

This Outfit Maintains 'Em!

Will they get your back from dropping down a lot of weight in "Chestnut State" and still be in any shape to operate equipment? They can be (and will be) with general maintenance products and the good... and legal... use lots of "new" 100-100 function battery.

"General products" for this job "Maintenance" for us, we do not get the general maintenance and "Special" light generator to make that matter I've been here.



WILL THE STRATEGY ... story of the day.

DOES ... keep in mind all necessary items and control for efficient general maintenance and repair work.



TRAINING

TRAINING ... in the small

generator that'll train when the unit they're using. And make sure all of the necessary and essential are completely done. The best is checked every 2 hours.

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FROM — **RED ARMY**
DURING AUTOMATIC TRAINING —

PM — KEY TO ACCURATE SHOOTING

Your M16 gas detection computer (FARAD) is far more handy simple PM checks. But, don't be misled . . . the way and in the kind of PM also provided — the computer's gas traps in ready to compute being done in the flip of a switch, and guards the ready gas traps against wear and damage. So, you have to stay alert to its daily PM needs.

PROTECTIVE



GET YOUR
M16
CHECKS
ON-TIME
DAILY
IT'S
CRUCIAL
TO
YOUR
SAFETY
— 2000
OR IT
IS ALL
OVER

INT — CLEAN AND DRY

In fact, when you're out in the open, you'll have a likely time to get up a barrier of some kind to ward off the dust and dampness. You'll need socks, clean rags and a clean, self-heated tank to keep things just dry and dry.

When things change fast and frequently, you'll get to be extra careful about drying the equipment.

WATER-PROOF

In damp weather or a moist climate run the computer in a couple of hours a day to dry up the moisture that may collect inside. If you forget the daily watering, the moisture will damage the computer or slow it down, and then where'll you be?



PROTECT THE FROM THE ELEMENTS!



GET THE
COMPUTER

DATA

COMPUTER
POWER
CABLE

THE
M16
CHECKS
ON-TIME
DAILY

Always keep the covers on when the computer's not in use. Store out the tape cables having to a pull or lift.



Wipe the windows and control display with soft, lint-free disinfectant, never use any kind of abrasive liquid, paste or alcohol on them.

Brush and wipe the console panels daily and pay special attention to the switches, buttons and keys. If the console buttons stick or bind, clean them good and then give them a dab of alcohol to clean out the sticky grime around them.

Never shove sticky buttons or keys. Have them checked by the regular scheduled maintenance guys. Watch your mouse pointer on knobs and switches. You'll have 'em for sure if you force them past their normal range.



BLUR CASE

Cleaning the air filters daily protects the memory . . . as well as the rest of the computer. Clogged air filters block the air intake and the memory will overheat.

When you're in a real hurry, usually when you may have to clean the filters 3, 4 or more times a day.

Clogged filters keep dust blowing through the computer. It builds up and combines with cooling and causes shorts and wear. Dust'll also get into the board sockets and keep the circuit boards from making good contact. That's why you have to keep a spare set of good filters on hand . . . in your case keep operating while the dirty set gets cleaned and dried.

HERE'S HOW TO REMOVE THE FRONT FILTER!



With the smaller filter, which are across the bottom of the computer, use the sides of the case.

You can easily clean the filters by twisting them around in clean, soapy water ... but be sure they're good and dry before you use them.



Replace a filter if the element is crushed or the filter's damaged in any way.

The outer set of filters is stored inside the computer's back cover. When you remove the back cover, transfer it to the front cover ... that'll box in the filters and also keep both covers clean inside.



AIR CONDITIONING



Make sure the ventilation blowers keep working. To check the steady air intake, just place a hand under the front edge of the casing, near the filters, or check the exhaust vents on the back of the computer case.

Take care the air intake's not blocked by anything inside the computer. Remember, when the temperature light (on the trouble indicator panel) is on, the temp is OK, but when the light starts blinking it's telling you the computer is overheating.



You always remove the back cover when you're operating the computer... except when the temperature is 212° F, or higher—then the cover stays on.

With the back cover removed the blowers will pull cool air right through the computer.

The hot air will lessen the computer's heating problems and it can heat the memory, so always shade the computer from the direct heat of the sun.



IN COLD AREAS KEEP BACK COVER ON SO THE WARMED AIR WILL RECIRCULATE INSIDE THE CASE... AND BY THE WAY, ONLY ONE BLOWER BLUES WITH THE COVER OFF!

BACK OFF

Time never, ever remove patch, connectors, buttons, screws, bolts or anything else on the computer that you've not authorized to monkey with. Likewise, you never get near the computer case.



HOLD IT... NEVER GO NEAR THE CASE OR MESS WITH SCREWS OR CONNECTORS.



BEHOLD

Keys, switches, keys, windows, disks, patch and assemblies, connectors, capacitors, etc., are tested, repaired and replaced by your organizational mechanics.

You've indicated to change indicator lamps on the control panel, though, so keep an eye out for burned-out bulbs and put in good ones. To swap lamps, unscrew the lens from the panel carefully, pull out the bad lamp, slip a good one into the lens, and screw the lens back into the panel easy like.

Before you remove the panel, make or pull any FR checks on the computer to save the computer's stored location code's a bit.



LATCHES/TIMERS/DRUMS/CUPS/TABLES



Keep eyes on all cables connecting your built-in to prevent loss from dust, damage and damage.

Check or clean the cassette, tapeheads, and tape as needed and keep the rollers from getting loaded or clogged.



Watch it every with the computer worktable, keep 'em open and that carefully or you'll lose 'em. Keep them latched down right when the cover are on, and press the latch with both out of the way when the cover are off. Close your with the computer hold-down clamps on the table.

COMPUTER GROUND



Be sure the ground jack is inserted into the computer ground connector, and shove the ground-strap rod into the ground under, or over, the table.

EDITING THE TAP READER

Common Programs

1. Put the tape in the reader.

2. Push the "T" and "P" mode buttons.



3. Press the "SM" (start) or "material key".



4. Push the "T" button 3 times and then press the "Stop" key.



The tape reader will start reading the tape.

Special Programs

1. Put the tape in the reader.

2. Push the "T" and "P" mode buttons.



3. Press the "SM" (start) or "material key".



4. Push the "T" button, then the "P" button and then the "T" button again.



5. Finally press the "Go" key.



NOW THE TAPE READER WILL START READING THE TAPE.



UPDATING THE (M63) ON BOTH

If your scanner or reader program tape doesn't read right at any stage of the game, you'll know in a flash.

If the reader goes on the first part of the tape, the reader will stop and the ERROR lamp will flash on the front panel.



If the reader goes on the second part of the tape, the reader will stop and the NO SOLUTION light will flash.

But, no stops and no flashes means your tape reader goes to the head of the class.

You'll find more on this business in the FBI's on the M63 gun direction manual—FBI 4-1-1 (1-4 Jan 68) for scanner application, and FBI 4-3-2 (10 Oct 67) for reader application.

M63 FUZE SETTER



Some M63 fuze setters hit the field with a couple of loose screws. So check your setters if it's giving you problems.

The screws must be good and tight, or else the handle will come loose or the chuck inside the fuze setter will wobble, and the fuze setter won't work right.



GO POWER KNOW-HOW

FACE IT —
RAMAC Topping
 without a GO-20
GENERATOR YOU'LL BE
 COMPLETELY DEAD. Even the
 SAID BY WHAT A
 COSTLY MACH' THIS
 THERE POWER SYSTEM,
 AND THE 3-WAY SWITCH
GENERATOR
 A LITTLE WORKING
 CASE — IT IS THE
 CASE
 THAT MEANS...



1. Finding the best possible location for the generator.

2. Making time with the experts about the checks and services.



3. Getting it up and going — fuel, set of the oil and when it's got plenty of.

4. Keeping the generator clean and dry.
 5. Starting and stopping it right and keeping it running when it's not it you.

It runs definitely means running your 2 generator on a regular schedule to spend the work load and give you and the maintenance guys time to do right by both generators.

Don't take a short look at the kind of care that'll keep your generators in top shape and your RAMAC working for you.

Maintenance and operation comp for the power end of the generator is in TM 3-4015-171-01 and its -200. The engine is covered by TM 3-2001-204-16, its companion LO and -240. Basic operating instructions are given on the data plate on top of the power control box.

The generator takes big loads from 2400-1, -2, -4 and 2400. Use DA Form 2400 for PM checks and 2407 for regular maintenance.



Run the generator up so its stays level and anchor it so it won't slide away. The right engine oil level is critical for engine safety and proper operation. If the generator's on a stand, it can't get the lube it needs.

The air-cooled engine needs good ventilation from all sides at all times. It relies on the flywheel fan and the normal circulation of air around it for cooling, so don't crowd it . . . ever. Give it air. Keep your building entrance and roof at least 2 feet away.

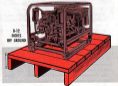
Keep the generator clear of trees, dry grass, leaves and anything else that'll blow about and pile up on the generator. Keep a fire extinguisher handy.

