

Issue 188

PS

TMM Series

THE
PREVENTIVE
MAINTENANCE
MONTHLY

P.M.
HELPS
OFF
TROUBLE
SEE PAGE
29

REGULARLY
MAINTAINING
YOUR EQUIPMENT
CAN SAVE YOU
MONEY AND
HEADACHE

IF YOU DO
YOUR OWN
MAINTENANCE,
IT CAN BE
A REALITY

Bill Brown

TELL THE MAN

The leader of the pack—let's say, you, and outdoors is always in the news.

What do you do when the industry—obviously anybody—finds you that leaves the most about how your equipment works for them? Well, . . . and how the industry, now and maybe, might work for them? Well, . . . and what can be done about it, today, you say, just like you're in there to see?

Well, . . . maybe, and in fact your favorite Uncle Sam, Uncle Sam's on the lookout for your solution. He wants to find out how the equipment you're using works—how the maintenance and supply systems work and with you. After all, you've got those things you've designed for.

Well, . . . your Uncle is all excited and looking over with them to make things better. . . . how do you tell him?

Well, there are several ways, depending on what's the problem. By three—

You can turn to a magazine or, preferably, working outdoors in a 24-hour issue. The problem as you see it and the solution you suggest. Send the form back your local Advertising Commission, 100-10 10th Avenue, New York, N.Y. 10022. All the way to New York, it's easy.

Suggestion	
Name	
Address	
City, State, Zip	
Phone	
Company	
Product	
Problem	
Solution	

The equipment, your message form is the 1981 Equipment Improvement Service, 100-10 10th Avenue, New York, N.Y. 10022. And it's one of which you can see, shipped with them, please, double . . . nothing that will help tell the story, the way to tell why your idea is better than what you're using. The company will accept 100% of the cost to the National Maintenance Forum which has the engineering responsibility for the equipment and service 100% go to the Legislature, State Center, Washington, D.C.

Suggestion	
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On publication, you get 100 copies, 100% of the cost. And it's one of which you can see, shipped with them, please, double . . . nothing that will help tell the story, the way to tell why your idea is better than what you're using. The company will accept 100% of the cost to the National Maintenance Forum which has the engineering responsibility for the equipment and service 100% go to the Legislature, State Center, Washington, D.C.

That's how you tell your favorite Uncle Sam, Uncle Sam's on the lookout for your solution. He wants to find out how the equipment you're using works—how the maintenance and supply systems work and with you. After all, you've got those things you've designed for.

Well, . . . your Uncle is all excited and looking over with them to make things better. . . . how do you tell him?

Let him know—today.



PS

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THE MUSIC STOPPED, BUT IT WAS



OF THESE THINGS

JUST ONE

Once upon a time there were these vehicles between and it rolls out, out,
For weeks and weeks they got along, like gears, in



WE CAN'T
THINK OF ANY
THING I AM
SURE YOU
WON'T

The harmonies would sing sweetly in their grooves: "I Got a Change Out
of You."

And the radio would beam to the harmonies: "You Got a-a something to Me."
The voltage regulators, in harmony, would add: "For God You Under My
Skin, I Won't let Voltage Drop In."



THE
HAPPY
MUSIC

Then, one morning they, the happy little vehicles got it in the gears.
One of the vehicle's harmonies had to be replaced.

Shortly after, the transmitter in the radio burned out. The music had a poorer
tube man. Then, the dynamo got fried up, and the voltage started climbing.



One, two, three and voltage began dropping. In old transmitters EF tubes, and
... well, you probably know the other details.



The "Chair" leader, a driver-radio operator, couldn't figure it out so he got
one thing on his radio set straightened out, sometimes she would kill the
harmony.

RED-HEAT RED-HEAT

You see, this had been you don't
know a vehicle with the radio turned on
to be never did. And to know you don't
get your engine with the radio on.
This, you, could damage the radio via
voltage surge. In the next did.



I'M
SURE
YOU
WON'T
MIND
IF I
MENTION
THE
MUSIC
MUSIC



When he didn't know was that unbalanced harmonies out do in fact, to
make a customer's life miserable in any other driver's hands in balanced electrical
device.



WE CAN'T
THINK OF ANY
THING I AM
SURE YOU
WON'T



Well, there was this of course, one somebody called him "chair" or "chair"
or something like that. And he proceeded to show this young lad in his
gears to twist and pull, almost, as the good sympathy of the musician radio
harmony-groove-voltage regulator.



The music went up on the of his about slowly, steady, vibration holding
down voltage surge. Then he tried his usual trick in on the reason for the
divided unbalanced... unbalanced harmonies. The music went down



WE CAN'T
THINK OF ANY
THING I AM
SURE YOU
WON'T

If one harmony has a full charge and
the other has a full charge, it means the full
charged will it grows to damaged by
even in his to accept higher changing
rate. In the best, the situation? with
a long, you see with the full-charged
and preventing its own from resulting
up in drops.

Which means your generator is
grows both do more work, too, to
make up for the weaker battery. Which
means you're gonna have voltage surge.

WE CAN'T
THINK OF ANY
THING I AM
SURE YOU
WON'T



or high-wattage motors. And that means, simply, that a rundown battery is going to cause a lot of radio-disturbance.

So how do you make sure you're up to speed?

BALANCED BATTERIES

The easiest way is: When one battery goes, replace both with fully charged batteries from the charging rack.



Or, use a hydrometer to get TM 9-6148-208-11 to see if the battery you're having in the vehicle has good charge. A hydrometer specific gravity reading of 1.280 will keep your radio-beaming steady, but anything from 1.250 to 1.300 is acceptable. If the reading is 1.225 or less, take it out and get it recharged, too. Never let a battery drop below a reading of 1.200 (except in the engine, in which case check the TBS).

In any case, the specific gravity readings of both batteries shouldn't vary more than 25 points (1.250 to 1.275, etc.), and their voltage shouldn't vary more than .2 of a volt. Double-check all of page 46, page 54, of TM 9-6148-208-11 for more steps on these variations.

If you get the same full-charge reading from both batteries, you've really got it made.



When one battery goes, replace both with fully charged



However, you also should check the date stamp on the replacement battery—especially when you're using it to power a radio. If the battery's nearing the end of its normal life span (TM 9-6148-208-11 classifies, unless another way),



If there's one main difference in the expected life span of the batteries, you could run down before the other and wear your muscles all over again—even tho' they've both fully charged when you put 'em in. The darn thing is that the negative—1 pole and would read, Filomaco, 5-3-64 if it went in reverse in January 1964. The "1" is the month and the "64" is the year.

If the condition of the battery is questionable give it the high rate discharge test as per para. 13c of Td 54141-200-15.

CONNECTIONS, TOO

Low-charge batteries and a heavy load on the generator aren't the only causes of high surge currents. Loose or dirty connections and poorly grounded straps can overwork your battery, too, and discharge it.



You save away from those off-key notes with tight, clean connections, good, solid grounding, and well-charged, up-to-date batteries.

To avoid the wretched wail of reversed transients following "Thunder God Is My Eye," watch out for reverse polarity . . . or reverse voltage. Make sure you connect the two power leads from the rails to the positive (+) pole of the battery, and be extra careful not to put a battery in backwards.



The big bear down in the act is the voltage regulator. A faulty one, or one not adjusted right, can really wear your rails or generator.



THAT'S THE WAY TO A BETTER LIFE! THAT'S THE WAY TO THE BEST! THAT'S THE WAY TO THE MOST! THAT'S THE WAY TO THE MOST! THAT'S THE WAY TO THE MOST!

The regulator normally is adjusted at 27.5 volts. Your support does the adjusting, and they do the checking when the regulator's suspected . . . not you.



THAT'S THE WAY TO A BETTER LIFE! THAT'S THE WAY TO THE BEST! THAT'S THE WAY TO THE MOST! THAT'S THE WAY TO THE MOST!

A voltmeter, normally, registers more surges from the batteries than the batteries can maintain when the vehicle's idling normally. Which means the batteries have gotta get help from the generator to carry the load. So, an engine idled about 200-RPM over normal (normal would be an auto lock-up) should maintain proper load to meet



radio-current draw. Your support takes care of this, too. If the engine's not idled up, the radio'll drain the battery.

Good cars on low output are better to load on low frequency, decreased rolls and maximum HF output, sluggish or chattering valves, a slowdown of blowers and dynamos. There could be internal reasons in the valve train, but . . . when they happen at the same time, or a couple of them happen at once, suspect low voltage.



If possible, move your car off and have support check you out . . . before damage occurs. Or, try to get permission to move your car to another vehicle (and don't forget to test the radio in the new antenna setup).

Oh, oh, oh, oh, oh-oh! Now's about the time that happy music should be coming through again, shouldn't it?

To keep it that way, grab your bugle and hang onto those notes!



