

Issue 187

PS

1988 Series

THE PREVENTIVE MAINTENANCE MONTHLY

"YOUR REQUEST,
DATED OCT 4, 1988, FOR
MATERIAL, WAS OPEN DEFENSED
FOR THE LACK OF THE FOLLOWING
INFORMATION:

1. FIRM, NOT LEGIBLE
2. NO TM REFERENCE
3. UNABLE TO READ...PLEASE
PRESS ON FIRM...
Etc., Etc., Etc.

W. J. Brown

W. J. Brown

W. J. Brown

W. J. Brown

MADE AND BORN

Whoops-which operators and crew make an organizational maintenance? It's a somewhat obvious, but this decision should consider:

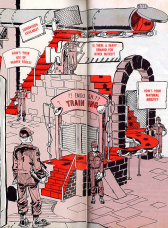
1. Training
2. Reliability
3. Interest in other duties
4. Use of paper tools
5. Supervision

Familiar to TQM is

... The driver or crew usually encompasses the material and makes the organizational maintenance in the performance of company or location organizational maintenance services.

When "workers" can step from rightwing men and later to making careful adjustments. The supervising mechanic is responsible, though, and give it in the work of the "workers" back up in his rightwing and adjusting.

Mechanics — unlike drivers — are made and born. Unless they get a chance — with the right tools and under supervision, of course — drivers and crews won't learn or make use of their natural ability.



PS

THE PSYCHOLOGICAL SCIENCE OF...
 Volume No. 100, 1000 Pages
IN THIS ISSUE

GROUPS

| | | | |
|---------|---------|---------|---------|
| 101-110 | 111-120 | 121-130 | 131-140 |
| 141-150 | 151-160 | 161-170 | 171-180 |

INDIVIDUALS

| | | | |
|---------|---------|---------|---------|
| 181-190 | 191-200 | 201-210 | 211-220 |
| 221-230 | 231-240 | 241-250 | 251-260 |

THE HISTORY OF

| | | | |
|---------|---------|---------|---------|
| 261-270 | 271-280 | 281-290 | 291-300 |
| 301-310 | 311-320 | 321-330 | 331-340 |

COMMUNICATIONS

| | | | |
|---------|---------|---------|---------|
| 341-350 | 351-360 | 361-370 | 371-380 |
| 381-390 | 391-400 | 401-410 | 411-420 |

GENERAL AND SUPPORT

| | | | |
|---------|---------|---------|---------|
| 421-430 | 431-440 | 441-450 | 451-460 |
| 461-470 | 471-480 | 481-490 | 491-500 |

THE PSYCHOLOGICAL SCIENCE OF...
 Volume No. 100, 1000 Pages
 IN THIS ISSUE

For more information
 contact
 The Psychological Science of...
 Volume No. 100, 1000 Pages



Helping your combat or tactical vehicle run do its engine more hours than good.

You're not doing your vehicle any favors by wanting the barrels and counter several times a night for a short engine warm-up.

And slow killing or warm 'er up is slow death for your engine.

If your operating rules by wanting up your combat or tactical vehicle every hour in a while, you should use a starting aid to save your batteries and money from all that work. All 5-110 (5th-11th) allows your outfit to get the 5M4 there but if you're where the temperature doesn't get much way off F.

If the 1B says you can do slow kill, does you also get engine primer and other supplies like for your vehicles.



But if you don't meet the requirements for the slow-warm-up trap, your CO can give the ORC for getting jump cables. Then you can use one vehicle to start all the others. You just go right down the line, hook up to one vehicle, get 'er started, unhook and move on to the next.

Your self-service crew may carry jumper cables or will work 'em if there's enough demand. Or you can buy 'em on the local market.

Jump starting's a trap, as long as you remember: Positive is positive, negative is negative. All Army combat and tactical vehicles have a negative ground. So, even if you can't find a plus (+) or a minus (-) on your batteries, you know



the heavy cable hooked to the chassis or engine block is negative and the cable going to the motor is positive.

NO! NO! NO! NO!

If you have to idle your engine to warm it up or because you've got some reason to keep it running, make it a low idle—usually at least 1000 RPM's.

Idling, especially low idling (about 500 RPM's), is slow death to engines. Some guys think it's best to follow, but it's a fact that slow idling runs down an engine life and wears out batteries. Idling a compression-ignition engine too low can bring an driver and shaker that'll heat or loose up parts.

Your engine won't heat up fast enough at low idle. Reduced operating temperatures cause maintenance to build up in the combustion, fouling your oil.



And if there aren't enough good reasons against low idling warm-up, give your body heat as a long list of conditions in TM 9-207 (Sep 66), Para 12, para 24—Ming Eldredges

So, be kind to your engine—but not killing kind.

LARGE WHEELS...
SMALL WHEELS...

GENERATOR MWO



HERE'S
THE RIGHT
PART
FOR YOUR
TRUCK'S
ELECTRIC
SYSTEM.

Aspirin won't much help when you have generator troubles in your 16-wheeler (or dual-axle vehicle). But a new-type spacer for the Avonite Model 22A-1803 GT generator will save you headaches.

Your spacer will do the job under MWO 2-2002-100-50/1 (Jan 66). In as much as you get the MWO, come in on a GM Form 2000-5 for each generator you've got. Then have spacer, shown, GM 2002-100-1001, installed on the drive pulley end of the shaft.

Like the MWO says, this new spacer has more contact area and'll stretch the life of your generator's armature shaft and drive pulley bush.

If you get a replacement generator of this model, make sure you get a 2000-5 with it so you'll know how to install on the MWO.

IF IT'S HOT...
IF IT'S HOT...

EXHAUST MANIFOLD LEAK



One good ear will do for leak-hunting around the exhaust manifold of your M11 16-wheeler. If a leak's so small you can't hear it, it's not hot enough to worry about.

If either the exhaust or intake manifolds have to come off for inspection for leaks, you should be up on the check points on pages 117-118 in TM 2-2004-211-54 (Jan 65), the TM for the M11 16-wheeler.

SOGGY BOX

Water's bad stuff in your turn signal system's distribution box—and water's just what you get if the cover gasket is wrong.

Some turn signal systems in manual wheelbase vehicles have been fitted with the gasket ends at the top of the box. If the axle don't quite flex, this leaves a little gap. Water gets in—especially with hoses attached to the engine compartment—and you've got one more the complete end to the business. Be sure to cover terminal with wax. FOM 8048-841-081.

You've a nut bar for turn signal trouble if water did in the distribution box. It'll cause corrosion—and failure. Be make sure you don't get stuck with a nut bar—make sure the gasket ends up down.

Repair parts are the same for all turn signal systems installed either by FOM or in production. So, if these parts aren't listed in the JOP TM for your particular vehicle, you can find 'em in Change 2 (Jul 61) to TM 9-2320-212-20F and Change 1 (Sep 61) to TM 9-2320-211-20F.

Turn signal trouble may be only a loose wire that needs soldering. Any replacing of wires inside the box should be done by good support, using 17-gauge wire. For 37 cars, they can get a pound of Wire, Electrical, 17 gauge, FOM 6148-190-763, found in Ford Car C11 45-1L, 4 (1 Mar 60).



TIRE CHAINS ON TANKERS



Dear Half-Heart,

Are tire chains permitted to be used with the gas tanker M107-caster or other PCA product axles?

CPD E. P. W.

Dear Mr. E. P. W.,

There's no deny regulation that says you can't use tire chains on tank trucks. Even though chains might make sparks or heat pavement or snow, this would happen only when the vehicle's moving and no white fuel or other PCA products are being loaded on or dispensed.

When you're authorized tire chains on other vehicles, PCA vehicles should get chains, too.

Half-Heart

RADIATOR CAP

Mixing a radiator cap on your M107 (11-82M) gas or your M110 (fuel tank)? These caps have been put in supply as Cap, yellow, P/N 2048-006-100 (EIN 1000041).

TRUCK, 16-708....

ARGUMENT SETTLED



Dear Staff-About,

How about settling an argument here on the brakes pulled free travel on the 1977-series 16-in truck.

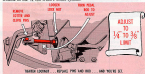
Item 17 on page 17 in 118 of the TM 9-2000 says the free travel is supposed to be 1/4 to 3/8 inch. Is that right?