Use your best to shield the generator from sand, dust and dampness. Dust and sand will damage the motor, the motor and fan assemblies, get in away at the flywheel assembly and other moving parts, clog the engine air filter, breather, vents and cylinder cooling fins.



To keep the generator from using its own dust and sucking up dirt right from under its belly, you can raise the generator off the ground on a stand of some kind. A solid stand 1 to 12 inches off the ground and a few inches wider and longer than the generator works best.

6-12
INCHES
OFF GROUND



To ground the generator use a 9-foot, 3/4-inch steel rod (or 1 1/2-inch pipe), sunk some 8 feet into the ground. Use No. 6 AWG copper wire from the generator ground terminal to the rod. Page 184 of TM 54-119-271-15 has grounding material.



IF YOU HAVE
TO APPROXIMATE
A SOUND... USE
SOME 'N' CORD, BUT,
USE ONE... IT'S
A MUST FOR
BOTH YOU AND
YOUR GENERATOR.



AIR

ENGINE, AIR-DRIVEN

11—You just can't rely solely on the air filter service signal to warn you when the filter's clogged. It may not always pop-out at the right time. If it's not dusty in your area you have to check and clean the air filter daily. Just keep in mind that the air filter won't do the air the engine lives on. The engine must have all the clean air it needs to run right and give you the strong, steady power you need for operating FADAC.



To clean the air filter, use low pressure air to blow out the dirt; direct the air flow from the inside out (from clean side toward dirty side). Never clean the element with solvent.



Wipe out the air cleaner cover and housing and be sure to put the element back in so the arrows point up and the ribs on the element seat into its lock in the filter housing.



Oil — Always keep oil level up to mark. If you try to check the oil every 5 hours at least, in wet dirty areas, change the oil more often. . . . When you change the oil remember to clean the oil filter housing. Always clean around the oil filter cap before checking the oil level. Install a new oil filter as needed.



...AND KEEP AN EYE OPEN FOR OIL LEAKS.



CHECK · CHANGE · CLEAN

THE OIL
FILTER
EVERY
2 HOURS.



OIL FOR THE
ICE . . . MORE
BETTER UNDER
REAL COLD.

WASH LUBRICANTS



THE FUEL
SYSTEM
EVERY OIL
CHANGE —
WASH
FUEL AS
NECESSARY

Never, ever add oil past the full mark on the dipstick. To make sure you don't overfill, it's best to add oil a little at a time. If you overfill, you have to drain off the excess right then and there.



For supply info on engine oil, coolant, lube oil, Maintenance and Operating Supplies, TM 5-1885-105-14, and the LO.

Whatever you're lubing on the engine, always close the lube point before you give it fresh lube . . . keeps dirt out of working parts.

FUEL

FUEL—Always check the fuel container level before you fire-up the generator. If you neglect the level even once, you'll be out of business fast. Water and dirt will get into the fuel lines and the carburetor. Once the engine starts sputter' and sputter', it's too late . . . and, there goes your FALMOC power.

Replace the fuel filter if it's clogged or damaged. Also the sediment level gauge, if it's bad. Wipe off the fuel filter head while you're working the sediment bowl. Remove the washer in the gas filter neck and cup it clean. You can use cleaning solvent to clean the washer, but be sure it's dry before you replace it.

Keep your fuel containers clean and sealed. Take time to clean around the tank cap before refueling. Straining your gas supply is one sure way to head fuel system problems that can cripple your generator.



READING FALMOC

To power the FALMOC system safely the generator must be set for 120/208 volts, 1-phase and 60Hz. No other output will do for FALMOC.

The output selector switch is inside the control box, so you have to remove the box cover (it's held by 4 quarter-inch screws) to check the setting.

While you're in the control box take time to wipe off any dust or dirt you see there. Replace the cover good and tight.

FALMOC CABLE REMOVAL

FALMOC's cable setup set bracket comes with its own attaching hardware. When you install it, be sure the bracket has a good grip on the top and bottom front of the generator frame.

The cable hook-up instructions are lined on a clear plate on the generator's terminal box.

REMEMBER... TAKE OFF THE CABLE ADAPTER AND KEEP IT WITH THE FALMOC whenever the generator is out for repairs!



Remember the RADAC operating you keep the generator on 120/200 volts, 3-phase and 400-hz. To make the power adjustments you work like this:

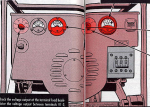
1. Output Indicator Switch. To make the correct low-voltage and high-voltage, the switch is set the 120/200 volts. Explain just how to replace the cover.



2. Voltage Indicator Switch. Use the switch to check the voltage compared the normal load built up. The 2 output settings on the right will register the voltage output between terminals 01-1, 02-1, and 03-1. And, the voltmeter reading you want, between any 2 terminals, of course, is 270 volts. The indicator reads out the result on the red line at 270 volts.
The 2 output settings on the left — 01-0, 02-0 and 03-0 — give you the voltage between each terminal and the ground connection. These voltmeter readings are read at their average read for 270 volts on the same index as with the variable resistors.



3. Load Meter. The load meter should read 1.



4. Frequency Meter. If the meter doesn't read 400 Hz, you'll have to adjust the engine speed. The indicator 2 on — 1 is frequency on the meter while the other shows the pressure.
To adjust the generator you first lower the generator until it's around 1. Then you turn the generator screw with a screwdriver left or right in your hands until it increases or decreases the pressure reading. When the screw reads 400 Hz, tighten the nut and you're done.

5. Current Indicator Switch. Use this switch and the load meter to check the current draw of each terminal. Just, how you've got to do a little figuring, or you don't see how to be sure the combined output percentage of the separate terminals doesn't exceed the 100-percentage on the load meter. If the total output registers over 100 percent, you're in trouble... just to get down to work, or stop the generator and call for the maintenance people for this one.
Every year, if you're a regular you can't get the correct voltage or load adjustments — you can't fix that then and call for maintenance help.

DELOADING OF

Correct shpping is also important generator FOC. In, by the numbers below:

1. Put circuit breaker on OFF (no of power to 120/200).

1. Turn the variable resistor knob counter-clockwise all the way.

2. Put the generator control on start (all good). Run, and let the engine idle 15 minutes.

3. Turn the 00 flow switch to ON.



GENERATOR PRE-START-UPS

- ❑ Generator level and on a firm platform out of dust and mud.



- ❑ Generator clean. Dust, mud, clumps wiped off.

- ❑ Output selector switch on 120V/208 volts, by-pass position.



- ❑ Engine oil checked. Not over full mark. Change oil according to LO ... man's when it's real-dirty and dirty.



- ❑ EATON-cable/generator lead-connections hooked-up right. From top to bottom: White-Red-Black-Green.



- ❑ Fuel selector lever set for Tank or Aux Tank, according to fueling system.



- ❑ Gas tank or generator full, and extra gas supply handy. Reserve gas for best results.



- ❑ Air intake lever set for proper temp. Summer for above 50 degrees. Winter for below 50 degree temp.



- ❑ Air filter clean.

- ❑ Fuel sediment bowl clean.



- ❑ No oil or gas leaks.

- ❑ Daily DA Form 2404 completed.

- ❑ Log book on hand. Needed entries recorded.

- ❑ TM 5-2011-274-15, TM 5-2005-107-14 and its LO on hand.

- ❑ Good ventilation for generator on all sides. Generator area clear and fire extinguisher handy.



PRE-START-UPS

Complete the entries on DA Form 2404 and DA Form 2404-5, as needed, and mark the log book as required by your SOP. Cover the generator with an canvas cover.

TOTAL ROUNDS FIRED ON DA 2408-10



If you want to stay safe around artillery you've got to do more than keep away from its muzzle end. You've got to know the area and make it's been through.

So ... record requirements for gas tubes—and the guns they're a part of—**are changing with a super bang!**

That bang comes from TB 154-211 (3) Dec 68) coupled with DA Mag 890504 (10 Feb 69). Both should've come to you through your own pipe and command channels.

Both call for a record of gas tube changes on DA 2408-10 in the equipment log — deleting the exception that's now in para 4-1(b)(1)(a) 2 of TM 34-750 for gas tubes.

TB 154-211 goes a couple of steps further.

It sets up instead of instead of artillery on the basis of miles traveled (if self-propelled) or total equivalent full charge (TEFC) rounds fired by the weapon. (TEFC rounds are defined in Appendix A of the TB and in TM 3-1000-200-14.)

Miles traveled (as available for a self-propelled weapon) on its DA 2408-1 in the log or on the weapon's columnar (DA 2408-1 assembly should be checked in all cases since there may have been an columnar change recorded there.)

(Even though total rounds fired now are listed on DA 2408-5, changes are there are for the tube currently installed only — from the current DA 2408-4.)

These entries on DA 2408-10 are used so the Army can keep track of the tubes used on an real item.

TABLE 1000000000

MUNITION TYPE	WEIGHT			1974	1975	1976
	GRAIN	WEIGHT	WEIGHT			
TUBE 1017			1075	9,400 00 300	7,400 00 100	2,300 00 1933

TABLE 2000000000

MUNITION TYPE	WEIGHT			1974	1975	1976
	GRAIN	WEIGHT	WEIGHT			
TUBE 0100	1741		800	11,000 00 275	6,300 00 3427	18,300 00 475

DA Form 2408-10



M107
M100

ARTILLERY PM TIPS

GROUND MOBILITY

HEY TANKER!
WE'RE BATTERED!
Ain't that?



