from a tiny assembly in your radio to a tank engine.

Maintenance will work like this —

The unit technician will use a mechanic, armorer, or whatever first uses his TMDE (that's Test, Measurement and Diagnostic Equipment) to find out what's wrong with his equipment.

Then, he replaces the module or assembly that's not working.

Detailed repair of the module will be done by support units. Some real complicated modules might have to go all the way to-depot or factory to be overhauled.

New equipment will be designed so that more modules or assemblies can be replaced by the using unit. This will be in line of replacing many small piece parts. The manuals on current gear are being revamped so the personnel can be approach the equipment you're now using.

This will mean you'll have less maintenance to do. Take off a module, send it to support and put on a good one. It also means that you'll have fewer items to stock on your PUL. It means that a unit maintenance man will be mainly a module "diagnostician." His big job will be to find out what's wrong. To fix it he simply removes the bad module, and exchanges it at the GSU DE. Then he puts on a good module or assembly.

This might be done by a well streamlined fighting unit.

You can read about how it's being set up in DA Circular 780-34 (18 Aug 70).



FOR MORE INFORMATION, WRITE:
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REVERSE ENGINEERING

IN THE MIDDLE OF A SPORTS MEETING, A MIRROR BALL IS SENT IN CRASHING FROM THE CEILING AND CRASHES ON THE COURT AND THE AUDIENCE.

IT'S BEEN AN HOUR AND A HALF AND ALL WE'VE GOT IS...

THE VACUUM GAG!



THE GAGS OF THE DAY TO

- Wax phallos...
- Wax under wings...
- Shiny wings...
- Tasty drinks about coffee...

- Spicy coffee...
- Indulgences...
- Love machines...
- For flying vacuum attachment...
- And a lot of other jokes and puns.

Why do vacuum gags?

The reason is that the vacuum in a gasoline engine must behave in a certain way under certain conditions. Any other behavior is a clue to trouble—the vacuum gauge detects abnormalities.

What's vacuum got to do with a gasoline engine? Where does it come from?

Well, vacuum is formed on the downstroke of each piston as it sucks fuel into

the cylinder. The exhaust valve is closed and the intake valve is open—the vacuum the intake manifold and the cylinder use single diameters. As the piston moves downward the area of the chamber increases.

And as it gets bigger, it wants to suck in an equal volume of fuel and air mixture, but the small opening (venturi) in the carburetor air horn won't be enough through only a positive gas through. This reduces the pressure in the chamber as a piston will below atmospheric pressure.

And there you have your vacuum conditions.



The natural and expected thing to do inside air is suck it out till the vacuum of the air comes through the normal path, that is, through the carburetor throat, everything's OK. But if it's forced to through any other place, that's bad.

That's where your crystal ball—the vacuum gauge—steps in. It'll point to the possible source of leaks and other trouble—which is a lot better than breaking high and low over the engine in a broken-down fashion.



Free Manual Carburetor by Joe Kay
PW 410-02-A-1
A 4-10-68
No. 2 Injector — 2-490-91-C-004
No. 3 Injector — 2-490-91-C-007
No. 7 Injector — 2-490-91-C-008

WINDING SOME FUEL GAUGES

There are a couple of things you're got to do whenever the gauge readings aren't so dependable.

1. Is the gauge in top shape? Needs an overhaul? Or does it have a bad adapter to PSI?



2. Does it need calibration standards?



FUEL PUMP TEST

The gauge will tell you how your fuel pump is behaving. To make right is most pump fuel at a given pressure—and your vehicle or equipment's *BOOKS* tells what it should be.

To run...

1. Disconnect the fuel line at the carburetor.



2. Connect the gauge to the fuel line.



3. Start engine. Will man at fuel left in the carburetor or how it worked with the gauge.

5. How read the PSI on the gauge's bottom side.

If it's within the PSI given for that piece of equipment, it's OK. But if it's below the specified PSI and if the fuel line isn't clogged, the pump needs changing.

If you're testing an electric pump, make your hook-up where the equipment's *BOOKS* says.

A HEAD FOR THE TUNE-UP MAN

Trying to do a tune-up job with serious compression in the cylinder is like trying to raise a *TRUCK* in a vehicle. You can't even lift an serious compression by a glow-plug tune-up, so a quick check with the vacuum gauge will save you in the right direction.



1. If your vehicle has a combination fuel and vacuum-lineing gauge you'll have to disconnect it from the manifold before plugging the opening or attach the vacuum gauge at this point.



2. Make sure all the fuel jets, manifold jets, spark-plugs and vacuum connections are tight. Before it says, "...don't over-tighten."



3. Hook-up the gauge. Be sure to use the right adapter. Connect either to the vacuum-leader-gauge connection or into the vent opening in the manifold — after removing the air-pipe. Connections must be tight.



4. Run the engine and bring it up to its minimum operating temperature until the long gauge needle begins to move.



With the gauge hooked up and the engine running at idle (about 600 R.P.M.) or about 1,000 — 20 T.M. the needle should read between 17 to 22 on the vacuum scale (upper scale). Adjust the mixture screw on the base of the carburetor until you get the highest possible reading. A slight wiggle in this area is OK, go ahead with a normal tune-up job.





GAGE

INDICATORS

SPENDING MONEY BY CHECKING GROUND AND GROUND INDICES

DRIVE PRESSURE



CRANK NEEDLE BETWEEN 12-14



Needle drops 1 when starting throttle, and returns to 20 when idling. Indicates correct engine.



Needle drops to 1 when starting throttle, and does not return to 20 including four days operation.

IRREGULAR DROP



Cranks when idling. Needle in 10 or less. Irregular drop rate. Internal valve seat trouble.

IRREGULAR DROP



Take hold upon valve closed, or loose, or leak. Throat adjustment. Check gasket leak.

LOW MOVEMENT



Low when taking the

LOW MOVEMENT



Cranks out of oil pressure. Plug gaps, too low. Ignition timing off.

DRIVE BARKING OR BELL



Normal reading at rest, but rapidly drops, indicates closed valves.

DRIVE BARKING



Wide variation above 20 increasing with engine speed indicates wear, or broken valve springs.

CRANK NEEDLE BETWEEN 14-16



Four days or less light fuel running. Operate one month engine.

CRANK NEEDLE



Cranks when idling.

CRANK NEEDLE



Wide needle fall.

Incidentally, various gage readings will vary with altitude above sea level, because atmospheric pressure decreases with altitude. The gage readings are for sea level for each 1,000 feet above sea level deduct about 1 inch from the readings pictured here. To pinpoint the exact cylinder that's leaking, you'll have to make a compression test. See PG 119.



TEST'S HOT! 30

The reason our fuel pump pressure gage can do a lot more checking and TM 3-4980-077-01 can check you on all of them. The gage can answer a multitude of questions you're bound to be. The fact that it won't take you to the bank and that you can't afford to lose it as a mechanic's routine is up to be a little bit changing but with a little practice will prove that the "equal ball" can give you trouble spots with amazing accuracy.



IN YOUR OWN INSPECTOR... **TANK & PUMP UNIT**

THE MOTOR MIGHT NOT START ON ALL TERRAIN, HOWEVER.

HEY, MIGHT THE MOTOR BE TOO POWERFUL?

IF IT'S BURSTING IN THERE—IN ULTRA-DIRT TERRAIN.

WHEELS, WORN. EXHAUST, PUMP UNIT, THERE!



ENGINE

VALVE — Usually long, ending in a clipped or ob-structed, end.



VALVE PLATE — Flat, polished looking, polished brass, steel or cast-steel, flat-surfaced, often threaded, slip fitting.

PUMP - TO - ENGINE - END PLUG — Both brass, locking friction. Shell slanted.



ROTOR — Shell not usually hardened, both face in friction.

COVER — Control not friction/bush or ball, loose, support pin ball, spring or roller pin ball, sliding speed control lever ball, slipping, slipping, roller ball, set up too fat.



MAGNET — Cable friction, loose. Lower mounting, core.



STARTER PULLEY — Sets sharp-edge, rope fitting, handle friction, loose on shaft engine — adjustment OK! See Fig. 3-70 of your TM 34-880-204-1 for ad-justment work.

BUFFER — Metal, both long, rubber cut, weather cap stuck or missing.



CRACKER — Oil level low. Check plug in top fit snug, compressed. Oil change not made. Friction slipping, support cover plate loose.



AIR CLEANER — Oil not changed when cartridge removed. Not in pump. Oil all at air pressure filter, get into or dirty face, leaking.



