

Issue 187

PS
★

1968 Series

THE PREVENTIVE MAINTENANCE MONTH

WACONS ARE
THE SYSTEM'S SHORT
ON GENERATORS... WHY
NOW? THEY GET SOME
OF THE GOOD-OLDS
OUT THERE TO TURN IN
THEIR UNDERGROUND
ONES FOR INSPECTION
AND REPAIR!

IT IS
BLAST YOU
REMEMBER
THAT - AGEM!

HELP WILL BE ON ITS
WAY IN SHORTLY THE
MAYBE YOU CAN
REPAIR IT YOUR
MAYBE YOU CAN



Without lube, a modern
grip would grind to a halt,
screaming both real quick.

That's why lube—all the
oil and grease you use—is
so important. It keeps your
equipment's parts that rub
or slide or turn against one
another from grinding each
other to bits.

In the big rush of things
to keep the right going,
some guys let lube go. "Ah
... it can wait," they say.
It can't! (And not for
long.)

Oil levels in gear and
main cases must be kept
up or you'll burn out some
real important piece of
equipment. And that oil has
got to be changed when it

gets lousy, or with dirt and
sludge. Don't let oil work like a
grinder. Put in clean, fresh
stuff. The lubrication order
is your guide.



Grease in bearings and
such places has to be
cleaned out when it gets
dirty, and then you put new
grease in. Leave that old
dirty grease in there and
your bearings will grind up.

Your LO and your 30TM
will tell you how often you
should lube and the kind to
use.

Keep moving, shooting
and communicating...
with the right lube in the
right places at the right
time.



10001
1000000's life

GENERAL MOBILITY 440 4400
10001
1000000's life



ARM MOBILITY 440 4400
10001
1000000's life



FRESHEN 27 20
10001
1000000's life



ELECTRIC & COMMUNICATIONS
10001
1000000's life



GENERAL
10001
1000000's life



10001
1000000's life

IN YOUR OWN DEFENSE...

CHECK YOUR 3 1/2 TON TRUCK

Should check or this, equipment in operation is waiting if it's up to par.

On an issue as big as your 3 1/2-ton 1954 truck, it takes time. Luckily, you can do it by phone—a lot each day. It's real FM (Frequency Modulation) too, because it helps you see things you might miss otherwise.

The only work you need to place, nevertheless, means work, the program gives you notes on road grade tips.

You may be stopped as you go along to measure a single wheel or each and make a fit on the spot. That's best done — because the facts you find may be a sign of another fault you can't see. If you make a check doesn't do the whole job, you're just covering up evidence ... and maybe landing for a good deal less.

It's right to trouble with your own mechanics, though. He'll know the details, and he'll tell you right when you're in doubt. He'll expect your list from 2404 from you when you're through, too — which of course you'll do on schedule — in your 1954-56-57 and 58.

Just put down the facts you do find, nothing fancy. They call it loggers, Drivers, Carvers. The last one you do, the third one, when it's something more you can handle with the truck



in your pocket, you can stop your work now.

When you get to the underside, use a scale or ramp. Some work you have to look at from both ways, up and down — moving gas, if necessary.

Now what? Answer: ... like any you just walk up where your truck's

FRONT

GENERAL APPEARANCE — Body, fets, wheels, fenders to see the look for a broken spring or 5-dump.

WHEELS — If present they're not, loose, cheap or hole cut, loose screws missing.

GRASS GUARD — Loose, bent, rusty, missing, especially missing PM 5-8, G-11, or, wrong.

HOOD SUPPORT LATCH (over the right of windshield) — Missing, won't work, bent, rusty.

HOOD — Hinge pins bent, broken, support lock washer missing, loose, fasteners missing, won't work, registration impossible, missing PM 7-10 and 13 PM 5-13.

HEADLIGHTS, BLANKET LIGHTS, LIGHT SIGNALS — Not working, not adjusted, lenses cracked, painted over, chipped, dirt, waterlogged, broken, short wiring, not if you, lens wires, mounting type.

LIFTING BRACKETS — Dents, missing, loose, cracked, center pin out.

BUMPERS — Body bent, cracked and markings AM 1405 & 1870-5-12 wrong, missing bolts out, loose, clean job ready.



perfect right now.

The best type is the down road version, things you can find, but quick.

In the CAB

WORN-OUT WHEELS

— Jammed, broken, motor not working, manual handles missing, slips, rollers hard, steering, cracked, gaps, wheel loose, won't work.



SPINDLES — Glass loose, a weld or bonded enough to absorb vibration? Don't touch, adjusting nut or lock, body, slack, seal, trim, frame, bent. Must check longer than 2 inches.

BEAR PIVOT NOISES

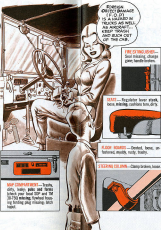
— Glass, cracked, broken, supports, bent, broken, won't adjust and stop roll.



DATA PLATES — Missing, bent, painted over.



DOORS — Latches loose, driver's, both sliding, panel's loose, lower fingers bent, painted, handles missing, glass won't roll, apron, stems, stops, won't hold in all positions, trim holes clogged.



REPAIRS DIRECT DAMAGE (IF O.D.) IS A WARNING BY TRUCKING AND INFLUENCE AS APPROXIMATE... KEEP THROUGH AND BLACK OUT OF THE CAB.

FIRE CYLINDERS — Seal missing, change gages, handle broken.



SEATS — Regulator lower, weak, base, missing, cushions torn, dirty.



FLOOR BOARD — Bent, loose, unfastened, weakly, badly, badly.

STEERING COLUMN — Clamp broken, loose.



BUP COMPARTMENT — Trash, dirt, empty, gages and forms, broken, your head, O.P. and O.P. 30-750 missing, hydraulic, foot, long, turning, plug, missing, lock, bent.

COVER — Cut, missing, old, straps, missing, seams, frayed, fabric, torn, missing, with gaps, side of same, loose, front, outside, missing, rope, flaps, missing, large, broken, missing, body, bent, twisted, loose.



BATTERY COMPARTMENT

POP — Bolt-tight, control, at, loose, cover, not, tight, or bolts, bent or missing.

CRACK — Frayed, dirty, corrosion, cracked.



GARAGE — Straps, loose, pins, loose, for, cable, left, leg, worn.

BATTERIES — Caps, missing, vents, clogged, loose, electrolyte, not, covering, plates, wrong, specific, gravity, for, climate, 1.260 to 1.270 in, tropical, 1.280 in, temperate, correct, good, purchased, steadily, with, acid, dirty, corroded.

OPERATIONS

LIGHT SWITCHES — GREEN, parked over; amber, starting; red, stop; red/black, dash lights won't work.



TURN SIGNALS (if present) — Amber, left; indicator, amber; broken, parked over; amber, starting; same when repaired. (See Pages 154-157, 161 & 162-163.)

Good things have to be checked **BEFORE** ON THE ROAD... SO, TO BE SURE, DO A WALK-OUT TEST!



OUTER PEA — Test when the fuel gauge is at full and fuel is not moving.

DRIVE LIGHT SWITCH — Test, with driving.

LAND BRAKE LOCK — Test, ensure it stays on!

DRIVER SEAT — Don't wash, oils.



DRIVE PUMP (if any) — Tests, start, stop, run.

CHECK



GASES — Inspect and check through all pressure tubes (O₂ or fuel reading, water temperature over 150° is not working, fuel level not showing, spontaneous jacking, excessive tire skidding, excessive fuel burning, etc.). Check painted over areas, rust, etc.

CLAMP PEA — Insuring, look, listen.



HEATER CONTROL (if present) — Test, start, stop, running, test, when repaired.

HORN BUTTON — Test, on, look, turn, wash, etc.

ACCU PEA — Test, starting, running, look, test, etc.

OFF-ROAD WHEELS — Lower, make, plug, reconnected, turn to, etc., etc., etc., etc., etc., etc., etc., etc., etc.



Can't adjust wheel? It's probably LOCKED!

MAKIN' SURE YOUR HOOD
 GOTTA BE THE HOLIDAY HOOD IN
 YOUR BELONGS CLEANER UNDER
 THE HOOD. IF IN DOUBT USE A
 HOPE OR PIECE OF WIRE TO GET
 IT BACK—ANYTHING THAT'LL
 SHAVE YOU FROM WHAT CLEANER
 TOWARD IT!

APPEARANCE — Engine greasy, dirty.
 Brakes look broken.

CAREFUL —
 KEEP HANDS
 AWAY FROM
 MOVING PARTS!

FAN — Blades bent, teeth
 missing, belt tight, loose,
 over-tight. Fan in deflection
 is right, timing/blade or
 direct.



WATER PUMP —
 Slip, wobble,
 leaking, cracked.



CRANKCASE VENT —
 Loose, cracked, dirty
 slips, missing.

CORROSION — Rust
 brown, white or black
 on contacts sticking,
 Volkswagen's searching
 rods, looking.

