

Issue 20

**PS**

PS Series  
July

THE  
PREVENTIVE  
MAINTENANCE  
MONTHLY

ANYTHING  
MOVING  
GET  
FIXED!

SOMETHING IS  
BUT EVERYTHING IS  
FUZZY. YOU  
OUGHT TO SHARPEN  
UP ON YOUR BRICAL  
PMA, GARY!

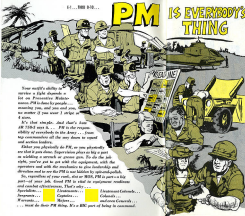


Colt Carter

PS  
PS  
PS

H...MM 848...

# PM IS EVERYBODY'S THING



Your world's ability to survive a fight depends a lot on Preventive Maintenance. PM is done by people... meaning you, and you and you, no matter if you wear a strip or 4 stars.

It's that simple. And that's how AR 158-2 sees it. ... PM is the reason ability of everybody in the Army ... from top commanders all the way down to squad and section leaders.

Either you physically do PM, or you physically see that it gets done. Supervision plays as big a part as holding a wrench or grease gun. To do the job right, you've got to get with the equipment, with the operators and with the mechanics to give leadership and direction and to see the PM is not hindered by operational needs.

So, regardless of your rank, slot or MOS, PM is part -- a big part -- of your job. Good PM is vital to equipment readiness and combat effectiveness. That's why... .

Specialists...  Lieutenants...  Treatment Centers...  
 Sergeants...  Captains...  Colonels...  
 Privates...  Majors...  Adjutant Generals...  
 ... must do their PM thing. It's a BSC part of being in command.

# PS

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CAUTION WITH GAS  
WRENCHES  
USE FOR ...

# SAFE RETURN



ASK IT  
IF IT'S  
NECESSARY  
CHECK IT WITH  
FIRST TO THE  
SERVICE CENTER

Most equipment, parts and components can safely be stored—if they're not jostled or dented here, look out for the repair shop.

Heavy items going to support or to other units as much care as you'd give a new unit—especially when they need to be kept supported to remove their weight. It wastes the rest of the return trip.

It's best not to return the load in bins and pieces. It adds weight and volume to heavy things if it's assembled. This helps prevent small parts drop out—and discourages dismantling experts by anybody along the way.



YOU SAY THAT SURELY YOU'VE MADE A VERY NEAT LOOKING ARRIVAL!

If original packing and padding materials are available, use them. If not, preserve and pack the items with the same consideration you would give your own.

ASK YOUR  
THE SERVICE IS  
A SERVICE CENTER  
FOR THE  
LAUNDRY, THE  
ELECTRICAL  
THE SHOP.

ASK IT  
IF IT  
NEEDS TO  
BE PACKED  
OR AN ITEM  
FOR SERVICE  
IF YOU CAN  
DO YOUR  
TO SERVICE THE  
NO FURTHER  
CHANGE OCCURS  
THE SERVICE  
SHOP IS.



Always use a generator if one's called for. The main power will be used and use of metal-wrapped conductors for electrical or optical lines.



And most of the "bummer damage" to parts, components and end items resulted in support units or depots or in COMUSCINCPAC trouble from one or more of these failures:

1. Failure to use preservatives on the item.



2. Failure to pack the item in an adequate container.



3. Failure to use enough cushioning, blocking or bracing inside packages or bins.



4. Failure to wrap or pack each item separately.



5. Failure to ensure old load are longer up plastic markings.



6. Failure to apply new identification and markings.



7. Failure to pivot around hump and jolts when transporting the item.

#### YOUR SOURCE NOW

DAEMON, 447 775-11 (24 APR 64)  
DAEMON (Continued) and STORAGE  
CONTAINERS, LOGS, MISCAL, and  
MATERIALS, 447 775-11 (24 APR 64)

Your guide on preservative packing are AM 740-20 (17 Jan 63) on preparation of material for shipment and TM 34-230-1 (24 Jan 63) (also CM 1-118 Aug 63) and TM 34-230-2 (17 Dec 63) on preservation and packing of military supplies and equipment. TM 34-100 (17 Dec 63) has a list of available packing materials.

Extreme markings are found in MIL-STD-129. Also see guidelines on marking in IPN 208. Your command may

have issued a local SOP on this, too.

But you can avoid a lot of damage without trying on any one-size-fits-all book.

First and foremost, when a replacement part comes in a package, that same package can help guarantee a safe return trip for the part you return. In fact, that is, if you use the package and protective

inserts and use 'em to protect the "wounded" items just as they did the new ones.

And you don't need us to be long on a box to know that you never saw replaceable items in a grab-bag box. Pack each item separately, each in its own container, to avoid hang-ups.

When you pack equipment and components for return to sender, a return label can be printed on pallet case or the 18 7/8" return or shipping label complying with the 10-100 09 kit (see the index, 14 Item 114), for a complete list. You'll find our label form for your particular equipment.



IMPROVE THE WAY THE PACKAGE IS OPEN. USE THE FRONT OF CASE.

LOADING CASE WITH A FORKTRUCK. MAKE SURE THE FRONT IS IN FRONT OF FORK. OR STOP IT.



REMOVE OLD LABEL. DON'T COVER THE CURRENT NUMBER.



MOVE THE CASE TO THE SIDE, NOT FORWARD.

Attach or detach any tags or forms that belong with the item. Check TM 14-710 or forms like DD 114, and DA 2002, 2400-4, 2400-5, 2400-6, 2400-16, 2400-17, 2400 or 2410.



Specialist Buck Spender won't touch anything marked "free."

Buck's figure isn't some kind of trap, points up anything that doesn't have a price tag, and winds up with a "steak" in his budget.

Buying replacement parts and components for defense equipment that's still under warranty means getting twice—*there, the same*—in return, because the warranty costs more thought.

That's what happens if a part that's available free under the equipment warranty is ordered instead from normal supply needs. On equipment with a warranty the maker guarantees it—up to a point like time, miles or hours. In simplest terms, a warranty guarantees that the item is free of defects in design, materials used and workmanship.

Warranty often is double. Then details may be spelled out in a purchase contract or a general guarantee by the maker—or may be only implied in the Military specifications or other rules for supply.



1. How do you get either an engine and/or transmission if they aren't by warranty?



2. How do you get either an engine and/or transmission if they aren't by warranty?



The computer does this way by stamping on these places, or it may be on a special warranty deal.



The 118 cover vehicles of the G10 (1174 and 1175) and G200 (1174 and 1175) write. And details on warranty procedure are in TB 9-200-200-01 (Jan 87).

So...warranty matters don't question.

1. What and how are covered by warranty?



2. What are the warranty details?



Other warranty for the M715 and M735, F350-series, calls for the manufacturer's own personnel to make repairs and replacements under the warranty (see D39925)—if he can't fix it. Otherwise, the manufacturer pays the cost of labor required. And, of course, some items—including some vehicles—are not covered by warranties.

Some of the other commercial items used by the Army are covered by some manufacturer warranties (usually for about a year) that may not be spelled out in Army regs.

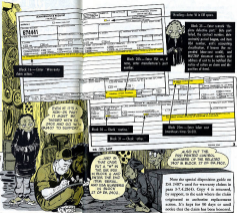
So what do you do to get this warranty service fixed?

1. Check equipment parts (EPA or manufacturer's) to see if a warranty applies. Also check the 2408-8 (if there is one) and equipment data plates. (It will be double-check with your D3 unit.)