ROCK ON — Loose plug on the rotor, tapered, cut, grinding table friction, loose, getting water in roller not loose, missing, magnetic case broken, loose.



Like the top that holds the gear on the shaft —

Like the wall that holds the bearings on the top —

These nuts and pump nuts of your feet has to stay in shape or a lot of other equipment will get messed up.

Tanks, cranks, PCs, pistons, ball-bearings, and even aircraft won't run without them — that's certain — and your 1200-gal water-mounted motor in the tank needs them too for all of 'em.

No, there's where you can look for trouble that might make your mind run, even out of the lineup just when it's most needed. The ball eyes have an end motion.

SERVICE UNIT



HOSES — Cut, leaky, collapsed by kinking too much in one place, ripples, worn out, caps or chains missing.



WIRE BELLS — Spring loading loose, cracked, bells missing, guides sticking, rolls rough, vent lines clean, steel spring weak, broken.



SETTING UNIT — Loose on base, leaking, recorder damaged, calculator not working, solenoid or control for bell's base, relay chatter sticking.



GROUND BELLS — Staff widely landing along line, landing table weak, retract clips loose, setting, tension release sticking, misaligning not working.



MAN: "What's that for?"



RECYCLES — Loose, cracked, badly bent, valve defective, dripping, loading wire binding, broken, control panel not working smoothly, bell or broken, cap missing.



FILTER SEPARATOR — Tests for dry, get-water trap, broken, separator head or couplings loose, damaged, rumbles and rumbles, there's a dry, slight glass cracked, waterlogged, dirty, any leak the gasketed joints, intake pressure gauge in drainage pressure (gauge glass, cover, or fittings broken, dry, unavailable, hand valve wheels broken or badly chipped) not working right, 3-way valve defective in any way. Probe the caps missing.

TANKS

FEEDINGS — Oil: open body, ballcock valve missing; tankbottom loose, stripped; drain holes not drilled in side; see TD 75047-2, 7th May 55, pp. 23 & 14. Stop bugs from, missing.



PORTS — Handle over port chain stopped, missing; mating faces painted, rusty; gaskets gone; pump inoperative.



CRACK VALVE — Rusty, sticking; lock-up handle broken, won't work.

DISCHARGE VALVE — Rusty, sticking; handle broken; shut: cap thread over base, missing; stream stopped; lower release failed; fuel supports.



PER — I WILL CHECK MY TANKS.



SCALE, DENTS — Rusty, missing to ship, cracked; rusty; long axial hole of that is a deficiency.

SUCTION HOSES — Cut, binding on jaw-line hole, dripping.



WHEELS — Rusty, bottle parts base (spaced) only with work-point lamp when empty.



GET LOW! AT THE CORNER OF TWO BATTLE PLAYS.

INDICATORS

Trickle-free sleep perfection's not enough. The way you run is what, how, and how are ways you would like pluggin'.

1. Running with the tail gate up. It will lower your engine heat. The electrical power may lose ventilation.



2. Stopping gas without loading up or grounding.



3. Running your engine over 1 hour without an oil check.



4. Letting your dispensing lines hang back on venting.



5. Lifting fuel on a hot engine or without gips.



6. Wiping your face inside control lines open.



Tailgate-up running makes it harder for you to see what's happening around your valve and hose system. Sight glasses get dirty and way dirty . . . a dump comes from . . . wash clothes. And before long, a little fuel drip spreads a way with matter a quick —

You will do no thing on you and your truck if you give it a chance. It may happen a devoted way. And there's one more way you can know it is — clean and leak-free operation.

And better than the proper running are all through your TM 5-6000-117-01 (Highland Model 100) and TM 10-6000-104-1 (all other models) — whichever for your particular rig.

BLOW IT OUT...



OH... WOW...
GETTING READY TO
DO THE "LOW
RPM COOL DOWN"
CARRYOVER!

A LOT OF
LOW
RPM
CARRYOVER

Your truck engine may need deep-breathing exercises once in awhile to blow out the carbon.

A lot of low-RPM operation piles up carbon in your cylinders and back your sparkplugs. This can create trouble — like stalling, when your engine keeps on running after you shut it down.

Nevertheless, even up all the fuel you load it, even with the best engine, a lot of low fuel is dumped out the exhaust pipe. This much low-RPM operation makes this "incomplete combustion" worse — including carbon buildup in your engine.

Here's a real carbon-building combination:

1. **Low-rpm operation for 10-15 minutes — or get a good, high-RPM load on your engine.**

2. **With low-rpm or stalling like you get in an inch when there's a lot of other traffic — after vehicle is stopped.**

3. **Let that built-up carbon engine stalling get a chance to operate at high load long enough.**



In some cases, any one of these carbon builders can be bad enough all by itself.

How do you make up?

Maybe you'd better check with your maintenance officer about trying up a "blow-out run." Somewhere where you can drive your vehicle to maximum allowable RPM, maximum allowable temperature and maximum safe speed for about 20 minutes.

Remember, your engine "blow-out" has to be under load — it's no good just stalling in one spot, rocking the engine.

Your engine will "peck" it

BYE-BYE BLUES



Losing your momentum can even give you a headache, too—especially if it happens while you're rolling down the road.

A nightmare? You feel like a clown, too—it has happened!

All because of a 5th wheel—busted or missing from your truck tractor's 5th wheel.



This safety wire is on the fifth wheel (FEM 2530-730-7000) that you see on lots of commercial and rental truck tractors.

A broken or missing wire lets those un-secured ramps loose. This lets the back jockey drop down.

Then, with no 5th wheel grip on your tractor's king pin, you find yourself waving goodbye to your trailer.

So it's up to you to make sure that safety wire's in place and in good shape, like it says in TM 9-2020-21 1, 80, Ch 3 (Jan 87), page 3, for the 3-ton M53 truck tractor:

"Caution: Locking jockey and locking back ramps must be safety wire locked together to prevent them from working loose in the down."

NOT WANT THE FIB

For an idea on the size in Para 11, in Ch 3 (Jan 85), TM 9-2120-211-10, where it says to remove the 5th wheel safety wire. That jockey belongs in the 55 manual for 5th wheels. The right copy for you is the last "Caution" on the page, saying the safety wire has to stay tight.

Every time you look up your trailer, give a close look under your tractor's fifth wheel and see if everything's OK. Any cracked broken or missing parts? Everything work smooth like it's supposed to? If you're even suspicious, get 'em checked out by your mechanic—right now.



Your 2½-ton cargo-body can develop a bad case of tailgate scratches. Gas-frame edges scraping the hinge pins make the noise . . . and they'll eventually chop the corner layers out of the plate you love.

The cure for that is a manicure.



You just took off a 3-scoured inch of the lower lip so it can't touch the pin. Grind off the sharp edges, repoint the spot, and there's it. You'll find this used in Article 12, TB 750-981-1 (Jan 71). Better yet, 3-ton tailgates can use the same treatment. Local command can make such minor alterations under AR 750-11.

WINCH-FIX

Are your hoists' trouble making the central lower lock on your 2½-ton truck's front-mounted winch?

It's probably because this channel on top is mounted too far back on the winch.

So take the channel off and mount it up front.

Fill the empty mounting holes at the back with the screws you take out of the front mounting holes. TB 750-981-1 (Jan 71) has the word on this.



MATING IS NO GAME



Get a pair of telescoping beams in the OVE of your 3-ton M54A1C or M54A2C wrecker, correct?

Well, if you happen to get a pair of unthreaded tubes, they could hold up and ruin your wrecker, and your load.

There are a couple of differentiated sets of beam jack tubes in the system. Old ones are 3-in O.D. male and 3 1/2-in female. New tubes are 3 1/2-in male and 4-in O.D. female. If you try to use the old male with the new female, the whole works can go south on you.

BUY a and BUY a slide's change with the new deal, or if any of the 3-in and 3 1/2-in O.D. are going out on you, order a whole new set of 3 tubes: Tube, beam jack, female (female) P/N 2140-040-2801, and tube, beam jack, top (male), P/N 2140-040-2588.

Order new tubes 3 1/2-in male and 4-in O.D. female as an "as required" item.

M54A1C T-BOLT

Now it's a repair part in the supply system—the locking handle way for your M54A1C 3-ton track (drop-side) cargo hoist. Order by P/N 2140-185-4001.