SP5 B. B. B.

Dear Specialist B. B. B.,

Whoever says that's right is right.

The free travel used to be more, but it turned out this was causing some trouble in the 16-in truck's brake system.



REMOVE LOCKWASHER ... REMOVE PIN AND BOLT ... AND REMOVE BOLT.

Page 117 in the basic TM tells how to adjust the brake pedal, but it gives the old free-travel limit. You will adjust in the same way but with the 1/4 to 3/8-in limit.

Staff-About

3-TON DUMP TRUCK ...

FIRM STARTER BUTTON



Just make believe you're starting your gal's diesel when you press the starter button in your 3-ton D744-series diesel or modified model.

It's a quick and clean hold in time while the water's inside' over.

Save your delicate touch for the stoplights—your master control doesn't need a lot more. It's a light, thumb-or finger control, the contact is spark, burn and fuse together.

Please note now and refresh your memory on the starting procedure in TM 9-2526-211-10 (Older 90), and Change 1 (Use 94 pages 12-24). It takes a lot of prep sometimes to start a diesel engine, to give your starting system all the help you can — including a few thumbs on the starting button.

NEEL, WHAT WROOOL...!

BUM BOOM CUPS?

If you see signs of leaking seals in your M443 or M443A1 Series member's heavy hydraulic system, get your support up high for underlines or cracked cone-pressure cups. Checkers are that's where the trouble is.

There're 4 of these cups in the steering cylinder assembly and cushion cylinder assembly. They're got to be just the right size—1.0750 to 1.0760 inches diameter—and in good shape as they wear's hold against that month hydraulic pressure.

Any cup that doesn't come up to snuff should be replaced with Cup, Cone-pressure, ITEM 2096-102-4301.

I THINK IT'S TIME FOR SUPPORT TO COME AND CHECK UP OUR CONFECTION CUPS.



1-TON DUMP TRUCK ... SAGGIN'!

FUEL TANKS

DON'T JUST BY ANCHORING WASTING TIME SUPPORT!



Keep your eyes open when you're 3-ton dump truck's being loaded.

Then open your mouth and buffer your head off if the shovel operator is spilling part of the load onto your fuel tanks. And make a big note too of your truck's getting overloaded.

These fuel tanks will be saggin' like a sackbacked mule by the time a few big rocks or chunks of dirt have been dropped on 'em. The tanks and supports can carry 15 gallons of fuel each with no stress, but they were never meant to take a loading from material spilled during loading or dumping off an overload.



The 12 screws that hold the M15 cupola on your M58 or M50A1 make my pretty heady — 5/16 in. unthreaded cap screws — and if one of them falls out it could hang up your range finder or even you. It has happened.

So...uh...check 'em for tightness with a box head key from time to time.



The screw just to the right of the 12th sign on the range finder is a little hard to get to but if you lower your main gun you can tighten it with no stress.

Every 6 months or just if the Q service your company mechanic will use his torque wrench to tighten all 12 of 'em to 270 to 300 lb-ft. He'll have no words for regular tightening on the way by the 12th sign since a torque wrench won't fit.



NEED OIL COOLER LINES?

So you're getting holes in the oil cooler lines in your 2000-series motor?
So what's best for you?

These lines have been out of stock but now you can order 'em.

While they arrive, you can always solder the pin holes in the bellows of the lines you already have. Just take off the wire wrapping and always solder the holes.

The oil cooler lines listed on page 2-8 of TM 9-1300-11-9-10P (Jan 87) have all been redesigned. Here are the P/N's for the new lines in case you want to join the hole show in your -10P . . .



Take assembly info. for 2000-2002-400
2000-2002-400 replaced by 2000-2002-400
2000-2002-400



Take assembly info. for 2000-2002-400
2000-2002-400 replaced by 2000-2002-400
2000-2002-400



Take assembly info. for 2000-2002-400
2000-2002-400 replaced by 2000-2002-400
2000-2002-400



Take assembly info. for 2000-2002-400
2000-2002-400 replaced by 2000-2002-400
2000-2002-400



M80A1 TANK SIMPLE FIX



"YOU DO IT—OR HAVE IT DONE!
NO PAPERWORK OR ANYTHING!"



If you've got an M80A1 tank, an M776 combat engineer vehicle or a loading loader on an M80A1 tank, there isn't a simple fix. In fact, it's more hours of working around . . .

As you know, every time the transmission starts all pressure gets checked, you have to take off the parking brake, lower support levers.

No more. Get your friendly company mechanic to cut his tools and scientific know-how to turn a 1/2-inch hole through the bracket directly above the main oil pressure check point. What way the oil pressure gauge can be put on to give a reading without the taking off the loader lever support levers.

This is an example of a "simple fix" which means that it is authorized in the Equipment Maintenance Report and Maintenance Digest, TM 750-511-1.

A simple fix is optional. The user can apply it or not as he chooses. Also, there is no paper work involved, and if the fix is applied it is not noted on any form.



M577/M577A1

COLORING LESSON



HERE IS THE
4 1/2 IN.
BRACKET FOR
ON AN
M577/M577A1
COMMAND
POST CHASSIS.
IS OR IT
DESIGNATED



HERE IS A
DRAWING OF A
M577/M577A1
COMMAND
POST CHASSIS
WITH THE
FIXED IN
PLACE. THE
FIXTURE IS
ON THE
M577/M577A1.



THE SERVICE
COMMANDER/OWNER
A PIECE OF
M577/M577A1
IS IN THE
M577/M577A1
FIXTURE IS
FIXTURE IS
FIXTURE IS
FIXTURE IS



HOW THE DESIGNER
CAN KEEP THEM IN
WORKS WITHOUT
BUYING
BUYING
BUYING
BUYING



M107 | M108 RELAY ROUNDUP

Dear M107/M108,

There must be 2 kinds of heater control relays, is it wrong (ask the nice lady at M107) you and M108 hardware and a diagram version for the late model M107 and M108? How do I make it clear to Supply which M107 I want?

DAVID S. S. A.

Dear Mr. S. S. A.,

The 4-prong relay is used on M107's with serial number 221 and below and on M108's numbered 128 and below. It's listed on page 23 of your TM 9-2300-210-20P (Jul 62) or 209 (1015-118-5789) but the number has been changed to 209 (5045-308-6018).

3 PRONG

209 (5045-308-6018)

209 (5045-308-6018)

The 4-prong relay used on late model M107 and M108's is on page 228 of the catalogue list, TM 9-2300-210-20P (Jul 64) and you order it at PSM 2045-610-8178 (AFN 1500-810).

4 PRONG

209 (5045-308-6018)

Half-Off

HEATER PARTS KIT

As you've got a Perfection Model M110 personal heater in your vehicle.... it's great to have those your feet or keep you warm.

Only thing, sometimes an igniter will burnout. When that happens, of course, you get a cold warm foot.

So here is the latest, morning January-order please note, the parts kit for this heater is now in supply at PSM 2140-403-1173 (P/M 20941506).

This kit includes one coil (2727020), and one resistor (2727011) in addition to the igniter (2727000).



The parts manual for the M100/M109 hardware family, TM 9-2300-211-20P1 (Jan 65), lists it on page 177.

When parts kit, PSM 2140-403-1173 is exhausted, the heater in the kit can be replaced as follows:

Igniter Assembly, PSM 2140-403-601 (272700).

Resistor Assembly, PSM 2140-403-608 (272701).

Coil Assembly, PSM 2140-403-600 (272702), composed of coil (272702) and lead, Coils (272703).

TANK CLOSED

When you walk home—can you remember that fat tank?—you closed the doors to keep out the bugs and the brats.

But do you have to keep the doors closed in your 2000, 2000A1 or 2444A1 tank?

Doesn't it stink?

The doors on your M10 and M12 portable storage boxes can swing just the edge of the car or tank if you leave 'em open. When you return the next

DOOR POLICY

time swinging doors will swing on some storage tank chains, swing other things, and make a stinky mess out of your tank.

So, keep the doors closed and you'll stay out the gunk—just like at home. Like it says on page 2-07 of the 1-8 TM for the 2000/2000A1, check inside the tank for people and obstructions before you return. If you make that real "Check inside and outside" you'll have it knocked.