2. If a part or component fails on equipment with a warranty, fill out form before you start repair or replacement. DA 2407 is your Maintenance Report to DA, and you also use it to check all claims on equipment under warranty or spelled out in part 2-7.4.2 of DA 24.708.

USE every opportunity DA offers!

More info on DA 2407 goes down type centers for warranty claims or for other maintenance reports. But there are some special warranty-claim rules for vehicles by unit filing the claim and/or unit making repairs.



DA 2407 THE MOST PERFECT GUIDANCE NUMBER OF THE 240700 7027 IN BLOCK 27 OF 24.708.

More the special equipment guide on DA 2407's and the warranty claim to part 2-7.4.2.041. Copy 4 is attached. By support, in the case where the claim originated on another equipment center. It's kept for 90 days or until notice that the claim has been finalized.

3. Before any repairs are made on the M71 or M73 or COPES make sure the manufacturer has been notified about the failure. This is usually done by your DDU under local SOP. Notice to the maker normally is required within a specified time.



4. Make sure you need to identify the end item and the part or component that failed. Use the USA number for vehicle and serial number for component (if they have one). Sometimes you may need to identify part, component, sub-assembly and major assembly or pin-point the defect. Include any other details called for by your local SOP.

5. Record exact hours and miles as well as the date when the failure occurred. Warranty periods are measured from acceptance by the Army to failure, so make sure they're recorded, with dates.



6. Parts or components replaced or repaired by the manufacturer also may have a warranty, starting from the time repaired or installed. So, make sure replacement entries on all log and maintenance forms (like DA 2408-10 and DA 2407) are accurate and complete.

Like in life, the best way lives — including replacement parts and components.

There's almost a law — and waiting there's money — if you don't take advantage of the warranty on your M71 (the new truck for M73 vehicles, etc.). Before you do any repair work on your 4-quart, check to see if it qualifies for free parts and labor. If it's under 2 years, oil and has rolled up less than 4,000 miles, there's a good chance the manufacturer will make good for parts and labor under TR 7-1000-PS-15 (the M71) and TR 7-1000-PS-1171 (the M73).



STEEL WAREHOUSES AND SUPPLY

# DUST GRABBER

If you're operating in and dusty country, you may need:

Kit, Air Pre-Cleaner, P/N 2040-121-0189 (the price is \$71).

It's for 574-Hourless L-Series tractors — modified and fitted — with the tractor-mounted engine air filter. This kit is to be installed only as required, as you'll have to get command authorization to order it.

Your pre-cleaner will catch a lot of the big stuff before it gets to your filter. Each day you just take off the wing-nut on top of the pre-cleaner, take out the cap and dump the dust.



NEVER LET  
DUST GET  
WORSE THAN  
THIS KIT

But, even with the pre-cleaner, you still service your filter every 1,000 miles — or more often if your air filter indicator signals that your filter needs cleaning.

## Mounting your pre-cleaner is simple:

1. Rotate the rear cover and turn it so the six brass pins are out like in open.



2. Remove the 2 bottom covers that help hold the hose to the vent. The 2 longer covers that come in your kit and attach the support bracket.



3. Install the pre-cleaner on the air hose (keeping the air protected) and dump it out.



And make a note for yourself on these replacement parts:

Unit, pre-cleaner, P/N 2040-121-0713

Bracket, front support, P/N 2040-121-0178

Knock, bracket holding, P/N 2040-200-0211



# QUICK 60-AMP ALTERNATOR CHECK

**STOP!**

Are you really a **COUPLE** THOUSAND MILES AWAY FROM HOME? **MOVE IT OUT!**

**MOOD SWING**

Before packing out your 60-amp Genie-Niville alternator when you suspect the generating system is on the fringe, it's wise to be certain the alternator is the guilty party. A few quick checks can put you on the right track and you can ease the problem like a real pro.

The trick is to use the Battery-Charge Indicator that's on the dash as a voltage meter.

There are several eyes—pick out the one on your instrument panel and picture these voltage areas over the indicated areas...



# ALTERNATOR CHECK



A reminder about the work load of the Genie-Charge Indicator...



When engine's **NOT RUNNING** BUT **WARNING** ON, IT INDICATES **BATTERY** VOLTAGE.



When engine's **RUNNING** IT INDICATES **CHARGE** SYSTEM OUTPUT VOLTAGE.



Now, for the quick checks.

## BATTERY CHECK

**1st** Check the condition of your battery. Turn ON the ignition switch but don't start the engine. Make certain the all electrical units like the horns, radio, lights, etc., are turned OFF.

If you know how a battery should behave, you can check it. The needle should swing to the 21-25 area.

Locate the needle on the 21-25 area. If it's in the 18-22 area, the battery may be weak. Or, maybe you're driving in a low gear or on a hill. If it's in the 25-30 area, it's too hot for the battery.





## GET A HAND UP!

**2nd CHECK** . . . Coast the engine and watch the needle. If it drops (lower engine speed will lower the RPM), you've got heavy trouble. They could be worn out or have a bad oil.



**3rd CHECK** . . . After engine starts, set the throttle so it'll run at high idle (about 1500 RPM). The changing ability of the indicator will affect low-end (the indicator needle reads as a low-rpm sign). For a good-working charging system it should sit around the 28.5 rpm mark. That's about at the white marker two-thirds of the way into the GREEN section.



## PROBLEM AREA

### OVERCHARGING

1. If the needle settles beyond the 28.5 with work under the 30 or 34 inch gear (and the indicator from the meter is 28.5) — the alternator is overcharging, or your battery can be in state of overcharge. Check both the alternator's overcharging. This calls for an adjuster.

### UNDERCHARGING

2. If the needle settles well below the 28.5 with work it means the system is not up to par and needs further checks, adjustment or a new alternator. . . .



## CHARGING FROM OVERLOAD

This check-out should be made by an organizational mechanic—a guy familiar with the vehicle electrical system and the workings of the alternator that's found in every No. 1 and No. 2 Organizational Concrete Tool Box.

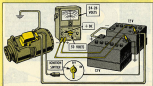
Check BATT-CHM indicator that shows overcharging, providing directly to the alternator and make the adjustments. . . .

But when under-charging is indicated, first check out:

1. Control voltages.
2. Exciter field coils.
3. Belts and alternator with connection—especially good.



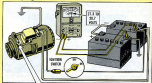
**Factory Test**—Set the multimeter on 50-volt range and 11 DC-current. With the engine stopped, connect it across the batteries. The 50-volt DC-voltage scale should show from 14 to 16 volts. If it doesn't you'll have to get your batteries charged or get another set.



## CHARGING TEST

With good brushes and the multimeter hooked up across the battery, start and run the engine at high idle (1500 RPM). When the engine runs smoothly the multimeter needle should swing down between 27.5 to 28.7 volts.

If the multimeter needle doesn't fall within this voltage range the alternator needs adjusting. . . .



### ALTERNATOR ADJUSTMENT

1. Remove the rubber-leaf plug that is fast at the alternator bearing with a hex key or hex wrench.

INSIDE

OUTSIDE



2. While engine running, insert a small screwdriver and turn the electrical inside the alternator and the multimeter will read 27.5 volts. Continue increasing and watch voltage increase the voltage 2% but do not go up to 30 volts and then back off and let the needle come to 28.5 volts. When all the test-adjustments needle should be at the white dot in the center.

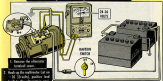
3. If voltage OK — replace the plug.