2320 TO 2350

Your tracked carrier has had a gear-and-chain number change—2320 to 2350. Do watch your listing of carrier MPT's in EA Pam 110-7 (plus AGS bulletins and EIC digest TF's). These 2350 MPT's are for all carriers classified in the "Applicable To" column of EA Pam 110-7—even if the front end of the ERM on the equipment data plate is 2320.

FILTER CLEANUP FOR 5-TON WRECKER

I KNOW—
NOT BUILT-IN
REPLACE VALUE!

Dear Mr. Most,

Since I'd an OIL FILTER-2111-12 (Apr 88) was to clean the filter element on the MOBILE Jaws wrecker hydraulic tank—but it's a little dear as always. What's the best way to pull this little job?

OWD C. F. F.

Dear Mr. C. F. F.,

First, be careful rubbing the element out. If your rig has a built-in control valve, you need only a 2-gal pail to catch runoff. Otherwise, you need a clean 55-gal barrel to drain the tank.

You can wash the element with dry-cleaning fluid, mineral spirits paint thinner—or even hot water and mild detergent. If mild detergent is used, rinse element twice in clean water. Then blow it out with compressed air.



It helps to rub with a coarse palm brush—never use a wire brush. The 107-in. metal screen can't stand it. Besides, wire particles can flake off, and wire fragments in oil are lousy traps. Keep the element and run pressureless from left and fast, and you're back in business.

Mr. Most

EASY DOES IT

You'll knock your rear view mirror accurately, FSN 2148-880-8022, out of kilter for good if you over-tighten leveling screws. Trick is to put on a gentle squeeze on the ball mounting thread—don't stretch when mirror is adjusted a few times.



HORNIN' IN

Why leave your cow?

A few dolls of lubes and you can put on a 2-Hr- or 3-Hr- grade lube bottle in a jiffy. No struts. No grunts.

You'll find this sense of the cow made in the form of lubricant. FOM 2040-041-0071 (get the same stuff used at the end of the tube.

Here's how you use it:

1. The 2-sided portion of the glass.



2. The plastic lube lip.



3. The rubber cover insert.



Your tire slab is not the best. You gotta fully look in the corner, otherwise, it'll pop out sooner or later.

The lube also helps you by cutting rust or oxidation. So, adding the lube before assembly spot should be a snap-the-act time.

TURN SIGNAL COVER

Are you missing the green turn signal indicator when you see your turn model 2015 (and 14 and 1981) Car a new one with FOM 2030-101-1588, which includes a weather and D-ring.

DRY YOUR HAIR ...

THE BABY ROUTINE

WHEN THE CURTAIN CALLS, YOU'LL FIND OUT HOW DOWN ITS STAIRS TO GO!



Towing your trailer is a tricky task. These extra vehicles, big or small, demand all your attention—before you take off and while you're on your mission.

The M101A1 1/2-ton Trailer is a good example.



HEAVY LOADS ARE HANDLED ON THE GROUND

You've got maintenance to-do before you wheel away. Use it up in TM 5-2114-500-14P (Aug 62). Then, after that's done, you gotta handle it like a little baby.

—Never jackknife it; you may crack the driver's.

—Be alert. Don't start a hillside. You'll bend the chain or body or frame.



TURNING A CORNER CAN BE THE SCARY

—And never, never whip it sharply around a curve.

Be sharp and get with it. Give your trailer the PM treatment it deserves.

SAVE YOUR



RAMMERS...
SOUND LIKE
OVERWORKER
PROBLEMS!



The leather-rammer on your M107 70-800 gun is tough, sure enough. Still, repeated power ram strokes can damage it.



This could happen if you try to drive a normal projectile farther ahead with one power ram stroke after another to get your depth of ram to 100% inches or more.

Looking for a better way?

Give your projectile the gravity ram. This is the way to ramble ... If your projectile is seated less than depth of ram it reaches 100% inches, it might be right seat for OK, or fire.

1. In between 2 to 20 or so, you open the breech and pull some extra water in case it the chamber ahead of the alternate spalls. This is to keep the prop from churning the head of the spalls during the next shot!



2. Don't let the rammer keep ramming straight and simply raise the gun a little so it will go. In this position gravity will be pulling on the 100% prop trying to seat it and shoot against the alternate spalls.



RAMMER



2. Lower the tube to the loading position and set if the prop is still seated. If it is you can load the propelling charge and go ahead with the firing station. After 20 shots, pull out the water tank or say the you water protect the alternate spalls!



If the prop has dropped back out of the ram position you can try to ram it again provided the mounting head and forward launcher are both unchanged and there is no crack in the chamber or forcing case.

If there is any damage or if you can't seat the prop on the second try, set it aside for the HQ people to Do Their Thing with it.



The gravity ram will keep you from overworking your rammer which is good because repeated extra hard ramming puts a lot of stress on the ram follower. The much stress on the ram follower will cause or cause break your gun case and have you with a ram stroke cycle that won't run anything.

SUBMACHINE



YOUR INSPECTOR AND YOU: NO ONE BUT YOU CAN CHECK THE OPERATION CAREFULLY! ONLY WITH SOME NUMBER OF WORKING PARTS, BUT STILL, IT HELPS THE OLD FASHIONED TRICKER. (SOME COULD!)



TRIGGERS — Bent, twisted, misaligned?

WELD SEAMS — Cracked?

LIVER — Fits snug, locks tight?

EXTRACTOR — Works, breaks, binds in lock?

BOLT — Slides freely? No binds?

FEED — Works, jammed? Check that all components are in the magazine selector, extractor pin, guide retaining clip, & firing springs.



MAGAZINE — Open? No cracks, dents allowed. Check wear? Magazine fits smoothly, ejects properly? Features? sets at barrel?



BARREL, BUSHING, TRIGGER — Must be clean — not battered or bent. Note: the most likely spot for gas to get in, when you check the barrel locking spring it must contact the barrel collar. No gap allowed.

A loose, flapping barrel can cause misfires — is it split from the receiver, damaged? Too hot!



TRIGGER PIN — You can cover the barrel with the receiver without depending on that spring, but appropriate to barrel without depending on spring. A worn pin gives both you and you'll get for such backfire. It retains a vein.

GUN ...



SLIDE HOOD — Straight and smooth? Hold tight in retaining pins?

WELLS — Bent, cracks?

TRIGGER — Bent or broken?

TRIGGER SPRING — Fits tight?

TRIGGER PIN — Damaged?

Will cover open, open trigger bar should disengage, firing ball down barrel. Will fail to fire, rear, slide cover and open trigger bar should stay put.

A SHOT TAKEN AT THESE PARTS? KEEP IT WORKING IN CASE YOU NEED IT TO SHOOT!

BARREL — Any bulges, deep pitting, dents, scored ends? Help for help — from the barrel.

FOUNDER — Make a good tight fit on the receiver?



CLIP — Threads stripped? No cracks allowed (MAG).



STOCK EXTENSION — Straight? Cook from stock tight — introduced in extended? No sagging allowed.

WELD SEAMS AND CLIP HOOD STOP (MAG) — Straight? If wobble, re-align, fix your armor.

THEY CAN'T WAIT...



Apply the 20-step checker and function in a just because conversation, take no chances. Get it to your armor. E-1-1

Need any more homework? This TM (3-004) 204-12 after 600 gives you daily, after-reading and troubleshooting. Put up.

RIFLE BOLT MISFITS

WHY HELL? THEY LOADED EXACTLY THE SAME!

HERE'S A LITTLE TRICK—FOLLOW ME!



all steel case bolts will fit most receivers.	<input type="checkbox"/>	<input type="checkbox"/>
New bolts will fit most receivers.	<input type="checkbox"/>	<input type="checkbox"/>
all bolts will fit all receivers.	<input type="checkbox"/>	<input type="checkbox"/>

Never pick up a stranger—bolt. Just because one is your M14, M16, or whatever, like maybe you're choosing a fewer-blows and pick up a look-alike bolt. It seems to fit.

Translate, the headspace might be off just a hair . . . enough to cause problems, like a misfire. You could lose an eye!

Someone gives the guy a bad bolt/receiver combo.

When you have to take out the bolt, prize your rifle's receiver IM an eye and stick it in the back. Steps wacky-sicky, mis-matches every time.

Suppose you make up bolts, you gotta turn in your rifle to direct support the headspace inspection, and that's a lost, 11-Bolt type.

UNMODIFIED BOLTS?

Dear Herb Stein,

One of my soldiers are using bolt extractors while firing blank rounds. Why this will not? Before you, how can we stop it?

CAROL M. J.