FIREPOWER



SPELL-BINDING IS... MAKING SURE YOU GET WHAT YOU WANT!

WHY? BECAUSE!

1 Always locate the selected trigger so it lies in the right and predictable path to the



Because—If you put it on the back, it means to you there is no good in not knowing "what" means. You're going to fire it accidentally by bumping it ... or by getting it caught in his field jacket or pistol belt ... or it might pull you in the eye.

2 Always make sure the trigger long is clear when you install the backplate.



Because—If the backplate goes on with the trigger long up, you'll have your backplate clear going in off again. Likely you'll have to pull your shoulder since the selected will have to be put on right.



3 Always use a pair of pliers to pull the bolt and out of the left side of the weapon.



Because—If you use a drill pin, say, to force the stud through from the right side, you'll have the counterbalance the screwing that comes up and down inside the bolt.

4 And have a rig that applies only to submounted 80's. Always make sure the screw thread every time you drop the weapon.



Because—If the screw's open, gravity will pull the counterbalance screw will go forward behind the counterbalance after you pull the charger handle all the way back.



5 Always use GOOD CASE IN YOUR OWN MINDS ... WE'LL SEE WHO'S ...

NO CLICK? IT'S SICK!

Don't be full-back, be exclusive: you have positive locking action before firing any tank or M1 howitzer or M1 gun that has a breech mechanism with a sliding wedge/breechblock. Otherwise you might get a premature firing—which could get somebody hurt.

The way to make absolutely sure it is to make the 3-man check spelled out in TM 9-1009-209-12 (14 Dec 88). If you don't hear a sharp-click as the seat engages the firing pin guide when you pull the cocking lever, you'll know something's wrong. No click means it's sick and you've got a part-by-part inspection and replacement job ahead.

3-MAN DETAIL EVERY TIME

Any time you have to move a mounted 160MM rocket rifle off or onto a vehicle — or even to where you can't see rough ground — always use 3-men. One at each rear leg and one at the muzzle end. That way you won't drop it.



That's what it says over and over in para 14 of TM 9-1009-209-12 (Mar 88 w/2 changes, etc)



YOU, TOO, CAN BE FARSIGHTED



Yep! Curves really count, on a girl or on a self-propelled mortar right extension.

Curved right extension arms (RTM1990) work less when curves before you can get right into M15 to 6. M1970 (5-10000-101-80) (The 60) has the slope for your direct support artillery mechanics who will cut the curve.



These handspikes used with the coils on tube artillery also make handy things such as clubs. But, not double bar, they're not made to replace the standard rammer. Never.

But . . . you want to push wadding through the tube to clear the bore and grooves. However, you don't want to use a handspike to pound away at the wadding to get it on the nose. All it takes is one miss and you've got some grooves — like on the breeching.

So . . . if you want to push wadding through the bore, use either end of the rammer — not a handspike.

**RAMMER, YES...
HANDSPIKE, NO**



CAREFUL HOW YOU PAINT 'EM



Dear Staff-Editor,

Here in Vietnam, our machine gun mounts take a real beating from the wind and weather. It's a constant battle against rust. What way do you see using a little paint to protect the non-sliding surfaces?

DAVE B. W. J.



Dear Specialist D.W. J.,

Sorry — for Vietnam only!

When the phosphate coating wears off and rusting sets in

1. Use a wire brush or coarse steel to get rid of all the rust. The phosphate coating is gone and you'll want a little spritz of oil.

2. Clean it good with solvent.

3. Then paint the metal with a non-gloss 50-50 black enamel that matches the color of the coating already on them.



Be real careful you don't get any paint on the bearing surface or the movement bar. Use PL Special on them.

FILE THE FLATS



CALL ME
"AMERICA'S FLAT"
(204) (204) (204)

They're still showing up now and again—those over-the-hill cads on the gas cylinder plug for the M14 rifle.

This part of a bad plug is just big enough to keep you from using your combination seal on it.

Your answer can file the flats so the plug will fit inside the combination seal. He knows what he's doing, so he'll make sure he doesn't round the corners of



the plug. And when he's through filing, he'll touch up the shiny surface with black touch-up paint—POM 804 B-140-1140.

Don't you file the hex opening on the combination seal so it'll fit the plug. If you do, the tool won't be any good for plugs that are its good shape.

TRY THE PALM METHOD

Dear Editor,

Here's a simple, safe way to remove a stubborn M14 gas cylinder plug.

Just clamp plug with your palm right in the hole. If it won't, you'll know the plug's too frozen and you'll need help from someone.

Of course, you want to be sure you have the combi wrench on snug and hold the wrench firmly with your left hand before you deliver the blow.

George Wilcox
East Lansing, Mich.

ONE GREAT
WAY WITH
FILE



Old Note—This method ought to win hands down.

SMALL ARMS — CLEAN 'EM, LUBE 'EM, PRESERVE 'EM

| Item | SKU | Unit of Issue | Remarks |
|--|--|--------------------------------|--|
| SWAB, BRASS WIRE CLEANING 1 lb 8 oz | 100-283-252 | 100 lbs | all small arms except M16's |
| SWAB, BRASS 1 lb 8 oz | 100-210-208 | 100 lbs | For M16's. |
| COOL, AIR-OIL 75 1/2 Gallon 87-1-028 | 100-251-867 | Case | Apply the cooler's contents. |
| GREASE, BSA 50-0-4000 | 100-274-000 | 1-0 | Use light coat on machine parts, especially in arid climates. |
| SHOES, FINE, BRASS (SPOTS) Polishes Machine Oil 87-1-201 | 100-283-201 | 1 gal | Remove dry cleaning solvent to save the life of the oil after use. |
| CLEANING COM-PRESS (SPOTS) Military Grease | 100-294-000 100-294-001 100-294-002 100-294-003 | 2 ea 4 ea 1-gal 1-gal | Large spines and full assembly also (see M16's and M16A1's). |



| Item | SKU | Unit of Issue | Remarks |
|---|--------------------------------------|----------------|---|
| SOAP, LAUNDRY 400-0-001 + 807-0000 | 100-274-000 807-1-000 per mail | Case | For transportation. Only if transportation is used — but take right after using. Inexpensive for washing. |
| DISINFECTING BR Wipes (SPOTS) M16-2007 | 100-293-000 | 1-gal | For all small arms accessories. Use before M16's. |
| DISINFECTING OIL GENERAL PURPOSE Penetration grade 01-00-000-0000 | 100-293-000 100-293-001 | Case 1-gal | For all small arms accessories. Use before M16's. |
| SHOOT OIL, BSA 87-1-201 | 100-294-000 807-025-001 | 1-gal 1-gal | The most potent you should use. Use, but use it in good with your fingers. |
| SAFETY OIL (SPOTS) Fuel 10-000 | 100-294-001 100-294-002 | 1-gal 1-gal | For safety. Use and carry by arms. Be dependent on your needs. |
| GLUE, BUSHING Lubricant | 100-293-001 | 1-0 | For all other. Use and use it with grease and the other and with lubricating oil. |

BAD-MOUTH AMMO



When you've found M&S TACOM leads for training on rifle and machine guns, you don't get a black check with it. You don't compare with this because it's in it if it's been compared with. You or your weapon could get hurt too. Check every cartridge for cracked or bent cases, dented or bent primers, or severely dented rings above the web that hold the propellant in the case. Feed anything wrong? Then it is wrong!

A NEW TWIST



Write back on our copy of THE 1-800-283-11-000 M16 if you want to get the latest dig on the use of a new twist-type book for recording the case details on selected vehicles. Since the book covers, it allows the case details to come and come ready instead of being worn too. Period. (Single chain M16)

EXTRA! GET YOUR
**HAWK LOADER
NEWS**
READ ALL ABOUT IT!

KEEP IT TIGHT

You're not supposed to be able to raise your Hawk **EMPOWER** loader-transporter when the transmission shift lever is in a position other than neutral. That's for three reasons.

It can be done, tho... and something as simple as a loose nut/washer will let you do it.