4. But if the alternator cannot be adjusted to 27.5 volts, you'll have to make further tests to see whether the battery voltage is getting to the alternator — it can't work if it isn't getting battery juice to start with.



## BATTERY POLARITY OF ALTERNATOR TEST

Turn off the engine and leave the ignition switch ON. Then ...

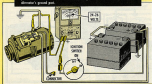


1. Remove the alternator terminal cover.

2. Hook up the multimeter (set on DC Voltage) positive lead lead to the alternator's positive terminal. The multimeter's negative (black) lead goes to the alternator's ground terminal.

3. When lead-up is made the multimeter's DC Volt scale should show full battery voltage (24 to 28 volts). If it doesn't, then there's an open circuit between the alternator and battery. It may be caused by loose connections or broken wiring.

4. Next, disconnect the rubber waterproof connector on the small wire leading to the positive terminal. Strip back the rubber on the vehicle side and connect the multimeter's positive lead lead. Leave the multimeter's negative (black) lead connected to the alternator's ground post.





DO NOT BLOW THROUGH BATTERY VOLTAGE

1. Use 24 to 26 volts with the resistance of 24 ohm with most vehicle 24 battery voltage. 24 to 26 volt. If not, after the guitar pedal or using a led.

Be sure to put the connection back together right—a little silicone compound (FON 8890-890-7010) on the rubber'll be it more easily.

Before the alternator can do its thing, 24 to 26 volts must be at the alternator's positive (+) terminal and at the ignition connection. No one going any further until it's done.

**ALTERNATOR TEST**

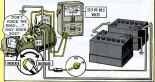


AFTER YOU'RE DONE, MAKE SURE FULL BATTERY VOLTAGE AT THE ALTERNATOR.



2. Start at the engine and run it at 1500 rpm. If normal, after it's running smoothly.

3. Remove the resistance across the alternator's positive (+) and ground terminals.





2. Now adjust the alternator's internal rheostat and the regulator's DC coil with care. About 10.5 volts, then bring the regulator in full turn to about 28.5 degrees. When you've adjusted to 28.5 volts, the DC coil indicator needle should be two-thirds into the green.

If you can't get the 28.5-volt adjustment, the alternator is on the fringe and must be replaced. That's it . . .

And don't forget to replace the plug and terminal covers after adjusting.

### FACTS OF AN ALTERNATOR'S LIFE



BOY! BOY!  
A PRO-  
CONNECT,  
RECONNECT,  
CONNECT,  
DISCONNECT,  
CON...



TECH! WELL,  
JUNIOR RUSHED OUT HIS  
NEW SET OF JUMPER  
TAPS, HUNG OUT AND PLUG-A  
DUN THE FACTS OF LIFE.

1. The 60-amp, 4C DC charging system is negative ground.

2. Never disconnect the batteries while engine is running.

3. When working on the electrical system, disconnect the battery ground cable.

4. Never reverse polarity—always double check (-) to (-) and (+) to (+) connections before installing the bus wires. Even an instant reverse flash will do damage.

5. The same goes when using jumper cables to start cars. But after starting, remove the ground cable from both vehicles first, then remove the positive cable. This'll head off damaging sparking cables.







7. Never ground the alternator's positive (+) terminal.

IT'S A NO-NO!



8. When using a fast charger, disconnect the battery cables.



9. Never throw a faulty alternator out as junk — test it first to support for a rebulk or a possible battery rebulk.

10. Before doing any electric work on vehicle alternator, disconnect the alternator cables.



11. Don't try to polarize an alternator.



Over upon a time there was no repair or rebuild program for the Laver-Meritt 60-amp AC DC alternator but there has a way of making changes. So don't throw away faulty alternator's, here 'em in, call TR 750-760-11 Jan 700-pgs. 81 and 90.

From camps and stations in CONUS, Alaska and Hawaii the now and their faulty alternators, regardless of condition, to the Laver-Meritt factory for rebuild under a special deal worked out with the manufacturer. The details on this repair and rebuild program are covered in AHCPS-GEN-5 message 00-1889 dated 7 Oct 1969, subject: Repair of 60 Amp Generator/Alternator, PWS 700-760-1181. It was sent to all CONUS Army and Major Command Headquarters.

So far, this program has not been set up for overseas commands.



75-700 8000...

# TRANSFER MOUNT PARTS



I WANT  
SUPPORT THIS  
TRANSFER  
FOREVER.

DRIFT  
MONEY  
PARTS SHOULD  
BE GOOD FIRST  
ON THE MOUNT.

Dear Mr./Mrs.:

The Maintenance Allocation Chart in TM 5-2520-246-201 says replacement of transfer mount assembly is an organizational maintenance job.

For the mounting bolts and nuts see part in TM 5-2520-246-201 w/Ch. 1 (Fig 60), the TM for the crane/hoist, transfer and power take-off.

Another thing, the 20 FM doesn't tell what torque to give these mounting bolts and nuts.

Can you lend a hand?

ONE A. H. A.

Dear Mr. A. H. A.,

These transfer mounting parts for your D-1/D-200 tracks are listed on page 21 of TM 5-2520-246-201 w/Ch. 1 (Fig 60), the TM for the crane/hoist, transfer and power take-off.

But there's been a couple of revisions—an improved nut and a washer added to keep your transfer mounts from loosening so easily.

Here's the rundown:

2 — Bolts, double, FM 230-72-134



1 — Bolt, double, FM 230-72-134



4 — Washers, mounting, FM 240-246-201



2 — Nut, self-locking, FM 230-270-204



1 — Washer, flat, FM 210-92-208



The torque is 22.05 lb-ft—listed in Appendix I, Torque Chart, TM 5-2520-209-15.

*Army*

FOR INSTANT...

# BOOT IT GOOD



Use your goggles—all the time—when you dig into a CV—constant velocity—creeping flexible hose. It's no snap job.

If you're dry only a machine clamp score, get FOM 3100-712-0805. For just a plain clamp cut, use FOM 5110 707-1897.



USE AN  
CLAMP WITH  
GORET



CIRCULAR  
RING  
CLAMP

SMALL  
RING  
CLAMP

LARGE  
RING  
CLAMP

All the words in the world won't help if you don't know the clamps, clips or hose the correct and safe way to use the CV hose line pipe.



When you don't know the score, find out. See your TM.

Get yourself under the hood of a down-and-out with a guy who has savvy. You'll find him in step with TM 5-1126-309-30 (Apr 81) and always looking for damaged parts. He'll want any good hardware.



FOR THE  
NEW BOOT UP

It'll be easy to allow the wood "TOP" with the corner of the mounting knuckle upper clamp and on the lower clamp into the groove made for it.



With a twist of the wire the lines'll go right side over and the zipper clamp will be fixed snugly in, all around the mounting knuckle groove.

Wrap up by locking the zipper with fine wire, tugging off the excess zipper



and sealing the outside zipper area.

When the heat gunned glue on, the job'll be done—but right.

## DRAIN-HOLE DOPE



You gotta bend, stoop, peep and poke to find all the drain holes on your wheeled vehicles. But it's all worth it.

The real result is stopping body panel decay, and that's achieved by keeping the drain holes open.

Check them often, especially after harding operations. That's when rust and corrosion begins to work in.

You can find the drain holes on the bottom door panels, the frames, the sub floor—places where water could naturally accumulate if it weren't for the drains.

Any kind of dirt can plug up the small openings. If they remain clogged you'll be plagued by bigger problems.