Dear Ms. W. H. J.,

You're using unmodified extractors. Sir, These original M14 bolts have a sharp-pointed nose front-center that stops the round as it comes from the chamber or magazine.

Check your M14's. If the extractors have this sharp point, get your unit ordered to file off about 1/16" in of metal with a fine file or sharpening stone.

Some prep gear for units firing blank rounds in M14's. New extractors, P/N 100-010-0100, order with extractors listed.



M16 SHORT SHOTS

Tapping your short-striated arm off your M16A1 rifle can keep you healthy while you're bumping a distribution.

Big, fat barrel is not a good bar. A lot of guys' barrels burst that way... and still load barrels.



Expecting to take your rear sight, per the TM, can freeze the sight. Kind of ridiculous, and uncomfortable, having a frozen rear sight in enemy Vietnam.

Bolts and bolt carriers are not for dropping. Bolts can get bent, or you can bend the carrier key. Handle the carrier with care, both with and without.

Last before you close that truck door was time, keeping how many handguards and stocks get ripped to shreds. It's not a surprise.



STOP, BTW, NITM HOWDIE.

XM454 PROJECTILE POOP

I NEED THE
CABLE TO SUPPLY
MILES...



... YOU GET
THIS NEW
IMPROVED
MODEL!



If you use the XM454 projectile with your M16A1 hardware, this is for you... Unlike the old T-4175A cable assembly which replaces the T-4179 cable on a one-for-one basis.

FM 1100-81-011 gives you this improved model which works better.

However, when you get the new cable, the old one, T-4175, FM 1100-81-011, becomes scarce and has got to be turned back to supply.

FM 1100-81-011



STOP

FM 1100-81-011



STOP

GETTING READY...

WATCH THAT

THUMB!



Start — you can use your M204, 40-MPH portable blower as fast as you can load it. But, you'll run for long if for long if you keep your thumb on the barrel handle while you're firing.

Here's how —

When you hang on to the back the barrel won't be completely locked. Only a tip of the back will be locking the barrel, and the tip can't take the full force of the forward thrust. It'll be torn off by the shoulder of the barrel extension.

when on the firing pin housing, and you'll soon be twisting the firing pin.

So make yourself right — don't let the barrel in locked state your thumb down to the handgrip, and keep it there until you're ready to unlock the barrel again.

BARREL LOCK IN LOCK POSITION



And keep this in mind — your fire rate is a clipped lock in failure of the barrel to stay locked when you fire.

CHANGING POSITION AND LOCKING

When you take the barrel assembly per against extension on the carriage barrel. If the barrel stays locking it won't hold the carriage right against the barrel. This'll also give you handgrip trouble and blow primer problems.



BARREL LOCK BRACK

Once the lock is damaged the barrel won't lock right, and that'll feed up-the launcher's handgrip. With incorrect handgrip you'll get blow primer. Blow of blow from the primers will



All you have to do is make sure the barrel and around the barrel. Some launchers have a small hole along the top of the barrel extension, so be sure

to make sure the barrel is there, too. Then pass the barrel in several times (with your shooting rod or a similar tool) to make sure it's not stuck.

USE THE SLIDER



Do the same for the primer. If it gets stuck or sluggish it'll slow down your loading and firing — but good.

Go ahead and check the barrel and discharge right now . . . and then check 'em back after you pull PM on your launcher.

LAUNCHER WARNING



Listen to this warning and you won't be mourning. It's the same the thing is clear of the barrel before you fire.

The danger slip is from the rounds when you have checking fully extended. If you fire when the slip is in the way all sort of interesting things can happen — none of 'em good, however.

It's a collection of all those great ideas for maintenance procedures that you've collected over the years. It's a collection of ideas that will help you keep your car in the best of health. It's a collection of ideas that will help you keep your car in the best of health.



MAINTENANCE
 THE BEST OF IDEAS FOR KEEPING YOUR CAR IN THE BEST OF HEALTH. IT'S A COLLECTION OF IDEAS THAT WILL HELP YOU KEEP YOUR CAR IN THE BEST OF HEALTH. IT'S A COLLECTION OF IDEAS THAT WILL HELP YOU KEEP YOUR CAR IN THE BEST OF HEALTH.

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CDV Guides

Get a mind-boggling amount of commercial design vehicles in your maintenance shop! These make sure you cover every A-Z 700-800 (over 71). It tells you about repair parts, accessories, repair facts and repairs.

FMV Commander's Guide

Keep your night eye peeled for the new FMV Commander's Guide to Preventive Maintenance Indicators. It's loaded with good info.

MWO of the MONTH

Keep us more — there's all plenty from this to give you 100-100, 60-60, your car — (Should be 1000) the extra support of 1000, MWO 5-41 11-408-5071 (log 88) gives an additional document to prevent collapse during transportation and rough handling.

JOE'S
DOPE

FOR
ACCURACY'S
SAKE
CALIBRATE!

HENRY LOOKS
WHAT A
FOUR!

CAREFUL WITH THE
LEVEL, THOMAS. BEHOLD,
THERE MAY BE AN OLD
MILITARY TRICKABOUT!

THE
ARMY'S
SQUAD
LOOK AT IT.

LENER... UP...
SAY THE FORMER
PROVED THE CASE
TO BE THE CHANGE
OF MEASUREMENT.

FROM MY
FINGER TO
MY ELBOW.

IT'S DONE, I PROMISE
THE BOWL CASE
OF FIRST CLASS
QUALITY!

THE BATTLE
SQUAD
COURT MUST
CONFORM TO
THE BOWL
CASE!

AND THE
BATTLE
COURT MUST
CONFORM TO
THE BOWL
CASE!



WELL, GUY?

SYMPATHY HELD STRONGER WITH IT.

CAN THAT A PROBABLY BEING CALLED UP TO THE FRONT?

WELL, TO THE FRONT, AND BEING CALLED UP TO THE FRONT, THAT'S THE WAY IT GOES.

THEY SHOULD GO TO THE FRONT.



THE ISSUE OF FEELING THE FRONTLINE'S DIFFERENCE IS CRUCIAL.

CALLED UP TO THE FRONT?

CRUCIAL WITH THE FRONTLINE.



SO CALLED UP TO THE FRONT, AND BEING CALLED UP TO THE FRONT, THAT'S THE WAY IT GOES.



"IF YOUR TEST RESULTS ARE NOT CALIBRATED, YOUR TESTS AND MEASUREMENTS WILL BE WAY OFF AND YOU END UP WITH FULLY EQUIPPED."



THEY'RE NOT CALIBRATED, AND YOU END UP WITH FULLY EQUIPPED.

THE CALIBRATION TEAM WAS CALLED IN THIS A.M. — BETTER CHECK IT IN.

IT'S CALIBRATED.



Joe's

Dope Sheet

HELP

DA FORM 2417
THE RED TAG

SPECIFIED TESTING EQUIPMENT NEEDS CALIBRATION AT REGULAR INTERVALS!

DA FORM 2416
CALIBRATION OVER CARD

I HAVE PERSONAL CHECKS!

78 38-780
78 38-286

1. CHECK OUR WEBSITE FOR A LIST OF EQUIPMENT WHICH IS REQUIRING TAGS AND TO BE CALIBRATED.

2. YES! HOW DO WE SPECIFY IT? WE HAVE YOU COVERED!

3. TAKE A COPY OF THE TAGS AND IF IT'S USED IN THE FIELD.

4. YOU WILL BE FORM 2416 TO INDICATE CALIBRATION FROM YOUR SUPPORT.

5. SUPPORT YOUR CALIBRATION FROM TAGS.

6. SUPPORT PMS & QA LABEL TO DO IT—ENSURE THAT IT HAS BEEN MADE AND, AND WHEN IT'S TIME FOR CALIBRATION.

7. SUPPORT LOGGING THE NEXT DATE IT'S DUE AND WILL NEED TAGS.

8. YOU CAN MONITOR CALIBRATION BEFORE THE DATE IF YOU WANT THE ACCURACY OF YOUR TEST EQUIPMENT.

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

IF YOU WANT TO DISPLAY THIS ADVERTISING ON YOUR BULLETIN BOARD, SPIN BOARD, LEFT IT OUT AND PUT IT UP.



If you're using a paper search as a trade or look, look up the system code for U.S. Army Installation Command, located in 10 100-100. You'll find that it's 100. Then you have to further it and look for your paper search under system code 100. You'll find them on page 11-100.