The culprit is the nut/washer that holds the pin that's linked to the starter lever. The nut/washer has a bottom point... and when you tighten it real good, it takes a bite on the flat side of the pin. The starter linkage lever against the pin will slide back and forth in the starter lever and for the engine start once only when the shift lever is in neutral. If the pin is loose, tho, it'll slide so that you can start the engine even as a starter when the shift lever is in forward all possible by moving the gear into reverse and up and going to work on the nut/washer. If you find all your tight-wings doesn't keep the pin from sliding, ask your support people to check the pin for wear. Then TM 9-1150-500-01 for the wear limit figures.



LITTLE THINGS COUNT

Right. Otherwise... what it tells you is page 50, Ch 3 to TM 9-1150-500-01 about looking up the wiring for the transfer arm limit switch on your Hawk loader.

You want to measure the leads to the No. 1 and No. 2 terminals—use the No. 1 and No. 3 terminals.

If you hook up 1 and 3, you take your safety circuit out of the picture, giving you reduced hydraulic pressure and a situation in which you could release the valves before they were on the handles or poles.

And while you're eyeball to eyeball with page 50, take a close look at what it says about adjusting the remote plunger. That warning about not allowing the plunger to extend more than 1/4 inch beyond the rubber plug (when the



plunger is retracted) is too real. If the plunger sticks out more's than, there's a good chance it'll snap off when you exceed the requirements.

JOINT STATEMENT

Evening tho, the you have to replace the rubber boot for the universal joints on the steering assembly for your loader.

When this happens, you want to go slow and easy as you remove the 2 spring pins from each of the 2 joints. Either then or both on to new pins and make sure they're handy in case you have up the old ones in reworking them. If you do damage the pins, you'll find replacements on page 50 of TM 9-1150-500-01P (Ch 3) — under P/N 9-11-050-0001.

As for the boots and universal joints... they're part of an assembly that you find under P/N 299-777-5483 — on page 50 of the JOP.





The idea of the black-broacher wheel cooling system is just what it says — to cool whatever wheels are sitting on the broachers. That makes sense.

It didn't make sense, tho, to have a cooling system with a ballbed up air duct — one that won't let air get to the balls. And this is what happens when the honeycomb elements in the duct get jammed for one reason or another.

When the elements in your broacher get so hot up that air barely makes it through to the rollers, get yourself a pair of longnose pliers. Put 'em in the honeycomb openings as far as they can go and then twist and pull. And keep twisting and pulling until you have all the elements out of the duct.

At one time it was figured that the element was needed to get down on rods when the broacher was in operation. But the element doesn't make that much difference. So after you've pulled it from the air duct, don't reuse it.



OIL FILTER WITH FILTER OIL

Take some electronic equipment . . . put it in a small, enclosed spot . . . and it won't take long to warm up to the situation.

This is the ideal you run into with your Mack battery control control . . . and that's why the BCC is equipped with that Fairchild Service VED-1 air conditioner — to keep the electronics just as cool as possible.

The air conditioner will do its job, but it may need some help — the special FM — from you.

If there's one place where the help is really needed, it's the air filter in the evaporator section. The filter needs to be wet, not dry. And wet means sprayed with oil, the filter being so much dirt, dirt, lint and other unwanted junk.

The odds are that the filter in your air conditioner is dirty. If so, the easiest way out would be to throw it away and get a new one. But it's a permanent type, so you clean it by giving it a bath in soapy water, followed by a rinse in clear water.



While you're waiting for the filter to dry (and it has to be dry), use your vacuum cleaner to work on the evaporator coils. The coils are found to need cleaning. Then back to the filter — the AIR INLET (SIF) — which you spray with a light coat of filter oil. The oil you want is water soluble and is listed under P/N 4138-000-0002 on page 65 of P/N 4138/38 ML (cat. 67).

After the filter is oiled, put it back in the frame, being careful not to slide it into the chamber. Fasten the filter clips . . . wipe away any excess oil . . . and you have the panel.

That takes care of the filter. Now you want to stay on the ball by checking in every 24 air conditioner operating hours to see if it needs another cleaning. But don't let it go beyond 48 operating hours before you clean and oil the filter again.

You'll know the filter is doing its job when it becomes dirty. And that's the idea — to keep dirt and what have you from getting beyond the filter.



CONNIE'S 1987 CALENDAR

JANUARY

| S | M | T | W | T | F | S |
|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 29 | 30 | 31 | | | | |

WHEN IT'S COLD
OUTSIDE...
GIVE YOUR
SENSITIVE
EQUIPMENT
A BREAK—
KEEP IT
WARM.

KEEP
DRY CELL
BATTERIES
UNDER YOUR
CLOTHES IN
EXTREME COLD.

FEBRUARY

| S | M | T | W | T | F | S |
|----|----|----|----|----|----|----|
| | | | 1 | 2 | 3 | 4 |
| | | | 32 | 33 | 34 | 35 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 26 | 27 | 28 | 29 | 30 | 31 | 32 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 43 | 44 | 45 | 46 | 47 | 48 | 49 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 40 | 41 | 42 | 43 | 44 | 45 | 46 |
| 26 | 27 | 28 | | | | |
| 37 | 38 | 39 | | | | |

MARCH

| S | M | T | W | T | F | S |
|----|----|----|----|----|----|----|
| | | | 1 | 2 | 3 | 4 |
| | | | 50 | 61 | 62 | 63 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 78 | 79 | 80 | 81 | 82 | 83 | 84 |
| 26 | 27 | 28 | 29 | 30 | 31 | |
| 85 | 86 | 87 | 88 | 89 | 90 | |

Do Miss control the world on the ground? . . . All you need is your PI . . . keep it up to snuff.

APRIL

| S | M | T | W | T | F | S |
|----|----|----|----|----|----|----|
| | | | | | | 1 |
| | | | | | | 27 |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 29 | 30 | 31 | 32 | 33 | 34 | 35 |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 36 | 37 | 38 | 39 | 40 | 41 | 42 |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| 43 | 44 | 45 | 46 | 47 | 48 | 49 |
| 30 | | | | | | |
| 50 | | | | | | |



LOOK OVER
YOUR GEAR
EVERY TIME
YOU HAVE
A
CHANCE...
KEEP IT
REPAIRED &
READY.

PM IS FOR FIGHTERS, FIXERS AND OPERATORS

WATCH OUT FOR OPTICAL AND ELECTRICAL DEAF
WHEN WASHING



MAY

| L | M | T | W | T | F | S |
|-----|-----|-----|-----|-----|-----|-----|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| | 127 | 128 | 129 | 129 | 130 | 131 |
| 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 127 | 128 | 129 | 130 | 131 | 132 | 132 |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 134 | 135 | 136 | 137 | 138 | 139 | 140 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| 141 | 142 | 143 | 144 | 145 | 146 | 147 |
| 28 | 29 | 30 | 31 | | | |
| 148 | 149 | 150 | 151 | | | |

After working on a vehicle's electrical system, take off the ground cable first — and put it back on last.

JUNE

| L | M | T | W | T | F | S |
|-----|-----|-----|-----|-----|-----|-----|
| | | | | 1 | 2 | 3 |
| | | | | 142 | 143 | 144 |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 137 | 138 | 139 | 138 | 139 | 140 | 141 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 147 | 148 | 149 | 150 | 151 | 152 | 153 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 159 | 160 | 161 | 162 | 163 | 164 | 165 |
| 25 | 26 | 27 | 28 | 29 | 30 | |
| 166 | 167 | 168 | 169 | 170 | 171 | |

Yes... don't make
your Allen Garage

P M

REVENTIVE MAINTENANCE



DONE ANY LATELY?

WE HAVE THE WORLD'S BEST... *Best... Now... It*

at various locations and... *... ..*

JULY

| L | A | T | W | T | F | S |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | | | | | 1 187 |
| 2 183 | 3 184 | 4 185 | 5 186 | 6 187 | 7 188 | 8 189 |
| 9 190 | 10 191 | 11 192 | 12 193 | 13 194 | 14 195 | 15 196 |
| 16 197 | 17 198 | 18 199 | 19 200 | 20 201 | 21 202 | 22 203 |
| 23 204 | 24 205 | 25 206 | 26 207 | 27 208 | 28 209 | 29 210 |
| 30 211 | 31 212 | | | | | |

AUGUST

| S | M | T | W | T | F | S |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | 1 213 | 2 214 | 3 215 | 4 216 | 5 217 |
| 6 218 | 7 219 | 8 220 | 9 221 | 10 222 | 11 223 | 12 224 |
| 13 225 | 14 226 | 15 227 | 16 228 | 17 229 | 18 230 | 19 231 |
| 20 232 | 21 233 | 22 234 | 23 235 | 24 236 | 25 237 | 26 238 |
| 27 239 | 28 240 | 29 241 | 30 242 | 31 243 | | |

HAPPINESS IS KEEPING YOUR THROTTLE FROM CHOKING. YOU KNOW THE DRONE: WHO CHECKS ON JULY 7th.