## REPACK AT 600 ONLY



Dear Frank,

The info sheet in TSM 33-1209-210-20 (May 84) shows that the coverings on main drive shaft, P/N 200-200-004, get the final grease treatment every 600 hours . . . 100 hours on a P/N 204-240-010 shaft.

But when you take the shaft shaft out of our 10 mated heavy for another reason do we repack it?

SP4 B.C.

Dear Specialist B.C.,

Negative. If you take the shaft out for some program other than to take it, you don't have to grease it.

Handle that baby with kid gloves, tho, to make sure it doesn't get damaged or contaminated with oil.

## SAVE THE BARRELS!

Cover and know location—no baby trigger fingers, please!

Never recycle the trigger to prevent interruption of firing by the burst limiter on your SMITH 1 submachine. The limiter allows a maximum of 3 minute firing per burst to prevent the barrels from burning out.

More barrels are recommended.

If a combat emergency requires firing a full complement of 2,000 rounds of ammo or a major part of the complement by continued recycling of the burst limiter, a minimum of 15 minute cooling time is required before starting to fire the next complement.

If you must recycle the trigger in a combat emergency, write it up so that the command officer can give the barrels the big break in accordance with the pump in para 3-12b of TSM 9-1829-200-12 (7 Aug 65).



SHOOT BURST  
TO SAVE BARR.



## EASY DOES IT!



When it comes to marking your Husq or HusqCobra cut-saw blades to get rid of a high freq vibration, lay off using a grease marking pencil.

The pencil won't last! It because the saw blade will usually knock the red off, or at least dilute it, and keep you from getting an accurate mark. I'll also cover this and show you how to get the tracking done.

Instead, use a small piece of sponge rubber, 1/8 to 1/4 inch thick, on the end of a 1/2 by 1/2-in pine stick. Cover the sponge with greenish MoS<sub>2</sub> or some other coloring, diluted with oil.

A small piece of soft black rubber from a hose also does an excellent job of marking the blades . . . no coloring needed.

Ask your favorite throttle jockey to mark up the blade.

At 6000 RPM, cut-saw patch is scored, make your move.



Now the marker stick on the underside of the rail beam and slowly move it back the saw, just far enough to mark the saw blade, about 1 inch from the tip.

After engine shut-down, eye the same rib as steps. Shows the pitch change line of the marked blade and track the blades over more.

With a reliable marker, chances are you'll get the blades to track on the first try.





**JOE'S**  
DOPE

**Mission**  
is  
**Possible** (1987)  
(1988)



Your mission should've started at 0800. It is too long for what you're doing on this. We will modify or redesign it pronto!

- If you succeed, operations all over the army will benefit ... the status job better performance etc.

This message will self-destruct in five seconds. Good luck Private First Class!





IN SECTION 2, ONE WILL THE INFO — FROM THE THE FIRM, NAME, ADDRESS AND SOCIAL NUMBER.

HOW ABOUT THE ADDRESSES?



THAT'S IMPORTANT! IF YOU EXPECT TO GET A FEED BACK YOU'RE GOT TO BE CLEAR. YOU'VE NAME AND THE ADDRESS AND PHONE NUMBER AND ON IT!

RIGHT ON!



IN SECTION 3, I'VE GOT TO MAKE IT'S ESSENTIALLY URGENT OR ROUTINE, ONE FEEL AND HAVE ON WHAT INVOLVED.

AAA, OK-OK-

ALL NO.



NAME	ADDRESS
PHONE	DATE
INITIALS	REMARKS

IN BLOCK 31, WHEN I DRAWS... VOUCHER OR RECEIPT? THEY CAN USE PHOTOS OR DRAWINGS...

YOU DON'T HAVE TO DO A PHOTO ARCHIVE OR ANYTHING...



HOW ABOUT THIS... THE ONE I SAID WAS FROM INACCURATE IN IT... LOOKS BRING THE NEW SCHEMATIC UP ILLUSTRATION.

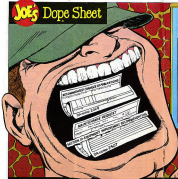
FINE — YOU CAN FORPLAIN ABOUT A PIECE OF THE ONE, UNDER 2000!



I'LL POST THIS THROUGH THEN WE CAN BEGIN OUR OPERATION!



# Joe's Dope Sheet



The man "at the top" are not far from Home and puts under par—  
 Here the word... You'll do (RISK)  
 With a Two-Oh-Two-Eight  
 Or a nice down to earth BIG!



**TABLE 1.11 (continued)**

Product Line		Product Price
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16
17	17	17
18	18	18
19	19	19
20	20	20
21	21	21
22	22	22
23	23	23
24	24	24
25	25	25
26	26	26
27	27	27
28	28	28
29	29	29
30	30	30
31	31	31
32	32	32
33	33	33
34	34	34
35	35	35
36	36	36
37	37	37
38	38	38
39	39	39
40	40	40
41	41	41
42	42	42
43	43	43
44	44	44
45	45	45
46	46	46
47	47	47
48	48	48
49	49	49
50	50	50

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

IF YOU WANT TO DISPLAY THIS ADVERTISER ON YOUR BULLETIN BOARD, OPEN STOPPLA, LET IT GO! AND FIN IT UP.





WASH THE  
CIGARETTES  
COME OUT  
SUDDENLY  
AND ARE  
POOR FOR  
A YEAR!

HOW  
DO  
YOU  
GET  
THEY?

BY THE POINT  
DOWN... THE POINTS  
AREN'T STOCKED AT THE  
AN FINE CENTER SO  
THERE MAY BE  
IMPEDIMENT TO GET  
YOUR AGING SENT IN



CRASH WE'VE FILLED  
OUT THE AIR AND  
IT'S IN THE AIR!

LET'S  
WATCH THE  
MOMENTS ON  
OUR HIGH  
TECHNOLOGY  
APPARATUS

WELL  
SOME  
NEWER  
ONES



WELL THE IS-A  
CONTROL BOX, WE'LL  
ZERO IN ON THE  
COMMAND RESPONSIBLE  
FOR THE FEEL!

The  
following  
impulses  
are  
analyzed  
and the  
best frame  
compressed  
to show  
how it  
works



WELL THE, THEY'VE  
GOT YOUR BRICK...  
THEY'RE BRACING  
IT!



WELL THERE'S  
JUST PLAIN IT...  
NOT DOIN'  
NOTHING  
ABOUT IT!

WELL YOU'VE  
GOT ACHIEVED THE  
HARD TIME THE  
HARD TRICKLE GROUP  
OF THE MOTHER  
FOOT OF  
SCOURGE?



WELL, NOW...  
THEY'VE GOT YOUR  
BRICKS TO GET  
A WHOLE LOT OF  
CONTROL ON THE  
HARD TIME FROM  
SOME AND NOW  
IN THE FIELD!

THEY'VE  
WRITTEN IT  
UP IN THE  
BIG BOOKS!

YEAH!



# WITHOUT A SCRATCH



The night has a thousand — you've got only two.

Old Cyborgs had only one, so he knew that he had to take care of it.

By now you should know that the subject is eyes — the sets you use to sight, the props you use to prop. And their helpers.

Good as your eyes are, they sometimes need help, especially for seeing long distances or in a blackout. For seeing their dangers before they run into big ones or for drawing a head on a target.

That's where optics come into the picture.

Whether they're used for observing, sighting, range-finding or recording an image on film, these optic helpers have one thing in common. They're almost always made of glass.

Each lens, prism or reflector comes to you clean, clear, unscratched and without a scratch. Your job is to keep it that way.