But if you're using the paper search as a store or grade, then you'll look under system code 100, which is the code for U.S. Army Installation Command, located. That's the equipment code on page 11-100.







GROUND STRAP FLAP



If your pack is 1/2 ton, a 1 1/2 ton, or a three-quarter ton, you should have a woven ground strap between the RT-010 radio mount and the truck body.

You could be using radio sets like the AN/PBC-11, -13, -15, -17 or -19, or maybe one of the smaller jobs such as the AN/PBC-31, and -34, or AN/PBC-111 or -115.

If you're using the strap, here's how you get it.

Check the 11-150 (200-60) for your radio and vehicle installation unit. The groundstrap (P/N 1005-173-1116), often referred to as "flap," should be included in the component list for your installation strap. If it isn't, you don't need the strap.

THANKS FOR THE LOOK OF YOUR GEAR—YOU'VE GOT A NEW ONE WITH THE 1994-95-96.

IT'S NEARLY AS GOOD!



4 MOVIES ON MOVING

The Army now has 4 new movies on packaging equipment for shipment—all available through your multi-branch support areas. Here they are: TF 10-411, Packaging for Kits and Reproduction; TF 10-414, Packing, Binding and Labeling Materials for Packaging; TF 10-410, Packaging Line Equipment and Operations; and TF 10-411, Military Packaging, Preservative Application. All are 16-8mm color films.



Wherever the action, wherever the action . . . you and your AN/MS-401 radio intercomparator are out to check to be handy, handy and communicative.

When the good word's needed best, I hear's nothing any more obliging, and you can be just as obliging by giving that only one goodly dose of PM anywhere it's indicated.

What kind of PM's most important? All kinds, of course—but, how you gets to make use of . . . you to the Joe who's doing the work.

THE MIXIN'

Now, why not make sure you're wearing your good clean air inside your J-14472 or J-149111 shelter? If you combine the eye glasses, ink eraser, color, printed drawing compound and other compounds they sell they the intercompar, are your shelter better to than those famous fumes with fresh air from outside.

Even if it's just to be sure, well, it's fresh and breathable, right? Right—see personal PM.



YOUR '48"



It would pay a man to take special pains not to attack his shell on certain lanes inside the shelter. It also pays a man to keep his feet under control any time he's near the J-200172C intercomparing box. The reason can be located by accidental bumps and bangs.

If there's a break in the skin of your shoes, best get it patched before midnight to do the dirt in the shelter, and maybe its custom equipment. If you don't have the JKS-400111 patching his hands, stop some waterproof mending tape over the puncture as a temporary measure like it says on page 7 of TB 770-240 (1st Ed).

This tape goes by JKS 4111-240-0001 (green, 4-1/2 wide) and JKS 4111-240-0001 (green, 4-1/2 wide).

Never let a break in puncture go unpatched. Fix it quick. A rubber cushion or cushion could give you hand slams by maintaining your equipment.

Thinker's best and gentle's best?

Could be you forget to put back the goodness. After you cleaned it.

Without that filter, you can get a fast line blocked with carbon or wax. And even if you don't need the hose, could be your equipment dies. Like maybe the intercomparator legs will not bright and slick.



Combination can be a position-stealer, but you can beat it — or at least beat a lot of it.

Here's what to do:

Open the shelter doors every day — except rainy days — to fresh the air circulation and help move out the oxygen stores. A 100- or 300-gram built-in breathing when the shelter's closed will also cut down the combination.



1-100 REMEDY

Any time you're bothered with your **ANYONE-17** radio set — or even temporarily — slide that **SERVICE SELECTOR** switch on the T-195 transmitter to **STANDBY**.

That way, the radio can be used and the battery power is retained, both standing by for future action.

The **STANDBY** position also reduces the drain the radio set makes on the battery of your vehicle, and thus keeps the set operator's fingers and toes.



The T-195 may keep right on doing you a job — but maybe it'll do a better job if the **BAND SELECTOR** control and **SERVICE SELECTOR** switch were replaced.

What, now? Don't get it wrong . . . This doesn't mean to just get right out and go happen to replace some random, outside piece of equipment.

But . . . if the **BAND SELECTOR** is flush with the frequency you want, and you come up with . . . nothing, then you need a new control. Sure, you can probably wiggle it better frequency by giving the manual a little rattle up the left or right. But that kind of frequency selection can't help locate a 1915 quality close it.



The **SERVICE SELECTOR** switch can be in trouble because the dust's built right down. The set can go on and off without a move on your part.

The word is Replacement. The new word is Happier.

Be sure to give your T-195 the air . . . that is, be sure it gets all the air it needs to stay cool.

This transmitter needs a constant flow of clean air. If it doesn't get it, dust'll be your first trouble ending up in down-time.

Keep an eagle eye upon the dust filter, 'cause that's where it is at. Change filters as often as you need to — and that can be every couple hours when the dust is stinging.



CELEBRATE!

That's one way to bring home the **GO-OUT** or **REMOVER** or **CELEBRATE** — but no matter how goodly in name, you might be overlooking your relay.

If the switch is pointing to **REMOVER**, but the relays have you on **OFF** or **STANDBY**, you're just not where you want to be.

So, what to do?

Turn that **SERVICE SELECTOR** switch one click to a new and make a second or each position, so the relays can link in and take you to the new position. When the switch and the relays agree, when they're where they might be, you're ready to communicate clear.



The coverage and distances of the Gyrocompass beam are stamped on the metal ends of the beam. For the right beam, see above, as found on page 5, TM 11-5880, 555-30P (Jul 61).

10	100	1000	10000	100000	1000000
10	100	1000	10000	100000	1000000
10	100	1000	10000	100000	1000000



If your T-100 gets audibly shaky when you shift frequency from channel up to Channel 7 . . . it could need a trip to support. But, in the meantime:

Shift the CHANNEL SELECTOR back to a lower channel . . . 3 or 4 maybe . . . and let it complete its cycle there. This makes the shift up to Channel 7.

Don't put the pressure on the life-cycle TUNING CONTROL without first turning the DEAD LOCK control clockwise to disengage it from the control. Otherwise, you can find up your own and lose your transmitter in repairs for a repair job.

Because, however, when the DEAD LOCK, show on the TUNING CONTROL, and follow with the counter-clockwise turn of the DEAD LOCK to lock your wiring.

Before making these antenna wire correctly on your counter-balanced doublets, the you'll have a pegged PA tube in your transmitter. As little as a 1/4 inch difference in the 2 antenna wire lengths can cause additional plate current and heat the power amplifier tube (V-100).

A tape measure is handy to make sure you've got these wires matched in length. If there's any difference between the 2 lengths, keep it under 1/8 inch.

If you never rebound up on doublet antennas, the info in TM 11-2011 and FM 24-12.

Expensive and valuable. These words rarely do apply to the spare parts existing in the lab boxes of your T-100. These have had previous . . . they've just done . . . and they can be heated by random effects, stress, heat, or whatever you. Be kind to 'em. Y may need 'em when you've got a low emergency reserve.

If it does occur in practice the antenna guard clamp . . . you could really break it next to the guard. So, don't over-tighten these screws. Just tighten 'em enough to snug in the guard.



Why have there in the R-1011LR receiver, when the drawing would be to be locked?

The plug connector on the RF cable (20-112070) sometimes come sideways and hangs over the binding post. Thus, you're shorted.

Wrap a strip of electrical insulating tape around the binding post, to stop the shorts.



When the R-100 is out of its case and you're mounting it around, beware of getting a hand-held in the plug holes. These can pull out, and you can fall into or become disoriented through or damaged springs on top of the plugs.

The P-100 plug inserted haphazardly into the J-100 jack can break or bend the female jack pins.

But if you do spot some loose pins, back off. Don't try to push them 'em . . . they're almost a click outside for support tabs on the overlighting job.

The pins on the J-100 jack can also be pushed up by random removal of the V-100 tube, so it'll pay dividends to cap-head the tube removed.



When you disconnect the P-100 plug from its J-100 jack on the R-100 receiver, you'll be better off not to make the disconnection by pulling on the wiring. This piece of wiring can break just over the plug if it's given the best-hand treatment.

If you finger-grip the plug itself to take you holding the wiring from the station, you should come up with a smooth disconnection — and an unspiced wiring.



You'll want to inspect the newspaper and check stretch around the #100. Reason: if there's any damage at all to that rubber seal, the receiver will leak water. If you spot any water, leaks, or frayed areas, it's high time for a replacement seal.