1. If 11.000 rolls for a 100-watt generator, then more voltage because of the recent demand of rolls. Make sure your vehicle has the car if it's authorized.
2. Start your vehicle . . . within ten or fifteen miles. Let the car warm up a few minutes before using it.
3. After the engine at about 2000 RPM and normal for rolls on, the generator will voltage drop when you begin to accelerate or apply constant load. But, and it's a big but, don't over-rotate. Using it too high RPM can cause overloading and other vehicle maintenance problems.

Also, 10- and 14-amp vehicles normally are equipped with 45-amp-hour batteries. However, TB 9-2330-201.2012 authorizes installation of a 100-amp-hour battery, ESN 0140-071-2914, to M57 and M57M 14-amp vehicles having the AMFIRE-06 valve interconnectors.

FOR HARMONY

TO GET THE MOST FROM YOUR RADIO, BE SURE YOU HAVE THE BEST EQUIPMENT AVAILABLE.

1. Use silver electrodes.
2. Fully or six-wire electrodes.
3. Inwardly aligned whip-rod-tips.

NOTE:

IF YOU WILL USE A BATTERY, A GOOD BATTERY AND WIRE CLIPPING IS THE BEST SOLUTION.



GROUND MONITOR

TANKER TOWING



Dear Hal/Mike,

What safety regulations cover towing loaded MHC tankers when they break down on the road?

CWO R. H.

Dear Mr. R. H.,

There're no Army regs that spell out exactly how you tow a crippled fuel-towing tanker, but you can adapt the steps in certain parts to meet the emergency.

For instance, Para 95 of TM 28-11 (Dec 55) and Para 806 of TM 1-8022 (Dec 54) offer helpful hints on general towing.

First, however, check with your local or state motor vehicle people for any safety rules they may have on the subject. Keep your operation legal. In fact, you'd be smart to check in advance on the laws in effect in all nearby states, too, just in case you ever have to road make an emergency, etc.

NEVER TOW A TANKER WITH A CRIPPLED WHEEL OR
TOWER FROM ANY MILITARY SERVICE, UNLESS
THE TANKER IS FULLY LOADED AND
THE TOWING VEHICLE IS IN GOOD
SHAPE.



And here's a couple other tips:

If your crippled tanker has motor trouble but can still be moved, follow the same precautions you would if the tanker could go on its own power. But be sure to read Chapter 4 of TM 28-1115 (Sep 59) w/Change 1 (31 May 63) for the word on this.

Just remember that the dangers that exist in carrying fuel in a heavily MHC are multiplied in a crippled vehicle since the driver of the disabled tanker won't have as much control over starting, stopping and steering. One of the real dangers to watch out for, as you know, is the static electricity that's generated by skidding gasoline.

If the crippled tanker has to be moved with a wrecker (meaning it has to be lifted from or onto to be towed) by all means that transfer the fuel cargo to another tanker, Para 52 and 53 of TM 18-1115 have the best steps on loading and unloading fuel.

Hal/Mike

BE CAREFUL WITH THE LEVER.
OR YOU MIGHT END UP HERE.



A FUTURE AHEAD

Has this ever happened to you after working the front winch of your M35 truck?

Your emergency job went smoothly. You're congratulating yourself on the way you can handle this baby.

Now you're all set to start rolling to home.

You yell at your assistant to check ahead!

You dash around to the front to make the winch ready for road travel.

You grab the drum check lever (usually like, hey, nothing happens. All you get is resistance. The lever won't disengage. It won't slide easy like it usually looks like she should. You push and shove. She's grabbing right.

Then because you become annoyed at this (pink) little thing in your otherwise smooth job, or because you're tired, or eager to get home—or simply

because the lever's never done this before than you know of . . . you get enough. Up you go on the bumper. You haul off and give the lever a solid kick with your foot . . . or maybe you reach for a bar and force it free so that this lever knows who's boss.



In a minute . . . O-B-A-D-I-N-C-E! Quicker's you could weather your fate you had yourself a busted winch.

It's a sure thing. Anytime you pull down, or any other emergency needs on this lever you'll quickly lose the check yells you and you may also break the lever's handle.

It's a real pain for your M35. It means the job's delayed for a major winch disassembly job. Remember and explaining that they give calls for heavy work.

All this can be avoided with patience and a bit of understanding.

WINCH



There are two quick and simple ways to make the drum check lever release or disengage with just normal pressure from your hand.



WARNING!

DO NOT FORCE DOWN LEVER
IF THE LEVER DOES NOT
RELEASE, STOP TRYING TO
FORCE IT DOWN. IT MAY
BE BROKEN OR THE
DRUM CHECK LEVER
MAY BE BROKEN. CHECK
FOR DAMAGE TO THE
DRUM CHECK LEVER
MOUNTING.





SOME CHANGES

Here's a few tips on checking the instruments cluster reading units, switches and circuit breakers in your 2½-ton M100-series vehicles that may give you a longer life.

A 1-amp/25-amp bulb, like the one used in the instrument panel, should be enough to see the reading units like 1-amps in para 17(a) of TM 9-40111 (1) Do 74). A high-amp/25-amp bulb like the 24-amp lamp listed there may damage the sensitive parts of these reading units.

The steps in para 17(b) will show you how to check. The booklet's not going to walk you to get a light from a bulb. The instrument can be tested by turning on the light or other current draw accessories, and a quick look on where the needle moved to. If it went to the left on the gage, the gage is good.

Take in just parts . . .



Check (check) how to the left



Making this one with some of the gages in the system just won't work through. Some of the more common bulbs are 1-amp. To get a good reading from them, turn the meter and run at low idle and the needle should point to the right

side. Even with the lights turned on, the needle should be on or near to right side of zero. Any other reading, unless gage or generator circuit is bad.

When testing the battery-generator indicator (voltmeter) like in para 17(c) (4), first, give the battery a quick run. It's not necessary to put them on the load bank or use the hydrometer; just run on the lights or give to the current run with your size 12's.

If the battery checks out OK, turn on the ignition switch, and the needle should swing into the yellow. With the motor running at low idle, the needle should go into the green zone.

With engine on, needle should swing to yellow



With engine at fast idle, needle should swing to green zone

With engine at fast idle, needle should swing to green zone



If it didn't go on the yellow with the key turned on, the gage is bad. If it didn't go into the green (engine running), check the generator or regulator for defects.

This ought to cut down on the time to take a quick check on these gages. If you want to make a complete check of your instruments and gages on TM 9-4208-100-00 or 101-00.

POOR CONTACTING



WELL, THE OTHER ENGINE WITH A GOOD CONTACT WITH THE CONTACT POINTS.



WELL, I DON'T KNOW, BUT I THINK I'VE GOT A BETTER IDEA.

That's what's been happening to your Blah's characteristic contact assembly. That unit (P/N 200-001-001) is based on many of the designs in earlier produced MTH Blahs (K121)—and they've been giving you some erratic contact work.

So... now, they've been taken off the line production Blahs and given the supply system for good... you can't get 'em no more.

The unit was supposed to have grounded out the engine only when it got overloaded like with a broken fan belt—but it got to work up or down and didn't stop off when it had no business.

Maybe the contacts on your Blahs are working just fine! If so, leave 'em be. When they do start to act up, that's when you take them out of the system.



You can either disconnect the other cables from the electrical system and strip the cable off at the junction where it got applied to the ignition switch-to-magneto cable....



Or... you can take it off the engine altogether. If you decide to take 'em off the engine, then you'll be in need of a spacer used for the cylinder head. The end that the electrical system is now connected to is longer so to secure, make the spacer the contact work up.

You need that, striped, P/N 200-001-001-001 to replace 200-001-001.

When the cable gets stripped off to make to tape up the exposed ignition switch-to-magneto cable... that'll be the end of the contact.



When you have to walk away from an idling truck, tank, crane, plane or what-have-you, it's wise to make it well known to anyone else concerned that the equipment's not safe for operation.

And the easiest and cheapest way to give fair warning is with red flags or red tags . . . that's why in para 116 of *49 CFR 192.1003-1 (1) Max 80's, "Marking of Vehicles and Equipment"*.

One or more red banners decorating the outside, and one on the steering wheel, or the ignition switch, or aircraft flight controls, should do the job.

If you forget to put a "Danger" sign and some helpful red cones along and tries to move it, or fix it, he could do more damage to your rig—and maybe even do harm to himself.

Say your vehicle sprouts a gas or oil leak, its brake, steering, or cooling system fails, or it gets a bad short, or has no lights, or no horn, or some instrument goes on the blink, or maybe

it gets a cracked tire . . . before you go off to repair the problem, or go looking for a way to repair it . . . you put out the red flags. For aircraft, you use those "Remove Before Flying" red warnings.

If you've got no flags, or red ribbons handy, of course, you can rig up some other valid "Danger—Hands Off" sign.

Some guys fix what you're working on a vehicle or aircraft and the vehicle moves . . . but fix it, or make it, another way—so nobody else can try to start it, or move it, while you're gone.

Some places use a special red "Don't go" tag.