DON'T FIDDLE WITH KNOTS, TAILS AND SWIRLS ON KNOTS AND TAILS... AND KEEP THOSE FILTERS CLEAN!

IT'S NOT JUST THE AIRBORNE TYPES—IT'S FOR EVERYBODY—ESPECIALLY DRONES!

100%

100%

NOW'S THE TIME FOR
LIFE
CHANGES
AND
ADJUSTMENTS
TO NEW
CONDITIONS.

IT'S TIME TO
GET
AHEAD!
AND
REFOCUS
YOUR
LIFE!
BECAUSE
THE
FUTURE
IS
NOW!

| SEPTEMBER | | | | | | |
|-----------|----|----|----|----|----|----|
| S | M | T | W | T | F | S |
| | | | | | 1 | 2 |
| | | | | | 3 | 4 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 | | |

Know what your goal can do — and **don't** forget to work on it!

| OCTOBER | | | | | | |
|---------|----|----|----|----|----|----|
| S | M | T | W | T | F | S |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 29 | 30 | 31 | | | | |

NOVEMBER

| S | M | T | W | T | F | S |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | | | 1 | 2 | 3 | 4 |
| | | | 30 ¹ | 31 ¹ | 30 ² | 31 ² |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 31 ¹ | 30 ¹ | 31 ¹ | 30 ² | 31 ² | 30 ² | 31 ² |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 30 ¹ | 31 ¹ | 30 ² | 31 ² | 30 ² | 31 ² | 30 ² |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 30 ¹ | 31 ¹ | 30 ² | 31 ² | 30 ² | 31 ² | 30 ² |
| 26 | 27 | 28 | 29 | 30 | | |
| 30 ¹ | 31 ¹ | 30 ² | 31 ² | 30 ² | | |

DECEMBER

| S | M | T | W | T | F | S |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | | | | | 1 | 2 |
| | | | | | 31 ¹ | 30 ¹ |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 31 ¹ | 30 ¹ | 31 ¹ | 30 ¹ | 31 ¹ | 30 ¹ | 31 ¹ |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 31 ¹ | 30 ¹ | 31 ¹ | 30 ¹ | 31 ¹ | 30 ¹ | 31 ¹ |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 31 ¹ | 30 ¹ | 31 ¹ | 30 ¹ | 31 ¹ | 30 ¹ | 31 ¹ |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 30 ¹ | 31 ¹ | 30 ¹ | 31 ¹ | 30 ¹ | 31 ¹ | 30 ¹ |
| 31 | | | | | | |
| 30 ¹ | | | | | | |

Always remember . . . the job's not done till the paper world's done. Keep your employer's needs in mind, up to the minute.



1988 WGE.....

YOU WANT THE



-JIM TYPE

Having trouble with some of the tools in your *Armada* General Mechanic's Tool Kit — like maybe some wrench and open-end wrenches don't struggle even nuts and bolts in their squares like they should?



Could be you have the wrong tools.

Sure, you can't be blamed for having ground-up, chisel-edged tools — like maybe you inherited them with the kit, or you drew them replacements from supply.

But you *can* do something about these misfits. Start with a copy of 30-1188-994CL-40-1 116 top 600 Generaly SM 11-4-1188-401 and inventory your General Mechanic's Tool Kit. Each tool in your kit should fit the gub description in a "T".

If you find a tool that doesn't meet the long-line description in the gub, order a replacement, giving the exact measurement and P/N. Add in the request, "this will, no substitute acceptable". . . to be sure you get the close-line app.



DON'T LET A SEE HIR RUN YOU . . .

BE IN

THE KNOW!



One of the rewards of troubleshooting a down-to-earth-tech field engine night-and-day is the feeling of success when you finally locate the problem.

But did you ever go there the whole ignition and carburetor bit and still not come up with the answer? What a typical development?

That's what happened recently on a British C-47 engine mag problem.



On an engine run-up there was a 150 RPM drop. This was followed by a normal reading and then a 300 RPM drop.

About that time a lumpy, windy-type technician happened along and he naturally stuffed up to a group of mechanics huddled around the sitting pilot.



Well, it didn't take Lumpy long to size up the situation.

"Knew what, folks, I think you've got a short supercharger drive shaft and he there.

"Told you what. Let's make with a wrench on the supercharger fuel drive screw. If there's all on the inside of the screw—it's the end."



Well, you could have figured 'em over with a feather. There it was—drip . . . drip . . . drip!

The overhead trouble's change the real test to sure you have enough down-hand support. Using the team and on the EIA Form 240? maintenance requests crowd a lot of time and effort given.



Yonder, this business of trouble-finding calls for some know-how that you won't find in the manual. About the only way you can be in "the know" is to talk over your problem with other mechanics.

There's bound to find a Wandy type in your group who can put his finger on the trouble . . . even on trouble!

NO MORE WEIGHT TESTING

Don't Worry.

Can you safely use age-old ideas on when aircraft restraint equipment gets tested?

Our individual aircraft maintenance

jobs say to weight-test the shoulder harness and safety belt every year — and per 14 CFR 43.161 (a) in TM 11-481-5, an maintenance of aircraft systems, says the test period is every 2 years.

Don't we follow the organizational maintenance job?

THE R. O. P.



Dear Specialist R. O. P.,

Yes indeed — you do follow the job for your belt . . . except when a TWC gives new poop.

For reasons and logical reasons there won't be any more weight testing. That's the way to manage SMOCA-EGCG-7-1584 (30 Jul 61).

You use the remaining equipment on every 2 periods for signs of wear, rust, deterioration, fraying, broken stitches, loose bolts and improper attachment. If the equipment is shot, you replace it.

In addition, you check the installation date and if it's more than 5 years since it was installed (1 year for airline-type restraint webbing) you replace it.

Now, if you don't find an installed date, you add 1 year to the first weight test inspection date to get an approximate installation date. The 5 year service life is then figured from this approximate date.

| For Restraint Equipment | Replace | No Installation Date? | Only Inspection Dates or No Dates at All | |
|-------------------------|------------------------|--|--|---------|
| Every Period | Every 2 Years | NO (SMCA) | 5 Years | |
| | Every 1 Year For Signs | See Weight Test Job | | See TWC |
| | For Signs | After 1 Year For Approximate Installation Date | | See TWC |
| | After Webbing | Full Service Life Of 1 Year | | See TWC |
| | | Replace Restraint Equipment | See TWC | |

Of course, all the individual test jobs will either pick up this new group or will refer you to a revised TM 11-481-5.

11-481-5 (11-60) (2-61) (1) (1)

Dear Wholly...

What's the best way to keep my customers satisfied and the weather in the winter months? I'm looking for the best weather conditioning system for my business. I've seen you get recognized by many people and I'm sure you have the best system. Please let me know what you can do for me. I'm looking for a system of air conditioning. Thank you for your help. Sincerely,
 Mr. J. B. B.

"HE'S TRUE BLUE..."



What's the best way to keep my customers satisfied and the weather in the winter months? I'm looking for the best weather conditioning system for my business. I've seen you get recognized by many people and I'm sure you have the best system. Please let me know what you can do for me. I'm looking for a system of air conditioning. Thank you for your help. Sincerely,
 Mr. J. B. B.

Dear Specialist R. D. B.,

No even. The work numbers are listed and collected in the full contents list of some listed organizational parts.