The cork gaskets that seal the dial window do a job, as long as it's in good condition. Wouldn't you be to inspect this now and again, to make sure you don't need a new one.



CHECK IT REGULARLY

IT'SN' AOKY, AKAOKA BUSTERS'IN



If you're operating a non-synchronous TC-101 synchronous-transmitter or a TT-200 (or the AM/FM/CB) synchronous set, you're bound to be adjusting the motor speed now and then.

Here's a place where your fingers can have a say: pair of gears. Plus, if necessary, you have the motor governor adjustment screws, maybe even even the adjustment screws spring in lock—and there comes the quick-stop or stopper to get the locked spring unlocked.

Use your fingers to push the screws in to speed up the motor. Pull the screws out when you want to reduce motor speed.

One big trouble with gears is that they have sharp edges and burrs on the teeth, which cut at unsuspecting operator's fingers. And that kind of cut takes a long time to heal.



BEWARE! DON'T GET YOUR FINGERS



WATCH OUT FOR BURRS

It's good to remember . . . when you're removing the dust cover, the first thing you do is remove the P12 power-light plug from the J11 connector of the power supply and terminal unit.

Then you simply lift the dust cover straight up off its mounting brackets.

If you happen to unlatch the eye-light plug from its connector, before you lift . . . you could come up with a damaged plug or connector. The solution, get some 1/4-inch-wide pressure-sensitive tape and letter it:

You can ask for a 100yd roll with IBM 8114-000-1014.



CAUTION: REMOVE EYE LIGHT PLUG IN SAFETY COVER

Keep those dust covers on your tele-typeunits as much as possible. Dust and dirt are hazardous foes, and the dust cover stands guard over the TT's motor (see left).



KEEP THE DUST COVER ON

This is especially important if you're which is travelling and kicking up the dust.

Speakers' of dust, too much of us a tele-typeunit can draw dust and dirt



the wrong way. And that grinds around in those TT gears doesn't make for long-term communication.

Sooner, later or lighter.

Incidentally, you can get a lot of valuable tele-typeunit info from TB 11-5880-104-207 (Feb 68).

Of course, when a line blows, it usually means you're in a little more trouble than line repair's best. If you make the replacement and it blows again, it's time for higher-order help. Maybe someone should have mentioned that.

When you install a new ribbon spool, be sure the indicator with it down, so that the ribbon will feed off the spool. An upside-down ribbon spool installation can cause ribbon drag on the roller.

There are few who like to run kinks and such, sometimes just because the kink's sticking out and available on some control panel.

When it comes to your TT, the line thing is to lower the kink to, unless you're making adjustments on motor speed or the range/finder. The wrong sort of the wrong kink at the wrong time could leave you holding the short end of the stick—maybe a burnt-up TT.

Wonder thing, when you shove back the TT-10 or TT-200 tele-typeunit shell, avoid pinching or crushing the cables. Grab a handful of the cabling and lift up . . . long-term it's not the shell lock has clicked in.



When you've been parked, moved, unpacked, you can forget mighty easily to lock in the planes and carriage and blocking plane on the TT-608.

The discrepancy is that line of action could show up only at the end of the shift.

Remember, your Direct Support positions the blocking plane. The plane blocks the carriage-return driving gear when it's positioned for moving.

If it's a short move, it's OK to leave just the carriage lock. But for longer trips, or for parking, lock the plane and carriage lock next to be in place. The plane is locked whenever the move.



THE CARriage LOCK:

You've got the MD-304/CR and other and the CV-118/CR frequency shift converter to consider with 700 points on your scale.

Look for cracked, frayed and loose connections and cables, tangled and broken internal wiring, wrong fuses.

The J-408/CR interconnecting box should come in for a check-out to keep 'er operational. Look for loose leads, tangled receptacles, damaged connections, and the like.



The electrical cable on the J-408/CR has a special joint that won't stretch. When you can do it you try to stretch it to pull the wiring off the pins inside the speaker, after the cable slips through its stretched-out housing.

Then, of course, it's support is in jeopardy.

When you change position, you'll be better off if you keep one hand under the J-408 and the other hand on the cable. This will help keep the 2 pieces of equipment together and functioning.

YOU ARE
AND I'VE
SAID WHY
A PROBLEM?



That
MIGHTY
A
ROCK!

APH-5 WIRE WORDS



You say you can't get the telephone-wire cord for your APH-5 flying helmet?

Well, while you're waiting, try snatching a telephone cord from a M-105 handset. It'll keep your telephone talking until the right cord comes through the mill.

And you might still whoever handles it so go easy with the M-105 wire. Those internal wires are fragile and can't take rough handling. Like, lay the handset down on the opposite side, swing the mike boom easy, etc.

ARC-44 SWITCH FLIP

Flipped by an receiver action on your AN/ARC-44 radio set?

Before you write it up, better check the switch position of the RCMB toggle on the M-474 or similar bonding switch assembly. If it's on or up, you've got the bonding antenna working for you.

RCMB toggle has to be off, or down, for normal receiver operation.

On some aircraft jobs, like the M-105, the AN/ARC-44 position handle switch should be labeled "RC" for receiver.

Don't loose it if you're to set antennas with the M-105 handset and can't to leave the RC switch on.



Final point if you've got the M-474 and you can't transmit on your RC-1100 set, remember that there are RCMB switches on the right, if they're tied in to your RC-1100, etc. Beware to set correctly to transmit.

In other words, be sure the switch you want set or avoid is flipped . . . before you write it up.

THESE SPECIAL IDEAS...

A L'I'L CUSHIONING HELPS



Bumper bumpers, joggle and slide as naturally as a ground vehicle... with one big difference. The black foam in the fly vehicles used good cushions so super-durable parts won't get damaged.

To protect against broken roller joints, loose connections, etc., check the



check mounts on your vehicle at least every 100-hour PE.

If the checks are loosened, replace 'em... or get 'em replaced. Depending on the equipment, you might have to replace the entire mount... or just the shock.

If the roller bearings are bent up, replacement is a good idea.



Breakup bars just might be the star that the shock is really to get loose from the mount, sending little black foam through a rider's head. Which is good reason to make sure the mount's secure.

Another good way to prevent a bent-up head or a framed loss is to be sure to safety-wire the bar to the mount after



you clamp it in place.

This safety wire fits gaps for mount bolts, dynamic bolts... and wherever else it's needed.



When you handle the BT-140 or BT-114 receiver assemblies, be careful not to flip the E.T. wire on its end and where the Microw socket is. This can bend or crack the back panel, or even bend up the Microw.

Also, handle loop sharp points and edges away from the Microw socket to keep from damaging the lot.



HOT TIP FOR A COOL SET



If you want keep from getting bricked up about the whole thing, make sure the R-500 receiver on your 500/ABC-50 radio will get a real workout over these around.

Like the 3-ohm and 5-ohm ear pieces are not for mixing up... even though they're interchangeable.

The 3-ohm connector (P300) goes in the J-500, or top center jack of the receiver, and the 5-ohm jack (P500) goes in the J-500, or lower right jack.

Mixing 'em up can heat out the circuitry in the set.



AIR MOBILITY

Some Army aviators just won't believe the true extent of their flying capabilities until they get off on a postflight walk-around inspection, resulting in things like:

Paul and Bill walk away from starting flight, unaware Hillary had empty fuel or oil tanks, ignored landing or cruise flight controls, and so on.

HAPPY BIRTY.

You can't pull a professional post-flight inspection without getting your hands dirty. In a by-the-book they look like Happymouse . . . not a clean book Luckymouse.

That's the difference. A Luckymouse looks at the Pilot's Checklist item, TAKE OFF/ON CLEAROCK, Check. He looks at it . . . it looks OK . . . so he checks it's checked in. He didn't stop to maintain. If something is clean and he notices the same flight, he's a Luckymouse.

WELL,
WELL,
LUCKY!

By-the-book Happymouse checks the condition of the tail cone gearbox for unusual leakage or swagage. He checks the oil levels, slip distance wiring and plug for security and location where makes sure the oil filter cap is tight before and that the drain is secured to cap and filter neck. It and they handle job . . . but he leaves nothing to chance.

SEE CHECK SERVICE . . .

HAPPYMOUSE

THE LUCKYMOUSE
WON'T STOP!



OR LUCKYMOUSE

LUCKY IS
FOLLY—
SO FLY!

A GOOD
PREFLIGHT
CHECK IS
FOLLOWED
GOOD—LIFE
CHECKS!