Cracked fuel tank or loose-up rear maintenance a problem on your M107 or M118 vehicle?

Here's what you can do . . .

Keep the fuel tanks as full as you can. When you do, fuel stops against the side of a partly-empty tank. In time this hammering can crack the tank. With the tank full there is less noise on it.

IF I DON'T GET SOME MORE FUEL, I'LL CRACK.



Fill air lines to the correct air pressure as you use. The hull strains when you drive at a big angle from the roadline and this puts added strain on the tank. Unless there is an emergency, move the vehicle when you have a big amount change.

Driving with the hull bounced strains the fuel tank and, in fact, the whole hull. The suspension system in the LOCKED position was made to take most of the shock of driving. With the hull bounced the suspension can't do its job.

DRIFT HERE IF



OR

THE BIG AIR LINE
FROM CRACK



HEY COMRADE,
THE FUEL TANK
SHUT 'N' THE
REAR ROAD
WHEELS ARE
CRACK



THAT'S BECAUSE
YOU'VE BEEN
LAME AF' YOO
BEVING AN
HONKLY ANGLE
AND WHEE
FROM HULL
IS BOTTTOMED.



The rear roadwheels (driving wheels) take more strain than the other roadwheels and are more likely to fail because the tank is wrapped around them.

Correct track tension runs down as follows. Adjust the track like it shows on pages 1-15 to 1-18 in your TM 9-2586-21 8-50 (Sep 68).

Wrong mounting bolts torque is hard on the roadwheels. Torque should be 250-375 ft-lb.



GLUP!



GLUP! THOSE MOUNTING BOLTS GOTTA BE TIGHT. FROM CRACKING THEM OFF!

Shut and seal packed between road wheels wear them out. Dig out mud and seal buildup between the idler wheel discs as a regular part of both before and after preventive maintenance checks, and any other time it builds up.

WITH OPTIMAL LUBING...

YOU CAN AFFORD TO FORD

You wouldn't buy an insurance policy without reading the fine print, right?

So why not read the fine print in your truck's lube contract? It's a life insurance policy for both you and your truck.

GM's for all 1988- and 1989-model trucks, M728 (TUMBLE) CRT's and ATLE's have something like this in the fine print: **Holdup** after Fording.

Guess when you're clearing the Bad Guys you're not going to stop and re-lube every time you splash across a shallow stream. You've got a good reason.

Only doing the wheel bearings on a truck can be such a cumbersome nuisance. All they need is lube.

What to do?

Just make sure your lube is in good shape before you start clearing those slippery roads through the snow. As the quarterly lube service path is the grease

until you can see the fogginess coming out where it's supposed to.

A good lube job wraps your support roller and road wheel bearings in a protective coat of grease. That way you can keep going when you have to.

If a sloppy mixture is coming up and you're near the end of a lube quart, lube before you go.

This means a good lube job, with GAA pumped into the support roller grease fittings until you can feel it where you put your hand in the access slot behind the roller. Grease the road wheels until the GAA comes out the inlet valve, and the road wheel arm until clean lube shows between the arm and roller and the arm.

If you're not sure whether to grease or not, always remember that grease is cheaper than bearings—and less under the gun.



M551 SHOCK ABSORBERS

The shock absorbers on your M551 can let you down real sudden-like if you squeak 'em up too tight. This is real easy to do unless you follow the prep on page 9-42 of your TM 9-2140-100-12 (Jan 68).

If the oscillated nuts on each end of the shocks get tightened to over 140 lb. ft torque, they swell the spherical bearings. When the bearings can't move freely this puts a strain on the whole shock absorber and the piece not necessarily is likely to break.

In a good idea to have your shocks checked right away to make sure torque on the oscillated nuts is within 130-140 lb-ft.



CHECK THE TORQUE
ON OSCILLATED NUTS



WATCH YOUR AZIMUTH



On some M551's the 4 retaining screws on the traverse gear box have been coating loose. When this happens you could get a little play in azimuth.

Sure! Sure! You can tighten the 4 retaining screws, but they'll come loose again — and real quick, too.

Thing to do is call your support, and they'll do the job the way it says under Installation Notes on page 3-7 of Ch 1 to TM 9-2140-110-10/1 (Jul 68).

It has to be done just so, torqued and checked for a backlash between 8 and 15 thousandths of an inch . . . No job for a crewman or even a colored company mechanic.



Support can do it in a flash, though, and they'll put sealing compound on the threads so the screws stay put and don't give you any more trouble.

To check the traverse gear and if the mounting screws are loose, have 'em attended to.

YOU WANT YOUR
MORTAR
CARRIER TO
BE A REAL
OO-OO VEHICLE?
THEN YOU'RE
GOT TO KNOW
ALL
YOUR
STOP—
STOPS!

MIGG! MIGG! MORTAR CARRIER STOPS



If you fire without the concrete stops in place you could wreck the equipment and maybe get somebody killed.



Here's why.... The stops let you traverse completely 180° with 60° with right-to-775 with left—but they keep you from straddling where the mortar in the traverse can line up with the vehicle in the indexing gear.

If the concrete stops have been removed allowing the traverse and indexing gear another to line up, the mortar can't be aimed. After you fire, the mortar could cut into the whole mortar jump around inside the vehicle.

More important, you could shoot parts of the vehicle. Another thing—also thing puts the position of the stops will cover in the traverse and ball.



Disappointed?
You'd better believe so!
So make sure you have your
concrete stops.

CRASH

While you're checking the traverse stops, see if the index gear has a light coat of GAA grease on it and inside bearing surfaces—not on the teeth!

Some M106/M106A1's have been inspected and the traverse and the index gear have gotten so crusted together the mortar can't be removed.



The 50° stop to limit the indexing gear quarterly. It also acts to give the rest of the mortar socket that contact the bridge traverse a quarterly greasing.

Fixed that in the dirty M1A machine, quarterly may not be often enough.

The muzzle stop clamp is another kind of stop you need to have in place before you fire your mortar. It'll keep the round from hitting your vehicle even if the shock absorber on the mortar won't work. To see you gotta get a new muzzle stop clamp for your M106, it's TM 9-2300-207-20F (M106-450) on page 412 of TM 9-2300-207-20F's (M106-450) PART THREE. If all you need are parts, they're on page 417. If you have a M106A1 you'll get your parts from TM 9-2300-207-20F (M106-450) and the clamp is listed there on page 1-501 with a drawing on page 3-190.



By the way, if you're still got a 50-degree stop assembly (M106-450), take it off your mortar and save it to be in supply. With the M1A mortar number you needed it, but with an M106/M106A1 it does nothing useful.



JOE'S
DOPE

THE
COMMO
KILLERS

COMMO
KILLERS

MAINTENANCE
KITCHEN

THE
THE TIME HAS
COME TO UNRAVE
THE ULTIMATE
MISFIRE.

HEE

HEE

HEE

HEE

THE DEPARTMENT
HAS JUST
AWARDED THE BEST
MAINTENANCE RECORD
AWARD... THESE GUYS
ARE GETTING OUT OF
HERE. HEAT THEM
IF YOU WANT - WE
WILL DISAPPEAR!

THAT'S
WHAT'S THE
ULTIMATE
MISFIRE!

THE COMMO
KILLERS!

THIS IS SLOPPO...
HE NEEDS
BY

RESPECT!

HE'S WORRY AT LETTING SLY
BATTERED CONROO AND BURN GEAR
... HE TOO KNOW BATTERED
TEND TO LEAK AIR ONCE
WHEN THEY'RE NOT
USED FOR A WHILE.

WHEN THEY'RE
PLACED IN A
PILE OF EQUIPMENT
... IT DON'T SPEED
UP THE PROCESS!

HEWER HELL,
THAT CONROO'S
SPRINT BLUE BLAYS
UP CONROO EQUIPMENT
FAST.

HE'S ALSO WORKING
ABOUT RESPECTING
FILTERS!

I DON'T
SEE HOW
THAT HELPS!

fool!

CONROO BEAR
NEEDS AIR
SO KEEP COVER THE
HEAT BUILD-UP BRING
'EM... HEAT BLIND
AND BURNS 'EM OUT
IN NO-TIME!

THIS IS
DRK
WITH
NO SHIRT
OR TROUSERS



STARTS UP HIS ENGINE
WITH THE BADGE DRK
(DRK) BUT KNOCKS
IT OFF THE TOP.



HE ALSO THINKS HE'S
A GUY ELECTRONIC GUY
TO EVERY CHANCE HE GETS
HE BUYS UNAUTHORIZED
ELECTRONICS (GUY)
BUILT EQUIPMENT
LIES AND

NEXT HE
GNASH
A MIDDLE-
CLASS... HE
DESTROYS



HE THROWS
HIS CAR
DOWN THE
CRACK.

HE SHIPS THINGS
FACED WITH
UNPROTECTED.