For example, TR 11-1500-000-000 (1st Mar 60), page 6-11 and 6-12, list the tapes for the Chiswick (11-1471). TR 00-1110-000-000 (1st Apr 60), page 6-10 and 6-11, list the tapes for the Chiswick (11-1471).

| ITEM | ITEM PRICE |
|-------------|----------------------|
| 550-010-010 | Pressure |
| 550-010-010 | Hydraulic |
| 550-010-010 | For Interguide |
| 550-010-010 | Marine Guide |
| 550-010-010 | Marine/Engine |
| 550-010-010 | Marine |
| 550-010-010 | Industrial Air |
| 550-010-010 | Compressed Air |
| 550-010-010 | Tool |
| 550-010-010 | Industrial Oil |
| 550-010-010 | Fuel/Flare |
| 550-010-010 | Fuel/Flare |
| 550-010-010 | Fuel/Flare |
| 550-010-010 | Calcium |
| 550-010-010 | Super Air |
| 550-010-010 | High Speed L. B. |
| 550-010-010 | High Speed L. B. |
| 550-010-010 | Industrial Air/Flare |
| 550-010-010 | Hydraulic/Flare |
| 550-010-010 | Flare/Flare |
| 550-010-010 | Gas/Flare/Flare |
| 550-010-010 | Hydraulic L. B. |
| 550-010-010 | Hydraulic L. B. |

Wholly

CONDITIONER PROBLEM — SOLUTION



Dear Wholly,
 I'm looking for a conditioner that will work in the winter months. I've seen you get recognized by many people and I'm sure you have the best system. Please let me know what you can do for me. I'm looking for a system of air conditioning. Thank you for your help. Sincerely,
 Mr. J. B. B.

R. D. B., L. P.

Dear Specialist R. D. B.,
 I'm looking for a conditioner that will work in the winter months. I've seen you get recognized by many people and I'm sure you have the best system. Please let me know what you can do for me. I'm looking for a system of air conditioning. Thank you for your help. Sincerely,
 Mr. J. B. B.

Wholly

COMMUNICATIONS



"Whether you're mowing 'em down a heavy snowdrift or in a tight hole, there's no time to lose—start and wait 30 minutes before pushing the power into your ANTIPOW-DR roller kit.

Trying to heavy up operations of this skid-steer and drive-traction system could leave you with stressed drive shafts or damaged tires.

The worst enemy that we face, though, is condensation. So, here's a couple of tips to help keep that enemy on its own ground:—

Rise up the roller set for an hour every day even if you're not planning to operate 'er. This'll help our operators and eliminate leakage paths that could cause us the pain.

And, always open the venting ports when the air's in use. This, too, helps open the 30 minutes after shutting down so no condensation will build up inside.



Another little point on the roller... When you're heading down the venting-port cover for the roller between the wingnut and the wash on the cover, if the washer winds up under the cover and prevents the pin in the

READ YOUR BLIPS LOUD 'N' CLEAR



wingnut, the wash gets cracked or broken which lets moisture into the roller set cabinet. Incidentally, clean the vent air filter like it says on page 115 in TM 11-55-10, 230-10 (page 50).

FLORR™ 424 FLOORING BOARD

The X-drive (horizontal) and Y-drive (vertical) guide rods on the FT-425, -424 flooring boards are sturdy, but they're not supposed to help you shove your weight around. Put a lot of pressure on either one and you could bend or break it and make planting impossible.

When the Y-drive guide rod has to be moved manually, guide it by the springs.



Also, in checking the vertical or horizontal rod, be sure there's no grit or particles left hanging around. Clogged ball bearings'll give you poor ball pressure on your planting paper.

After setting your DC voltage at 400 volts, make sure the line voltage is at a top layer of 115-120 volts as indi-



cated on the ME-100 electrical meter assembly and BA-411 switch assembly.

Collective, the watt'll give false readings when fully charged, and you'll be calling for unnecessary repairs.

One other thing on the bench.



After you're closing the blackout curtains, just pull it straight across. Pulling it downward and around'll tear the holding eyes out of the curtain, making it hard on your eyes for watching the tape.

AC-1000 ANTENNA ASSEMBLY

Now, a look at the AC-1000 antenna assembly.

Make sure you have the right lead-ins in the antenna for the antenna.

Remember



... The straight lead-ins (P/N 1200-762-0349 and P/N 1000-762-0350) are for tracking the down beam and the curved lead-ins (P/N 5000-075-7200 and P/N 1000-075-0314) are for the Mikovik beam trail.

Getting the lead-ins installed may have you wondering if the set's working right.

While the set's on the airplane radio and down beam, look at the GA-2091 radio tracking group.

If you're watching from earlier on beam or vice versa, do like it says in your TM in part 42...



DO-DO MOUNT

There's a better pull to take for setting the MFC-242 electrical synchronization laser on grade: slip switch (S1000) and low altitude delay switch (E1150).

You must loosen the 10 captive screws of the cabinet, remove the panel and pull out the MFC-242 drawer and set the switches.



**BY ENGINE, WITH
PANEL 2 REMOVED.**

IN YOUR MIND

You're not competing in the Indian-sports 500 while pulling the roller out across rough terrain on the M-2000A1 trails. Trying to get to where you're going in a real big hurry could give you a justified roller and turn your roller set into a pile of junk.

Beats us go: there only that set at all. Let the terrain guide your speed. You may have to go slow.

And, when you stop to set up shop, don't over-crank the leveling jacks. It will put all the trailer's weight on the jacks and shear the A-frame pins.

Then, the jacks' spreaders and won't be much good for leveling the MFC-24.



**NOT
THE
ONLY**

Taking a short cut by reaching through the synchronization screen cover to the synchronization channel could give you a bad burn, since the power's on when the adjustment's made. The manual refers you to withdraw your arms fast could add to your injury with severe cuts from the unenclosed pins.



**HELP AROUND THE
MFC-242 ...**

**... DON'T
OVER-CRANK
THE**



AN UNUSUAL SITUATION OR ...

NEVER TRUST A FRAY



ANTARCA-31 housing systems that don't have an a constant source of entertainment. And a frayed or loose nylon wrapping cord is a visual signal you are about to lose your radio signal. A very embarrassing situation, indeed.

Planned already vibrations can loosen or detach the fiberglass whip portion of the AT-4344/AA antenna element FROM 1811-251-25000 from its metal base. Even though the nylon wrapping has little to do with holding both parts together, any loss of frayed strands should still make you suspicious of real trouble.

Because what really keeps the fiberglass whip snug is its metal tapered pin, which extends the base portion of the whip for a tight fit inside the base. It only takes a simple fingertip shake to tell you if this pin has loosened or broken.

What really makes the element operate, though, is a suppressed type conductor embedded in the core of the whip. But since there are 4 whip antennas in this housing group, you need a continuity check to track down a loose conductor.

All you need do is remove the pins on the whip tip or replace the conductor's base end. Then reach for a low range ohmmeter, reaching one lead to the base spot and the other to the metal base. If you can measure any resistance you have a bad conductor.

Now you don't always have to make this continuity check before using one of these elements. Missing, loose or broken nylon wrapping cord is enough of a defect to warrant replacing that antenna element. And even a frayed cord calls for at least the fingertip check.

After all, you just can't trust an antenna that's lost its bonding partner.

WE CAN DO A GOOD JOB
WHEN YOU DO A GOOD JOB.



BLACK BURNER
IS MADE
OF BRASS,
STEEL,
OR BRONZE.



If you have trouble or trouble has
 and lower the voltage indicator on
 the 10-101 220V-AC instrument/switch
 contact set in your circuit, check it on
 time.
 Check with a pinch-neck probe
 (1017) 1000-244-1300 and power line
 switches.



SAVE OUR SWITCHES

SHIP 'EM SHIPSHAPE



Would you believe you pick up that Honey (H.H.I.A.B.I.E.) made some Model Two
 don't want to ship wrap, right? So, to save you eye your Bill's organizational
 maintenance path to get the non-acceptable links. And the shipping people
 poop. Just to save you cash a Bill from 1000 with the hitch hitchy, when
 from the DA Form 1000-15, sure 'nuff.

HOW TO UPGRADE

There's a number of ways to keep up the grade of a high-power test set. You know it.

Think it, a lot of other Jers who also know it. Forget it. Or ignore it. Or get another about it.

There are simple solutions, ready for the remembering, and guaranteed to be helpful more than you've got a piece of electronic communication equipment in use.

Like us.

Have been a customer on IBM also gives an easy to install version of the new model will show the features... just.



Just as going to be with the equipment, or not used for weeks or more, make the better.