It must be kept free of moisture, dirt, dust, grease, grime — that's of even the film of oil you leave as a fingerprint any time you lay a finger down.

These optics can't take any jabs, jabs, slams or bumps. They can't touch 'em with TLC tender loving care.





## OUT WITH BRUSH OR BUSH

LET ME SHOW  
YOU WHAT A LITTLE  
HOT BRUSH  
CAN DO!

If the weather's not chilly, a whiff of your own hot breath is a good dust remover—though it may fog a lens for a few seconds. If a light brush won't budge the dirt, keep your hands and brushes dust-free.



To keep lens just shifting dirt along on the lens surface, rap the handle against a flat surface now and then to shake those minuscule gravel free.



Don't use grit or scratch a lens—and the danger doubles for the coated eye. So lift dust off with a light touch of an artist's camel-hair brush.



After a cleanup job, wash the brush in ethyl alcohol. When it's real grimy, push the brush handle through a cork stopper and soak the hair to free the grime—then dry it before use again on a lens.



## THE DE-GRAVE

Just a little dab of grease—even a greasy finger print—can do your lens in. To clean off a grease or oil smudge, use optical lens liquid cleaning compound, and lay these papers.



Roll the lens ...



Apply cleaning compound ...



wash the lens lightly with this treated tissue.



Then edge the cleaner away with a double-edged razor. Its lifted edge is on all four your fingers to be used through to the base. But it makes from the water surface. And always from any time there's a dip of glass on it. Dropping water on the lens.



DO NOT  
WASH  
WITH  
WATER  
OR  
OIL!  
DO NOT  
USE  
TO  
CLEAN  
GLASS.



In a pinch, vinyl alcohol can help for cleaning compound — if you're careful. But stay on of Alky. On some other forms if he needs over the edge he can not away their content.

Breath can help to clean up finger smudges — if they're light and the washer's not too used.

Take special care if the lens has a magnesium fluoride coating. Use the coating that gives the lens its bluish tint and run down light lens from reflection.



#### NO HARD STUFF

Don't let any window locker tell you any extra-strong polishing liquids, pastes or solutions for cleaning lenses. Some may clean but they'll also dig or scratch while taking away grime.



You may run across a perpetuated lens cleaner in the field. Don't use it for lenses. It's silicone based and can damage optics. Use it only for your plates of glass.

## KEEP 'EM COVERED

The best lens PM is as long as covered when not in use. That keeps a lot of trouble in its tracks.



If by accident your lens is lost, drop it before the paint dries.



Use lens paper dropped last week with suitable care, and spirits —



and follow with an alcohol wash.



## STEAM UP!



A flow of water, steam or air on an uncovered lens can kill it by forcing water into lens its flange or getting against its polished face. A scratched lens is scratched more ways than one.

And even though its job is to transmit light, too much light can kill a lens. A lens focuses light rays and builds up heat that can soften its cement — and crack the critical measuring lines! In sighting equipment, the cover protects a lens direct at the sun without a shade or filter.



LEAVE ME OUT IN THE COLD, IT'S BETTER IN SUCH A TEMPERATURE CHANGE.

## LENS IS A DANGER!

If you're using lenses in a cold country, your major hazard is not the cold — it's the sudden temperature change when you take 'em in out of the cold.

Cold glass is a warm room collects condensation. It even collects inside an instrument if warm air can reach it. This can ruin metal parts of instruments — lens up a lens, or even crack it, when it's taken back into the cold.



Warm up a frozen instrument socket by a hot stove and expansion of metal parts can crack it open to the stove.

One way to dodge such damage is to use optical equipment outside when you go in. You can use a lens with a lightened lid and lens with a continuous piece of heat-conducting material, like aluminum foil.

Put your optics in this box—outside—away from sudden temperature changes. Then take 'em inside in the box and they'll warm up slow without freezing.



Two other points to keep in mind:

Don't try using your own hot breath to clean a lens in freezing weather. Use a bit of alcohol, instead, but use with care. Moisture in your breath will fog the lens—maybe even freeze it, forcing you to heat it slowly when you look at a lens in the cold.

Check equipment tube instructions for the right cold-weather lubricant. Lubricants prevent sluggish in the cold; some moving parts sluggish or even being 'em out standstill in extreme cold.



#### HEAT THE HEAT



When it's lying-pat hot, hot day, there are few big problems with optical equipment. (Hold down on the oil, though—it'll just collect sand and dirt.)

But add humidity to the recipe and you've got trouble.

Sweat flows freely and drips and squishes. Frost's got acid, and acid brings corrosion and rust if it gets on metal parts.

To keep your waxy hands off these instruments except when you need to handle 'em, and wipe 'em dry after use—making sure you keep that wiper away from the lenses. A little light oil on base metal, screws and pins can cut down rust in damp weather.

A light coat is enough on a metal surface.

With high humidity, too, watch things closely in every damp spot.



NEED THOSE GREASY HANDS?

I'M JUST GOING FOR A LIGHT OIL—MAYBE OILY!

#### OUT OF THE GAMP



HEY—THAT'S A GREAT WAY TO SHUT DOWN A BOMB—GET THE POINT?

NO FEAR... IT'S EXACTLY A DO-IT-YOURSELF PROJECT—HERE'S HOW!

#### GET LOCKED

Roll three 1-in. holes in the divider from top and bottom of the cabinet. Roll 'em in either the front or back side.

Use . . . your hand two dividers, each with eight 1-in. holes, and put 'em in the cabinet in the cabinet in "out" or "in" side.

The dial that runs the cabinet into a divider is a light bulb that you put on the bottom of the cabinet. A 25-watt bulb should do the trick, but you may need a larger one in the future. For a dial, like aluminum foil, cover the bulb as protection against a possible fire.

The divider works like an air pump through the holes at the bottom of the cabinet. It is normal to it pump the bulb . . . and when the dividers with it on and the bulb at the top. Come, you don't want to let that bulb go in the street, even though through the instrument and with the bulb.

## HANDLE WITH CARE

Handled all the way, though, when you're taking optical gear off shore equipment to store it in a dry locker. Rough handling can kill it before you get to dry-land check your IMAC (maintenance attention chart) before dismounting any equipment. You may need help from a higher level — like the IC — or special tools to do it.

If you're moving cross-country on rough terrain where optical gear is not needed, you can guard against damage by putting it in carrying cases or in shielded storage. Some guys use real valuable sights in their bags as they ride cross-country.



DON'T HIT THEM

Part is, if you keep the bags down and build 'em big enough, a dry locker can also be used to take the dampness out of leather instruments carrying cases.

But watch that heat. Overheated leather may grow brittle and crack.

Remember to clean those carrying cases now and then. Use a cloth of wool or clean canvas — a bath or glass may rot the leather.



Wash away gunk with a sponge and mild soap. Rinse at least twice with warm water, and wipe with a clean cloth.

Dry in the shade of your warm dry locker. Sun and radiating heat are bad on leather.

After drying, you back the weather-out oil. Moisten a cloth with neat's-foot oil and rub-wipe-rub until the leather shines.



## OTHER YOU DO OR YOU DON'T



WEATHER CONDITIONS  
DEPENDS ON THE  
KIND OF SERVICE  
YOU WANT. YOUR  
OPTION — YOU  
KNOW IT. THE  
HIGHER YOU CAN  
BE, THE MORE, THE  
BETTER.



## DON'TS

Don't allow guests to sit on rubber up-  
stails ... and don't use rubber-covered  
upstails or dry cleaning solvent to remove it.