HE'S ALL THINGS WHEN HE BUYS
DELICATE EQUIPMENT



MEANWHILE



DO YOU
HEAR A
SOUND LIKE
SOMEONE
WALKING UP
A FLOOR UP
SOMETHING?



Dope Sheet

COMMUNICATION EQUIPMENT

KILLERS

NEGLECT AND ROUGH HANDLING CAN LEAD TO EQUIPMENT THAT'S SURE TO BURN! SO, BE SURE WHAT YOU'RE BUYING AND YOU'LL SOON START RECEIVING THE CARE YOU EQUIPMENT YOU NEED!



**KNOB TWISTING...
UNPROTECTED
SHIPPING...
ROUGH TREATMENT.**



**WET WEATHERS LEAK
LEAK FILTERS-CLOG,
ALLOWS CORROSION.**



**TRAMPERS WITH PARTS,
CIRCUIT POWER FAILURES,
MATES WIRING CONNECTIONS.**



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

IF YOU WANT TO DISPLAY THIS CONTENT ON YOUR BULLETIN BOARD, OPEN EMBLETS, COPY IT OUT AND PASTE IT IN.

STOP...

I CAN'T BELIEVE
I HAVEN'T COME
TO HEAR
THE GALT!

She:

I TOLD
YOU I HEARD
A TAPPING
NOISE.

NEGLECT

BY JUST PAYING
A LITTLE ATTENTION
TO YOUR POWER
SOURCE, YOU
CAN AVOID
TROUBLE!

WHEN EQUIPMENT IS GOING
TO BE USE FOR A LONG OR INCREASING
PERIOD, USE BATTERIES
WITH RESERVE!

AND KEEP FILTERS
(CLEAN) ESPECIALLY IN
HOT, DUSTY... OR VERY
HUMID AREAS... DO IT
ON A REGULAR SCHEDULE!

ROUGH HANDLING

PROTECT YOUR
CORROSION RESISTANT
VOC FLOOR. IT CAN
BEAT IT BACK FOR
REPAIR!



USE OLD BRITING
OR BRINE ... RATHER
FOUR OR AN OLD
MATTRESS IF YOU
CAN SCOURGE ONE



TWISTING KNEES?
GENTLY ... WHEN YOU
FEEL STIFFNESS
STOP! ... OR YOU'LL
LOST THE THING!



KEEP SHAFES
CLEAN ... OIL AND
GREASE BUILD UP
AND BRIT?



IGNORANCE

POWER DRAINAGE... DON'T
TURN OFF THE BATTERY IN YOUR
VEHICLE BEFORE YOU START
YOUR ENGINE ... AND ... (AND)



EXPRESS POLARITY IS
A BIG KILLER... BE SURE THE
CABLE LEADS OR BONDING
ARE RIGHT ... LOOK FOR
CABLE COVERS ON THE
BATTERY.







THE STACKED DECK VS TIO

THE
STACKED
DECK

HOW THIS ONE
SAYS EXPLAINS



In SEA Big Momma shuffles the cards, makes the deck and breaks the house rules.

Try similar in the game with your own rules and you'll be humming "The Dry Henny Blues" later in sweet card play.

You gotta make it by her house rules, or you ain't gonna make it.

You got the card on your side, so let's make this hand the "dry henny pot, no limit."

Play your Big Card anytime you want. Call it TIO, uncle.

So what is TIO?

Take It Out.



First off, Big Momma also goes by "Dance Moves." She makes things grow, like tomatoes. She creates things, like molasses. She can dry henny like her cousin. Dry henny tomatoes run it, and detours up plants accordingly. As soon as the henny develops a hunk, or starts to sweat, tomatoes begin.



Take the henny out of your rolls, your tea set, your phone set or whatever else it's in... whatever you're not gonna use it for a day or so.

So deal the cards.

YOUR ANFURC-106 CAN KEEP ITS COOL

SUPPORT YOUR ANGRY FRIEND

You gotta know it, operator man. You are the biggest thing going for your ANFURC-106 rolls on.

You can back its back . . . or make it sing the good song.

Here's a thing or three that'll keep your rolls not putting out like the general and good piece of equipment it is:

When you turn on the FRIENDLY POWER switch of the AM-3040 amplifier, put your hand over the blower to be sure it's spinning. If it's not, that the set down . . . squirrel! A small blower motor burns out and makes for a lot of work and expense.

OK. As you've seen the blower's working. Check to see that the proper antenna (w/rip or double) is connected to the RF input.



Get the AM-3040 and AM-3040 modules per the listing sheet, and have the AM-3040 switch to 100. If the new or old motor don't follow, write to 00000.

Check your RF 3000 radio (20-300) at both the amplifier and the AM-3040 to be sure the connections are installed fully into place. And, the give way to further.





YOU THINK
HE'S NOT JAZZ
HE'LL BE AROUND
WHEN YOU NEED
HIM?

HEY BABE!
LET'S GET THAT
CROCK IN OPERATING
ORDER!

THAT
GET YOUR
BACK SEAT
AND WOOD
HEAT
I DECIDE
TO
BE BORN

Look over your antenna connections for a loose one, a short, or broken leads.

So, your meters are deflecting and you're ready to tune.

— Turn the **ANT** switch to **FM**, and start with the **ANT** dial and **ANT** trim control at the position recommended on your tuning chart. With your left hand on **ANT** TRIM and your right on **ANT** DIAL, turn the controls in the opposite direction of their needle deflection. . . . and you get the desired wave with nothing at all more.



HE'S WANTING
THE INTEREST?

SCREWS JUST
TODDING MY
TUNE.



If the needle doesn't return in two minutes, switch to **OPERATE** and allow the final amplifier tubes to cool for a few minutes. Then, try again. If the meters still don't return, call your serviceman.

Over the meter cover, check for **POWER OUT** with the **TEST METER**.



When you get the desired scale readings, the net is ready to operate. In reverse, switch back to OPERATE mode . . . and make sure you're allowed about a minute for the net to warm up before you transmit.

Otherwise, you'll sure'n's likely bite your plate vibrator capacitor goodbye.



That'll dissipate the heat in the final amplifier . . . and thereby prevent trans-

istor damage.

In an emergency, naturally, there's not much you can do about it—

Wrecker killer for the final amplifier tube is voltage overload. There's not much you can do about it, but if your auto repairman's getting put out over frequent replacement of your 2ALN1Y1 and .173 PA tubes, tell him to have direct support check out your vehicle's voltage regulator.

You should be feeding your Angy-106 a maximum 28 volts. Higher voltage can shorten the expected 100-hour lifespan of your PA tubes to less than 100.

Excess voltage is a transistor burner, as well as a PA tube killer. The best operation is when voltage is adjusted to within .1V of 28V.

Couple' other ways you can help yourself and your repairman:

Always use a nylon or rope tie-down for your antenna. A wire tie-down strains out your whip . . . giving you obvious problems.

... and thereby prevent transistor damage.

not much you can do but about it down



Use your antenna rope clamp to tie it down. If you lose the clamp, get another. Never tension the rope directly on the antenna.

Also, be sure the insulating guard is in place. That'll keep the antenna from grounding on the vehicle.

WANTS
IT BAYS?

SHINE ON... XENON

WILL YOU
CHECK YOUR
BATTERY
ENERGY?

Working like a few truck-mounted AMPLOX 1-4 xenon worklights to brighten the night while you're trailing perfume grass.

But don't press to shove a lot of light on the subject—the sunny—what's hot long without your following some important PM routines.

IT DEMANDS A JOB

Main power source for your xenon flashlight vehicle is the BILHAI 174-cc truck's engine. The engine has to produce a steady 1.5 HP to keep the vehicle's 180-amp generating system charging properly.

LET BATTERY HIGH
LEVELS BE SEEN
IN THE GREEN.



In the first rule of routine is to keep the worklight off until you adjust the double wiring high enough to keep the battery-generator indicator needle in the green. If the main power switch is flipped on with the indicator outside the green, its heavy draw can burn out the system's switches.

THE BLOWER KEEPS IT COOL

The blower motor circulates the cool air that high-pressure xenon lamp needs to keep it from overheating and exploding. So both the inlet and outlet screens must be kept clean to allow good circulation . . . and the blower motor must be ON whenever the worklight switch is ON.

MAKE SURE
BOTH SCREENS
ARE CLEAN.



But when the worklight has been operating for several minutes, the blower will shut up at the same time the worklight power switch is placed in the OFF position. The blower motor will continue to operate until the motor lamp's current has been dissipated. Be sure to not touch the main power switch until the blower motor stops itself.



TAKE 5 FOR (WORRY)



Also remember that placing the worklight in sensitive increases the intensity of the light by 50 percent for close to 30 seconds. That really puts a drain on the power source and the blower motor. This is why you take at least 5 minutes between each sensitive operation. You normally restrict the sensitive mode for use against the enemy or during maintenance work periods.

SHIELD AROUND THE BLDER MOUNT

A backup ground strap is security against an unknown break in the power cable causing between the worklight and the work's generating system. Since the ground wire is wrapped together with the power cable, (you don't have to worry about this on the "A" model mount) an incomplete circuit would go unnotified until the worklight had to be used.