The tag has space for noting the exact driver's danger, for the driver's name, and other info. One tag is tied handy to the steering wheel, or the ignition switch, and another is attached to some conspicuous location on the outside of the vehicle.

A tag on the ignition switch, or the steering wheel, can help warn—even a sign.



FUEL TANK

A good way to handle a vehicle or aircraft with a gas leak is to park it in an isolated area, away from buildings, disconnect the battery ground lead, stick on the danger markers, and then have the gas drained (with a fire guard standing by), if possible.

If you can't move the vehicle, the next best thing is to park a leaky ground readily (especially if you're in a populated area) until you can get things under control.

URGENT SPEED

With aircraft you've got to be especially careful with fuel. Read all the

stuff in TM 10-1187 (Rev. 68) "Procedures for Handling Operations for Aircraft Fuel." Shows your vehicles and rights on fuel. VI shows why.



ON THE HORN

For when you have a leaking while you're on a public highway you've got the highway warning kit (flags, cones and reflectors), and you can "on the horn" in para 25 of AR 385-55 (4 Dec 61) "Prevention of Army Motor Vehicle Accidents".



Hey, Joe, you fix maintenance problems—then come on out every hour on your trucked vehicles!

AFMO (4-2800-216-28) (10 Jan 64) brings the good word. Your trucked vehicle mechanic disconnects the cables from the horn. He'll pull the horn wiring into the hull interior and cover the wiring and connectors with electrical insulating tape.

He won't take the horn off the vehicle. That'll be done only when the

vehicle's absent.

Course, this AFMO won't apply to the internal warning horns such as you've got on the M50A series. The internal horns stay put.

Also, this is not meant to apply to personnel carriers loaded with troops and some other vehicles. The idea is that vehicles with troops need a horn to warn when they're going to let the ramp up or down.

The horns are working on carriers M50A, M51T, M116, M19, M75, and M76. Likewise for the M54 mortar carrier and the M54, M576, and M58 VTR's. The M50T, M116 and M58 AP vehicles will also keep their horns.

If your trucked vehicle has a horn and it isn't in this list, it gets disconnected.

CALL US AT BIRMINGHAM NEW YORK.
FOR MORE WE MEAN TO WIN!



PERSONALITY
T

M113 PC TOW HOOKS

WON'T THAT
HELP YOU
MOVE?

I THINK
LET'S A
NEW
TOW HOOK

If you play football you may use the device "T", like this——but when you really need it is with the tow hooks on your M113 PC and members of its family including the M117, the XM800 and the M153.

When you're being towed you need the front hooks mounted like so——upright so it comes away from the vehicle like this. But all other times



mount the hooks mounted like so——with the handle pointed in, toward the vehicle, like this.



You don't need to be a genius to figure out why——but

If you leave the hooks in the first position, the wire runs like down away from it's lowered, and the wire runs can't take much pounding.



To use the device  forward with the handle except when you're being towed. Give your wire vehicle handle this way and you won't break it. Also, to keep your wire more healthy, put it lower the landing position every time. Drop it hard and you beat up the things.

MORE M113 PLUG POOP

In IS 134 (page 4) we had FMN 2920-078-0728 as the stock number for the speech plugs in your M113 personnel carrier and FMN 2920-044-1150 for the gaskets you need, one for each plug. One little info was as right as rain falling gently on the plains in Spain. Now one FMN will do the work of two. Ask for FMN 2920-071-2081 which will get you the extra speech plug and also the gasket. Progress, it's wonderful!

FOR INFO-SEE-FUN
CALL GUY RICHARD AND
MY BIRD, THE GUY.





The BATT-GEN indicator on your M50, M50A1, and M50A2 tanks will save you lots of grief if you know how it works.

On 'vulgar' tanks, if you don't know what the indicator indicates you can ruin your starter and relay. See your TM (N-1150-111-00 for the M50A1 or TM N-1150-114-00 for the M50A2) for the right way to start these vehicles.

SEE PLATE OF COLORS AND LOCATIONS THAT WOULD LIGHT IN DANGER...

1. If the BATT-GEN needle drops in the red part or the left above you flip on the master switch. Don't try to start the engine.
2. If the BATT-GEN needle crosses yellow or green with the master switch ON, quit cranking but stop immediately if the needle falls back into the left of some portion of the red segment. If you're cranking and the needle moves to the left of the center of the red section, stop cranking, right away.



If either 1 or 2 happens, don't try to crank until you notice:

Gas another tank to show you, or—

Get your batteries recharged.

Here're a couple other things your BATT-GEN indicator will tip you off to—

—If you get stuck OK but your needle stays in the yellow and won't move on to the green when you leave your tank or a few lifts, your generator's not charging, so tell your company maintenance.

—If, at a high lift, the needle moves into the last section of the extreme right, shut OFF your master switch at once and tell your company maintenance. It means your generator is dangerously overcharging. (This extreme right section is red on some BATT-GEN's and green on others. If it is green, the danger section is the part to the right of the white dash.)

The BATT-GEN needle tells you all you need to know to keep out of trouble. Just take a look and you won't get on the hook.

LOCK BUMPERS

WHY DO LOCK BUMPERS GET CAUGHT EVERYTIME YOU OPEN THE DOOR?

Dear Editor,

If the personnel doors on the M88 recovery vehicle fall back hard against the lock leg on the hull (unless they're opened), the outside door-lock handles get caught in the middle and bent out of shape. Then they won't slip over the leg to keep the heavy doors safely locked in the opened position.



Since an unbent, open door, in a serious safety hazard, the handles are always having to be removed and re-shaped.

Our idea is will protect the handles, and save maintenance work:

Remove the handles and weld a steel bumper (square-steel) on the inside of the handle's base and where it meets the leg.

Then if the doors run back into the vehicle the bumper breaks the handle and keeps it from being flattened out.

We used flat stock steel, 1" wide, 1/2" thick, and 11 1/2" long.

R. McLaughlin
Abraham Finberg School,
Ind.

1 1/2" x 1/2" x 11 1/2"
1" WIDE, 1/2" THICK,
11 1/2" LONG



Old Man—Good protection. And, a good way to avoid crushing the door's lock-handles is to hold the handles in the upright position until parts really to land or lighten the handle.



Having a hard time matching up the T numbers and the M numbers on some of the less big 'chrome' items? Well, no problem. This little guide rolls up the facts:



All of these tank-browsers are standard items now as they go by their M numbers. Some of the TM's and DA Form M-1-1 (guide index) will give the T numbers, though, as you have to know both.

M108 TRACK TOPICS



In all of the T8E 9-2110-2117 series sprockets, the track on your M108 and M109 HP hardware looks like it's on wrong because the chevrons point up instead of down when you look at the vehicle from the front end.

Well, if it's on the way it shows in the T8E's it is wrong and needs to be changed.

The chevrons must point down (when you look at the vehicle from the front) for two reasons—because the track always itself hangs that way and because the track operates with push against the thick side of the sprocket tooth socket. If you had it reversed, as the sprocket teeth made contact with

the thin side, the socket would naturally wear out quickly.

So—no-o-o, if your track is on wrong, reverse it. M108 vehicles with serial numbers 147 and lower, and M109 vehicles with serial numbers 85 and lower were issued with the tracks on wrong, and they have to be changed. Likewise, some tracks that were on right were changed so they'd look like the pattern in the T8E's and they also have to be put on the other way. Watch for it in the very latest revised T8E's.

By the way, when you change 'em, lay up the track pin across top and from 100 to 101 back to 175 to back to 10, no matter of they hold better.

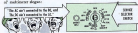
THE MULTIMETER TESTER



The wrong kind of voltage can blow up your MULTIMETER FOR multimeter and up it can blow to the repair shop.

That kind of error may be easy to do if you're the guy who makes the parts, but it's downright impossible to you when you have to use the multimeter to test a piece of equipment.

But don't despair, ITWare. You can head the situation by signing this kind of multimeter slogan:



Which means: You can't measure DC voltage with the 51 polar switch of the multimeter set for AC voltage measurement . . . and vice versa.

So-to-speak, check your switch setting first, and then measure the voltage.

Checking up the AC circuitry with a [DC] job kinda kills the BL circuit. With the BL gone, the AC meter register ain't show, and, presto! no meter reading. This could lead you to doing the second thing to get a reading—like going down the road. All that helps to do, really, is to burn out the meter.



Which means you gotta be completely unsure if you get no meter reading. Symbol that which setting quick-fix!

The result gives us you the other way, too, like, when you try to measure AC voltage with the switch set for DC readings.

You may go off without damage on or two times, but you can burn out the BL circuit or the meter movement by sticking for AC with a DC setting.

Now for a hint in another direction.



The battery feature is kept constant of the UT200-100 after several other use. This happens mostly with the BA-1471 meters and only in a white with the BA-1471 /3) circuit.



If your battery don't have a long life, measure them. Then, push the meters toward each other—easy-like, because it only takes slight pressure to do the job.

Keep when you've got enough gripping strength in the contacts to hold the battery in place.