UNDER THE HOOD

GENERATOR — Cable loose,
 fan not, cracked, wires
 exposed, mounting loose, out
 of alignment, squeaking
 load! try to idle — it's
 silent!



GRABER — Wires lead
 not, frayed, bolts or nuts
 loose, dirty.



Oil Filter — Mount
 loose, dirty, leaking,
 over-tight.

HEAVY DUTY — Cover
 loose, damaged mounts
 loose, cable connec-
 tion loose, belt wobbly.

DRAINAGE — Oil level
 low, drain too high,
 no dipstick, pressure
 leaking and behavior of
 like pipelines, broken,
 wire loose or frayed.

RUB PUMP —
 Leaking,
 draining out,
 hose in
 mount, hose or
 hose cracked.



SENDER/RECV — Only
 hose in mount, spark
 plug cable connectors,
 loose, primary wire
 bad connection loose,
 cracked.



FUEL LINES — Leaking,
 bent, pinched, loose,
 carbon dirty.

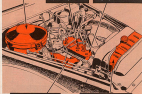


UNDER THE HOOD

AIR-CLEANER — Run over hole of dirty gases cracked.

START FLUID — Check at base, airy connectors loose, cables they do, wires slipped.

WAX & BUTIR — Cracked, coolant or oil leaking, bolts, nuts loose, flaking or hair fling of gasket.



MAN FOLD — Gaskets cracked, flaps or hole cracked, leaking, wires, fuel controls not working.

BACATOR — Leaking from rotors, salt in water, cracked, drain cock stuck, coolant below top of wire, up leaking.

WRENCH

If you have one, it's your job that comes off the bench to get you out of tight places . . . the work-horse that may not play much, but oh, he can —

CABLE — Galvanized, stranded steel fresh (stretched) ends twisted, tapered lead-in drum, internally wound, nut-clipped.

CHAIN — Made from hardened alloy (Fig. 21). On it, the 240000 lbs. weight, breaking load spread is listed.

DRIVE SHAFT — Dry, dirty, unlubed after gas gets clear on mixing, strong.

GEAR BOXES — Gears lubed; lubed level hot.

SHIRT BELT — Jammed, set in engaged hold-tight position.

WHEEL — Jam too tight, spring binding, mixing.

WELTS — Frames or bumper bolts loose, in wheel, mixing.



POWER TRAINS JUST STOP — Thus, loose, foot gone, feet not working, foot.

You can get your friends or gastrointestinal mechanics to hold the back while you try the wheel one . . . see if it sticks OK, ramps good, and slaps up. But no one winding too much cable onto that drum and feeding steel into that hole — why stay like around?



OK,
NOW
PULL!



LEFT AND RIGHT SIDE

YOU DON'T HAVE TO WAIT UNTIL THE DRIVER GOES OFF THE BUS TO DETECT HOOD CHANGES—**ONLY!**

COVERS — Top, mirrors, paint-chained wiring and, opposite of main facing, forward to comb rail or trap, or bracket, dip; rope missing.

FUEL CAN BRACKET — Rusty, loose, missing nut, unlabeled tripod, container if present; leaks, dented.



REFLECTORS — Broken, missing; painted over; dirty.

GAS TANK FILLER — Cap loose; gasket missing, damaged with closed tank only for leakage; flange or neck bent, stressed, missing or dirty; chain missing; fuel fill device missing.

SEAL PANNELS — Rusty, big dents or gouges.

TAMP HOOPS — Loose, twisted, missing.

SCANS AND BRACKETS — Loose, twisted, broken.

WHEELS & TIRES — Lug nuts or flange bolts loose, missing; tread pattern deteriorated, tire pressure wrong (40 lb is right); tires badly or severely worn, cut to fabric; rear wheel puller screws bent, jammed; fluid stain on rear hub; valve stems bent, valve caps missing; wheel bent.



SPRINGS & AXES — Bushes, locking stud, or nut bent, rusty, carrier bent, faulty tire flat or pressure wrong (Some models carry spare on left side).

REAR

TWIGS—Chain broken, missing; retaining bolt or hinge pin missing, bent, jammed; gate level, rusty.

PIONEER TOOLS—Loses, straps torn or missing, bolt rusty, missing, handles broken. (Local SCP may not require these tools or post.)

LIGHTS—Lenses cracked, scratched; painted lens; broken; shell worn.

DISPENSERS—Bolt, broken, rusty, loose; markings wrong, missing.

COLUMN ROOFPLATE—Cover bent, middle bolts loose, bottom spring broken, rusty.

WHEEL & CHUCKER—Jammed, unlubed won't roll.

SEALS—Broken, rotting, squeaked, brackets bent, pins missing.

SIDE BARS—Burning, missing; loose; slats, hooks or bolt heads, missing.

FLOOR PLATES—Bent, mal-rolled, rotting.

UNDERNEATH

SHOCK & VIBRATION ISOLATOR — Loads, absorbs, cushions, spring-mounting-related.

PURE TANK — Supports wood, damaged-looking.

TIE ROD — Clamps balls, sets, or nutsets mounting, loose wheel hub fixing mounting, ball stud loose in knaps, turn stop mounting, 2-way, two balls, ball.

SHOCK — Bent, broken, spring (Duffin-marked) mounting, loose.

SHOCK MOUNT — Cracked, broken balls, nuts, or washers loose, missing.

SHOCK SHAFTS — Bent, 2 parts cracked, loose, balls missing.

SLITCH HOUSING — Has ground body parts and/or old shock absorber, drag ring loose, missing.

SWAYBAR PIN — Loading 1 cup, 2 pins per wheel.

TRANSMISSION CASE — Loading 2 shafts in case per wheel, lower amount, body broken, missing.

SHOCK MOUNT CYLINDER — Has nut bent or safety nut loose, knaps loose, fluid leaking, roller pin gone or bent, oil seal, ball nut or mounting, return spring missing, fluid low.

SHOCK LINES — Broken, tearing, pinched, spring after bent, missing.

BACK PLATE ATTACHMENTS — Fittings loose, missing, loading, nut/ball bolts loose, missing.

CYCLING BEARINGS AND BALL JOINTS — Wheel nuts, nutsets loose, bent, bent, loading, both missing, bent.

SHOCK ASSEMBLY — Oil return stuck, bented balls, ball, mounting, slip plate bent, broken, rubber shock absorber (over shock) mounting, marked.

EXHAUST PIPE, MUFFLER, TAILPIPE — Broken, soft spots, hinge connection gone.

FRAME — Bent, twisted, cracked, cross-members loose, bent balls, rivets or bolts missing, bent.

FOR PUPS

YOU'LL NEED TM 9-8080 (INCLUDING CHAPTER 8) AND A SPECTRUM ANALYZER. TM 9-8080-101-201 (CHAPTER 1 AND PARAGRAPH 2). YOUR SPECTRUM ANALYZER IS TM 9-21500-101-2051.



SHOCK LUBE — Bent or Duffin-marked, bent, not after bent, bent.



SHOCK PIN — Loading, bent, bent, bent, bent, bent.



WEATHER WISDOM

Depending on local SEEP, a change of season brings more to check. Your checks whether it's snow like in winter, look after —

THINGS — Check air cross-thru knaps, spring plate for wheels, too low drives to go around.

INTERACE — Installed before frost but TM 8080 tells all have your feet to work check.

WARNING — Winter specific gravel standards 1,200. Have your steel wheels seen.

When snow spring, you drive slow and loose — and the rest and gear suspended in it (TM 8080 481), make wheels wear number 1.0 open . . . and you're in.

**AIR
MOBILITY**

MOBILITY SPARK PLUGS

CLEANING KIT GETS OUT THE BUGS

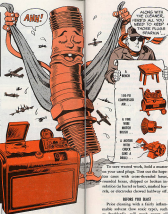
A spark plug like yours working in it is convenient for you.

Others don't fly without sparks.

But there's help in that spark plug cleaning kit like your 1954-1955-Pak-KO's, Type TR-3, in your organizational maintenance kit, B and C, and so on. With a kit, any plug that's badly fouled can be put back to work.



SPARK PLUG
CLEANING KIT



ANN!

ALONG WITH
THE CLEANING
KIT, ALL YOU
NEED TO KEEP
THOSE PLUGS
SHINY!

- 1 BOX
- 100 PSI
COMPRESSOR
AIR...
- 1 1/2 IN.
1/2 IN.
HOSE...
- 4 BUSHES
WITH
O-RINGS
AND 4
HOLES...

To save wasted work, hold a mirror on your used plugs. Then use the Super-Clean Lines with anti-fouling foam, mounted hoses, clipped on hooks in reference to hand or foot, washed fork, or electrode cleaned halfway off.

BEFORE YOU BUY

Price cleaning with a fairly inflammable solvent (low evap. temp., such as kerosene), will wash even oil

and gunk from plug bases and make your pressure-cleaning compound last longer. Use a lot of carbon so you position and use lots of ventilation. Whenever you use solvent, you wear no shoes, sweater or sweater around.