Obviously, you'll want a case of getting solutions that could even mean replacement of the equipment. This includes items like the replacement, power supplies, radio control sets and other equipment which are historical.

Thanks point to necessary damage to our hands. The way that is to show

A TEST SET

the look the way they were designed to be used... while might even take an extra 3 seconds of your time. For sure, this, it's worth it.

If there's a clip for mounting the test clip is in the clip.



If there's a compartment (like in the TR-102), slide the leads in.



If you've got an economy type meter with wider clip and compartment, a few seconds can be easily saving the leads can pay off when you need 'em more time. Like, be careful not to pinch them with the cover.

Now, look at the biggest single cause of things to the meter built. Measuring on the wrong scale settings. Try it with you like the TRM-101 and you've bought a new instrument.

It's obvious, never, never measure value when your switches are rigged for ohms. And, before you measure impedance, make sure your switches aren't set for voltage. You know, so the for us, and a good for a month.



BUCKLE UP!
ON IT, COMBAT!

FORGOT!
GOTTA LEARN
IT ON THE SPOT!

HOW ABOUT SOME
HELP FROM
YOU JERKS?



Even though you are in the right city, before touching a test probe to a piece of equipment be sure you're measuring DC voltage on a DC setting or, don't walk a potential 5,000 volts on a meter that's set to measure a maximum 500V.

Also, when you're measuring something you're not quite sure of, start at the high end of the meter and work down.

Therefore, if your test equipment measures a maximum voltage, start at the maximum setting and work down all you find the correct one for the equipment you're testing. Taking a

chance on a low setting, or not double-checking, will damage your test equipment or often you too.



You can't shove 115 volts through a switch set to measure one volt and not have damage.

Like the old, it all depends on you.

H-33 CABLE SHORTAGE

Things are tight along the supply line. Production of the type wire needed for the CN-1247U cables of your H-33PT handset is necessarily slow, and the more data you give the handset card, the longer you'll be communicating.



PAINT CAN FREEZE FAN

Whew! . . . a little bit of squirrel would have to move out to keep up with that 10,000-RPM blower motor on your RT-246 or RT-118 receiver-transmitter.

So, keep the odds in favor of the motor when you've stuck up paint! In the case around the squirrel cage, a couple or three drops of paint can dry between the cage and case, keeping those cooling vanes from turning and doing their job of keeping the insides from overheating and burning out.



After the paint is dry give the cage a gentle fly with your finger to make sure the fan blades before power to the receiver-transmitter.



SEDIMENT SENTIMENT

DA-DA-DA-SOMEBODY DA-DA-DA-DUST DUST
THE DA-DA-DA-DUST IN YOUR AIRWAYS (HA!) I
KNOW! BULLY! ROPENOTE FOR DA! DA! DA-DA PAINT
DA-DA-DA-DA-DA-DA!

Not! Then maybe you forget to put back the gasoline filter (P/N 652270-001) after cleaning it.

Without the filter (or without hair), sediments can collect in the fuel line, lay up and shut off the flow of fuel . . . or gunk can gather and block the line.

Of course, many hot-blooded rigs may not need the burner airway. But the equipment could be hamper' the burn. Like Frisanoor, the boys on the idiosyncratic'll stick when it's cold.



GOT THE O-RING BLUES?



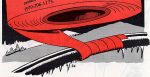
If you've been trying to find an O-RING for the heavy compartment O-ring of the 1984-1985 vehicles, your search is ended.

Red O-ring, sometimes called gaskets and other terms called more colorful names, actually means the title "Parking, Perfected."

You'll find it on page 5 of TM 11-6004-213-200 (Jul 83), under PM 1158-754-7982.

COLD WEATHER TAPE

For ... next time you're making cold-weather repairs, cold-weather you'll make out better by looking for the splice with TL-600(U) Tape. Again, PM 1170-240-0820. It's even better if you use the tape for added protection. Naturally, in some cases or climates, you will use TL-600(U), PM 1170-240-1175.



EXTERNAL INTERPHONE CABLE

Over Multi-Step.

How do we get the external interphone cable for the AM-104-F receiver mounted in the M2041 tank?

By B. L. H.



AUDIO GAP FOR A C-980JU



If dust and moisture are doing the electrical honors of your C-980JU audio connector strip, give it a lesson. Read back over this way if the interphone control is mounted in an exposed area like on the M1130 SF howitzer.

Course, Cassanova, CW-115711, EIM 1011-200-4449 will save your problem. It's to be added to the C-980 parts manual, TM 11-4050-204-12P. However, the manual's a common item, and our ready reference for it is Change 1 to TM 11-5830-201-20P (25 Jul 58) on the RT-65 doc. 48 receiver transmitters.

FRIGID FILM'LL FLAKE

WOULD YOU
BEHOLD
CRAZY
WOW!

WOULD YOU
BEHOLD
CRAZY
FILM CHIPS?

When you have a real cool spot in your LA-150A still picture camera's holder (camera) . . . watch it!

The cold film becomes brittle and rough handling while loading the film in will make a chip. Then, the chips

The chips can fall between the picture and the film, making spots on the picture . . . and if the chips are pushed into the camera lens, stopping it up, you'll have a blurred bunch of pictures.



chip up the rollers in the LA-150A aircraft camera body drive and stop 'em from working.

A couple other things can happen with low flying flakes of film inside the LA-150A.



CHIPS FALLING DOWN BETWEEN PICTURE AND FILM WILL CAUSE SPOTS ON PICTURE

Your best bet's to store both the film holder and camera in a warm place before and after the picture-taking session. This'll keep the film warm for winding without shipping.

Before making up the LA-150A with the LA-150A or LA-151A aerial camera lens case, pull off the non-charge lens cap.



REMOVE BEFORE MAKING PICTURE

RIGHT CONNECTIONS



Don't get yourself into a stew if you're issued an AMBER-5 receiving an and then find you can't hook up the power cables SC CR198, battery cable CX1468 and vehicle battery cable CX1999-11 to the old type J18 and J18 connectors on the power supply PP-508/188.

Instead . . . get in touch with your support people. The right J18 receptacle connector's in TM 11-483-284-10 (18 May 86).

The J18 receptacle connector's the same as the J18. Both come under FPM 9999-201-9998.

ANGRY - 19 REMINDERS

If you don't want your Angry-19—in any wrap using it—to get back at you, watch it when you rig up the AR-15 main line.

Like, forget the ground wrap. Get it off. Lose it.

If you rig the ground wrap, and you're using the GBC-19 components on a cracked vehicle, you can load the vehicle, which isn't too healthy.

REMEMBER...
NO GROUND
STRAPS
HERE.



And just in case you missed it, page 40a, p 10 of TM 11-483-284-10 (para 5C) should read: "Use the T-191 (11)GBC-19 SERVICE SELECTOR switch as YOCB/19C."

Somebody's supervisor slipped when the revised TM was worked up, and "REMOVE" came out instead of "YOCB/19C."

Change 1 Day 641 caught the error and changed it to "YOCB/19C."

COUNT-DOWN ON

When you claim the TM 2408 credit for a DA Form 2408, know your equipment well, do a quick checkover before you start an entry on it.

Even though it's titled "Equipment Component Register," DA 2408-10 has 2 uses—count 'em—spelled out in page 4-24.

1 Record of components and replacements for each aircraft.

2 Forwarded report on aircraft components and replacements (to base after initial is filed).

3 Log index (for 2 or more logs in 1 binder).

NOTE: THERE IS A CHARGE IN APPLYING FOR THIS EQUIPMENT AND INCLUDING THAT FIGURE. APPLY FOR THE DA 2408 IN WORD AS A LOG BOOK OF COMPONENTS AND REPLACEMENTS.



DA 2408-10

DA 2408

9.8.76



When DA 2408-10 is used as a component replacement record, base on the entry instructions — as only one entry is required.

NOTE



A

In TM 2408 (see DA 2408 in page 4-24), you list the DA 2408-10 immediately upon receipt of the card from the equipment. This is in part 4-24.2(2). You list in the "Serial number" column "2408-10" when the equipment is issued to you. You make these entries when the components are already listed on DA 2408-10 when you replace the component that came with the card — you'll show "Serial number" and "Date when replacement took place" as spelled out in part 4-24.2(2).