Sometimes the contacts are spaced by one hair's-breadth longer than the other. One may be just long enough to push the contact away from the metal RA-16. So-o-o, use their tongues-with-your-hand when you install 'em.



Also, the tongues of the RA-16s are slightly rounded, so use the contact. Be sure they're lined up right before you put the cover in place.

A final reminder: You've still got the old problem with the trillion-placed contacts of the release switch. The metal of the contacts wears off at the switch springs close around the circuit on the printed circuit board. The metal deposits flakes between the circuits of the board, and eventually short the board.

Your first clue to possible shorting will be abnormally high readings on DC voltage measurements. Here's you get the high readings, send the mechanic into your support for cleaning.

You'll get it back a lot faster than you will if you wait until the mechanic shows back out of business.

CHECKED YOUR TUBES?

Have you ever noticed how some eyes try to make a mountain out of a mole hill? Here you have!

A radio receiver, transmitter, or other electronic gear starts actin' up. Then, without giving 'er the once-over, they figure she's real good . . . a job for support.

That's why support, of late, has been pushing you back in A-1 shape by simply replacing a bum tube or two, which is an organizational sham.

Guess you wouldn't believe an important piece of equipment for such a minor repair. Not while you have your handy Electron Tube Tester (TV-711) Test Kit, and a copy of the TM 11-6825-274-12 (14 Jan 68), operator's job, handy.

AN GRC-26D ARC-OVER



Dear *Half-Watt*,

We've got a problem with the transmitter lead-in wire, from the base of the antenna to the GRC-26, when we use our *ANTENNA* GRC-26D with an radio in the 1.8-3.0 band.

When you're transmitting, the wire arc between the shifter and the GRC-26 antenna tuning unit. The equipment works well on other bands.

What can we do about this wiring?

W.F.L.A.R.

Dear Specialist J. A. B.,

You didn't say so, but I assume you have the trouble when you use the whip antenna. It sounds like it, from what you describe. As well, the GRC-26D should not be used below 1.8 megacycles when you use the whip.



The W-128 transmitter lead-in wire may cause an arc if the insulation is cracked or worn. Which means you should replace it with a new one.

As a field expedient, you can substitute a foot-long piece of RF Cable RG-6, IAN 0440-100-0007. RG-6 gives good results, but you gotta remove the outer cover and shielding before you use it. Also, when you replace the cable, get maximum clearance between it and the console and junction box on the shifter wall.

As a final precaution, your output power should not exceed 400 watts on the low frequency band . . . since that's when you've got a high standing wave ratio problem.

Half-Watt

And when a heavy load is placed and fastened on the truck...

After that heavy amount of weight is placed on the truck, it's about to go for the truckload.

LOCKY HERE!

Yep! With the loads of pushing and unpushing, transporting and getting on the operation, it's easier than slipping on a banana peel to forget the lock on a couple' year transportation use.

But never do it! Big damage can give you on the other end of the ride. Also, you can stay with your TT-000/00 or TT-001/00 transportation also into the maintenance shop-keep it if you forget to place and carriage lock and locking plate.

On the TT-0, the locking plate is your help to worry about. But your driver support has to position the plate on the TT-00. The plate blocks the carriage from driving gear when it's in position. A quick look will tell you whether it's ready for business or shipment. Just take a peak down the hole between the carriage and the plate.



The TT-0's got an additional lock—switched on the right of the motor and



lock switches. This keyboard lock is held by a lockset and you can't cover the front of the set when you're going to transmit.

Normally, the voice message multiplexor wrap from one spot to another, the carriage lock alone is OK and you can forget the blocking plate. The long loads, or the pushing, the plate and lock must be in place. The plate lock gets locked up every time.

HERE!

And that's the way you'll get the most out of the trip. That's what most people want.

And that's the way you'll get the most out of the trip. That's what most people want.

It's so important to get those holes off as to get 'em on.

The plate gets damaged from slipping up and down during transportation, and its lock holds it down. The lock is on the right end of the plate—held in place by a wingnut. You lock it up by turning the hex key to an



the plate is a down position.

Then, loose the wingnut, turn the locking lever clockwise till it engages the nut on the plate, and tighten the wingnut. Reverse the procedure to unlock it.



The carriage lock holds the speaker carriage to the left during transportation. To lock or unlock it, turn the wingnut on the left end of the carriage



nut, using the locking lever up or down from the nut, and tighten the wingnut. First, too, with the carriage return on the carriage it is position in the far left.



Engaging the locking plate on the TT-0 is no easy to taking off the two locking horizontal nuts. Slipping the plate over and away from the driving gear, and releasing it with the two nuts.

TO RELEASE, PUSH!

To push.

It only takes a little nudge to remove the H-63 handle from its cradle on the TA-43/PT and TA-513/PT airplane seat.

Some folks found it on the hard way. Like, they used a method a second with a straight-up pull, but they sprung the handle, stretching springs on the motor cradle. So they had a lot more time cutting the seat off for repair and waiting to get it back.

To not to do!

... Pull!

Like, wrap that fly-rod-like aluminum band over the handle, push and handle slightly toward the remaining springs, rotate the motor and (where the cord is), and out comes the handle.

It's an easy as falling off a gun tube.



Reverse the process to replace the handle . . . uh, push and let it down . . . and you'll save even more springs.

Remember, too, that the motor end of the handle always goes in the cradle opposite the spring side. Never damage to the cord.

Motor point: The leading gear mesh on compressed-like on the cover's inside edge. It's up to you to supply the protection. Which means you gotta watch it so nothing hangs into the gear and this area. A watchful eye pays off by keeping the seat out of the repair shop.

A final note: Replacement covers for the TA-43 and TA-513 come without the metal guides for the remaining springs. Which means if they can't be recovered from the old covers, they'll have to be fabricated.

BEWARE OF LUMPS

WOW! WHAT A GREAT DAY! WE'VE FOUND THE PERFECT PLACE TO STOP FOR LUNCH.

WELL, THAT'S A GREAT PLACE, BUT...

HEY, LOOK! THE TANKS ARE BEING MOVED AWAY!



Lumps, and more, can occur real easy for the Joe who forgets to lock his radio set components in place when he mounts 'em in a vehicle.

First it, most often one Joe is walking around with the impedance of a radio component in the back of his skull. And more are not walking around.

All it takes is a fast-riding component and a fast-stopping vehicle.

To avoid that sticky mess, the simplest thing to do is make sure your mount locking device, or clamp, or whatever, are snugged up tight before you even start your vehicle.

Loose components that can rattle each other up and mangle cables, connectors and connectors . . . especially the doublet cables of the ANVORC-3 wire radio set configurations.



WE SHOULD ALWAYS LOCK UP AND TIGHTEN BEFORE WE START OUR VEHICLE. OTHERWISE, WE'LL BE IN A REALLY TIGHT SITUATION.



. . . And that caution goes for Joe about any radio set in just about any vehicle.

JOE'S DOPE

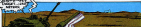
THE SALVATION OF HUBERT V. PFTHRR (hub?)



What are you doing in the back pocket?

What's your name?

"Hubert" is not in order to pronounce or avoid other name parts like "Hub" (from Hubert) and "Hub" (from "Hubert")



HIT!

ARMORED PERSONNEL CENTER

IDENTIFIED

STOP!!

Hubert's identity in the target

Look for signs of life... let's see what they have to say

Hubert is not in the target... but from behind that target!! That's an order...

Hubert is not in the target... but from behind that target!! That's an order...





WHY ARE YOU SHOOTING HIM — A PARACHUTER FROM THE 101ST AIRBORNE DIVISION?

NOPE! I WANTED TO KNOW SOMETHING ABOUT THEM — THE WAY THEY PARACHUTE.

LET'S GO ON TRAIL! THAT'S ALL YOU NEED TO KNOW!

A PARACHUTER? YOU CAN'T BE! PARACHUTERS DON'T SHOOT!



THEY COME DOWN FROM THE SKY! THAT'S WHY THEY SHOOT!

YOU'RE RIGHT! I'VE NEVER SEEN A PARACHUTER SHOOT! BUT YOU SAY THEY DO!

WHAT? I DON'T KNOW! THE 101ST AIRBORNE DIVISION!

I DON'T KNOW! I'VE NEVER SEEN ONE!



NOPE! THEY'RE NOT SHOOTING! THEY'RE JUST PARACHUTING! THAT'S ALL YOU NEED TO KNOW!

NOPE! I'VE NEVER SEEN A PARACHUTER SHOOT!



NOPE! I'VE NEVER SEEN ONE!



SHUT UP! YOU'RE NOT LISTENING!

NOPE! I'VE NEVER SEEN ONE!



NOPE! I'VE NEVER SEEN ONE! I'VE NEVER SEEN A PARACHUTER SHOOT!

Joe's Dope Sheet



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



ARE YOU
SERIOUSLY
SLEEPING?