You can get plugs in a second try (lubricate one as you like it), and give 'em a hot-water bath in solvent.

About 15 minutes should do the trick. Then turn the plugs over in the tray and dry 'em with compressed air. Before applying the pressure, protect yourself with safety goggles and gloves. Don't attempt to hold the plugs in your bare hand while drying 'em. Compressed air is dangerous when close to your skin.

MAKE USE OF SOLVENT



Thoroughly clean vapor in tank, which uses oil of solvent with alk., a kind of alk. you prevent with ventilation. You want no heat, moisture, or moisture in the air.

ON THE BENCH DO

Now check out your streamer kit, make sure your water trap on the air supply line is good, your cleaning compound is dry, plentiful, and not over-age... and you're going good. If your compound is dry, take off the dew and take out the condenser. Pour in your AC-type G-3 Aircraft Spark Plug Cleaning Compound... about half a



fresh package is right. Never use sand or gypsum powder. Replace your cleaning nozzle with a fresh one (part CL-21) every time you replace compound. Then put down and continue back along.

On this work, you have to make sure you're grounded. If your electric supply isn't 3-wire with ground, then hook the whole car to a standard ground rod or water pipe.

Now test out your plug. ... For the right adapter for the brush you'll work on first from the pressure-cleaning rig, hook it in ... and here you go, first plug in place.

You push down the compound blast lever with one hand, and rotate the plug with the other. Holding the plug

in the cavity, set the plug aside for a trip through your vibrator and—AYES! by mine.

If the firing end isn't badly heated or oxidized, another shot compound blast and air cleaning could be enough ... but not a long grind. Then you clean up electrodes and porcelain.

Whatever you do, that compound, every speck of it, has to come out of that plug hole before you even think of reinstalling in an engine. Working on such is deadlier on polished-alloy cylinders than that oleo-rin.

USE THE VIBRATOR

Several plugs will likely be black up inside. Your vibrator, which looks like a small smiling alligator with back teeth, fits right up in the shell.



It's simple. You pack out the right end, take each plug between your thumb and fingers, and rotate it gently while running. On 1-cylinder plugs, use patent mark CL-271 and CL-274 in a CL-272 holder.



Isn't the rough case are there the vibrator, run them back for a compound and air cleaning. Then all you have left is barrel run-out and re-gapping.



is, watch for about 5 seconds. Then take a 3-second plain air blast straight in there and compound particles.

That's when you hold another small GARD of your own — get the firing end of the plug under the AY24-1 inspection light and wear sharp-eyed. If you see carbon or unburned deposits up in



THE OUTSIDE JOB

External cleanup is an item you can't be slack about. Electrical leaks there can



be disastrous . . . and a dirty hat is a leaky hat.

To put the shere cleaner in your bench grinder's chuck, use NPT-1 cleaner composed like creamy soap, and rub with a gentle scrub-out. Then rinse thoroughly, all that soap has to come out in plain old good 'V' warm water.



Air blow-drying is the finale. And right then is a good time for another short inspection.

The thing is, breaks you couldn't see for after may show up when you get beyond insulation nicely cleaned. That's one reason you do that hard-shine job in the first place — to prevent just what's what.

GET THE GAP RIGHT

You have a set of spacer gage leaves to take everything up to 11 thousandths. Follow your TR 71-2821-200-25 (Feb 66), and be sure you have not left any wire-mesh holes inside. Then check the gap. For flight engines, the gap is .018, that is, 18 thousandths. You can have a thousandth over or

under, but you shouldn't be over 12 percent.

For AC 173, AC 172, SRP and MIL-S-88 plugs, a gap of .019 is right.



CORRECT GAP
GAP .019
GAP .019
CORRECT GAP

That's all there is to it . . . but do be sure you gap all the plugs you check. Looking at them and deciding they don't need gapping could cost an engine.



FINAL INSPECTION

You realize under most of your work, of course, and this job even includes a little glass-bench checking, otherwise called the indicator position.

Pick the right size adaptor for the plug to be tested, run the plug in just finger tight (you have to have a little bit of air leak for the water to work best), and look on your instrument.



Now, get the high-voltage contact and cover the exposed terminal, and take your hand off the works.

Reach over by the indicator gage and push the high-voltage button. If your

plug is healthy at all, it'll flash blue, and you can see it reflected in the gauge mirror.

Now put the air pressure on it . . . open air control needle valve gently, and let pressure build a bit. See if the plug still sparks, as the gauge needle goes from red to green, do you still get good fire?



Several things could happen. You might see sparks run all up and down the center porcelain, but unless you get "track" in one spot, that's all — that high voltage carbon wanders around like thunderbolts lightning. What you want to be sure of is, the spark on the plug tip doesn't flash out and an arc doesn't develop in one slight spot away squintably the throat. . . . If it does, you've found a break in the porcelain, and not good for plug.



You could get a spark at first, then it could stop before your needle ever gets out of the red — and you'll know that if there's nothing left in the throat by accident, and the gap is right, that's a lean plug, too.

In fact, if the spark stops but your dial still registers, no matter what the air pressure is, you've probably got an invisible insulator-crack some place — would no chance with that plug either.

The same trouble could be in the barrel insulation. A fine crack there could be choking your current. So before your gauge points, and the red line —

If you can't power a plug in healthy, with a good fire spark at all pressure, check it out.

SPARK PLUG HEADS MATR

You won't be doing anybody's engine a favor if you re-install plugs that haven't been break-cleaned at the head. These threads take on a lot of carbon and lead gunk. A rotary brush in your check, 200 wire size, and a careful



hand-held run-through, will do the job. If you've got a die-casting motor, 1500 to 1725 RPM, that's good.

Checking gaps before you give plugs a dunk-up is another good trick. That's what your GO-NO-GO round-wire gages are for.

Your magnifying glass will help you see whether any fine cracks in stone or tip protrusions might have caused your pain.



And before you miss plugs for later use, test each stone barrel and shell threads for an oxidation inhibitor, MIL-C-13115-A, Type III. While you're at it, see the threads and well to see that none of them are ragged up and likely to damage your engine; if in doubt, get your support to check 'em with a thread gauge. Damaged engine cylinder head bushings is one item you can't do with 'em.

BY THE NUMBERS

You should have received a TM 9-4910-421-1.2 (just 94) with your kit, if not, get one ordered on a DA Form 17. It has all the factory part numbers and P/N's you could dream about.



Specification	ITEM, QTY, PRICE
Magnet, Inductive, Spark Plug Coils, 14 500	9F16-004-916
Magnet, Inductive, Spark Plug Coils, 14 500	9F16-004-925
Magnet, Spark Plug Coils, Induct, 14 500	9F16-004-976
Magnet, Spark Plug Coils, Induct, 14 500	9F16-004-978
Coilwinding Compound, Insulate Stone	9F16-701-400
Coilwinding Compound, Spark Plug	9F16-701-400

PROPS 'N' PITCH

Both Beaver (1.44) props P/N ED06-501 and ED06-207-021428 have the same diameter—4 feet, 6 inches—and a pitch range of 18.5 to 24 degrees at the 43-in station. You may have prop, P/N ED06-207-021428, which is 2 inches shorter in diameter and gets a pitch range of 11.5 to 24 degrees at the 43-in spot. Be sure check your props and pitch ranges 'cause a wrong pitch setting could put your Beaver bird in a bind.

FLYWEIGHT



HELP!
WE'VE GOT
TO GET OUT!

Mayday! Mayday! From piles or scraps you better make them Coog from Mustangs. Successful rescue from Coog or crash may depend on how well you're propped. For on your distress marker light—EOM 4130-907-1206, P/M 3204-178.

This free marker light is almost as accurate as a gun. Usually the only option in replacing the battery when the light needs a dose of adrenaline. For giving the light a PM check-out now is a while in playing the game according to the light.

THE BATTERY

Check the date of manufacture of the battery. If you think a battery has been in your light two years or longer, replace it with EOM 4131-873-8956, P/M 36660-21-1C, Cost \$4.95.

Take a look-over of the battery for cracks, leaks, bulging. You'll know a leaky battery by the strong pungent odor that smells like vomit. EOM! From batteries get the batteries.

Peek inside the case at the battery contact for rust, silver, corrosion. A good fixer does a bang up job. Check your job here.



CHUCK LIGHT

A POUND OF BANG FOR THE BUCK!

PHUH!

LIFE SAVER



HELP!
WE'VE GOT
TO GET OUT!

HELP!
WE'VE GOT
TO GET OUT!

with EOM 4200-017-0002 and \$1.25 you can get a dip-in-off Max Mustard Redhead. This dipper replaces standard PM mode and doesn't give away your position.

If you find corrosion on case, a wire brush treatment is in order. Add a dash of silicone grease to keep steel building.



Make the glass-on O-ring! It is cracked, broken, bent? If so, you may not have a water-tight light. Replace battery if you can't find new O-ring.