## DO'S

To clean the upstails with more soap  
water, scrub by ... then dust thoroughly with  
felt.



Don't handle rubber upstails rough in  
the mill. Call rubber-pelt handle and handle  
in extreme cold.



To handle these upstails with care when  
the mercury drops below zero.



## DON'TS

Don't strap your limbs, including neck or fingers.



Don't tighten straps or screws enough to feel the threads.



Don't show anything apart just to see why it fails.



Don't let brackets, supports or instruments slip down legs.



Don't set up a tripod until the legs are logged.



## DO'S

Go from inside out — up to the necked bolts. Use no more force than needed.



Go tighter straps and screws till snug — then stop.



Be about the third man you'll see if more's needed, and support.



Be upper straps the slowest to show to loose or broken.



Be second legs ready to the level. Be straps and two legs downhill with feet in the ground. Keep attachment straps tight.







YOUR IDEAS, FEED  
AND KNOW YOU ARE  
MOST IMPORTANT IN  
HELPING THOSE OFFICER  
HELPING ON THE JOB.  
BUT SOME CLEANING  
AND CARE ITEMS ARE  
NEEDED, TOO. HERE'S  
A LIST THAT MAY  
BE USEFUL!

**CLEANING AND CARE ITEMS**

Cleaning compound, optical  
lens, FOM 6400-223-1002, 1 qt.



Etchant, desolved, FOM  
6400-224-0206, 1 pt. and



Tally, technical, FOM 6400-170-0209, 1 lb. case—  
all listed in Fed Gen Catalog 11 for 02.



Brush, optical, special task,  
FOM 6400-244-0002,



Etchant, optical, universal  
optic, FOM 6400-224-0279, 1-  
of case and



Brush, lens oil, FOM 6400-  
244-0002, 1 qt. case or FOM  
6400-244-0002, 1-pt. case—  
all listed in Fed Gen Catalog 11  
for 02.



Paper, lens, FOM 6400-223-2070, 100 sheets 3 x 1 1/2 in, FOM 6400-223-2071,  
25 sheets 4 x 6 in, and FOM 6400-223-2082, 100 sheets 7 x 7 1/2 in — all listed  
in Fed Gen Catalog 11 for 02.



Spans, widths, FN 794-  
280-252, FN 794-276-276  
and



Spans, widths, FN 794-276-  
280, 280-276-276-276-276-  
and for 0794-276-276-276.



## SAVE SPECIAL CASES

Some instruments—like the M115 panoramic telescope, M157 telescope mount and M1 infantry altimeter—are hermetically sealed.

These should never have moisture inside. If there's water inside 'em, they've got to be purged and charged with dry nitrogen.

Other instruments without nitrogen valves—like the M104 or M105C altimeter telescopes—should be dried out if there's condensation evidence in 'em.

Expansion and contraction of optical elements in range finders keeps putting the coincidence reticle out of adjustment as the temperature changes. Adjust it often.

When binoculars and removable periscopes are supplied with protective cases, keep 'em there except when they're needed for immediate use.



THANK A LOT FOR THE LEMONADE ON THE TOWER.



# PURGE

"It's not the heat, it's the humidity" is an old saying that still fits around a lot of places these days. It's that same old humidity that causes the contamination which clogs up your diagnostic instruments.

While you can't do anything about the humidity, you can do something about clearing up your own cylinder operations. Available for the asking is your very own independent maintenance type purging kit.



# YOURSELF

Everything you need to know about this kit is in 2 publications.

It gives the step-by-step instructions for safe installation, filling, storage, use, and perhaps, longer projects, safe filling and white tape copies of being able to use purging and storage.



It lists the kit's components.



Locally, the nearest distributor (they require \$24.95) (1-800-235-2372) and address (20 420-20-242) will be included in a more complete kit which the distributor order for \$24.95 (1-800-235-2372).

There more of the TCB's have this gauging kit as yet, you'll have to use the organizational solution specified near the top of your TCB at your service for handling the kit. Send a letter request through authorized channels for an emergency maintenance with the following info.

Kit Name Number  
 Manufacturer  
 Equipment requirement  
 Personnel requirement

Kit Number: 20 420-20-242  
 Price: \$24.95 (1-800-235-2372)  
 Address: 20 420-20-242, you'll require paying a first copy \$24.95 (1-800-235-2372) and subsequent maintenance provided the supply of gauging and maintaining this kit.

## WILLIAM SHIRLEY... CARE FOR

## CARE FOR

## YOUR COFF



Let somebody maintain Shirley and her thing you think of as the XM41 and XM40 Controls of Your Turret. It's only natural... since the COFF controls the components you work with most of the time.

And the component requiring the most care is the Instruction Control Unit mounted on your tank's turret. Its poor ICU maintenance means more down time... and less winning... for all you Shirley sluggers.

### WATER THE PAPER UNIT

The answer, a sure way to get water, is to ignore the REMOVE PAPER indicator on the ICU from panel. Since this lamp will only light during the firing cycle, every gunner insurance needs a third eye coded to watch the light before it disappears.

If you don't watch the always red when the light says so, the red (and... but the turret drive on and on... until the power's turned off. Leads to all kinds of possibilities, but not more,



stripped drive gear, lose drive motor shaft.

But once your support maintenance applies the change to para 1 of TB 700-200-2 11 Jul 69, it'll be possible for the REMOVE PAPER lamp to light any time the power is on, not just when the turret is operating during a firing cycle. Then you would have to watch the turret markings and paper light at the same time.

### WILD THAT ONE!

As long as you're watching the ICU from panel, here's a sometimes dangerous opening up to help keep you on target.

1. **Wait for the turret rotation complete** (anyday before you hit the RED light button).

2. **And the turret is still in RED (ICU) position** you're in a complete fix.



Table 2-13, page 2 (Rev 1) TB 700-200-2 401-12 (Sep 69) has it in writing.



You also want to be very careful each time you put a new roll of paper in the recorder. Bunching lightly around the ICU's open cover can sometimes be confusing... particularly when you discover you grabbed the wrong set of leads for adjusting the paper positions.

It's smart to double-check your lead positions before actually turning any leads—check all 4 of them look and



feel alike. Just one wrong wire can throw either of the gun positioners out of alignment. And that the recorder unit has to go back to maintenance support to fix them.

The fix is para 1 of TB 750-030-5 11 Jul 69) replaces the "marked" lock on the gun gun with a locking and "marked" lock on (PN 0991-114-0900) that gives the 2 you controls a different "fix."

### DOUBLE-CHECK! CHECK!

Wait one while you've got the ICU open. In case you didn't realize, that

Lamp-to-Target-Center alignment control knob, next to the number locating, is set by organizational maintenance. So leave it in the extreme counter-clockwise position—unless you plan to use it for a target vehicle other than the M991 Sheridan or M994 F2 tank.

Be sure the ICU cover is closed during a COFT roll test. Otherwise, the sun, or any other bright light, may hit the cards inside the ICU. And this will cause a “no-go” on the COFT.



**SHLEIGHT COFT NEW...**

## SMOOTH SLIDING



Loading the XM41 or XM43 Counter of Fire Trainer onto your Shleight mobile firing rack can be pretty rough on those exposed air filters at the bottom of the Inertance Control Unit.

That tank's slide is just too rough for the unprotected filters to slide by while not knocking the heads off the remaining edge covers or gouging into the filters themselves.