WELL, I'M NOT
SLEEPING... BUT
I'M TRYING TO
KEEP MY EYES
CLOSED... I'M
TIRRED... I'M
TIRRED... I'M
TIRRED...



LET'S GO
ABOUT A
LITTLE FURTHER
TO THE EAST?

OH, I'D
LIKE TO... BUT
I'M NOT
SURE I CAN
DO THAT...
I'M TIRED...
I'M TIRED...
I'M TIRED...



HEY, ARE
YOU
SERIOUS?

WELL, I'M
NOT
SLEEPING... BUT
I'M TRYING TO
KEEP MY EYES
CLOSED... I'M
TIRRED... I'M
TIRRED... I'M
TIRRED...

CLASH



YOU SHOULD
NOT
WARRANT
YOUR
LIFE
FOR
A
LITTLE
LAND...



"Pillbox"



YOU SHOULD
NOT
WARRANT
YOUR
LIFE
FOR
A
LITTLE
LAND...
I'M TIRED...
I'M TIRED...
I'M TIRED...



IF I'M NOT A
SERIOUS
SOLDIER... I
MIGHT AS WELL
BE A
LITTLE
FURTHER
TO THE
EAST...
I'M TIRED...
I'M TIRED...
I'M TIRED...

The page 20

“GRABBY! ON THE
LEFT! IN THE
GRASS AND PLANTS
WE’RE GOING TO
“LAMB-DOWN!”
“PLEASE LAUNCH
... PROCEED!”



“OH WOW! WE SEE AN INTRIGUING
“MUSIC” THAT CONVINCES
THAT “MUSIC” IS THE “MUSIC”
TOLD THE “MUSIC” THE
“MUSIC” “MUSIC” WAS “MUSIC”.



“WELL, YOU’RE NOT THE
“MUSIC” “MUSIC” “MUSIC”
“MUSIC” “MUSIC” “MUSIC”
“MUSIC” “MUSIC” “MUSIC”
“MUSIC” “MUSIC” “MUSIC”
“MUSIC” “MUSIC” “MUSIC”



“WELL, YOU’RE NOT THE
“MUSIC” “MUSIC” “MUSIC”
“MUSIC” “MUSIC” “MUSIC”



“WELL, YOU’RE NOT THE
“MUSIC” “MUSIC” “MUSIC”
“MUSIC” “MUSIC” “MUSIC”
“MUSIC” “MUSIC” “MUSIC”
“MUSIC” “MUSIC” “MUSIC”
“MUSIC” “MUSIC” “MUSIC”



“WELL, YOU’RE NOT THE
“MUSIC” “MUSIC” “MUSIC”
“MUSIC” “MUSIC” “MUSIC”

“WELL, YOU’RE NOT THE
“MUSIC” “MUSIC” “MUSIC”
“MUSIC” “MUSIC” “MUSIC”
“MUSIC” “MUSIC” “MUSIC”
“MUSIC” “MUSIC” “MUSIC”





WALK WITH THIS POLYMER. THE POLYMER WAS COATED BY A MAN BEHIND IT THE BEST POSITION. SO... THE POLYMER MUST BEAT!

WELL, THAT'S A GOOD POINT!



THE CLARE OF THROUGH AN INVISIBLE MAN. THOUGH EVERYONE CAN HEAR THROUGH IT. ALL THAT'S LEFT IS TO... THAT, THAT WAY!



WE KNOW ALL THIS BUT THE PROBLEM IS HOW TO GET EVERYTHING DONE EVERYTHING WE'RE TRYING TO!

WHAT? YOU JUST WANTED TO BE ASSURED WHEN THEY GO. AND THEN YOU'RE SAYING YOU WERE ASSURED AT THE MOMENT. BUT YOU WERE ON THE BALL!



WELL, ALL THIS APPLIES TO MORE THAN JUST BEHAVIOR. THERE'S A VERY SIMPLE SOLUTION FOR THE "HOW" PART. YOU'VE GOT TO USE THE SUBJECT - YOU ARE THE SUBJECT.

WELL, THAT'S A GOOD POINT!



WELL, THE POLYMER WAS ONLY THERE TO BE USED AS A COVER FOR THE POLYMER. SO... THE POLYMER MUST BEAT!

WELL, THAT'S A GOOD POINT!



WELL, THAT'S A GOOD POINT! YOU'VE GOT TO USE THE SUBJECT - YOU ARE THE SUBJECT.

I AM!



That night...

YOU IN THE END... YOU IN THE END... YOU IN THE END...

PLEASE... PLEASE... PLEASE...

WELL, THAT'S A GOOD POINT!



"SPIN A WINNER"

Dear Windy,

How can you win with the propeller spinner on a Lockheed T-44 engine? Using stainless steel reinforcing plates on one that's cracked doesn't seem to solve the problem.

Is there a device fit that really works?

SP-4-C.R.



Dear Specialist A. C. R.,

There isn't any designed spin. Project 44-4553 (7806-3) in Chap 1 of TM ANM 25-3-1 (9 Apr 65), which called for use of the 354-in reinforcing plates, is being taken out of the IIS Digest.

Your best bet is to play the inspection game to the hilt, by carefully inspecting the spinner every Daily, Intermediate and Periodic.

This means checking the over bolt-head mounting screws and, after an engine freshening, making sure that the propeller blade balance weights don't hit the nut plate that holds the nut-axle screw and clamp on the spinner shell.

Even if you had a cracked spinner, it got replaced with one listed in TM 11-2110-201-207 11 Jul 65—press.

Windy

AIR MAPS



Dear Friend,

Can you give us any information or lead to get unaccounted status on a missing pilot? It shows some way to make out one map which will give us better change to find them on unaccounted situations?

Operations Office Incident#

UNIDENTIFIED AIRMAN... BUT
TRACING FROM AN AIRMAN...
PARTIAL VIEW OF MAP... (PARTIAL
EVIDENCE FOR THE AIRMAN...
SECTION 7 YEARS 1988.



THE ONLY
WAY TO
FIND OUT
IF A PILOT
IS MISSING
IS TO CHECK
THE STATUS
OF HIS
STATUS
ON THE
STATUS
OF HIS
STATUS
ON THE
STATUS
OF HIS
STATUS

AIN'T AUTOMATIC



I DON'T
REMEMBER
WHEN THE
PILOT WAS
LAST SEEN
IN 1987.



THE ONLY
WAY TO
FIND OUT
IF A PILOT
IS MISSING
IS TO CHECK
THE STATUS
OF HIS
STATUS
ON THE
STATUS
OF HIS
STATUS



THE ONLY
WAY TO
FIND OUT
IF A PILOT
IS MISSING
IS TO CHECK
THE STATUS
OF HIS
STATUS
ON THE
STATUS
OF HIS
STATUS



THE ONLY
WAY TO
FIND OUT
IF A PILOT
IS MISSING
IS TO CHECK
THE STATUS
OF HIS
STATUS
ON THE
STATUS
OF HIS
STATUS



Dear Sirs,

Making a neck check of the exhaust valves in our Bird Dog TD-11 engine for routine had an annoying ear-ache for awhile. There wasn't any way in the world to get a gage into the cylinder exhaust port to make the .000-in. minimum measurement called for in TM 91-1730-203-20 (Jan 54), on a periodic inspection.

What with our Bird Dog using 118/141 inlet valves and valves, P/N 40011 and P/N 52949, in the engine we needed a simple way to check routine on every period.

So, we made up a checking gage from a commercial 1 1/2-in. 95-degree offset wrench.



By cutting off the 1 1/2-in. end and changing the 95 to 120 inch and to 200 inch, and checking the angles with a sinebar, we had our gage.

Now, checking the exhaust valves is a breeze. If the gage doesn't slip over the neck, that's OK.



Donald J. Stone
Ft. Belvoir, Va.



(The Note—Good that you'll never of the checked-up valves, P/N 42944, get into your Bird Dog engine at overhaul.)

ONCE MORE'S ENOUGH



Dear Editor,

The rail wheel spring on our Bird Dogg 6041 really takes it on the chin, littol wonder. The 55-1504-102-10 120 has 641 calls for a dye check or magnetic particle inspection every third period.

To make the dye permanent, check you have to wrap the joint from the spring using paint remover, lacquer thinner and a wire brush. It takes a lot of elbow grease to get down to the parent base metal.

Then there's the painting and repainting job to do after the check—more elbow grease.

That's the way it was here until we hit upon the idea of using a light coat of bird engine oil, instead of paint, on the spring.

Using oil is a mile under there we only need ordinary cleaning solvent, not paint remover, to take the oil off. You also get a more thorough check, since no paint is left on the spring.

The oil treatment works like a charm.

Robert L. Phillips
St Louis, Mo.



(Ed Note—That sure is a shame. But is, your idea may even go in a revision of the Bird Dogg organizational maintenance job.)

PAINT 'EM WHITE



You say your base is not white because you're using your olive green AFM-1 flying helmet? And you'd like to paint your briefcase, passport, white to reflect some of that wild blue head?