Let's see this light case like field grade weather—clear, friendly from Coog while making noise is all. For

before, if you're an O-1 pilot who has pushed out of a clear window of a loaded aircraft, your first rescue may depend on how well you're maintenance of your emergency equipment. Here's your light!

Play pop-up regularly with star

THE WORK LIGHT

—for cracks, dirt, dust. Be working around with these 2 items. Anything wrong with 'em and you order a new light. EOM! \$1.25 for light, battery, and pop-up.



TEST — looking for cracks, corrosion, dirt.

WATER TIGHT AND CORROSION CARRYING CASE — for dips, bumps, haps, hot spots.

BATTERY SWITCH HOOD — for cracks, haps, dirt.



There's Time For Life Saver's O-RING!



"PASS THE WASHERS, PLEASE!"

Checking the wear on Havy (H-4-C) parts is a natural when you're pulling a preventive maintenance inspection—and washers are no exception.

For one, be sure you check on the shoulder washers, P/N 1344-005, 854, at both ends of each of connecting link, P/N 1315-005-4 108. One washer goes on each side of the bearing in the rollers and drive assembly.

These rollers wear out at around 600 hours and then the drive wedges a groove into the mating surface of the rollers.

... means an expensive part replacement.

If the drive doesn't appear to be seized on the mating arm, the washer is okay.

Keep the washer wear pattern in mind, too, every 4th periodic. You can replace worn washers for pennies.



A LITTLE DAB'LL DO YA

Ever notice how a dill needs a tooth-
up here and there to stay at her best?
Here you have!

The same dill goes for the stabilizer
bar dampers on your Havy (H-4-C).
Give the damper shaft splines a little
extra care or they'll go to pot on you.



...like a nut guard against cracking,
chipping or breaking of the damper
splines make with Adhesive Metal Set
A-4 on the damper shaft splines and

the level shaft splines.

Read all about how it's done in Ch 7
of *Die-67* in your Equipment Im-
provement Report and Maintenance
Digest... TB 790-991-5.





Common equipment caretakers can spend a spare bit less by not keeping the innards of the RT-548 receiver-transmitter higher-class. A dual-dial jammed switch to cut that huge Picked Pilot from overloading will get you a hundred of dirty words!

It's not a big cleaning job—except when your unit's operating where you get more'n your fair share of dirt, dust, FOD and smog. Normally, you'd spit 'er polish the unit every 100 hours, but it makes a heap of PFI sense to pull out the unit more often for cleaning — say every 100 or 200 hours — if necessary. Part No. TM 11-5811-344-01 (S&W-54) gives you the stepped-up cleaning doc.

When dirt build-up is on the power amplifier mechanical linkage and between the coil case, P/N 809C 1821,

and you'll get an off-frequency that keeps the pilot from jam-bolting on his PFI on.



Every time the unit is pulled out of its cover, take a long look at the 4 air conditioning filters. If the 2 top filters are dirty — see 'em.



But hold one before you drop-ize the 2 on the bottom. You can avoid them 2 filter packs 'cause only one-half gets dirty while installed, just be sure the blue sides face each other when you stick 'em in. This filter bit gets for all 4 filters.

Equipment kept in a standby status collects dust faster'n Bob Hope and his. So-oo, keep this gear protected and accessible, it gets immediate maintenance PFI at least once a month.

Essential links and drive circuits caused by dust and dirt in a vacuum gear can be reduced to zero-zero with by the book PFI.



and its sleeve. If you get a default dust-in here, the air screen in the locking collar on the right hand case will break

RAM AIR JAM

I'M
LOOKING
FOR
THE
JAM



Hydro-book maintenance and follow-up inspection will get you with the in-ground-crowd of professional mechanics. A normal gear-up and you'll get a piece of the action — in front of the top hatch!

Like maybe you're replacing the ram air scoop — dust assembly — after putting a new G-36B-5 engine on your Semolina. The scoop end, P/N 54-04321-040, catches and crimps the inside of the flexible dust hose, P/N 54A51741-02A20, as you seat it.



You forget the follow-up inspection, spelled out in para 3-113, TM 11-21 10-201-20, to see if the air scoop hookup is OK.



You missed it. On the maintenance test flight the pilot has loss of power on climb-out, and at 6000 feet with new engine full boost his manifold pressure was on the minus side by 2 inches. That made diversion landing the trouble. Your ground checks were OK.

CF38r TAG BAGGED

HEY, SAM —
WHEN DID YA
LACE ME UP WITH
THE CF38r?



That's right, aviation types. You can remove DA Form 115 from all CF38r fire extinguishers mounted in Army aircraft. Use this monthly inspection tag only on extinguishers located in buildings. You still weigh-out the CF38r every 6 months and make serial entry on DA Form 2404-10.

DRAIN OIL SAMPLE



When you Mikovik OY-11 type sample the engine oil don't remove the oil filter and screen and take a drain tube to draw . . . more screens get less than most! TM 31-6090-200-12 (26) Jan 67) allows you to drain the sample.

D-470-118 (200) . . .

A GOLD PISTON POUNDER



If your Ford Dog (D-1) comes back from depot with a new engine, don't panic if you see a gold one under the hood!

New field use, Goldfinger G-level type. Don't start shipping magnets from that bank of metal, it's only an G-470-11A engine updated with the D-470-11 cylinders, pistons, and ring assemblies — and bearded G-470-11B.

You're looking at a piston plant virtually identical — maintenance-wise — with every other Ford Dog piston pounder D-470-11 type.

Service, pull scheduled inspections, special inspections, troubleshooting tips, and repairs by the maintenance pals, TM 31-1510-201-20 (May 66). Bottom line . . . the gold is only paint skin deep!

JOE'S
DOPE

THE
TURN-IN
GAPER

Once again we take you to the top secret headquarters of the Army's maintenance supply system.

WELL, HELL, I'M COMIN'!

COMIN' AROUND AT LAST!

WAS YOU COULD
GET HERE... I HOPE
YOU'RE IN THE!! THE
TRIPPIE SYSTEM IS
ONCE AGAIN IN SERVE
DANGER... MANAGER
OF UNDOUBTABLE,
RECOVERABLE,
REPAIRABLE
THINGS.

WELL,
EXACTLY
WHEN
IS THE
PROBLEM,
TY?

TURN ON
THE VIDEO (HIGH
FREQUENCY--CONTROLLED)
BEAR SINGLE CHANNELLED
TRIPPIE OBSERVER,
MR. ROBERTS.

YES
SIR...

NOTICE, KIND OF STUFF IS
STORING AWAY IN UNLA-
BELED-BATTING-BUFFY
OR DAMAGED?

IN
STORAGE
ROOMS.

WELL,
STUFF
CORNERS,
BUFFY ROOMS
--GIVEN
BENCHES.

EVEN
IN
DARK
CORNERS.

WE DON'T
HOLD OUT
TY ON THE TRIPPIE...
WE HOOK OURSELVES
OUT BATTERING DAMAGED
--WELL FROM US THEY
HOLD OUT ON US!!

BILLIONS OF DOLLARS WORTH
OF BELIEVABLE
STUFF IS OUT
THERE WHICH
WE CAN DO
SOMETHING...
IF ONLY WE
CAN GET
OUR HANDS
ON IT.

I CAN'T JUST WALK
TO OCEAN

...GIVE IT TO ME!

...SURE, COME!
WE WANT TO KEEP
THE SUPPLY SYSTEM
WORKING! OUR
BEST HOPE IS
WE DO?

OH, NO!
LET'S
TAKE
THEM
IN!

STICK TO YOUR
SUPPLY TUBS-
IN
SHOP ARE THE-
BE
CLING FOR!
THE-POINT SCENE-
ON THIS AND
WHAT I WANT
TUBS-IN CASE!

WELL...COME
TO THINK
OF IT, WE'D
NOT HAVE
TUBS-IN!



FINE...AND IT'S THE ONLY
THING TO REMEMBER IN TUBS-
IN PROCEEDS ALL UNRECOVERABLE,
RECOVERABLE AND REPAIRABLE
ITEMS, ALSO, ANY UNAUTHORIZED
ITEMS!

WELL, I WANT TO
GIVE THE TUBS-
IN UP... I DON'T
NEED IT, BUT
IT'S NOT TO HAVE
THE TUBS!

NEXT STOCK ONLY ACCORD-
ING TO YOUR DEMAND
RECORDS IT TUBS IN ITEMS
NOT SUPPORTED BY
DEMAND AND ITEMS FOR
EQUIPMENT YOU NO
LONGER HAVE.



OK, MAYBE I'LL
NEED THE SUB-
SISTED ARCTIC
FACTORY...
IF WE CAN
GET THE
TUBS-
IN.

TURN IT IN
RECOVERABLE
SOME ARCTIC-
BASED DATA
CAN WE IT?

WELL, COME!
SUCH A
TUBS-
IN?