—BUT
I'M A
LITTLE
LONELY



Here's a well-known deal for the CE-25A (Kaiser). It is often in doubt from the one for your field, or even. The main thing is HOW thoroughly you check each item.

Looking inspectors strictly for the essential, or pulling them by memory or with a checklist, are outside it too . . . may not.

OUTSIDE LOOKING IN

Watch, you start with the checklist. It says in your hand, not watch back in your pad.

THE CHECKLIST—This is the big book there in the back of the cockpit. It contains the best done. The CE-25A (Kaiser) will show you the checklist, the 2500-1 is an uncorrected book and the 2500-1 is an additional inspection sheet.

How 'bout 2500-1 (Kaiser) You'd be surprised how many Luckymouses go by—many, many—with overloading their birds, or often the CE-25A or fail to compare directly outside or destination. You know who's in the back!

Any time 2500-1 is applied before start?



WARNING: AIRFLOW SWITCH, OFF.



1411 SWITCH—Turn to ON to check landing lights and POSITION lights. For NON-Essential BUS switch in MANUAL position. If you're in SEA Operations be sure lights are operating. A mission could take you in and out of tricky weather, or into wind-shears.



1412—Take a look at the fuel quantity gauges. Never depend solely on gauges enough fuel for the mission, including the safety factor! It's embarrassing to run out—any time. Cross-check gauges reading by checking amount of fuel in tanks. If your bird has 2 tanks, check both gauges and both tanks.

1413 SWITCH or Turn battery OFF.

**LAST CHANCE
KEROSENE**

1414—Check list for proper safety and presence of extinguisher.



DO WHAT YOU CAN FOR THE FUEL.

WELL I FOUND THE FUEL ONE NIGHT A GUY GOT OUT IN '11.

RIGHT SIDE FORWARD



STATE PORTS — Clean, unobstructed!
No-flare, fire, or oil in opening!



LANDING GEAR — Any loose wheels,
damaged disks? Anchoring points OK?
Ground handling checks completed!



HYDRAULIC SYSTEMS AND FLIGHT CONTROLS
—Any leaks at attaching points? All
controls secure and refilled. Free move-
ment!



HYDRAULIC RESERVOIR — Fluid level OK!
Connections tight!

DOOR, PASSENGER DOORS — Loose doors?
Doors? Will they close and lock properly?
Emergency jettison handles retracted?
Check safety belts and shoulder harness-
es if doors are removed for mission.
If an man's sitting up front with you,
harness seat belts, harness as they won't
interface with an pilot flight controls.



HYDRAULIC FLUID — These reservoirs
gotta be done.



LANDING — It's in A-1 condition! Any doors, cracks, loose bolts, fuel flow above the air level?



ENGINE TEST — Cover removed? Any dirt, grime, disconnected belts, worn damaged, chipped up covers?



IN ENGINE COMPART — Check the M2 SYEC, NO PUSH signs. Has anyone been using controls for support? Make sure antenna attached securely to fuselage. Any damaged housing? Support base or cracked? Any gear hanging in it, like rags, clothing?

WALK AWAY, TEST — Free of dirt, mud! Undamaged?

WALKAWAY DOWN — When you bottom up make sure the doors are flush, locks tight. A flapping door can tear off ... wind up in side-of tail rotor blade.



WALK AWAY UP — Good enough fuel for the mission? How 'bout the dirty cap? It's right? Check the safety chain. Is it on — and clear — break off inside tank?



RIGHT

SIDE AFT

WALK AWAY — Cover removed. Check for damage, obstruction.



ENGINE AND AFT COMPART — Covered? Fits flush, looks right?



ANTI-COLLISION LIGHT — Flip and test. Make sure they're secure. Cover and bulb cracked? Dimmed?



ENGINE COMPART — Engine covered! Any scuffs, shavings? All nuts and bolts secured? Shipped marks and connections OK? How 'bout cover flap? Right side ... is properly? Loose all lines, hose wires are a mess. Any chafed lines?



WALKAWAY — Any damage? Dents, holes, loose rivets? Check the strength of landing forward structure panel. If it's cracked, look for structural, internal damage — for quite. No cracks! ... OK.



WALK AWAY — Check condition and cap for signs fit and chain security.



TAIL BOOM—RIGHT SIDE

TAIL BOOM—FRONT

TAIL BOOM BENT SHAFT, BURNING, NO. 1

—Any excessive play? How about selected area? Check heat, damage!



TAIL BOOM— Loose rivets? Excess sharp wrinkles, broken ribs, holes? Straighten and rework in the forward area.



WINDMILL BEARING— Landing-edge OK? No loose rivets. Ribs tight. Mandrel guide tight in Windmills-and-how?



MADE DOWN MADE— Tin-down removed? Mandrils down to eye level and slowly to your proper nose to level Made man. Landing and trailing Made edges should be clean cut, no obstructions. Flats, dents, flattened. Make get a second look by stepping. Same goes for skin wrinkles, bonding failure. Wings OK!

VERTICAL RIB, TAIL

NO. 1— Loose area correct dimensions. Make sure rivets do it in top shape. No loose rivets, bent. Mandrils allowed. **TAIL BOOM**— FODS. Fire and prevent?



NO FODS!

OFF INSULATION BOLT— Loose, with no tension, cracked bolts or wires.



TAIL BOOM GEAR BOX— Loose escape anywhere in gear box area excessive double check, FODS. All bolts, nuts tight, selected? Check all level! Chip cleaner plug, wiring secure? Any loose wire that'll give you a false sense of security? Oil line opening, check correct?



TAIL BOOM— Make notes. Any down in one Made, and back take a trip—No eyes. Strutting bolts, nuts, selected? One movement: is center? Any wrinkles? bending and you take a second look. A cracked tip blank means a new blank.



NO. 1— No good condition!

CHECK THE BOOM!

TAIL BOOM—LEFT SIDE

TAIL BOOM BENT SHAFT— Same as right side.
WINDMILL BEARING— Same as right side.
OFF INSULATION BOLT— Same as right side.

ENGINE COMPARTMENT — This is not a stuffed bag type storage. Check in the front. Recently a Huey was caused by unsecured items in case of hydraulic fluid shooting out the engine would be in lower left side engine compartment.



REF Check

Engine oil, transmission oil, intake preclude work, oil use with approx. case of 50% grease, BGA case, rala jacket, rips, etc. have also been found in various compartments. Keep it clean, neat! Flight check!

For your info on the black boxes to make sure all tests, runs and wires are leading the correct gear to place.

Connections should be checked. Battery connected ... Disconnects. No time, broken, or loose wires. Don't fix front and back!



FUSELAGE —

LEFT SIDE AFT

ENGINE EXHAUST — Remove covers. Any obstruction, rips, tears, holes gas double take.

FUSELAGE — Same as right side.

ON MAIN HOIST HOOK — Check reading against amount of oil in tank.

FUSELAGE — TOP

TRANSMISSION OIL FILL CAP — The right, check around!

GEARPLATE AND FLYWHEEL COVER — Cracks, extra movement, loose connections, unsecured nuts and bolts call for further inspection and investigation.

WALT — Loose, straight? Wicks, grease, cracks are No No's!

ENGINE COMPARTMENT — Any oil or fuel leaks are suspect. Have crew chief lead a hand and fuel cause. Engine mounts secure? Connections right and adjusted!



WIKI, CHECK!

ENGINE AND AFT EXHAUST — Check the front and back lights, right!



WHEEL WIRE — Unlogged.

ON ENGINE ANTENNA — Same as right side.

TRANSMISSION COVER — The Back, holes right!

ENGINE BOLT — Remove covers. Any gear slipping holes?

MAIN HOIST PULLEY — Clean and unobstructed? No KOOL here! Check all level of blade grip and yellow/black corrosion. What nut and blade connection was secure and adjusted? Shipping marks unobscured!



MAIN HOIST BLADE — Must be in Center Bolt position. That's No. 11 Weight OK!

ON UPPER MAIN AN HOIST — Insured right? No holes, rips, tears? Tube free of any obstruction? Exhaust area clear?

LAND COLLISION LIGHT — Same as right side.

HYDRAULIC ON HELICOPTER MAIN CAP — The right, check around!

FUSELAGE—LEFT SIDE FORWARD

WHEEL AND POWER CONTROLS—Look for signs of leakage, leakage. Findings report?



WHEEL—Make sure the wheel isn't broken, even if it's a plain simple wheel. It has to be tested and used for years, day or night... **NONE IS ALLOWED.**

The DIRTYMOUSE Call



POWERLINE DOOR—Same as the right side.