The best method of shielding up is to use ordinary 1/2-inch wide braided wire. Attach one end to the ground terminal hole at the base of the worklight pedestal. Connect the other end to the



bolt on the lower mounting bracket for the searchlight's control box.

Use the same length of wire (about 3-1/2 feet) as the power cable in order to allow enough flexibility for the mount.



FRONT THE UPS

Securing the mount before moving out to another operating site protects the searchlight from unnecessary wear and tear during vehicle travel. So when time galls, it's wise to follow these travel procedures.

For the newer 40 model of the universal mount.

Level and point light to vehicle rear.



Tighten the direction bracket hardware.



Engage the gimbal locks.



Engage the universal bracket with the vehicle level.



For the old universal mount.

Level and point light to vehicle rear.



Wipe shock absorber and lower ball adjustment pin through upper end of shock and bracket plates.



Tighten direction bracket.



Tighten bracket head bolts by rotating clockwise.



Engage the gimbal locks.



CHECK THE TAG, TOO

It never hurts to spend a few spare moments with your searchlight's friends. **THE 11-6150-119-11 (Jul 87).** Helps you remember a lot.

KEEP YOUR NIGHT SIGHT RIGHT

THIS SCOPE
WERN'T WORKED RIGHT
BUT I TOOK IT
APART.

Operator, may I say?

That little rule, if passed on every AN/PVS-1 and PVS-2 night-vision scope ... and misused by every rifleman ... could keep more scopes operating than you and your buddies have fingers and toes. Count 'em! Specifically the fingers.

That's the only business an operator has inside a night vision sight is to replace the BA-1100/M battery.



CHARLTON GARD

If you're not authorized to repair it, and the sight doesn't work right, get it checked out and repaired by a qualified technician. Good technicians do the unexpected, you can make a little job a big one by trying to fix it yourself.

No, with the bad news out of the way, here's some things you can do to keep your scope away from the repairman:

As easy as the scope when slipping the power switch on the PVS-1, it's even easier to disconnect. The most simple way's to pop it up.



Pop the objective lens up. It's the best way to do it.



Normal pressure of your eye against the eyepiece will do you the trick ... no need to use oil because you think they can all measure you back they can't. There's a little bit of oil, but you can keep it on for one day when you're out using the scope.



Here's something you can pass on to your replacement:

Interchangeable tubes for the PVS-1 and PVS-2 are not interchangeable.

The MX-7004 tube, 0000 000-0001-2700, goes with the PVS-1. The tube for the PVS-2, 0000 000-0002-2000, has the vehicle pattern on the tube itself.

Like, if you get PVS 0000-0002-2000 in the PVS-1, you get a double switch pattern. If you put the MX-7004 in the PVS-2, you get nothing.

Back to you, operator of 'em! Luckily:

The positive end of the BA-1100 has very low a rated amount ... for night illumination use. The rated end goes in the scope first. Naturally, the negative side is hot. If you accidentally switch ends, well ... before you decide the battery's no good, be sure it's installed right.



If you've got the PVS-1, you must unlock the locking lever before you can use the objective lens focus knob.

Naturally, unlock the lever when



you've focused the objective lens.

If the focus knob slips after you've fixed the locking lever, well, don't be otherwise you may be the bad guy. What's more it's time for a cleaning. You can lose up the objective lens housing by having the lens, so water the compression.

Some quick ways to clean up the objective lens or eyepiece assembly if they should get bogged down humidity or temperature change. Pump the eyepiece several times ... or take the objective and/or lens cap off and wipe them with a clean rag.

Here's a quick reminder or two for anyone who forgets previous PVS tips:

Handle your scope gently-like. It's not a flashlight, it won't handle if you drop it, and rough handling can put it (maybe you, too) out of business.

Keep it dry, including the lens. If the sight's used and stored, open it regularly and pop up the moisture.

Never expose the uncovered lens to bright light (flashlight, sunlight, etc.). You can pop it back to depot with that technique.

POWER FOR A PIPSY-4

ANYBODY WOULD
HERE GET AN EMERGENCY
POWER SOURCE?

Along about this part of the century it would seem that all AN/PPS-4 cables you have long since been modified and that only the product of the modification (MWO 11-5849-111-05/1), the Pipsy-4A, is still around.

Not so, no, sir! Not infrequently an unmodified Pipsy-4 shows up, and its positive ground versus the negative ground of the -4A poses a problem.

Said problem is compounded by two conditions:

No. 1, you've gotta need an emergency power source, and No. 2, your power cable might still have the old alligator clips. Couple those with the positive ground, and big trouble can brew. The Pipsy-4's ground lead must go to the positive post of the power source.



Now, if you've got a connector on the end of your power cable, read some-



thing else. The connector's built to go on right.

If you've got alligator clips and you anticipate an extreme emergency where you'd use something other than the Pipsy-4 and -4A's ideal power source, the BB-422 nickel-cadmium battery, read on.

Your emergency power source must put out exactly 24 volts. No more, or you'll severely damage your set.

If you're not sure whether you've got a -4 or -4A, there are decals in many-issue areas which tell you MWO 11-5849-111-45/1 has been applied, making it the -4A.



A repeat caution: Only in an emergency would you hook up your Pipsy-4 or -4A to anything other than the BB-422. The PU-512 generator set is used to charge batteries... not to run them.

ETC, the MWO-0355-PPS-4 cable assembly set has the cables you need for generator battery charging. BB 11-586 (3 Aug 64) tells you how to get it.



NEED SQUAD RADIO PARTS?

That's the only place you'll be going to with local store days for your squad radio, AN/PBC-5 and AN/PBC-1, -4A. All listed as follows:

AN/PBC-1

Kroh, Antenna

FSM 5855-055-2885



**Antenna Keys,
AG-1 (980), PBC-1**

FSM 5855-056-2185

Antenna Housing Keys

FSM 5855-055-2878



Rock, Switch

FSM 5855-011-0006

Heater, PCB4, PBC-1

FSM 5855-025-7586



Lanyard Assy
FSN 5885-953-2579



Slide
FSN 5825-995-0750



THE LANYARD ASSEMBLY AND SLIDE ARE USED ON BOTH THE 987-4 AND THE 988-2!

85-9914, -4A

Rock Channel
FSN 5885-953-5001

Rock Tab
FSN 5885-953-3888

Release Lever Assy
FSN 5825-952-4601



Antenna Assy 85-2555-9987-4, -4A
FSN 5885-953-0580

You'll find 'em in SB 11-612 (29 May 68).

All other parts will be available as direct support level and above. If you've got any other parts in stock, you gotta turn 'em in to Lexington-BlueGrass Army Depot as per SB 11-612, which fills you in on pre-addressed "jiffy bags".

You get 'em from direct support.



FOR AIRCRAFT MECH'S KIT ...

USE RIGHT TOUCH WITH RIGHT TOOL



Before you grab your General Aircraft Mechanic's Tool Kit (GMA 5100-123-4000) to give that airplane that tender love' touch with your tools, make sure you have the right tool for the right job.

Like, keeping your tool set up to itself takes a little extra effort with the changing needs for tools for specialty work.

Be sure your tool kit matches up with those items listed in GMA 5100-99-CL-401 (MIA-88).

To give you a hand on those handy tools, here's about an inch spread of tool stock number and description goodies.

If some of 'em don't look exactly like those, don't worry. Just be sure they'll do the trick.

GENERAL AIRCRAFT MECHANIC'S TOOL KIT P/N 5100-123-4000

ALUMINUM SOCKET WRENCH 7/8 in sq neck and 1/2 in sq base end.

P/N 5100-123-4001

ALUMINUM SOCKET WRENCH 7/8 in sq neck and 3/4 in sq base end.

P/N 5100-123-4002



ANG. SAE/SAE P/N 4 in lg neck.

P/N 5100-123-4003



SET, SCREWDRIPS, flat tip, 1/4 in neck for drive, 3/4 in x 1 1/2 in.