DA 2408



Does the title in part 4-24(2), referring to inventory components, mean that all separate components should be listed on DA 2408-10 when it's used as a component replacement record?

A

Nope. That title was meant to be only a guide to help issue the right components for DA 2408-10. It'll probably be removed in a future change to the TM.

~~When DA 2408-10 is used as a component replacement record, base on the entry instructions — as only one entry is required.~~

DA 2408



WHAT'S NEW FOR 1987?

Where do we get the list of components for the components manual on EA 2400-10?

The Components Manual



A

There is an "Ex." on each, but you'll note that page 41-4-21A8 says "major convertible components." And page 41-4-21A7 lists required components as "total and/or its combined items capable of performing a complete function."

To help you pick out the right components for the EA 2400-10, it's recommended that you include (1) all engines, (2) all components except gas tubes for which usage data Center, unless no source is needed to make the equipment EMC, wiring, and (3) other components supplied by your local manufacturer.

It boils down to this: Your equipment EMC is your best guide in making a list of components on EA 2400-10.

In fact, it may be best to record additional and important requirements on EA 2400-10—whether serially numbered or not—even though they're not required. Otherwise you may have to compare data and manual titles against the master copy of EA 2400-10 to get the correct title of EMC-rated components, then cross to your issue or issue on EA 2400-10.

ARE YOU UP TO SPEED?

Q

In using equipment and how to connect its structure and how, should it be listed as a component on the EA 2400-10 for the item it's connected to?

A

As a general rule of thumb, neither of the 2 and there is a component of the other—unless they're mechanical and listed as a single component item under a single part.



Always use standard part numbers.

THE ANSWER TO THE QUESTION IS ALWAYS IN THE 2 ITEM LIST SECTION.

ESC'S ARE NOT REPLACEMENT GUIDES

A MESSAGE BY THE FINE
CATERING

Ernie's Road



Despite what you've heard, the true test of parts is not listed with ESC.

You can't use a low ESC score as an excuse to put more parts on old and worn. That's why parts fit of each ESC manual says:

"This manual... does not list small, replaceable components of equipment. Low ESC scores do not apply to such parts nor justify the replacement of an otherwise good, but replaceable component."



Equipment Serviceability Criteria just rate your equipment — by the point system — on its fitness for service. These Green-Red-Yellow-Red categories measure the capability of your equipment to perform in combat for at least 90 days. ESC ratings are not intended to be a reflection on your unit's maintenance work.



So, while the entire category of your equipment may show that it's generally fit-to-serve, the more category shows you always make your equipment's ready for a maintenance repair-by-replacement job.

YOU NEED A LOT MORE THAN JUST ESC POINTS TO JUSTIFY A REPLACEMENT OF SERVICEABLE PARTS!



DIRTY BUT TRUE (about diesel fuel)



You wouldn't think of dropping the contents of your tank in the sand and dirt below you. You know that would not be smart.

The same thing can happen to your diesel engine when dirt, sand, and water get into the fuel. It plays less well with that fuel injection system.

If you had X-ray eyes you see that the fuel pump and its injection valve or nozzle has parts machined to almost as small as you can see "mike" sizes. A little dirt or water in the pump or valve can therefore chafe it and flatter than Charlie can hit it.

In summary—it's really possible to keep your fuel in line of dirt and water!

Well, maybe you can't drive up to a new class, well-protected storage tank and say "fill 'er up." Even if you have to take the fuel right out of a drum that looks like it's going to burst in the road, there's something you can do to discourage that happening and it'll help to keep the fuel clean.

One of the best ways is to build a number of racks (they don't have to be fancy jobs . . .) but make sure they're strong enough to hold the drums, then



support the drums on them. A good idea is to back the drums up on the rack with 2 pieces of wood. The piece that the frame should be thicker than the one to the rear. That way any water or dirt in the fuel will settle at the rear bottom of the drum and stay there as long as you don't shake it.

If possible, let the fuel in the drums settle for about 24 hours before you draw it off to use. That's why you should make some extra racks while you're at it. When you have to pick up so many, take the racks with you.

When you're handling those drums, just pretend you've got a crate of eggs. Lifting and rough handling can cause leaks and other gunk on the handle or shake loose in the fuel.



Use a clean dry brush full of oil job-oline to brush the bung cap and all around it before you remove the cap. A cap will pick up dirt but it may leave less in drums which could drop into the fuel. And always keep the bung cap covered as tight when you're not drawing off fuel.

Using buckets, pails, cans and other metal containers to fill your drums



made is one of your worst sources of fuel contamination. If you have a water checker, don't be so sure there, that about the best you can do is to be extra careful. That means you'll keep the container, bucket, and whatever you're using clean and protected and crystal clear when you draw and measure.

To know about changing this to a clean source!

HOW TO MATCH 'EM

The latest boat, P/N 8415-288-2812, has 2 different suspension systems on the inside. The neckbands for the 2 boats are not interchangeable.

Here's how you match 'em:

Boomerang, Lullaby's Boat Neckband Line
P/N 8415-123-0070



Boomerang, Lullaby's Boat Neckband Line
P/N 8415-273-0134



BOOMERANG® HELPS YOU

If you're floating around Charlie County, "Operation Boomerang" is designed to help you.

It's a plan that moves heavy equipment that needs major repair back to Steamboat depot real fast—in places that bring supplies over to ECU.

Things like aircraft engines, turbo, compressors, generators, transmissions . . . anything needing major repair which will fit in available aircraft . . . move under "Boomerang." The depot has 30 days to complete most jobs and ship 'em back. They're getting some items back in all hands!

To you, this means you're likely to have real good operating equipment any time you need it.

It also means one other thing: When you buy from a piece of equipment that's likely to go in COMUS under "Boomerang," you know there is up real good. Cause if we have, say a generator, rather the States all globbered up with VN glitch, then it, the airplane and its crew will be guaranteed until everything is totally working.

Another thing . . . when you've got any item of equipment that's got to go in US (and maybe further) for repair, move it out. Get rid of it. It'll never do you any good chattering up your crew. You won't see them boomerangs coming back unless you chase them first.



Wagon 3000

OK, so what's got 'em? What's got those 300W generators with Wisconsin engine Model 444802 that haven't been given one connecting rod by the gun? FPM 2-4700-200-2011 (Don't get Eysahl your Whittingsworth, Ears and Feet or Genco 300W generator, if it has the Wisconsin engine, it needs to be modified soon).

A Fresh Start

Your Model 3000 Stewart & Stevenson 300W generator is getting off to a new starter that won't need a cold-starting heater line. FPM 3F03-902-1811 gets you the new starter, which replaces FPM 2F00-617-2431. Just cap the heater line for the old type starter when you get the new one.

M113

Air Cleaner Shell

If you have an M113 general carrier for any vehicle in that family such as the M117 or the M119, here's good news. The metal bucket protecting your air cleaner filter element has been put in supply as FPM 2F40-930-6207 Shell, Air Cleaner.

75W for 20-264 Fuse

Gettin' that little feeling trying to find a 75-wamp fuse for your AM/MPQ-44 motor set's F02-264 electric element detector? Don't sweat it. FPM 2F02-750-2081, listed on Page 71 of Red Car CATALOG (Vol. 66), will get you one.

F02-619/2E Covered

Need a cap for your F02-619/2E trailer-mounted generator set? Although the F02 doesn't show up in the P.L.'s '86, 2-6113-262-13 (May '86) yet, it can be had by requisitioning Torporite, trailer, FPM 2F02-619-2082.

"Stamps" for Air Cleaners

Aircraft Cleaners Stamps will be available about March, 1987. Take a ponder at Charge 11 (20 for \$2) to AR 671-3-1 to see if you're qualified to get a set. Then keep the eyes peeled for the FPM in Red Car 6432 and order your "stamps" here regular supply through.

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

PERIODICAL
MAINTENANCE
POINT

SEND YOUR **FEAR**

OVER

AND OVER...

AND OVER AGAIN

WHEN YOU
HAVE
REPEATED
EQUIPMENT
TROUBLES

BUT
KEEP AN EYE
ON THE **FEAR** SIGNS!
YOU MAY SPOT THE
FIX FOR YOUR
SPENDING PIECE OF
EQUIPMENT.