IN YOUR
MEAT TUBS
TUBS TO THE
RECOVERABLE
ITEMS
YOUR DE
SHOP-
TUBS



Joe's Dope Sheet



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

IF YOU WANT TO DISPLAY THIS ADVERTISEMENT ON YOUR WALL, YOU CAN, OPEN SAMPLES, CUT IT OUT AND PIN IT UP.

PLEASE DON'T WORRY ABOUT THE LOGS... WE'VE GOT TO GET THEM OUT OF HERE... DON'T LET ANYONE SEE THEM... THIS TYPE OF BOARDING CREATES A SMOKEHOUSE THAT WILL KILL YOU IN THE END!

NO, NOW DON'T WORRY ABOUT THE LOGS... WE'VE GOT TO GET THEM OUT OF HERE... DON'T LET ANYONE SEE THEM... THIS TYPE OF BOARDING CREATES A SMOKEHOUSE THAT WILL KILL YOU IN THE END!



BUT THEY DO IT... AND THEY USE A WORKABLE SYSTEM, BUT IT IS BASED, NATURALLY, ON EXPERIENCE - LIKE HOW MANY OF US FEEL WITH YOU UP IN A GIVEN TIME.

THE WORKING FACTOR ALSO IS BASED ON COUNTING ON A CERTAIN AMOUNT BEING RETURNED, SUPPLIED AND DELIVERED?



NO, IT IS A MATH OF WHAT SHOULD BEING LEFT... WE'VE GOT TO GET THEM OUT OF HERE... DON'T LET ANYONE SEE THEM... THIS TYPE OF BOARDING CREATES A SMOKEHOUSE THAT WILL KILL YOU IN THE END!

I SEE... SO THESE DECISIONS HAVE BEEN MADE... WE'VE GOT TO GET THEM OUT OF HERE... DON'T LET ANYONE SEE THEM... THIS TYPE OF BOARDING CREATES A SMOKEHOUSE THAT WILL KILL YOU IN THE END!



THAT'S RIGHT, SO REMOVE THE **COPY** FOR RECOVERABLE ITEMS... YOU'LL FIND THEM IN SUPPLY BINS, AND TAGS... USE THIS AND SEE HOW LOCAL SOP OR EQUIPMENT.



Copy 101... again...
 another...
 identify...
 check...
 identify...
 copy...
 identify...
 copy...
 identify...
 copy...
 identify...
 copy...
 identify...
 copy...
 identify...
 copy...
 identify...
 copy...

IDENTIFY YOUR RECOVERABLE **P.L.** ITEMS ON YOUR SUPPLY ACCOUNT SO YOU WON'T FORGET TO FURNISH UNRECOVERABLE ITEMS WHEN YOU GET SUPPORT FOR RECOVERABLE REPLACEMENTS.



IF YOU HAVE FREE TURN-OUT BE BLISS TO TAG AND IDENTIFY WITH PPM, NONDECLASSIFIED COPY TAG, ETC. EVERY ITEM YOU TURN IN, IT HELPS TO GET THE ITEMS BACK IN THE SHIP FASTER.



AND... WHEN YOU SHIP RECOVERABLE ITEMS... PACK THEM CAREFULLY SO THEY WON'T GET DAMAGED IN TRANSIT.



SHIP BOXES AS FAST AS YOU CAN.

SHIP BOXES AS FAST AS YOU CAN.

LATER

CONGRATULATIONS COMED... YOU DID IT AGAIN!

YEA, EVER SO... YOU DID THAT SQUATING BIT IN THE HOLE THE BROTHER'S BROUGHT OUT AGAIN!

DON'T WORRY, CHIEF! WE'LL BE BACK SOON AS THEY RELAX AGAIN. HUH, YEA.

N.V.E.T.C.N. INC.
Special Subversive
Anti-Maintenance
Division



SWITCH (Kilars, Wilars, Inenias, Terrible Collection of Hamard)



WE'VE ADDED LSA INSURANCE

PARSON
WE DON'T
ABOUT YOUR
POLICY?

Cops, hold me there, you non-shooting? MIRA! explain.

Before you head out on patrol or even to the firing range, add this new bit of LSA-type insurance to your weapon.

For a very light film of LSA inside the bore, the chamber and on the helix lips... after you clean 'em good and get through with the other before firing cleaning and helix done, call to your 24 and 24 of (8 5-252-24-11) dog 24 we's always.

THIS IS WHAT WE MEAN
BY VERY
LIGHT!

Put some LSA on a rock,
spray the rock and all
it's just water...

... then run the steel
back and forth over it
takes on these
parts with your
cleaning rod.



The film of LSA in bore's insurance can bit with your shooting, but it will protect the parts against corrosion—especially, if his name means you don't get in line-off.

The next change to your good book will have a word on this.

Insurance, remember: Cleaning and helix firing go together like a girl and a dog.

NOPE, CRACK! WALKS INTO NET!

BUT GADDE, MY BULLY'S GOT 'EM! SCRAMMED 'EM ON 'EM!

CLEAN AS USUAL

How to clean:

Some of the M16's rifle is not made from stamped or cast to show that they've been streamlined. Does this mean they don't need as much cleaning as those not streamlined, or what?

DAVE C.B.

Dear Specialist E. C. L.,

Well that rifle's quick. Most every weapon ever made needs the best cleaning job you can give it.

If your M16's has a G, or HPG or RUC (umped) I lock from the back magazine chamber, it means the chamber has been chrome-plated . . . and that's all. Not the bore, or any other part.

This chrome job helps keep the chamber free from getting plated or encased . . . and good deal. It will not keep the chamber from getting powder-baked or otherwise gunked up.

The dirt'll get in there same as

always, and it will still feed up your firing if you don't get rid of it or clean.

Bottom of fact, when a weapon's been fixed for some time, you can't tell by looking whether its chamber's been plated or not. Better way, give the chamber the cleaning job the TM calls for. And keep the habit of scrubbing the chamber area after you clean it for any kind of change.

DO NOT CHROME

One more, the bore is not chrome-plated. Clean it same carefully—and keep a sharp eye peeled for plating.

Half-Officer



CHROME CHROME



... NOT FOR MY GUN!

... NOT FOR MY GUN!

NEVER SWITCH BOLTS

YOUR GUN?

IT'S ALL THE SWITCHING YOU DO TO CLEAN IT!

Does the bolt for one M16 rifle look the same as the bolt for another. Does your for one M16 rifle look like another. But, at the same time, bolts can be fooling.

That can actually mean a change in headspace when you switch bolts. One rifle can wind up with too much headspace and that can lead to a misfire, burned bolt, ruptured cartridge or unextracted cartridge. And too little headspace in the other weapon can make it tough to chamber a round.

So . . . please use to switch bolts—either on purpose or by accident. And you can make the switch accidentally by mixing your disassembled parts with another guy's—like when you're cleaning the weapon.



When your eye can't see in the hair-width difference between bolts for the same weapon—the kind of difference

BUTT OUT!

You know it . . . you know the job of removing the base plate from your M16 rifle is the same in your support unit.

And now that the M16 is getting a plastic stock, it's even more of a must for you to keep a screw-driven, built-in base or what-have-you clear of the screws—especially the top one—that hold the base plate fast.

Some the top screw goes into a nut and another nut in the plastic stock. With the screw out, the nut can get lost. And when this happens, it's a job for your DMI to replace them.



M&O SAVANIGHT HINTS

NEED SOME
RIGHT ADVICE?

Even a satellite view can't help you if you let the elevation right inside on your M&O machine get too unbalanced. And this adjustment part is the No. 1 priority when you're confused with your weapon. So-o-on... :-

1. Always lower the right-hand side before you raise the side up or down. That helps it cool any other you're found your setting.

2. If the tactical situation permits, always hold the right-hand side when you carry or load the M&O, and only then you lift the cover. You don't have to change the setting in the field, either.

3. Always hold the right-hand side before you put your weapon in a vehicle — and be equally careful how you get it in the vehicle, too. Never give our weapon an inch of trouble.



Incidentally, if your view right accidentally does get bumped up, get EM on it, pronto. They're now authorized to replace found parts.

TIGHT IS RIGHT



NOW, I KNOW A COUPLE OF LADS DOWN IN SUPPORT THEY'LL HAVE YOU.

Are the rubber-bush top screws (containing latex) loose?

Those would be the ones that hold the steering and trailing assembly to the spindle on the MCX control for your 2004-11 208-MM roadster v6s.

Your support people can take care of 'em by tacking over a 18-CC plastic bead of sealing compound — the kind that comes under FSM 8030-001-2119 on page 71 of Ford Car 0200-E-A (Jan 08).



They'll remove the screws and lock washers ... clean the screw and hole threads with dry cleaning solvent. Put new

lock washers on the screws ... and then coat the screw threads with the sealing compound. After the screws are put back and tightened, you're in business.

TAKE A MINUTE TO CHECK THE 6 SCREWS IN THE SPOTTING GUN RECEIVER.