P/N 5100-123-4004



88, SCHROEDER Flat tip 1/4 in wide flat driver, 7/16 in drive, 1 1/4 in L



FOR 1120 881-170

88, SCHROEDER Phillips type cross tip, no 1 size, 7/16 in wide flat driver, 1 in max tip L

FOR 1120001 881

88, SCHROEDER Phillips type cross tip, no 2 size, 7/16 in wide flat driver, 1 in tip L

FOR 1120 881-881

88, SCHROEDER Phillips type cross tip, no 3 size, 7/16 in wide flat driver, 1 in tip L

FOR 1120 881-030

88, SCHROEDER Phillips type cross tip, no 4 size, 7/16 in wide flat driver, 1 1/4 in tip L



FOR 1120 881-881

88, SCHROEDER Flat & Power cross tip, 1/4 in dia, 7/16 in wide flat driver, 1 1/4 in drive tip L

FOR 1120 881-881

88, SCHROEDER Flat & Power cross tip, 5/16 in dia, 7/16 in wide flat driver, 1 1/4 in drive tip L



FOR 1120 881-881

88, SCHROEDER Hex, 7/16 in dia, 7/16 in socket, 2 1/2 in L



FOR 1120 881-881

88, HANS Flat, partially tapered, ground edge, 3/16 in dia, 7/16 in dia, 2 1/4 in drive exposed L



FOR 1120 881-881

CRIMPER ATTACHMENT, SOCKET WRENCH Manufacturing, open end type, 2 drive open legs, 7/16 in drive, 7/16 in wrench opening

FOR 1120 881-881

CRIMPER ATTACHMENT, SOCKET WRENCH Manufacturing, open end type, 2 drive openings, 7/16 in drive, 7/16 in wrench opening

FOR 1120 881-881

CRIMPER ATTACHMENT, SOCKET WRENCH Manufacturing, open end type, 2 drive open legs, 7/16 in drive, 7/16 in wrench opening



FOR 1120 881-881

CRIMPER ATTACHMENT, SOCKET WRENCH Manufacturing, 12 point open end flat type, 7/16 in drive drive, 7/16 in wrench opening

FOR 1120 881-881

CRIMPER ATTACHMENT, SOCKET WRENCH Manufacturing, 12 point open end flat type, 7/16 in drive drive, 7/16 in wrench opening



FOR 1120 881-881

EXTENSION, SOCKET WRENCH, TAPERED, 7/16 in DRIVE 8 1/2 in L



FOR 1120 881-881



CUTTING, SCREWDRIVER In description, 2 in lg.

FIG. 10000-0001

CUTTING, SCREWDRIVER In description, 4 in lg.

FIG. 10000-0002

CUTTING, SCREWDRIVER In description, 3 in lg.

FIG. 10000-0003

CUTTING, SCREWDRIVER In description, 4 in lg.

FIG. 10000-0004

CUTTING, SCREWDRIVER In description, 3 in lg.



FIG. 10000-0005

CUTTING, SCREWDRIVER In description, 4 in lg.



FIG. 10000-0006

ACE, HANDLE, SCREWDRIVER Same as type, plastic, metal handles. 1 in dia working face.

FIG. 10000-0007

ACE, HANDLE, SCREWDRIVER Same as type, plastic, metal. 1 in dia working face.



FIG. 10000-0008

FILE, HAND American pattern, half in, double cut, beveled face, 5 in lg head to point.



FIG. 10000-0009

FILE, HAND American pattern, half in, triple double cut, smooth face, or double cut, smooth face, single cut, smooth face, 5 in lg head to point.



FIG. 10000-0010

**FILE, HAND
SCREWDRIVER
IN HANDLE
WITH A
HANDLE**



FILE, HAND American pattern, 1/2 in, single cut, smooth face, 4 in lg head to point.



FIG. 10000-0011

FILE, HAND American pattern, finishing type, double cut, smooth face, 3 1/2 in lg head to point.



FIG. 10000-0012

FORCE, MECHANICAL Flatbar, 1/4 in wide.



FIG. 10000-0013

FLASH LIGHT Battery operated, 1/2 in, straight handle, double cut, hand hole, 6 1/2 in lg & 1 1/2 in dia.



FIG. 10000-0014

HANDLE, BRONZE: English version, 1 tooth gear, 28 tapered blades, 7 in lg, 12 in wt of 28, 0.001 to 0.002 in dia, 4-blade teeth.



FIG. 10-20-1880

CALL TWO PICTURES, ONE CAPTION: For turning an internal thread, calibrated 28 to 32 in lg, 1 lb weight provided for 10-in length steel 3 type, 27% in lg, 4 in.



FIG. 10-20-1870

HANDLE, WOOD: Mechanic's ballpeen, 8 in steel head wt, 4-bladed handle.



FIG. 10-20-1861

HANDLE, PILE, WOOD: Medium size, 24 in steel dia, 14-17 in long 1/2 in.

FIG. 10-20-1846

HANDLE, PILE, WOOD: Small size, 3 in steel dia, 14 in lg, 1/2 in.



FIG. 10-20-1844

HANDLE, SOCKET WRENCH: Basic tapered type, double working grip, 5/8 in size drive end, 3/16 in working 1/2 in.

FIG. 10-20-1832

HANDLE, SOCKET WRENCH: Basic tapered type, 5/8 in drive end, 1/2 in size to 1/2 in size 1/2 in.



FIG. 10-20-1830

HANDLE, SOCKET WRENCH: Hinged (fixed type), 5/8 in size drive end, 3/16 in working 1/2 in.

FIG. 10-20-1828

HANDLE, SOCKET WRENCH: Hinged (fixed type), 5/8 in size drive end, 7/16 in size to 1/2 in size 1/2 in.



FIG. 10-20-1826



HANDLE, SOCKET WRENCH: Ratchet type, reversible, 5/8 in size drive end, 3/16 in lg, 1/2 in.

FIG. 10-20-1821

HANDLE, SOCKET WRENCH: Ratchet type, reversible, 5/8 in size drive end, 1/2 in lg, 1/2 in.



FIG. 10-20-1820

HANDLE, SOCKET WRENCH: Type (normal) type, 5/8 in size drive end, 2 1/2 in size to 4 in size 1/2 in.

FIG. 10-20-1810

HANDLE, SOCKET WRENCH: Type Type, 5/8 in size drive end, 2 1/2 in working 1/2 in.



FIG. 10-20-1808

WELDER, ELECTRIC (ARC-WELD) PLUG (shown in face, 1 in dia body, 1/2 in nut end, 1/4 in handle)



FOR 240000-0000

WELDER, SCREWDRIVER BIT, PENALTY SQUARE DRIVE (1/4 in root drive, 1/2 in main hex section)

FOR 240000-0001

WELDER, SCREWDRIVER BIT, PENALTY SQUARE DRIVE (1/4 in root drive, 1/2 in main hex section)

FOR 240000-0002

WELDER, SCREWDRIVER BIT, PENALTY SQUARE DRIVE (1/4 in root drive, 1/2 in main hex section)



FOR 240000-0003

WELDER, SET SCREW (HEAD SCREW) (has 1-type handle, 1/4 hex, 1/400 to 1/4 in width across flats, with case)

FOR 240000-0004

WELDER, SET SCREW (HEAD SCREW) (has type, angled point, 1-type handle, 1/4 in across flats, 1/4 in in dia, 1/4 in dia by end lg)



FOR 240000-0005

WELDER, TONGS (1 cutting blade 2 1/2 in lg, rest non-cutting, with handle 6 in dia)



FOR 240000-0006

WELDER, WELDING TORCH (1/2 in dia pipe 1/4 in, 1 handle, 2 1/2 in lg)



FOR 240000-0007

WELDER (has handle type mechanism, liquid fuel delivery, 2 1/2 in lg, 1/4 in dia, 1/4 in diameter shaft, 1/4 in dia 1/2 in dia)



FOR 240000-0008

WELDER, SUPPORT (Angle iron, multiple finger and groove, 1/4 in main dia)



FOR 240000-0009

WELDER, SUPPORT (straight wire, combination with center, 1/4 in insulated handles, 1/4 in main dia)

FOR 240000-0010

WELDER, SUPPORT (straight wire, combination with center, 1/4 in insulated handles, 1/4 in main dia)



FOR 240000-0011

WELDER, TONGS (2 beveled tips)



FOR 240000-0012

WELDER (lg 1/4 in non-cutting, center, 1/4 in main dia)



FOR 240000-0013

A TOOL

FOR 240000-0014

FOR 240000-0015

FOR 240000-0016

FOR 240000-0017

FOR 240000-0018

FOR 240000-0019

FOR 240000-0020



5

FLAT, DIAGONAL CUTTING, 4 in work size.



FOR 1100-001-000

PUNCH, CENTER, 5/16 in in dia at tip of tapered point, 5/8 in work point dia, 4 in work lg in L.



FOR 1000-000-000

PUNCH, DRILL FOR Straight, 5/16 in dia point, 5/8 in working point.

FOR 1000-000-000

PUNCH, DRILL FOR Straight, 5/16 in dia point, 5/8 in working point.



FOR 1100-001-000

PUNCH, DRILL FOR Tapered, 5/16 in dia of point, 3/4 in total taper lg.



FOR 1100-001-000

REPAIR TOOL, MECHANIC TIRE VALVE For all tire sizes.



FOR 1100-001-000

REPAIRING TOOL, AUTOMATIC, telescoping type, 200 in dia closed lg 20 in total lg in L.



FOR 1000-000-000

RAE, TEE, MATHEMATICS 4-leg, R30 in x 3000 in dia, graduated to 1,000, 4, 5, & 1,000 in units of reading.



FOR 1000-001-000

SCREW DRIVER, TORX, flat-top wedge grip, plastic handle, 5/16 in dia, 24 in long blade.

FOR 1100-001-000

SCREW DRIVER, TORX, 1/4 in dia, 24 in



FOR 1100-001-000

SCREWDRIVER, CROSS TIP, Phillips type, plastic handle, no. 3 size tip, 3 in lg blade.

FOR 1100-001-000

SCREWDRIVER, CROSS TIP, Phillips type, plastic handle, no. 1 size tip, 3 in long blade.

FOR 1100-001-000

SCREWDRIVER, CROSS TIP, Phillips type, plastic handle, no. 2 size tip, 4 in lg blade.