Well, don't break your carburetor plug in and send us your publication frequency for a reading on 24 Oct 1988 (24 Sep 88), "Repainting AFM-1 Protective Flying Helmets With White Primer".

Repainting is done right in magazines, don't you?—and all the info you need to do the job is down in black and white, including PMP's for the paint. Major commanders can order helmets painted OG for tactical or training temp missions.



AIRCRAFT PUBS SHUFFLE

TM 55-1510-204-20PMP

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

The preventive maintenance services are being yanked out of the aircraft tech manuals and are being pulled as separate TM's in card form punched so you can keep them in the log book for each aircraft. They'll have numbers like this: TM 55-1510-204-20PMP (for Preventive Maintenance Daily Inspection Checklist), PMP for Intermediate and PMP for Periodic.

A LIT DAB'LL DO YA!

FIREPOWER



WE'VE GOT THE
BEST GUN ON
IN THE WORLD! They
call it the M16. And
it's Army.

No, maybe the gals won't protect you if you see this stuff. But a couple all-terrain machines gun'll just about keep you . . . like, say, the 7.62-mm M16C used on the M1 and M6 helicopters, automatic subguns, and the .40-cal ANM1 used on the M11 PGM for OH-1A aircraft.

Think, this here-new new semi-fold tube all (S&W) M11-P-60000's made specially for you. You can get it in a 4-oz tube (PSN 9150-000-3100) or a 1-oz tube (PSN 9150-007-4211).

Use it instead of regular tube all on these new weapons whenever they need moisture protection against wear and rusting, or against the kind of rusting action you get on a rainy flight mission.

All you need is a dab in the right place—bolt connecting surfaces, operating rod rollers, feed cams and rollers, firing pin bearings, and such-like.





WORTH A LAST LOOK

Before you get around to lifting the M100 (M100A1) rocket launcher with your handling team (FM 9-15.478-542), take an extra second to check the position of the lock handle on the carriage assembly.

Once if the handle's not locked where you desire, the suspended motor could slide forward out of the handling beam and into considerable.



GO 80,

Traveling beam drive ends of both M100 and M100A1 rocket launchers call for Grease-Accumulator and Multi-Lub (M44), according to EO 9.428.1. 289-17 011 Apr 83. Right?



No, what happens? The M100's come through OK with GSA, but the M100A1's heavy GO 80 is heavy Multi-Lub got stuck in there, which creates a problem. The GSA'll stand up to any temperature of climate, but GO 80's likely to lock out.

To play it smart, get your support guys to drain out the GO 80, clean the launcher drive assembly good and then repack it with GSA.

KEEP LAUNCHER LAUNCHING



OK... so your support people have applied M100-0-079-005-0018 to your M100 (M100A1) rocket launcher. And the launcher is better for it—what with getting a new steering mechanism and slip clutch assembly.

But the M100 doesn't have you out of the picture. No 06-0-0-0, 005.

Once your launcher has been M100'd you want to remember these things:

1. After rotating the deck to high elevation of the handling beam for clearance or alignment, set up the engine speed to between 1800 and 2000 RPM.
2. Don't let the engine speed get any higher's 1800 RPM while clearing and separating the beam.
3. Use the fire gun only when lowering the beam.
4. Don't clear and align the beam until it there is a cue or you see the end of one leaving the steering mechanism. You want a complete raising and lowering cycle to one time.
5. Don't do any real handling when the handling beam is locked in the forward lock. If you do, you might end up with a bent ball screw shaft.
6. Before you operate the ball screw steering mechanism, take the beam part of it with high pressure oil that the way it will and show you in Part 24, page 5, fig 124.1. In Group 1 to M100-0-079-005.

SCRAM!



THE
NEW
TRUCK

IT ALL DEPENDS

HEY! NEW TRUCK. SHOW ME HOW TO TAKE CARE OF THE CRACKS. I'VE HEARD YOU CAN TAKE CARE OF THEM—CAN YOU? (PAGE 11)



What's it like you can depend on them for a time or two—the new crack blocks on your Hawk tracks don't look like they've broken out of the factory.

All you have to do is drive the loader tracks over some small stones and the hole (it's about 1/4" in thick rubber covering on the metal part of the track block) will be cut. And the next thing you know the rubber gets chewed up and starts wanting to fall off.

But that's no reason to let go with a few choice words about the rubber . . . and then maybe replacing some new crack blocks. The metal chewing through the rubber won't hurt anything—believe it.

You want to patch the damage for now. And you don't have to wonder how much a charge should be when it's hot up before it's done for a new crack block. The guarantee disappears when you read TM 9-2630-209-14 (Oct 62).

TRUCK
ON
CRACKING
AND WORN



THE NEW
TRUCK
TRUCK

The TM is to help to keep it in title: "Maintenance, Inspection, Cleaning, Lubrication, Servicing, Disposal and/or of Solid-Rubber Tires and Track Components"



MEET "HERCULES"



It's the guy like water, and you in your Hawk history, who says he doesn't need any help taking equipment and equipment. After all, he tells you, the one you see suggested.

They can see, but they're not ready for what "Hercules" is about to do to get you ready to make some blocks on the AMI MFG CO. Hercules—all but drop the one on the leader of the Hercules.

Yes . . . could be nothing will happen to the one on. Or maybe the one will pick up a small dose on you, too.

There's also a chance that some of the electronic gear inside the case will get heated.

Of course, whenever you have to lift any one of these a few feet off the ground, you grab the first one going by and ask him to share the load. It isn't hard trying to explain how a man can look a bearing because you decided you could go it alone.

Maybe you can get your work's assignment to come instead to the same way of thinking.

CLEANING WILL HELP

You don't have to run out to your hardware and do it right now.

But whenever you have some gear like—even if you have to make the time—it won't be as long as things look inside the box exchange on your Hawk tracks. You know . . . with an effort or two pulled for the day, and nothing else that might keep the box exchange from doing its job.

All you have to do for a look and it removes the remaining stop that holds the welding element and moves and blows together.

THE
NEW
TRUCK



Just don't give him any equipment you might have to pull the components out of the motor and blower section.



TAKE IT EASY

ON THE OTHER HAND, YOU WANT TO...

You can do yourself—and the people up the maintenance line—a mighty big favor if you take things easy when you install the line all wing bolts on your Hawk aircraft.

Don't start tightening any of the bolts until you're sure you don't have a cross-threading problem with the nut each bolt goes into. Otherwise... going much beyond the 50-60 lb-ft torque you're supposed to put on the bolts will get you into the same kind of trouble—stripped threads.



If the nut threads get stripped, you'll have to sand the inside up the line to the guys who have the tools and know-how to restore and replace the nut. And no matter how you slice it, it means going to a lot of work to take care of something that can be helped before it starts.

Another thing... you can also ease up the work by using an eleven bolt in the wing bolt hole. The eleven bolt is some 1/2 inch longer than the wing bolt... and it won't seat fully, no matter how much you try to tighten it.



Dear Staff-Head,

We've got a problem with one of our Hawk aircraft.

The metal strip bonded to the rear leading edge of one of the wings—marked in front of the eleven-bolt hole—is getting loose.

What now?

By D. B.

Dear Sergeant B. B.,

Nothing till you get the wings back in your support rack for a bonding job without hooking up the control surfaces of the fuselage. You can figure that it'll take longer's a day to do the job.

Until you get this kind of time for the work, don't worry. That metal strip being loose won't hurt anything if you have to fix the bird in anger.



M14 RIFLE RUCKUS



Now, hey there, young soldier, no brass and no bull, there's this rifle your life depended on it . . . because it does.

It's all about the right position for the gas spillover valve on your M14 rifle.



It has to be on when you fire regular ammo—with the slide in the valve straight up position.



If it's off—the slide level is parallel with the ground—when you fire ammo, your rifle won't cycle because there'll be no gas in the gas cylinder. You'll have to load cycle the rifle and you open the spillover valve by moving the dot until it's vertical to the barrel.

But, that's not the reason.

That comes when you put your M14 grenade launcher on and try to hit any one there in left field. Before you pull the trigger make sure . . . real sure . . . that's SURE . . . that the spillover valve is in the OFF position, with the dot level



parallel with the ground. If you happen to have a GPS, your grenade could fall on them for safety.



COCK IT FIRST!



Some guys're still doing it wrong... and leaving the safety on their M14 rifle. Here's a trick to guarantee the right way: Cock it first, safety is second.

In other words, push the operating handle all the way back (which cocks the hammer) before you pull the safety to the rear. If you say no to cocking the safety back without cocking the weapon, something's gotta give.



STACK ARMS!

STACK
THE
LEFT ONE

NO
NO
NO



... AND YOU WON'T WANT TO TAKE THESE RIFLES AND OTHER WEAPONS ON TOUR WITH YOU.

The right people in Charge 1. (8 Apr 68) to (8) 22-5 (Aug 68).