GET 'EM STAKED

Hey, roadster aficionado, take a minute right now to eye-check those 6 screws in the receiver of your MCX spotting gun. Loose? Missing? Not installed? They're apt to work loose after a lot of being if the wrong screws are in there and if they're not staked. Get your DS to replace any loose screws with rubber-bush top screws (FSM 8030-001-2119) and to stake each of the 6 screws in 2 places.



ON GUARD



You say the phosphate holds on your MHA bypass-kick scabbard too wets off in place and you'd like it better if the thing goes away default? Tell you when to do.



WRENCH IT UP

Ask your manager to do some touch-up painting. Call reading PDA 471 line

a blue powdered coat of the black liquid that's just the skin. It comes under PIN 8048-940-9340.

There's also something worth knowing about the MHA bypass-kick — the one that goes in the MHA scabbard.

Don't sweat it if the guard breaks. It is because we know that the plank handle cracks, then it's time for a new bypass. But the chance of this happening are on the other side.

One thing you don't want is for anyone to try to weld the guard to the MHA. This could foul up the function of the blade.

HANDLE WITH CARE



Always aluminum is one the best of stuff that takes a beating. And the trigger guard housing on the MTE 12-gage shotgun is made of die-cast aluminum. So, go easy when you handle or move the MTE to keep the trigger guard housing from bending.

DON'T HOOK A MISFIRE



Watch it, you 275-in rocket launcher! If your holding the serial rockets close through with retaining wires instead of starting caps over their die-cast, be real careful when you inspect 'em that you don't snag the retaining wire on the firing wire leading to the rocket motor or on the contact die holding the fire together.

You could cause a misfire if you hooked up a rocket in the launcher with a damaged firing wire or a disconnected die on it.

Here's the safe way to do it: Lift up the looped end of the retaining wire, then push it forward and away to unhook the other end—making sure neither end catches on that firing wire or the contact die.



Then, never forget to check the condition of the firing wire and die as you load the rocket in the launcher.



MILITARY CAREER SMOOTH OPERATORS NEEDED



YOU AREN'T
SO LUCKY
TO SEE HOW
YOU DO
WITH YOUR
ENGINES!



A smooth operator always knows just what to do, whether he's making one with girls or keeping the blower clean shaft on his M115A1 engine from breaking.

The smooth operator sees to it that his M115A1 engine is adjusted so it has a grade life. A rough life puts too much strain on the shaft.

Likewise, he lets his engine warm up 5 to 5 minutes at 800 to 1,000 RPM before he moves out and he gives it a 2-minute cool-down period at 1,000 RPM before he shuts down.

He does these engine and shaft-wearing things because he operates his vehicle like it was in Change 1 (On GO to his TM 9-2300-214-0872/1 Dep 66).

A GOOD
ENGINE
KNOWS...



... AN ENGINE
IS A GOOD
BIRD'S EYE!

A smooth operator always keeps his air cleaner clean, since a plugged air cleaner puts a fatal strain on the blower drive shaft.

One thing a smooth operator will never do—he will never, but never, stop the vehicle engine by putting the foot cutoff out and leaving the vehicle man on a stop. This action changes its major use back the shaft.

The new and tougher shaft, ESM 2004-905-0008, will also break if abused. It is made weak on purpose so it will break and save the blower and/or engine.

If this happens, send out an ESM on DA Form 247.

WANT A SMOOCH
OPERATOR
PARTY CARD?



M113 STALL CHECK FIGURE



Dear Hall-Mark,

What are the right stallcheck figures for the M113 and M113A1? The ETC says one thing and the TM's another. Which is right?

OWEN J. M.

Dear Mr. J. M.,

Notice: The correct stall-check speed range for all members of the M113 (gas engine) family of vehicles is 1500-2000 RPM in 1-4 gear position.

The newer ETC's and TM's will have this figure.

Hall-Mark

TRACK PAD TIP



Dear Hall-Mark,

What is the authority for running track pads on the M113 personnel carrier?

SP5 J. R. B.

Dear Specialist J. R. B.,

There is no special authority for this but since it is needed. Your CD can order it since whenever he thinks that running without track pads will improve vehicle operation.

Hall-Mark

SHOE BLUES

PNV 2550-990-2011 is the number for one complete shoe assembly for any member of the M113/M113A1 family of vehicles. However, the shoes come in 8 to a package, so if possible, order in multiples of 8 and supply won't have to open packages.

The M113A1 exists in your M113A1 cockpit can put your gun on target in a flash. But unless you know how to sit it right you can hang your body in the back or shoot 180 either before in your own vehicle.

The 3 things that can save you up to:

1. Trying to operate with the gun depressed on low.
2. Not understanding how the intercoms work.

Maximum depression for the gun is 15 degrees (200 mils) but it's not safe to traverse with the gun lower than 7 degrees (110 mils) from muzzle of the gun protected by the intercoms.

Under 7 degrees the gun barrel will hit the observer's head once intercoms catch mount. If you lowered the barrel to 12 degrees (200 mils) you would also hit the driver's head once blaze.

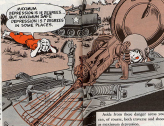
If you tried to fire or not read more depression with your gun pointed in the front of the vehicle, you could shoot out your headlights, hit the right corner of the vehicle, and put holes in the roofboard if it happened to be up.

CLACK
GEORGE!
THE
SUMMERS
AN
ARMY TALK!

REVEAL
LARRY

POWER CUPOLA CAPERS

MAXIMUM
DEPRESSION IS 15 DEGREES
(200 MILS) BUT IT'S NOT SAFE
TO TRAVERSE WITH THE
GUN LOWER THAN 7 DEGREES
(110 MILS) FROM MZL IN
SOME PLACES.



U.S.
13E

Avoid these danger zones when, of course, both covers and doors are maximum depression.

The thing to do is traverse gently in different elevations until you get a feel for how low you can go in various positions before you hit something. Sort of like that way in your economy like you do it already close with the location of the intercoms.

Not understanding how the intercoms work is the other thing that can hurt you up.

As you already know, when you cruise in a complete circle to the left and

a complete circle to the right, there are 2 places where the gun stays like a baby's back and will not go ahead until you press the red override button near the power control handle.



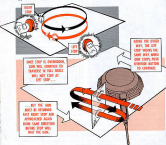
What you may not know is that on low production and certain M113A1's, the 2 intercom points are closer together, giving you a wider area to move the gun without hitting either intercom.

Another thing, each individual vehicle, old or new, varies slightly in the placement of its intercoms, maps, or levers where they are on your vehicle.

These maps are a warning to the tank commander that his observer might be in danger of getting chattered. The TC should not press on the override button until he is sure the gun barrel is riding high enough to clear both the observer and the observer's machine gun.

This system will work OK if everybody remembers that each trap gives protection from only one direction.

After the invisible barrier is passed and you continue moving the gun in the same direction, you will pass through the opposite trap without knowing it. This trap will work only if your gun barrel "hits" it while moving in the opposite direction.



This is the way to remember it. . . . Once you have passed the invisible barrier trap, neither trap will work again until it is hit by a gun barrel traveling in the direction it protects for. A gun barrel going in the opposite direction would pass right through the position without being trapped.

Therein, actually the trap system is done by a man but the position of the gun is what you have to think about so you can catch the Bad Guys instead of your buddies or your own vehicle.

NEW OR USED
EQUIPMENT

CD 850

TRANSMISSION



OLD

PN 400-EN-790
BYE BUCKLE



NEW

PN 400-EN-790
BYE BUCKLE
Bumper!

Supply will no longer have the old line for CD 850 series transmissions. However, they will still be used for the CD 850 series transmissions.

**SAFER
SAFETY
PINS**



Dear Editor,

We know what you mean when you say an unsecured vehicle loaded bridge can collapse when the truck pin safety pins drop out of place. (Page 42, PG 157)

The safety pins stay in place on the BYE bumpers here—now that we've swapped them with a few more of plain old safety pins.

Ralph Isakoff,
Fort Collins, Colo.



THE SWINGER

Try, now . . . backwards. Your standard vehicle operator's beltman's not made for tooting around in circles by holding the end of the upper cord in stability. That's plenty tough on the cord.

Instead . . . carry the beltman in your hand to under your arm.



SAFE TECHNIQUES FOR DISCOMPLACED

"THIS BABY SURE
DOES THE
JOB,
CORRECT?"

"YES,
PROVE TO
YOU KEEP UP
WITH HISK FM."

Coming on the front of the spine comes with the big ears is the ADL/PPI-5 reflector.

Talking over the ducts of the ADL/PPI-5 and ADL/PPI-21, and -28D reflectors, it seems more machinery than the Pipsy-1 and it's not as big as the Pipsy-2.

Yep, the Pipsy-5 covers a little ground, but it still takes considerable maintenance... with coded FM... to keep 'er scanning job up to snuff.

Take the P-281 cable connector...

...and bring the P-281 up to you if it's trying to make direction adjustments without releasing the lock.

It's simple, though, just pull the connector straight out and push the lock from there.



After cutting direction adjust knobhead, push the lock from up and the one lock in.