FOR 1100-001-000

SCREWDRIVER, CROSS TIP, Phillips type, plastic handle, no. 3 size tip, 4 in lg blade.

FOR 1100-001-000

SCREWDRIVER, CROSS TIP, Phillips type, plastic handle, no. 4 size tip, 5 in lg blade.



FOR 1100-001-000

SCREWDRIVER, CROSS TIP, Reed & Prince type, plastic handle, 5/16 in dia of tip, 3 in lg blade.

FOR 1100-001-000

SCREWDRIVER, CROSS TIP, Reed & Prince type, plastic handle, 1/4 in dia of tip, 3 in lg blade.

FOR 1100-001-000

SCREWDRIVER, CROSS TIP, Reed & Prince type, plastic handle, 5/16 in dia of tip, 3 in lg blade.



FOR 1100-001-000

SOURCEBOOK: FLAT TOP: Plastic handle, tapered tip 1/4 in x flat tip, 1 in lg. Stock.



FIG. 100-001-000

SOURCEBOOK: FLAT TOP: Plastic handle, smooth grip 1/4 in x tapered tip, 4 in lg. Stock.

FIG. 100-001-001

SOURCEBOOK: FLAT TOP: Plastic handle, smooth grip 1/4 in x tapered tip, 8 in lg. Stock.

FIG. 100-001-002

SOURCEBOOK: FLAT TOP: Plastic handle, smooth grip 1/4 in x tapered tip, 8 in lg. Stock.



FIG. 100-001-003



SOURCEBOOK: OFFSET: Square handle, tapered flared, 1/4 in x flat tip, 4 1/2 in lg. Stock.

FIG. 100-001-004

SOURCEBOOK: OFFSET: Square offset, single tapered end, flared top end tip, 4 1/2 in lg. Stock.



FIG. 100-001-005

SOURCEBOOK: BACKSTOP: Double joint, adjustable flange, 1 straight & 1 tapered flat point, flat tip 1/4 in x.



FIG. 100-001-006

SOCKET, SOCKET WRENCH: Deep style, 1/4 in diameter, flat end OR angled end.

FIG. 100-001-007

SOCKET, SOCKET WRENCH: Deep style, 1/4 in diameter, 12-point, 1/4 in opening.

FIG. 100-001-008

SOCKET, SOCKET WRENCH: Deep style, 1/4 in diameter, 12-point, 1/4 in opening.

FIG. 100-001-009

SOCKET, SOCKET WRENCH: Deep style, 1/4 in diameter, 12-point, 1/4 in opening.

FIG. 100-001-010

SOCKET, SOCKET WRENCH: Deep style, 1/4 in diameter, 12-point, 1/4 in opening.

FIG. 100-001-011

SOCKET, SOCKET WRENCH: Deep style, 1/4 in diameter, 12-point, 1/4 in opening.

FIG. 100-001-012

SOCKET, SOCKET WRENCH: Deep style, 1/4 in diameter, 12-point, 1/4 in opening.

FIG. 100-001-013



SOCKET, SOCKET WRENCH: Deep style, 1/4 in diameter, 12-point, 1/4 in opening, 1/4 in hole diameter of both ends.

FIG. 100-001-014

SOCKET, SOCKET WRENCH: Deep style, 1/4 in diameter, 12-point, 1/4 in opening, 1/4 in hole diameter of both ends.

FIG. 100-001-015

SOCKET SOCKET WRENCH, 1/2 in. sq. drive, open chain, 12 in. overall opening, designed for 1/2 in. sockets.



FOR 1/2-IN. SOCKETS

TYPE, BRUSHING, dual 1/2 in. sq. grinding to 1/2, 3/4 & 1 in. dia. ends, 12 in. max. lg., self-centering.



FOR 1/2-IN. SQUARE



TYPE, FOR PORTABLE USE, 1/2 in. sq. drive to 1/2, 3/4 & 1 in. dia. end positions, self-feed from 4- to multiple.



FOR 1/2-IN. SQUARE

FOR THE AUTOMATIC OPERATOR, 1/2 drive, dual open end/grinding wheels, glass, vacuum drive, 1/2 in. dia. from 1/2 to 1 1/2 in. dia. ends.



FOR 1/2-IN. SQUARE Grinding

TYPE, SLIP SOCKET, 1/2 in. dia.

FOR 1/2-IN. SQUARE

ROLL, TIGHT AND ACCURATE, 11 positions.

FOR 1/2-IN. SQUARE

CONFORMS, R/L/T 1/2 in. dia. end, open grip.

FOR 1/2-IN. SQUARE

WRENCH, OPEN END, TYPE, 1/2 & 3/4 in. opening, 12-1/2 in. length.

FOR 1/2-IN. SQUARE

WRENCH, OPEN END, TYPE, 1/2 & 3/4 in. opening, 12-1/2 in. length.

FOR 1/2-IN. SQUARE

WRENCH, OPEN END, TYPE, 1/2 & 3/4 in. opening, 12-1/2 in. length.

FOR 1/2-IN. SQUARE

WRENCH, OPEN END, TYPE, 1/2 & 3/4 in. opening, 12-1/2 in. length.

FOR 1/2-IN. SQUARE

WRENCH, OPEN END, TYPE, 1/2 & 3/4 in. opening, 12-1/2 in. length.

FOR 1/2-IN. SQUARE

WRENCH, OPEN END, TYPE, 1/2 & 3/4 in. opening, 12-1/2 in. length.

FOR 1/2-IN. SQUARE

WRENCH, OPEN END, TYPE, 1/2 & 3/4 in. opening, 12-1/2 in. length.

FOR 1/2-IN. SQUARE

WRENCH, OPEN END, TYPE, 1/2 & 3/4 in. opening, 12-1/2 in. length.

FOR 1/2-IN. SQUARE

WRENCH, OPEN END, TYPE, 1/2 & 3/4 in. opening, 12-1/2 in. length.

FOR 1/2-IN. SQUARE

INTERNAL, END, SOCKET WRENCH, 1/2 in. sq. drive.



FOR 1/2-IN. SQUARE

INTERNAL, END, SOCKET WRENCH, 1/2 in. sq. drive.



FOR 1/2-IN. SQUARE

WRENCH, END, regular offset double head, 12-point, 5/8 & 3/4 in openings, 4 in min lg w/s

FIG 100-000-0010

WRENCH, END, regular offset-double head, 12-point, 5/8 & 3/4 in openings, 5 1/2 in min, 8 1/4 in max lg w/s

FIG 100-000-0010

WRENCH, END, regular offset double head, 12-point, 5/8 & 3/4 in openings, 7 1/4 in max lg w/s

FIG 100-000-0010

WRENCH, END, regular offset-double head, 12-point, 5/8 & 3/4 in openings, 8 1/4 in max, 12 in max lg w/s

FIG 100-000-0010

WRENCH, END, regular offset double head, 12-point, 5/8 & 3/4 in openings

FIG 100-000-0010

WRENCH, END, regular offset-double head, 12-point, 5/8 & 3/4 in openings, 12 1/4 in min, 14 in max lg w/s

FIG 100-000-0010

WRENCH, END, regular offset double head, 12-point, 5/8 & 3/4 in openings, 12 1/4 in min, 12 1/4 in max lg w/s

FIG 100-000-0010

WRENCH END, Crossed double head, regular offset double head, 12-point, 5/8 and 3/4 in openings, 7 1/4 in min lg



FIG 100-000-0010

WRENCH, CONNECTOR END, OPEN END, FLG Double open end, 7-handle, 5/8 in opening

FIG 100-000-0010

WRENCH, CONNECTOR END, OPEN END, FLG Double open end, 7 in opening, 7-handle



FIG 100-000-0010

WRENCH, OPEN END, FLG Double head, 12 deg angle of head, 75 or 80 deg larger angle of head, 5/8 in opening, 3/4 in min of head, 12 in long w/s

FIG 100-000-0010

WRENCH, OPEN END, FLG Double head, 12 deg angle of head, 75 or 80 deg larger angle of head, 5/8 in opening, 3/4 in min head, 12 in long w/s

FIG 100-000-0010

WRENCH, OPEN END, FLG Double head, 12 deg angle, 75 or 80 deg larger angle of head, 5/8 in opening, 3/4 in min, 12 in of head, 12 in long w/s

FIG 100-000-0010

WRENCH, OPEN END, FLG Double head, 12 deg angle, 75 or 80 deg larger angle, 5/8 in opening, 3/4 in max min of head, 12 in min lg w/s



FIG 100-000-0010

WRENCH
WHAT
HAPPENED
TO THE
WRENCH
I DROPPED
AROUND
HERE!

BRONCH, OPEN END, FORCE: Double head, 12-deg angle, $\frac{1}{2}$ & $\frac{1}{4}$ in openings, $\frac{1}{2}$ in max flat of head, 3 in max lg x 1.

FIG. 10-28-100-001

BRONCH, OPEN END, FORCE: Double head, 12-deg angle, $\frac{1}{2}$ & $\frac{1}{4}$ in openings, $\frac{1}{2}$ in flat of head, $\frac{3}{4}$ in max lg x 1.