WHEEL DOOR—Same as the right side.



WHEEL DOOR—Same as the right side.

FUSELAGE—FRONT

MAIN DOOR HINGE—Same as before.

EAR AIR DUCT—No obstruction.

EAR AIR DUCTAGE
WALL—No obstruction.

WHEEL DOOR—Cleanse the hinge, the hinge chain, door, deep scratch.

WHEEL DOOR—Remove cover. No push allowed in or on side.

WHEEL DOOR

WHEEL DOOR

WHEEL DOOR—No broken glass, bolts, etc. Are they clean? Disinfectant of leakage gets washed—on hands and feet—upholstery. Look for better bolts, eyes, nuts, popped rivets.

Don't play around with the walls around. Be on the lookout for gaskets, gloves, belts, nuts, bolts, gaskets, etc., that are out of place, broken, unsecured or misaligned.

As the Old Pro Happiness goes 1 up on a happiness when he pulls a pre-flight inspection. He pulls it by the CL and the Dash 10 TM. There is more to work, but it's worth his while.

Flight story... the preflight, that is. Be sure... safe.

You can always wash your hands here, Dirtymouse!

HEAD OFF LETDOWN



No more chief reports his favorite device today to fly the air over his plane.

But he might be doing just that if his system starts to break on a head landing.

With use, rain, stress and high temperatures working on the fabric, it just naturally gets stronger after awhile. So, TM 25-1500-204-2171, Ch 1 (Step 7) is the general aircraft maintenance job now calls for changing the walling every 2 years. Plus 1-1-80, has the prep.

Be sure to make the 2-year frequency every on the log book DA Form 2400-10, pages.



YOU...YOUR EXCESS ...AND YOUR DSU



As top officials on the P.L.L. team can tell you, turning in your excess rigid parts is important business... for you and everyone else.

The way — What's common to your P.L.L. may be exactly what someone else is looking for.

The way — Your excess stocks just take up your storage space and add to your paperwork, inventory, and inspection problems.

While hardly any excess at all goes into the supply system — and help your DSU ease supply shortages, delays, and all kinds of supply bugs.

All you gotta do is:

1. MARK the parts and file their original packages, if possible.

2. TELL the units of the item(s) within the original file.

3. TELL the file on the file (DSU number) where to collect the shipment.

Some other P.L.L. men show the road, just by turning in exactly what DSU has drawn on you.

Do it now. You can't lose.

COUNT YOUR WAYS AND MEANS

How do you support your dog's medicine . . . ?

1875

1. PILL BOXES — Authorized by equipment records, for use with a bill form 2762.



2. PILLAGE ITEMS — Same as 1, but support as needed.



3. USE SUPPLY — Item 22 (Military) changed for published in your Bill (Bill Support 2762, for 24 from 240 to 24 copy.



4. BUCKS-SUPPLY STORE (Shandy Country Store) — Item 22 (Military) changed for published in your Bill (Bill Support 2762, for 24 from 240 to 24 copy.



5. BUCKS SUPPLY — Item 22 (Military) changed for published in your Bill (Bill Support 2762, for 24 from 240 to 24 copy.



6. BUCKS SUPPLY CENTER — Item 22 (Military) changed for published in your Bill (Bill Support 2762, for 24 from 240 to 24 copy.



7. BUCK SUPPLY — Item 22 (Military) changed for published in your Bill (Bill Support 2762, for 24 from 240 to 24 copy.



Council's Mini-Mini's



MPQ in A Sock "Sock"

Hey, man, forget that "socky sock" nickname on the AMT MPQ 124. Radio for periods on page 50 of P1 212.

If you need to replace a sock changing off a hand socket by what you're looking at or repairing the set, use the AMT/DA, 8024-502 switch-on the outer and switch panel.... Here on the main frame of the truck.

Watch the date to use to prevent the coming from accidentally blowing around and grabbing you when you're working on it.

MPQ In Control

Here's good news if you've got an MPQ-1 500-504 receiver: it's still you. Forget to have your receiver apply MPQ-1 501-521-20-71 (Aug 85). The MPQ-1 makes the life safer by improving the firing mechanism. The modification kit to do the job (P24 1813-840-2002) is a free loan until July.

Wash That Cabin...?

Hey — you did that engine? (P24 1813-840-2100) is available. Any old laundry detergent will do the job, but with the most around in cold water. Then wring it around in clear water and let it drip dry. Never using it out, though. That one (P24-4 1, P24 1813-840-2100) will get out stains on what's wanted.

Stop It Cold In

It's 20-200 says. Hey and hold ER exhibits are called for.

See it live with the 18 rule, 18-181, 004 Supply Letter (P1-7) (May 77) called for immediate shipment of 18-181 ER exhibits from Vietnam — CH-181, 004 Supply Letter to find three Army Depot and all other aircraft exhibits to U.S. Army Ammunition Maintenance Center.

It's 20-200 says. Here (all exhibits) ER exhibits from Vietnam are called for any time an ER is submitted. In need for an equipment, packed, marked and tagged or spiked out in the Supply Letter.

Simple Solution

If your outfit's one of those "specialty units" selected from time to time to call for simple equipment maintenance done in the (P24-2) program, you can avoid the basic rules in 18-181-27 (Mar 77). Once to visit a school to collect data in this program, select "specialty" will get out details on what's wanted.

Keep It 181

Need a huge job for your Model 407-2 ER Invention Center, P24 1813-840-2100?

It's Item 11, in P24 44, page 4-10 of your P24 10-200-200-12 (Jan 85). Ask for P24 1813-840-2100-2000.



When An Airframe

It's what's the story on airframes in commercial automotive engine? Stop it every spring! Or keep it in the ready queue!

The story's pretty much the same as for military design vehicles — in 18-181-27 (Mar 77).

You keep the airframes and your check with that 18, Reserve Availability, P24 1813-840-2100, shows the service procedure in the line.

This word is in 18-181-27 (Mar 77).

How Bad That!

All the repair parts for your 1.8 004 military design program are now in 18-181-27 (Mar 77). Includes parts for the AC and DC models. Parts with codes "A" are only for the 18-181, and "B" for the 18-181 (Mar 77). Parts with no code are for both.

Shut Up Compressor On

The air compressor in your 4000 (Shut Up) has to have a special oil — and it needs to be changed after every 50 hours of operation. Use lubricating oil, oil compressor, Item 1813-76, it comes in a one quart can under P24 1813-840-2100. Using any other kind of oil can cause serious damage to your compressor's inside.

How Right's Right!

Follow the words, not the picture. That's how it is in your AMT/DA operator's manual, 18-181-27 (Mar 77) (Jan 85) tells you in page 1-20 to get 18-181 or more clearance over No. 1 roadblock with track heading No. 2 wheel — and that's right. But P24 1-20 makes it look like you can get over on both — which you can't if anything's OK. A 18 change will see clear that'll up.

Many, Many, Many!

The name of 18-181-27, Consolidated Interchangeable and Identifiable Item List (CITIL), had better beary if you want to tell whether you like or dislike the 18-181 rule. Ask your SA from 1813-840, which is part of SA Chapter 181-7 (Jan 77), in P24 1813-840-2100. Ask for AMT/DA, New Cumberland Army Depot, New Cumberland, Pa 17095.

Stop Mess In Line

There's more work on the program you need on the 4 front tires of which-equipped 4000-series vehicles. You need to limit the 20-5 level to 40 pounds to stop them from wanting out too soon. Ask your motor officer for an OK. Deviate just word will be along soon.

Would You Stake Your Life ^{on} _{it}

the Condition of Your Equipment?

SMOKE POLLUTES KEEP IT DOWN



YOU CAN'T HELP BURNING A LITTLE
BUT NOTHING DARKER THAN THIS
IS DANGEROUS TO HEALTH!

IF YOUR DIESEL ENGINE'S SMOKE IS TOO DARK

- USE YOUR
EXHAUST FILTER
- CLEAN OR REPLACE
AIR CLEANER ELEMENT
WHEN DIRTY
- MAINTAIN
SLOWLY AND REGULARLY
- WARM OVER 500
DEGREES
- WARM TOO FAST
- USE ONLY DIESEL
FUELS
- SERVICE EXHAUST
SYSTEM

IF YOUR BUDDY HAS A TRUCKY ENGINE

YOU CAN

BOTH OF YOU MUST BREATHE