If you're, remember to have the knobhead at it otherwise when you're on the same side your set or it'll get damaged.

READ
THIS
FIRST



Always point the beam with center in the 500 position when handling the 40,000 connector from the antenna. The flags will wrap around the rectangular reflector probe and will not get stuck in it.

When the beam's not installed, be sure the protrusion over is flipped over the knobhead, making it keep it from that end the.



NEVER USE
DIRECT IN
MOUNT OF
ANTENNA

PIPSY-5

PM POINTERS

There's a little tip on the bottom of the 40,000 antenna reflector... Even though there's interchangeable your best bet's to install 'em the same way each time. 'Cause once the antenna's adjusted...



...it's not to adjust. BEARS AN IMAGE THE SAME WAY.

With the reflector in place, the setting can be a little off when the reflector is removed.

To keep 'em the same, put a small piece of tape on the back end of the top of each hole so you can see to feel which side is which when you're re-installing 'em.

On the 40,000 power cable, you should never put it on the ground unless



the blue wires touch the connector. Without the wires dirt or sand can get inside and short 'er out.

Also, in handling up the 40,000 on the remote cable connector plug take a

look-out as the roller-coiled (spring) ring. If it's showing you know the connector is in place and the pressure lock has a good grip on the plug.

Then there's the battery cable. It can't have the roller-coiled pressure lock as before it's secured to the RT's battery connector.



But, when the battery cable lock is on, keep it snagged up to the dummy plug on the bottom of the CE-2071 battery box. That'll help keep the connector clean and dry.

And, you say you have to pull the end cap and storage bracket out of the MX-7000 signal column assembly and lay it down every time you set up the MT-2058 radar signal.

Don't want to. Here's a way that should help you here.

When you're taking the air down from operation, leave the flanged end of the column in the upright position.

Leave the bracket with the MX-7000 base, telescope and ground pins in the column.



Now, tension the leg links and swing the legs in the opposite direction.



That'll let you leave the bracket with its components stored up the column, safe and sound out of the way of leg-linked feet.

Oh, yes! Wipe the dirt or other stuff off those ground pins before storing 'em. Besides protecting the telescopic lens, you might save yourself from having to-carry an extra mass in orbit.

Incidentally, there's always an electronic mathematician around who wants to make 6, 12 and 24 the same when it comes to the use of an outside power source.

Forget it!

PIPER
7000
10000



Use with a 24 or 28 volt battery unit.

Feeding up the Piper's with a PP-4100 power supply for auxiliary power also uses a 24-volt external battery only.

One last tip....

Keep those caps and covers on connectors and plugs. A dirty connector can short out your Piper.

LUBE IT LIGHTLY

There's likely you won't need more than 15 to 20 CC's to bring the oil level even with the bottom of the lower bolt.

That's what it takes for proper lubing.



HELD IT
ICE TIPS

When you lube ... be careful.

In refilling your standard AM/1000-44 radar set's receiver gas motor grease, watch it. Be on guard against pouring in too much oil.

You could cause leakage and damage to your oil seals.

COMING UP ROSY



Don't mess it.

When this bloming occurs in your set's E-701 radar target indicator, pull the plug.

That is ... disconnect the E701 cable's P2 plug on the CV-3000 signal distribution connector from the B-11111 video jack of the R-11111 or radio receiver. Leave it off until you're sure a clear signal is coming in, then reconnect 'em.

This is in the very latest change on TM 11-5840-206-01 (Rev. 60).



CPS ARE NOW HERTZ

CYCLES
SHAPLES!
THEY'RE
HERTZ
NOW!



MY
PLUGS
DON'T
FIT!
SUTHER
ABOUT
THAT!

You'll be in the driver's seat when you get the cycle per second (cps) converted to hertz down pat. Cps is electrical, electronic and communication circuit hertz that is replacing cycles per second(cps). So . . . instead of words like kilocycles, megacycles and gigacycles, you'll be using kilohertz (khz), megahertz (mhz) and gigahertz (ghz). Of course, it'll be some time for the cycle system to be scrubbed, so you'll still be using it around the world in parts and on equipment.

This hertz term has nothing to do with the car rental business. It is only the meaning of common electromagnetic terms for an early radio wave discoverer, Heinrich Hertz. No. 1 radio guy, you might say.

THOSE SPLITS CAN HURT

Ohh!

In that rubber gasket on your electrical cord assembly for the 50-220/2 FT reinforced doing the splits?

That sleeve—the one that shields a portion of the cord assembly—can wear apart. This doesn't do your TA-100/2 FT line job or TA-100/2 FT crank jack and assembly any good at all.

To remedy this splitting, take a single-edged razor blade or a sharp knife and—working around the seal—trim off the split portion of the sleeve.

Then tape the edge. Watch out for dirt which the cord, or your hands.

By the way, when you're working the reinforced, never let any of those self-reversible plugs slide back into the entrance holes. That'll cause major damage to the plugs and, worse, fly up and crack the release covers on your own eyes.

50-220-2 — 501 10 1000



So . . . make it gentle when you handle those plugs . . . they'll last longer . . . and they'll do better, too.

10X POWER
MORE
PER
PACK

POWER

HERE I
COME, COME!



Like a fresh, power-packed football team coming in the game at half-time, a couple of high-powered suspension dry batteries are fool-proof for portable tools use.

They're fool-proof, ready for longer periods of work-out and can really take the heat.



10X POWER FOR 100-200-300%
USE FOR 24-72 HRS
IN MONTHS



10X POWER FOR 100-200-300%
USE FOR 24-72 HRS
IN MONTHS

These Pack power tools will come through for you without much sweat or temperature up to 140 degrees F.

When you have your sights on one of these long-life batteries go easy about replacing it. Cause the RA-6000 series suspension types have longer temperature and storage life, and do not need to be kept in the cool, anytime.

While they're out in use, they sleep — pretty much holding their rated hours of service life. This being 40 hours for the RA-670 as compared to its nearest, the RA-730, with 20 hours at best, and 75 hours for the RA-650, compared to 50 hours for the RA-500.

To make sure you know you have a suspension battery, the shipping, intermediate and retail packaging are protected, stamped or labeled to wrap or roll better.

LONG LIFE SUSPENSION BATTERY

Also, as storage packages, wrapped type with label, label type . . . TWICE THE LIFE OF RA-730 . . . or . . . RA-500 . . . leaves the battery market. Take it off when you're ready to put 'er in the Pack like #29.

To keep you getting better batteries, fill out the tag (card) that's with each battery. It furnishes feedback info on the battery's performance.

You might look into a chairperson, an emcee, or a Gypsy fortune-teller — but preferably PM by the old-fashioned inspection route (just off big with the AM/FM) it really is.

To keep your Perk-6 ball of personality and in the ready, you'd certainly never stretch that new tapered handle rod, just as we have for it'll go. The early model could last to stop.

You'd certainly not remove your (B)TWO (battery) or (B)A-42 (M)U (long life) battery if you mean to keep your kit out of use for a time.

You've been careful with the maintenance notes along both sides of the inspection manual . . . so no breakage likely for you.

And you'd never wear the decorative accessories . . . one half-hour can put you off-frequency.

If the usual rule goes back in their making, you'd not say no say "no out, that's for sure. That's a job for support.

You always give the air valve a half-turn to the left to open it, a half-turn to the right to close it. Too much turning will raise you the tank. If this gets too, maintain the an Open System in your air.

Occasionally, the air valve should be open when the Perk-6 is operating, to avoid damage from battery pressure.

You've always been careful about handling the cover . . . rough movements can damage the Taping.

But, given it wouldn't hurt, would it — you're careful as you are — to check over some of the potential danger areas on your Perk-6.

IS YOUR OWN BUSINESS . . .

HAVE A

PERK-6

LOOK - SEE



BATTERY

BATTERY — Leaking, bulging, fused to metal.

BATTERY PLUG — Broken.

BATTERY CARD — Broken, tilted.

THE BEST PC IN PMU



WINDSET — Damaged, clogged holes.

WINDSET CONNECTION — Dirty, dirty.

WINDSET LERO — Killed, frozen, cut.

CIRCUIT UNIT — Or receive destruction.

GLASS — Broken, glass cracked, not strong, gummy binding.

FILAMENT SWITCH — Not down all the way.

WINDSET PLUS H — Plugged wrong into test socket.

OPERATING CIRCUIT — Not strong.

DISCRIMINATOR-TRANSFORMER — Keep calibrated.

ELECTRICAL CONTACTS — Dirty, corroded.

CONDENSATOR TUBES — Broken.

WINDSET GASKETS — Leaky.



SAFETY PUB CAN SAVE YOUR LIFE



NO MORE
SAVES. I'M WEARING
INSULATORS.

Electrification boards in cross operation near high-voltage lines is the target of TR 581-181 (Jan 87). The pub gives commanders 5 recipes to cut down accidents, and new equipment just made available backs up the bulletin.