FIG. 10-28-101-001

BRONCH, OPEN END, FORCE: Double head, 12-deg angle, $\frac{1}{2}$ & $\frac{1}{4}$ in openings, $\frac{1}{2}$ in max flat of head, 2 in max lg x 1.

FIG. 10-28-102-001

BRONCH, OPEN END, FORCE: Double head, 12-deg angle, $\frac{1}{2}$ & $\frac{1}{4}$ in openings, $\frac{1}{2}$ in max flat of head, 3 in max lg x 1.

FIG. 10-28-103-001

BRONCH, TORQUE: Rigid frame and drive mechanism adjustable torque mechanism, in-cable & slip clutch indicating mechanism, $\frac{1}{2}$ in sq max drive, 2200 lb in torque w/ rope.



FIG. 10-28-104-001

BRONCH, OPEN END, FORCE: Double head, 12-deg angle, $\frac{1}{2}$ & $\frac{1}{4}$ in openings, $\frac{1}{2}$ in max flat of head, 2 in max lg x 1.

FIG. 10-28-105-001

BRONCH, OPEN END, FORCE: Double head, 12-deg angle, $\frac{1}{2}$ & $\frac{1}{4}$ in openings, $\frac{1}{2}$ in flat of head, 2 in max lg x 1.

FIG. 10-28-106-001

BRONCH, OPEN END, FORCE: Double head, 12-deg angle, $\frac{1}{2}$ & $\frac{1}{4}$ in openings, $\frac{1}{2}$ in max lg x 1.



FIG. 10-28-107-001

BRONCH, TORQUE: Rigid frame and drive mechanism adjustable torque mechanism, in-cable indication mechanism, $\frac{1}{2}$ in sq max drive, 2200 lb in torque w/ rope.



FIG. 10-28-108-001

PEEP HOLE TIP FOR TI

How much is enough?

Like, when you're screwing a control tube to make sure it has a complete thread screwed into the drive end and

One way you know the control tube's tied to OR on that aircraft . . . say, maybe an O-1 . . . is to see working bar threads in the witness hole.

If you can't see your eyeballing through the hole because of close quarters, try sticking a piece of 303 alloy wire through it. Blocked from going through means it's still OR.

Telling is like it is part 100c11 and (2) in TSO 11-108 (Jan 68).



PUT SOME PM IN YOUR TANK



BEHIND THE SCENES OF A T-410 DEPENDS ON HOW YOU PUT INTO IT. READ OBSERVATIONS FOR FRAGMENTS...



For a start, when the plastic lining around the central yoke attachment that fits in play in the housing, replace it. Some play is allowed.



The wear up to every 1000 is thick enough to show and take the hinge pins. The hinge-attachment does release the pin. Otherwise, the pin itself... and it could take more damage than you've got in a tank's life.



In case, remove the top of the wear hole bracket for the foot so that it's toward the down. This way the hole won't hang up on the wear... and will be a large type pin or passage. The replacement gives you some distance over hole.



If you've just received a new oil dipstick, be sure it's the same length as the one you're replacing. Some of the replacements have been too long. Be sure, too, that the oil level markings are the same as the old one.



A reminder! When you remove or replace the oil dipstick, hold it in as straight a line as possible. That way you won't bend it... which happens.

Try it straight to see when you're slipping to the APJ 5000 MOTOR. Pushing is best with nothing too light, usually pressure on the top of the motor.



There's a few other tips to keep you straight.

CHECK
MOTOR
WELL
WELL?



Excessive overheat wear, on either side of the motor, is a good sign of wear. Which means it's probably close for a while on the new yoke.

Winter signs that all is not well with the motor is overheat when it's... on, down, down.

Overheat during use, is a good sign that the motor's deep over work hydraulic fluid.

And, oh, still with the motor, excessive play in the covering arm assembly makes for vibration... and shows you that you need them there, too.

Wind and vibration have an appetite for the plastic edge on the outside edge of the elevator... to the point where an additional rivet is needed.

The new rivet keeps the edge from being crushed at the star clip.



Remember to take the brake pins... on an emergency basis. The pins run... and could result in



brake failure up. The pins go into the motor plate... and you can take 'em with Grease, 200/300/400/500/600/700/800/900... which you should have around the shop somewhere.

If the pins have received 1/2 inch or so, hold the park button. There's still plenty of life left in the brake disc.

If you had yourself replacing a broken parking brake cable roller... go to the next step up for longer work.



TAKE 'EM OFF

When you're turning in surplus and equipment to the proper disposal office, in Military Standard Engine (M) there is and is not a disposal form.

The Military Standard Engine is not an M, regardless of its condition.

If one of the engine's not repairable, parts may be manufactured to repair other engines—unrepairable parts go you back on the unrepairable engine before you need to re-supply.

So what's a Military Standard Engine? There are 4 general groups with horsepower ratings of 1-175, 1, 4, 10, 14 and 20. Within each group there are L, T or S engines—usually identified on their data plates as

Mark L, B or S — with a total of 15 separate ESN's.

Engine data plates, with ESN's, are given also on engines that don't go to the PDC.



Here are the ESN's, engines and their ESN's and model numbers:

M 1-1000-104-001 E1 1hp 60

- 1 of 1000-104-101, 1001-1 00 1
- 1 of 1000-104-102, 1002-1 00 1
- 1 of 1000-104-103, 1003-1 00 1

M 1-1000-104-004, 1004-1 00 1
(the parts manual listed)

M 1-1000-104-007 E1 1hp 60

- 1 of 1000-104-007, 1007-1 00 1
- 1 of 1000-104-007, 1007-1 00 1

M 1-1000-104-008 E1 1hp 60

- 1 of 1000-104-008, 1008-1 00 1
- 1 of 1000-104-008, 1008-1 00 1
- 1 of 1000-104-008, 1008-1 00 1

M 1-1000-104-009 20 hp 60
1 of 1000-104-009, 1009

M 1-1000-104-010, 1001-1 00 1
(the parts manual listed)

M 1-1000-104-011 10 hp 60

- 1 of 1000-104-011, 1001-1 00 1
- 1 of 1000-104-011, 1001-1 00 1

M 1-1000-104-012 10 hp 60

- 1 of 1000-104-012, 1002-1 00 1
- 1 of 1000-104-012, 1002-1 00 1



COOL, MAN, COOL



Don't believe,

There are two things I've noticed about our M1 heater unit when it's placed in the top or middle section of the cabin. When the small doors in the cabinet are closed the pressure will build up fast.

Most people think the top shield is there to help keep the rest of the unit clean. It does that, but if it's removed and the heater isn't lit, the fuel tanks will absorb heat and raise the pressure like the danger zone. This is especially true when the unit's in the top position.

PE L L L



(Ed Note — Glad that you brought these two points up. The small doors were designed so you can get to the heater controls, so you can see the pressure gage, and feel hot air flow, to give air circulation to keep down the temperature around the fuel tanks. The heater should never be operated with the small doors closed in front of the heater controls, and never without the top shield.)

Cannie Radd's BRIEFS

I GOT A
MAINTENANCE
PROBLEM.



About Your AM/FM-50

Oops! We dropped a line on that AM/FM-50(4) radio set article in FE 221. So, just before the last sentence on page 28, add: "Then, rotate the mast to the point midway between the marks on the base plate." You do that just before you lock the mast in position.

Supply Companies

Your supply guys will want to get acquainted with 28 780-25 (Jan 59), Consolidated Interchangeable and Substitute Item List (CISIL). It's a companion to the Federal Supply Catalog Management Data List (C-M-D-L). Your C-M-D-L will show you as to whether you should look for an interchangeable or a substitute item in the CISIL, by means of an I & S indicator code.

Hot Contact Tips

You signal types plagued by hot weather contact problems will be happy to hear about a new, 21-minute training film, W 11-2963, "Powering and Protecting Electronic Equipment in the Tropics." Your self can get it from your local mail-order supply center.

New 75's For Audio Cops

The dumbbell-shaped audio cop for your FT-363, FT-248, FT-213 and FT-247 receiver-transmitters is wearing a new FM horn these days. You can get it with Canon, Electrical Connector, 15M 2525, 873-1732.

M11 Soap

Please pass the word—the M11 portable decon is for decontaminating equipment only. Please use it on human types or clothing. The stuff in the M11 will foam when it's sprayed on an open flame. So, make sure the M11 is never used as a fire extinguisher.

No Breather on 5/4

Forget what you've heard about a breather valve 'hair' needed on the transmission cover of your M13 or M15 1½-ton vehicle. That breather was only on a few early models. Now your Superior's transmission is vented to the engine air stream.

Ames Containers

Supply Types, note — 28 724-13-2 (Jan 59) gives the scoop on repairing AM storage and shipping containers.

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

Handle 'em like



That's the way to handle equipment
and parts going back for repair.

Use the crate it came in or use boxes
and padding you've used...
corrugated board, plastic foam
and such.



WHEN YOU SHIP 'EM—PROTECT 'EM.

Pack 'em well



Crates 'em



Ride 'em gentle on
a salvage mattress