But a cover like the one used with the inlet air filter on the Power Control Unit of the XM43 target assembly is perfect protection.

All you need are 2 each filter cover assemblies . . . P/N 4920-209-1492 (1460781) . . . and 8 each machine screws . . . P/N 1304-701-4112 (401-11905-34) . . . to breeze down the covers.



... USE A COFT



POWER UNIT (XM4) P/N 4920-209-1492

MACHINE SCREWS P/N 1304-701-4112

Lamp-to-Target-Center adjustment control knob, next to the number locating, is set by organizational maintenance. So leave it in the extreme counter-clockwise position—unless you plan to use it for a target vehicle other than the M991 Sheridan or M994 F2 tanks.

Be sure the ICU cover is closed during a COFT roll test. Otherwise, the sun, or any other bright light, may hit the cards inside the ICU. And this will cause a “no-go” on the COFT.



**SHIELDING COFT HERE...**

## SMOOTH SLIDING



Loading the XM41 or XM43 Counter of Fire Trainer onto your Skill-Check vehicle firing rack can be pretty rough on those exposed air filters at the bottom of the Inertance Control Unit.

That tank's ride is just too rough for the unprotected filters to slide by while not knocking the heads off the remaining edge covers or gouging into the filters themselves.

But a cover like the one used with the inlet air filters on the Power Control Unit of the XM43 target assembly is perfect protection.

All you need are 2 each filter cover assemblies . . . P/N 4920-219-1492 (1460781) . . . and 4 each machine screws . . . P/N 1304-701-4112 (401-11905-34) . . . to clamp down the covers.





Your M1-200, Case II multimeter won't get up and snarl in haste!

Try some screwing.

If the back of the mounting screws (which hold the plug to the board) are too big to fit the slots of the case adapter, use M14-271-212 type screws, which you get with PM 1405-045-0049. They fit the adapter slots no more.

The screw problem, incidentally, comes up with the M1-100.

As for the Army equivalent to mounting B, C and D models, try this:



Fit the fine leads into the leads on top of the M1-2.



With pencil and slip of paper, cut the leads and screw them in the compartment. The screw has to secure the case and fit all the K1 leads to show them. Cut and screw the K2 and K3 in the same place.



Turn the back cover upside down, fit the 1/4 inch slot in of the top of the leads through the slot and tighten the cover with the four screws.

WANT MORE TIPS? TRY  
NEXT THREE PAGES.  
FROM: P. 104





Blow in garden hose like 3BA can really put the seal on weather tubes like the T1 and V2 type EMUs in the PP-488/TBC power supply.

To, or keep the tubes from falling and putting your AN/TBC-24 radio out of business, remove the air filter from the back of the PP-488.

Fact is, removing the filter is a must in hot and humid areas. Taking it out allows more cooling air to flow over the tubes and such.

One big caution: Dirt and dust build up without the filter, so operators gotta be extra careful about keeping the in-

side of the PP-488 clean. Like, remove the dust as often as necessary ... which may be often in hot, dusty, humid areas.

REMOVE THIS



## ANTENNA RELEASE



Now that you release your radio whip antenna from its down, let it slide up into place against the palm of your hand.

That exercise keeps it from whipping back and forth and prevents pinching of the ears while by the coil spring.





## BOW THAT MAST

One easy way to prevent damage to the mast of the AN-150 antenna (ANT-GRC-005, radio protocol set) is to be sure the mast is bowed upwards before you erect it.

Like, when you've assembled the antenna and mast, and just before you pull it upright, add enough tension to the top mast guy wire (in the guy pole on that) to bow the mast slightly upward.

Have been mast tension.

It also pays to follow each step outlined in para 2-15d of TSM 11-0830-711-01 (Doc 60).

### TENSION ON THE GUY WIRE



## KIT FOR ANGRY-19

Looking for an installation kit that'll get your AN/GRC-19 out in a M111-1-17's star track? You can get it with PSM 3029-007-0007. The PSM also makes it done: M11-151, Vehicular Radio Sets and Associated Installation.

## CAMERA FLASHES

Now hold up, you organization camera repair types. There's one catch point in digging into the innards of that Olinflex RB-1100 still-picture camera with out the proper test equipment.

If the ailment's in the electrical circuitry, the RB-12 (2) should be used to support the flash.

You'd be mighty smart not to touch the doctor and his blades under any circumstances. Add from human fingers can scratch the blades and leave 'em up.

Incidentally, you need to use RA-300 batteries in flashgun, not the RA-30's.



## CLEAN HEAT

That's a big job cleaning the heat exchanger of the AM-5545 of the ANI 200-100 radio set.

Like page 48 in THE 11-1420-520-12 is written. Use hot water and a mild soap to clean it, and rinse with hot water. Hot water is good, but better than nothing, is forced air. Either way, clean it often.

And don't worry about damaging the heat exchanger. It's waterproof.

## PULL THE PLUG



The door cover of your TITANACE outboard motor can dent all the copy light plug (P13), jack (J13) and cable quick-lets if you forget to pull the plug before removing the cover.

To pull it:

For a permanent reminder, latch on an extra 1-in. wide pressure sensitive tape and guard it on the cover top with this word: "CAUTION—DISCONNECT COPY LIGHT PLUG TO REMOVE COVER."

Your support can get the tape with **POW 8021-500-0014** 300-yd roll. It's in stock at **1-800-82-4-1** (Jan 78).



## TRIM WHIM

Half a stick. That's all the MOD TRIM needs on your T-361 outboard motor.

Like, 100-grams. Putting the stick to it when you get underway will tap the gear teeth, stripped, that is.





## UPTIGHT SIGNAL LIGHT

I CAN'T  
WAIT TO  
SEE YOUR  
SMILE...

HANG UP  
YOUR PHONE,  
LOVER!



It takes an off-road security lamp to watching the unattended transmission of sensitive info over your telephone net.

You can requisition the lamp for the TA-HL5/PT or TA-CL1/PT telephone set by using FSM 1009-793-0230. This stock number replaces FSM 1009-793-0043 in the Army Materiel Data File.

You'll also find it listed on Page 87 of Ch 1 in DC 3000-21 (Jul 87).

This'll give you the entire assembly you need for the installation.

## FINGER TAP ONLY



THIS  
GLASS  
DOESN'T  
THINK!



One small window on your automobile or other car set?

One thing that won't get it done is tapping the cover glass with a nail. More's likely, you'll end up breaking the glass . . . or knocking it loose so it'll fall against the wire.

If the needle sticks, tap the glass gently with your finger. Get your support in check to cut it out if that doesn't work.

And, uh, if your cover "glass" is plastic and the needle sticks to it, you may have to apply some automatic compound to the window. FSM 1009-883-0050 gives you a 3 1/2-oz spray bottle. You'll find the FSM on page 3-54 of Red Car C5000-8L (Jan 79).





PRINT SHED

MAKES THE JOB PLATED BEFORE YOU PAINT 'EM



## M11 DECON PAINTERS

Your M11 Decon will painting? Here's other paint sprays you need. If you need a primer you can use coatings covered by Fed Spec TT-P-004, use:

**FM 000-00001** — 1-gal can



**FM 000-00002** — 1-gal can



**FM 000-00003** — 2-gal can



For the basecoat, silver drab top coat you can use paints covered by Fed Spec TT-P-007 or MS-D-004, color No. 2-0087, such as:

**FM 000-00004** — 1-gal can



**FM 000-00005** — 1-gal can



**FM 000-00006** — 1-gal can



The paint's listed in Fed-Cat Com-11-A-00000.