TENT-TYPE RIFLE RACK



Dear Editor,

It's sure a problem when to park your M14 rifle when you're working in a general purpose tent. At least, it was for us till we dreamed up this rifle rack made out of two pieces of 3/4-in plywood and a couple 2x4's.

Here's how to make it:

1. Cut two circles 36 inches in diameter. Put a 2-in hole in the center of one and cut this piece wide for the base of the rack.
2. Then cut a 24-in stake in the other piece. You'll have a 2-in ring just outside the top of the hole.
3. Cut a 36-in stake from the piece that's left over, and make a 2-in hole in its center to fit around the post. This'll be the top of the rack. Now cut eight 7/8-in holes equally spaced one inch from the edge to secure the rifle mounts.
4. To assemble, nail the base piece on two 2x4s (2x4's are what you'll use on either side of the tent post). At the right height, drill a 1/2-in hole through the tent post and insert a pin or spike nail to hold up the top piece.



This rack's worked great for us. We set up the rack as we pitch the tent and remove it as we strike the tent. Simple as that.

Old Man—Real Handy. This ought to help keep your rifle in top shape. Makes for a tidy tent, too.



Dear Half-Brother,

What's the story on double-clicking in the electrical firing mechanism of the M-16 rocket launcher?

The inspectors are giggling at the man on this. Yet, for as I know, there's no way an infantryman can prevent it.

SP 3 R. H. G.



Dear Specialist P. H. G.,

You forgot to mention exactly when this double clicking shows up . . . when you pull the trigger slow or when you pull it fast. This makes the difference between gig and no-gig.

If it happens during the slow squeeze, no sweat. Don't you worry about it and neither should the inspectors. The magazine goes inside the mechanism clicks coming and sticks going against the magazine and you can hear it both times in slow motion.

But if you can hear two separate

clicks when you squeeze the trigger fast, hold everything. This means the adjusting screw's loose or has worked loose away from the trigger lock. It's got to be adjusted by upper company guys. Field and depot guys are the only ones authorized the electrical screw that's needed to check that the screw's set just right.

So . . . all you can do is look 'a' them and help 'em out if there's a double click when the trigger's snapped slowly.

Half-Brother

RAM THIS IN YOUR NOGGIN



WHY'D YOU
SHOOT ME
IN THE
ARM? I
WAS
SHOOTING
AT YOU!

WELL, YOU
SHOOTED
WITH A
WEAPON
DESIGNED
FOR
A LONG
BARREL.
YOU'RE
SHOOTING
AT ME!

There was the man that went over the cliff 'cause he didn't see the cow turn, and there was the "man" that got the M1 and M1A1 submachine guns out of action 'cause they jam-bled! . . .

Anyway, this is the "man" you want to watch out for.

Here's the scoop: When you clean the barrel of your weapon with the rack and MB brush, either from the barrel or muzzle end, be sure you don't

either's damaged, and the barrel's got to be straight.

That's hard. The barrel assembly's only 8 inches long, while the working part of the stock, from the end of the end to the stop, is 12 inches long. Add 14 inches for the barrel and you have a good 3 inches to maneuver in.



shoot it so hard that the barrel bends. With a link case you won't have to and cleaning rod stop runs the muzzle in the stop even though the collar is on collar. You'll feel real sharp if muzzle end.

With a link case you won't have to in the stop even though the collar is on collar. You'll feel real sharp if muzzle end.

ONE-TWO-THREE... WITH TLC

A line on the third way to split a continental—diamonds say it's a gift's best friend—read all that you.

But, when you're getting ready to save in an indirect way with your M19 M30 or M20 M30A1,30A2,30A3,30A4, your M10 plating board is as good a friend and helper as you'll find.

So why treat it like it's a life-long friend, saving instead of a fellow comrade in arms?

First of all, the M10 plating board is one built to stand up to rough handling or abuse. The only thing rugged armor steel will buy you is reliable—the insurance savings and a barrel of oil.

Keep your board as clean and dry as possible. Don't let it take in the direct rays of the sun or store it on heated surfaces. When you're not using it make sure the board's in its M10 carrying case—protected from dirt,

dust, moisture, chipping, scratching and other things figured on not doing it's life span.



If you're getting blow-pow and hot wind a little more light or some of your low-control lanterns—M12, M11, M10 or M9 is the job for you.

It gives you supply means the M12 as local purchase M12, M11, M10, efficient emergency lanterns to replace the M12, M11, M10 or M9's found in the M12, M11, M10 and M9's lantern lights and the M12 aiming gun light.

The replacement doubles the voltage because it's a replacement deal with a pair of the M9's taking the place of



In other words—there is plenty of Tender Loving Care.

And, when it comes to covering the wet weather that runs the board there's the correct one-two-three way to do it.

1. Remove the rings and from the board.



2. Place the four parts of the rings into a special hole in the hole of the metal surface on the rear of the board.



3. Push down and release the circular disk. Done, job!



So stop in the next store and save wear and tear on the disk and your fingers.

LET THERE BE LIGHT

each single M9, M10 lantern. And there's no reason on the camp because the lowest M10's are only about half the length of all jobs.

Spending of money—the M10 lanterns

though in high prices and when it gets hot, but it's likely to wear and lower its power. So get the habit of removing and storing the lanterns in as cool a place as possible when the job calls for working in low places. Watch, replace 'em for night checks.

Local purchase is the only way your supply people will be able to help you make the switch at this stage of the game because the efficient emergency lanterns aren't available in the supply system.



It takes an ordinary vice, an ordinary wrench and a lot of know-how to safely remove the hose from the M3 gun or your M1A1 7.62mm Rem-UMC.

First off, this, the gun and hose are to part company only when necessary for inspection, cleaning or repairs. Like it says in para 79, TM 5-2000,204-10 (Aug 83).

Loose the disassembly job early and safely.

1. Place the gun in the vice so the hose points up and away from you.

2. Then you can easily lose the hose fitting with a wrench in 14in, open end wrench with OIL.

3. Position the gun in the vice always, only the gun's rifle body.

CAREFUL!—Do not try to use with you eyes or the streamer and to clean up the rifle body.

You clamp the gun in the vice the same way when you go to adjust the hose to the gun.

CAREFUL! The one thing you never, ever do follow you assemble or disassemble the gun from connected in place the gun's grip (the rubber grip, that is) in the vice. That kind of force cracks the grip.

Also, never, ever step on the gun grip to quick-like remove the hose from the gun or tighten the hose to the gun.



Remember that your streamer (and) streamer the gun grip is not, and you can not use it to adjust the hose.

CHEAPER BY THE DOZEN



Dear Hal-Max,

How come when we order a certain gasket for a piece of equipment we get a package containing the one we want plus others of different size? I hope that we'll never see more of the gaskets.

E. J. C. T.

Dear August C. T.,

There's a couple reasons . . . and they're interdependent by nature—see.

For one thing, it's cheaper—in the long run—in package and stock groups of low-cost parts like gaskets than it is to package individual parts separately.



Then, too, all in a package of a package of low-cost parts can be used on items that do the same job but which're not quite the same size, shape

and the like—such as carburetors and distributors.

With this deal, you have enough parts to repair several different models of an end item because some of the components of such are the same. The parts that're left over after you've made the repairs are those that go with another model of the end item.

And even on kits outside enough components for you to do a real good repair job on an end item. So if you're replacing a shot accelerating pump in a carburetor, don't stop with the pump. Use all the components that're in the kit for that particular carburetor.

CHUCK THE FLUID

BRUSH 'EM

HEY, GUARDS!
I GOT THE CLEANING
FLUID AND PAPER
PLATE FOR YOU!
I'LL BRUSH 'EM
FOR YOU!

WHY ARE YOU...
A NUT? — THAT'S
NOTED! YOUR
MACHINE'S
WORKING GREAT!
— I'M SURE! THAT
WAS THE...

Dear Sirs:

Fluid cleaners that are being used to operate operators for eye cleaning are causing costly damage to the machine.

These fluids stick to the operators, and cause them, paper discs and cross sheets to stick to the lens. Thus a mere application of fluid makes this sticky goo flow slowly toward parts and this puts the machine on the blink and less the operator.

Why can't we do away with fluid eye cleaners and have the operators use plastic plates for cleaning? They'd pick up the gunk and rub it out—instead of collecting it and washing it down inside the machine where the damage is done.

USE THE BRUSH

BOB E. T. Brown
Ft. Snelling, Georgia

Mid Point—fluid eye cleaners are not authorized for use on Army eye operators by operators. They're made and only by operators maintenance men or you're right on that score. But operators are supposed to brush the operators daily with a nondescript-shaped brush, P/N 1110-000-0000. This uses the thin plastic plates and adhesive-treated paper cleaners. The brush is found in Federal Supply Catalog GS-1953.11 Dec-51. It's also available from General Services Administration.

What Happened?

WASH IT
OFF YOUR
FACE!
I'LL BRUSH
IT OFF FOR
YOU!