First listed in the safeguards is provision of a dielectric boom shield and insulated link for 8½ lines. The dielectric shield can be placed above the boom and end thereof to fend off charged wires. The link can fit between the boom block and the load, preventing contact on the ground.



That's where the new equipment comes in. U.S. Army Mobility Equipment Command has two kits, each of which includes entire Boom Shield and Link units. For cranes under 20-ton size, PEM 1811-861-8609 gives a Shield, Safety, Electrical, crane boom, insulator, plastic-covered, and a Link, Insulating, Crane load line, with hook and swivel. Cranes 20-ton size and over take the same-size outfit, but under PEM 1811-709-0004.

But just putting the new stuff on isn't the whole story. Training, practice, and respect for the rest of the rules are also needed.

ON YOUR SIDE—

SOMETHING NEW'S BEEN ADDED



You may be a doubter when you look at the control panel of your Chrysler Model 4,000-16, which reveals that life. That emergency stop-control seems to have moved to the right.

You've seen strange things. It has been moved so that a "T" handle could be put there for the new "Normal Engine Shutoff". This new handle is easy to use... DOWN to start, and UP to stop. (You can remember by comparing it to the arrangement of your vehicle—push

down to go and let up to stop.)

Always shut the engine off with the shutoff control before you turn the ignition switch off.

The fuel shutoff solenoid, FSN 2930-514-8715, which was wired to the ignition switch, has been done away with. You no longer need it.

WARNING: Do not use the emergency stop control for anything but an emergency.

TIRE INFLATION RACK

Dear Mr. West,

Our outfit is required to use a tire inflation rack for inflating tires with a gas backing stop. I agree that this rack should be used.

My question is, is there an FSN for such a rack or not?

CHESTER W. S.

Dear Mr. J. W. S.,

There's no tire inflation rack in the supply system. Most outfits I've run into just make a rack out of pipe or angle iron. The metal used is welded together.

Staff Writer



ALLOW FOR EXPANSION



When you fill those 500-gallon vol-
tmetric drums (P/N 8110-751-480) and
all other drums (P/N 8110-751-480)
and all other drums (P/N 8110-751-480),
be sure that you don't overfill
them. Leave a slight head in the top
of the drum a minimum of 1/4-in. to
1-1/2-in. deep to allow for expansion
of fuel in hot weather and at high
altitudes.

You have to be real careful when transporting these drums at high altitudes,
you don't want internal pressure to go over 5 PSI. Use the pressure control
device for drum filling operations any time you're going to be loading the drums
at high altitudes.

FILL THE FORM



Fill out that DA Form 247 Equip-
ment Improvement Report (EIR) and
send it in today to the command that
made your equipment. That's the way to
tell the engineers what goes wrong on the
gear they design. Don't wait, do it today.

HYDRAULIC SCOOP

For some know-how on
the construction and opera-
tion of hydraulic systems
see Training Film 9-2075.
It's 19 minutes long and in
color.

"Sound and sound they be . . . and that's the "X" or the "L" of it. Some unexcused and unexcused duplicate requests are plugging pipelines and working up a B&B's.

Appendix B of TM 38-750 tells where most "backlog" type forms should go. But a copy there tells you that—since the form is transferred to punch cards



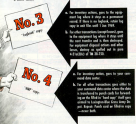
and sent on its way—the filled in "hard copy" forms will be held at the local level.

What's more, para 9 and 11 of DA Cir 700-11 (1) the 071 have some special word on disposition of the 4 copies of DA 3808-7.

For both inventory actions and other transactions (numbers, gains, losses and P&N changes)

Keep in mind, too, that any time the rules permit you to report a transfer of several items on one DA 3808-7, the duplicate copy is retained in the unit warehouse files for 6 months and then destroyed.

Whenever the rules in DA Circular 700-11 conflict with rules in TM 38-750, they superseded the rules in the TM—unless there's a change to the TM with a later date.



a. For inventory actions, you're the equipment log when it stays in a permanent record. If there is no logbook, enter log copy on the end of the TM.

b. For other transactions (inventory) you're the equipment log when it stays with the unit transfer and is then destroyed. An equipment disposal action and other forms, Army or updated, are to go in a file folder of 38-750.

a. In inventory actions, you're the unit record book.

b. For all other transactions you enter to your support documents when the data is transferred to punch cards for forwarding to the DA for "hard copy" and you should be knowledgeable. Don't forget to get logbook, transfer and or library copy—same both.

PLL ONLY FOR MIL

You're the only one who's authorized to maintain the MIL portable device, FM 409-730-1018. But, all you've got to work with are 3 forms listed in Sect II, Ch 5 (copy 044, TM 3-4200-204-15). So, when something you can't fix goes wrong, the only thing you can do is get the MIL replaced with a new one.

A new unit, in fact, is the only answer you have to the maintenance shortcomings (DA Pam 700-10) that are beyond your control.

TOOL

CALIBRATION



Now, you've been trying to take care of those tools in your Mr. J. Cannon Tool Kit, but you may have overlooked TB 750-115 (Sep-87), which has those tools that need calibrating. Here they are:

Item	Kit	Calib. Number Included (bulletin)	Calib. Frequency (days)
Multimeter	6621-441-1438	9-4421-794-50	100
Scales, Dial Indicating	6671-234-4634	9-4471-748-50	100
Tester, Cylinder Dispersion	4910-230-2823	9-6883-110-50	7000
Tester, Internal Combustion Engine	4911-220-4671	9-4911-208-50	100
Tester, Spring Balance	6621-440-2130	9-6621-220-50	100
Test Int., Generator & Voltage Regulator Adjustment	4910-230-7134	9-1-4910-421-01	100
Test Set, Voltmeter-Resist	4911-220-1754		100
Wrench, Torque	5775-440-6334	9-5775-963-50	90

**Excludes the Calibration Kit Inventory*

You don't have to do the calibrating, because your support calibration people do it. But be sure to check those tools listed above to see if they have the ILS Label 80 on them to show when they're due for calibration. If there's no label, better send your Dist. Point 2407 request to support to have it done. TM 38-750 gives the steps on how to fill out the 2407.

GENERATOR BREATHING RIGHT?

When you're doing those PM services on your 1- and 18-KW generators, don't forget the combustion breathe should be checked at least quarterly. More often is even better, especially if you're in a sandy and dusty area.

Connie Rodd's BRIEFS

Does Your
LIFT FOR
CALLING
CONNIE RODD,
WE GOT A
MAINTENANCE
PROBLEM?



New ESC Rules

A change on ESC ratings is in the mill for Compact and Tractor Vehicles plus other equipment rated on age or accumulated miles. Watch for changes to ESC 1M's before making the next ESC rating. Age values should no longer give your rig an Amber rating. The word "rent" will be major comments in Oct. Mag 8-19000 (7 Feb 88).

Modified M700

Your motor gets M700 8-2000-048-2871 (Dec 87) — if you've got a 3-1/2-ton truck with the 15' 485-1 engine or a 2-ton truck with either the 100 480-1 or 100 485-1a engine. Your support will fix up the schedule to cover you (shorter trouble). Catch the slip in the M700 — it should be Dealer Aug. PM 2700-890-6716.

Timing Lights

Been having ignition timing light trouble with your F24 4910-800-2 (15 model)? Replace it with 4910-817-271a, which will get you a SunStar's No. 247 or equal. The timing light is a part of your No. 1 and No. 2 common fuel kit. You'll find this new one listed in SC 4910-81-CL473 (May 87) (No. 2 Common) and SC 4910-81-CL474 (May 87) (No. 1 Common).

Your Wheel Fit?

Your 417 field protective work may be a good fit . . . and it's especially likely to wear out (80%) too large. Could be you've been found a medium (F24 4940-347-4471) or a large (F24 4940-347-4472) 417, when you need a small (F24 4940-347-4473) one. So be sure you're out for the right fit the page 22 of Vol 1-4840-287-15 says.

Solder, Solder?

Having trouble finding an F24 for Solder, Radio Corp. Alloy 50/48, 1/50th ounce. Code 81248 No. 000071, for use with your Soldering and Soldering guided media test unit? Ask for F24 5029-300-4028. You'll find it listed in SC 5029-300-4028 (Jul 87).

One'll Do

No need to repair your GA Form 17 order for the same job to the 40 Publications Centers unless you get the word from them that they can't identify the job you want. They keep your order on file and will ship it to you when they get it. Take a look at Col. Pamphlet 21 2 10 (May 84, page 18-4).

Would You Stake Your Life ^{with one} on
the Condition of Your Equipment?

**PLEASE
GIVE
THIS
MAN
AN
EVEN
BREAK!**



If you've got free time,
please log the parts
properly giving
all the
info
(like PDM
part
numbers,
some status,
etc.)
... and
pack parts
you send
support
for repair
and return
carefully
to avoid
damage
in transit.

**BECAUSE-
MAY BE**

**THIS MAN
YOU**

Get your repairable
items back into the
supply system NOW,
so you can help yourself
later . . .