To finish up the yellow fill line and the fill area you need marking enamel (Fed Spec TT-P-010):

**FM 000-00007** — 1-gal can



See page 3-15, Fed-Cat Com-11-A (Mar 60) for the list.

## PAINTING CARE



WORK SHOPS —

## DECON OIL DRAIN

On the M11A1 4-cylinder diesel, you need a drain of some kind to drain the engine's crankcase oil. Otherwise, the oil will splash inside so in the decon's steel deck and you'll have a messy drain to mop up.

You can make the drain from a strip of flat aluminum, or any other metal, or even from an old tin can or from ready cardboard. The strip should be at least 3 1/2 inches wide and 12 3/4 inches long. Curve the strip lengthwise so you'll have a smooth drain about 1 1/2 inch deep.

Place one end of the drain under the engine's front oil drain plug and drain away. The drain'll carry the oil well away from the deck and you can wash it in a shallow container.



## STILL A NO-NO



WE WANT  
ENERGY  
BUT NOT  
THE  
PRICE.

BUT WHAT  
ABOUT THE  
BUST  
ECONOMY?

FM 90FS

Fuel's used for many purposes on a ground force equipment, it'll camouflage your equipment, and sometimes it's used to improve looks (like your gal, for instance, she knows how to use it to improve her looks). Our point's still a no-no for the inside of the 3-gal. water can.

So what do you do when you find scratches or rust spots on the inside of your water can?

It depends upon the size of the spots. If they're pinpoint size, then you can still use the can. If they're bigger, better turn the can in. When you're not sure whether to turn 'em in or not, get advice from your unit support.



HOPE  
IT  
LOOKS  
GOOD

HOW'N I  
GONNA TELL THEM  
MY MIL CAN  
BARE HAD IT?

These cans need little maintenance, but the little you do is important. Keeping the cans clean inside and out is a must. Use hot water, soap, and a brush on the outside. You clean the inside with hot soapy water. Flush the water around until the can's clean. Never, never use steel wool on these cans.

When they're clean on the inside and out, rinse them with clean boiling water, and turn 'em upside down to dry.

Make sure the closure assembly's not loose, damaged, or missing.

To replace the complete assembly,  
or some of the parts, call for:

Evac assembly, mil-spec water  
can, FM 7540-201-0001

Closure assembly,  
FM 7540-111-0001

Evac can water (gal),  
FM 2210-204-0004

No. 11 stop pin for water,  
FM 2210-204-0001

You use a non-toxic adhesive to glue a hook or new gasket in the closure assembly. FM 9040-202-0010 will get you a pint.

The inside of the can may be painted with OD enamel, FM 9040-202-2124.

## EITHER DIRECTION OK



*Dear Staff/Reader:*

Often we have to cross these rump 2 or 3 miles with a 20% load always go in reverse to keep track dust out of their eyes. Will this hurt the equipment?

BT C. E.

*Dear Sergeant C. E.:*

No, not if they run in immediate range to prevent track damage. Reverse or forward makes no difference, but always travel in immediate range . . . and stop on the tracks. Go piggyback on a trailer if there's many miles to travel.

*Andy Alford*

## KEEP TAB



You can let an strap on a bag in a bag if you do your preventive maintenance on your Hopp Model MHT18M1, 11,000-RTU spare heater.

But you could be left out in the cold if you forget to take a look at the tab in the room thermostat control. Some of those tabs are being cut by an external bodywasher. That's cause the input voltage to be grounded, and it'll blow the fuse.

To keep your heater in operating condition, examine that tab (which is



made out of .010 inch-thick blue electrical insulating paper) for cuts or wear. If it needs to be replaced, use a plastic type loop clamp, P/N 11-68-019-0100.





## 290M PIVOT WOE



WHA... I just started  
BACK TO GET MY UMBRELLA...  
SO I TURN A "T" TURN



Turning too sharply in your 290M tractor can crack your rear frame. That's disaster, but it needn't happen.

The trouble is, the axles of the vehicle rear assembly, plus the weight of that heavy wrap, jolt right across the frame rails. First, your loader cracks your oil tank . . . then your upper sling point gouges a hole in the tank . . . then your frame bumps hit and the shock rips the side plate. The bill could run over \$10,000.

The trick is, every time or eight you enable a sharp a handball between the main part of these frame and rear section—specifically, keep at least 3 inches between that trailer edge and your tank wall always.



## SKIDPROOF YOUR STORAGE TANK

You don't have to be in wild country to find that your equipment can be slippery when you're climbing around on it. Your 500-gal metal liquid storage tank, 8954 1-02-145-17-05, and 8959 0280-753-0283, can get as slippery as a greased pig if you spill fuel on the top of it or if it's raining.

To keep from making an amber-dyed landing from the top of that tank when you're up there filling it, paint the top of the tank with some rough-eye non-slip walkway compound. 8959 5414-141-7434 will get you a gallon can of OIL-RESI-W-5444, type 2, compound.



You can use a brush to paint an area 50 inches by 45 inches from center to center of the lifting eyes on the top of the tank.



## Comic's Mini Mini's

### *7-MINUTE Pans*

Get the new DA, Pamphlet 130-28 (May '78) on 7-MINUTE. It's just been printed. Order copies you need on DA Form 17 from the Baltimore Publications Center.

### *R77-L Oil Filter*

Get out on any older-style engine oil filter on your 3000-hp RT Parallels. P24 P240-880-8880 is required on both M7Fs and M7MCH models, like the new 18-3008-240-30F (Mar '81) says.

### *Lower Dyes?*

Your check for lower bars that can cause FOD after your bird comes to rest from support? Like maybe D8 or D8 boy need a (like) Dist fastener during an M7FD, and a couple of studs dropped into your bird's girder. A FMO check on D8s usually—after any repair job—keep your bird flight-right.

### *Fast Fuse Wire*

No need to replace the whole fuse assembly on your M7 (M7AC) fuel service controller if the inside ground wire breaks. Just fix 'er up with cross-ground wire, like it says in 18-780-981-4 (Oct '81), Article 28.

### *Check Now!*

Have you gotten M7AC's new cargo track? The new drop-side-type? Did it come under Contract No. DAAM04-88-C-0012? You'd better check the wheel bearings—all 4 wheels. Some slipped by with no-grease in the wheel bearings. Try? Late out!

### *Boofed Up Bird Dog*

Some G-10's have been modified to increase the gross weight allowance from 2400 to 2800 pounds. The rest of the G models and G-10, B, YC-18 aircraft will also carry a bigger payload—when you get M7FD 18-10 10-002-00 17 (28 Mar '78) applied. Schedule B, insert.

### *Wrap-up Wonders*

If you're picking up parts, assemblies or equipment to go back for repair, there are a couple of new services you might use: 17-20-41 23 Packaging for Return of Repairables, and 17-20-0000 Packaging for Partial Post. Get 'em at your local multi-steps center.

### *Teletype Chart*

If your 24-hr track has a teletypegraph, you use P24 240-827-8770 to get a package of 100 replacement charts.

Would You Stake Your Life <sup>on</sup> <sup>the</sup> Condition of Your Equipment?



**NO, NO,  
I ORDERED  
A CRANK!**

On your  
DA Form 2765  
supply requests

**BE  
ACCURATE**

Be sure  
the numbers  
you write  
are  
exact!



**THEN  
DOUBLE CHECK!**

One  
little digit  
wrong  
can bring you  
a tank...  
instead of  
a crank.