WHEN YOU
OPERATE
A MACHINE
FOR AN
OPERATOR
YOU MUST
BE CAREFUL
TO BRUSH
IT OFF FOR
THE OPERATOR

Operators may be the best worker for some things, but that's the hard way to find that it doesn't take much to put your operator out of working order.

When you have to clean, move the carriage on one side



If you don't, these cleaning sheets will get up the works. The lens will stick, and then the eye looks like it's working.

There's something that's even worse that you can't see—it comes when on the part.

Another thing that will make your operator head for the shop is to use it on a heating plate for your roller heads or roller cap, and then suddenly spill some liquid.

And, when you're not using your operator, cover it up so that you'll get less it.

EYELENS OUTSERT MI



Dear Staff-Head,

We've got giggled recently because we have two different kinds of eyeglass centers for our MI7 field postmen/men. One type has rubber frames and the other kind has metal frames. If I had a nickel for every time you... and what's the stock number for MI7

SPCL 100

Dear Sergeant J. W.,

Both of these eyeglass centers are authorized items for your MI7. The one with the rubber (collective type) frames is an older design. The one with the metal frames is an improved version.

There is also a later version of the center which has a metal frame with prongs.

All three have the same stock number (PSN 4104475-071). Owners systems, MI7. Eventually, the center with the collapsed metal frame will be the only one issued... until then, all three are

acceptable as long as they fit properly over the man's system and provide a good seal.



GOOD LOOKIN' SPECS



Dear Half-Mast,

In the past our shop has used the following safety glasses for critical work on electronic circuits:

1. Safety glasses (4248), Cat No. PY 8449 (Lens 2E, nose clip 2E, temple 2g, only nose pads, front edge, side temples and perforated, clear acetate side shields).
2. Safety glasses (4248), Cat No. PY 8447 (Lens 2E, nose clip 2E, temple 2g, CC 27 $\frac{1}{2}$ -28).

Frame, temples and side shields on above glasses are resistant to corrosion and non-sparking.

Recently both types of glasses were replaced by safety glasses, FSN 4248-208-1903, which aren't any good for our kind of work. They are bulky, heavy and uncomfortable, and they limit a worker's visibility.

How about an FSN that'll get us the glasses we need, or some other model we find it good?



(4248) B. 1.

Dear Stuart D. T.,

Here's the story on your specs:

The glasses (1904 4248-208-7911) which don't suit you are actually industrial goggles. They're for protection from fan flying, large-sized particles — like from chipping, riveting, heavy grinding, etc.

The glasses you listed first are now called industrial spectacles, and they're available under FSN 4248-216-4120 (for size 2E).

The other glasses your shop prefers are also called industrial spectacles, and you can get them with FSN 4248-216-4120 (for size 2E).

To ask for spectacles ... not goggles or safety glasses, when you order,

and, to make sure the above FSN's ... that way your supply support can set up a requirement for the needed item. (Your supply in turn will send us an actual requirement for the specs to Commanding Officer, Ammunition Procurement and Supply Agency, Joliet, Illinois, Area O&B Service 2 0208. They'll tell the Chemical supply people which lens is needed, and they'll set it up so you'll be able to get the right specs each time you order.)

Any other specs you need on spectacles or goggles is in Military Supply Standards (MSS) 4248-1, 29 Dec 64. Your supply support units should have a copy of it.

McGraw-Hill

HOW CAN I
IMPROVE
THIS?

ONE AT A TIME

REPLACING ALL THE PUNCHES
ON THIS LAUNCHER PUNCH



Getting punches from replacing obsolete punches can be the easiest!

But still in mind 'cause you're loaded with incomplete sets—and will soon be always be making just the one the same mistake again!

Try the easy way. Replace each punch as needed.

FSM 1120-005-0005 gives you the complete set of ten punches, but here's the FSM breakdown for each individual punch. To get the unit replacement habit—it saves time, money and extra work.

	FSM	Quantity of Parts	Length of Part
	1120-005-0001	1/10	1 1/2
	1120-005-0002	1/10	18 7/16
	1120-005-0004	1/10	1 1/4
	1120-005-0005	1/10	10 7/16
	1120-005-0001	1/10	10 7/16
	1120-005-0002	1/10	1
	1120-005-0003	1/4	1
	1120-005-0004	5/16	1
	1120-005-0005	1 1/2	1

This set is listed on page 1804, Federal Supply Catalog, Vol. 5 FSM 10-100-5-002, May 1964. However, watch it because it's listed there as FSM 1120-005-1011—the old FSM that was good before the process that he revised numbers. FSM 1120-005-0005 is the good number.

HOW TO THREAD A TARP



Dear Editor,

If there's anything more aggravating than trying to thread a rope thru the hem of a tarp, I'd like to hear about it.

Fast is, it got so aggravating, we did something about it some time ago. You're welcome to it if you think it might save an hour or two in the field.



All you need is a length of fairly stiff wire (No. 8 wire works best) and a long dog-bone to hold onto your corner, etc. You can pick up the wire and long rings at most hardware stores, or make them yourself out of scrap material.

Now, loop an eye on one end of the wire and feed the looped end thru the hem of the tarp. Slip the long ring thru the wire loop . . . and crimp the long ring to the rope with pliers or a long-handled tool.



Pull the wire and rope thru the tarp hem, remove the long ring, and that's it.

Roll up the wire and rope in until it's needed again.

The whole deal takes less time than it does to describe it. A couple' minutes does the job.

John Stewart
Harris, California

TOGETHERNESS

Dear Mike,

The flat shown, P/N 2942-435-3019, used in TM 15-1110-224-20P for the 9500, the fork lift doesn't fit. The flat, P/N 2942-400-1111, that's installed on 'em.

When a replacement's needed we use Filter element, P/N 2942-400-0005, which fits the filter. Shouldn't the 20P manual list this element?

M. Kuznetsov
APO 61

San Francisco, Calif.



FIG 1 (cont)



Old Water—Right you are. Filter assembly, P/N 2942-400-1111, and Filter element, P/N 2942-400-0005, belong together. And both belong in TM 15-1110-224-20P instead of the crumbled P/N's now found there and in its Change 2. See the latest change for the right steps.

PARTS STORAGE

FEDERAL SUPPLY CENTER
1001 W. WASHINGTON
WASHINGTON, D.C.

FOR MORE
PARTS INFORMATION
CONTACT THE
FEDERAL SUPPLY
CENTER
DIAL 800-368-1000

Dear Mr. Kuznetsov,

Where can we find the P/N's, accessories, etc., etc., for parts storage cabinets?

CRD M. P. S.

Dear Miss M. P. S.,

Ask your publications section (or check your work's technical library) for Federal Supply Catalog C6-10-58 (1 Nov 68), "General Supplies, PSC Group 71." See pages 62-75 for complete info (and some illustrations) on bins, cabinets, and other storage equipment.

1001 W. WASHINGTON
WASHINGTON, D.C.

Cornie Rodd's BRIEFS

GENERAL
AND GUY UP
A BRIGHT
FUTURE!



YOU
CAN
DO
IT
YOUR
WAY!



NEW GA FORM 38-750

There's a new improved GA Form 38-750 out. If you're working with the Army's equipment record system, better order some copies of GA Form 37. It tells you how about what's new with the revised record system. There are loads of pictures and filled out forms. . . . Take a lot like PE Magazine, for more info.



NEW FSM NUMBERS

Do you have an AR 17-2000 (AF form)? Or is yours an AR 17-2000 (AF form)? No matter. . . . Your TM 9-2000-215-200 (Ad 60) has a couple of FSM's you'll want to change. The power-driven rotary pump (P9000747) Fig 10, Item 2, should read, FSM 3300-600-6357. For the air-driven filter pack (P18000) Fig 12, Item 8, the right FSM is 3048-750-7000.

NEW TRAILER PDS

Many 15-ton M101 and M101A1 cargo trailer owners are still having a hard time finding the latest TM for their rig. The latest is TM 9-2000-200-140 (Aug 62). This publication supersedes the old TM 9-874A, Ord T, B and F 394, 0748, and TM 9-2000-200-14, which covered the 15-ton M101 trailer chassis. Although the latest job is a J&P, it still covers all on your M101 and A1.

WANDA KNOW SOMETHING...?

When it comes to jobs on cleaning, preserving, packaging, storing or shipping, TM 9-136 (21 Jun 62) has 'em by the dozens. It's called "Publications for Packaging Army General Supplies." Don't give any attention to the number TM 10-1-2600 on page 1. The publisher.

ENERGIZER TM

You always who have been probably looking for a job on energizer energizer, Model No. 80-28-10, FSM 1700-600-5748) not your symbols. Thanks you want is TM 33-1700-200-12.

M312 TRAILER COUPLINGS

So your brand new M312 25-ton semi trailer was delivered to you without any dummy coupling covers. That happened on some of them. No matter, the last regulation dummy coupling assembly FSM 2200-707-0284.

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

THEY SUPPLY

YOU



GLOBAL SUPPLY FOR GLOBAL DEFENSE