

Issue 158

**PS**

1966 Series

# THE PREVENTIVE MAINTENANCE MORALE

**“GULPE”**  
ONLY FOUR HOSE  
CRACKERS FULL,  
SIR.

**“PUFF PANT”**  
IT  
MY PLEASURE TO  
HELP OUT, SIR—  
AS WE SAY IN THE  
PENTAGON—  
**MAINTENANCE IS A  
COMMAND  
RESPONSIBILITY!**  
(GPT-12-10-66)

**SPECIAL OFFERING**  
**10¢** **MAINTENANCE** **1966**  
Issue 158

"BEST of the month"

Does your work have a "Best Vehicle of the Month?"  
 "Best Tank?"  
 "Best Control?"  
 Or "Best Movement?"  
 It could . . . with us, too.

Some weeks give a Friday prize and hand a Savings Bond, check an improved lighter or the driver or crew selected. AR 150-1 and AR 150-10 give the award on one of their funds for awards. (The competition has to be an up or all over in the unit can take part.)

Prizes from this include a note in the Daily Bulletin . . . a picture in the unit or your newspaper . . . and the cabinet and general being real friendly about the whole thing.

Some weeks give certificates and the award in a hardware store. They mean "the best" on the equipment like "Best Tank . . . Goodies 1946" where everybody can see. A big sign or plaque to put up in the unit's area. Read up on writing.

14 items, the check point on which equipment and men judged on the real important ones . . . no "typical points." Each week works up its own list.

Talk is over. Your CO will no doubt like the idea. He's the one to really give it the kick-off. In fact, he'll have you in a strong hand all the way thru.

Who knows? Next month you could be your unit's "Best!"



TANK, TRUCK,  
 AIRCRAFT, GUN

**PS** THE OFFICIAL PUBLICATION OF THE UNITED STATES ARMY

12 MONTHS MEMBERSHIP (1946)  
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**GENERAL AND SUPPLY**

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BE YOUR OWN  
INSPECTOR  
ON...

YOUR  
M2  
50-CAL  
MACHINE  
GUN



YOUR M2 IS USED  
BY MANY ORGANIZATIONS  
FOR A VARIETY OF TASKS.  
BECAUSE YOU WANT THE  
M2 AS USED IN CURRENT  
DETAILS, AND DESCRIBED  
HERE BY HARRY.



"YOUR M2" IS  
MY NAME. ASSISTANCE  
IS MY MAIN PULLER.  
I'LL BE YOUR BEST  
M2-50-CAL WITH IT.

One of vehicle M2 is a mighty colored chunk of iron, what with  
the way it can be used with different mounts, with a variety of gun  
bars and a change of gun shoes.

If it's going to live up to its reputation, though, it needs some help  
— the permanent maintenance kind — from you. Knowing what to  
look for is half the job. . . . getting things fixed that need fixing is the  
other half. Read on and you'll see what to look for. The things that're  
in **bold green type** are what you want to read to know — or even know.

Because the M2 has different uses, you use it in two ways — the  
backpack group, Privateer — that's for the same for all the M2s. So  
pick out the group you have in your weapon and work from there.

While you're giving your checks' from the rearview, look for dirt,  
rust and the like. And also look for loose rivets, which is something  
you don't want your gun to have.

Now, on with the inspection.



## BARREL ASSEMBLY



REMOVE  
Muzzle JOG  
LEADS AWAY!

**CHAMBER**—Look for the same thing as in the bolt, except for seal ring.



THE BARRYL  
is the longest of  
any of your  
parts...no cracks  
if OK!

**BARREL LOCKING  
NOTCHES**  
—Rays

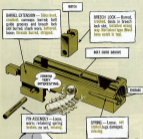
**NOTE**—Pinned, unbarreled, metal-lined,  
boreless plug. Drill to "plug"  
it to 28 inches from the breech end. When  
you see a gap to allow for expansion of  
the stainless steel when the barrel gets hot  
from firing.



**CARRIER ASSEMBLY** (shown with the bolt) — Barrel sleeve coated, doesn't slide on barrel, bolt breech spring seat, retaining pin (bore), bushing, female bolt cut of thread, breech handle sleeve (bore), head lock, bushing.



## BARREL EXTENSION GROUP



**BARREL EXTENSION**—Stainless steel, coated, stamped barrel bolt guide grooves and breech lock cut barrel, check work, tapered, bore: through barrel, drilled.

**BOLT**

**BREECH LOCK**—Bore, drilled, hole in breech lock cut, installed using key, fit/lock type (steel line with it top).

**BOLT GUIDE BUSHING**

**REMOVE  
BOLT  
ASSEMBLY**

**BREECH**

**PIN ASSEMBLY**—Locks work, retaining spring (bore), no oil, bushing.

**SPRING**—Locks, fit (bore), lug damaged, bushing.

REMOVE THE BOLT  
OUT OF THE  
BARRYL WITH  
A JIG AND  
INSPECT FOR

THEY  
CAN BE  
FIXED OR  
REMOVED





# COVER GROUP



**SPIND LATCH SHAFT LOCKER** —  
*Broken, missing.*

**COVER EXTRACTOR BAR** —*Barred, badly worn, loose.*

**COVER LATCH SPRING STUD** —  
*Worn, cracked, broken.*

**BELT FEED SPINER** — *Worn, cracked, bent, bent, operating by way of 90-degree angle to body of cover as it should be. Lock pin holes called "belts" type and missing them? you either key in the block, shoulder pin barred, bent, missing, always broken, missing, bent and set up for correct direction of feed.*

**COVER EXTRACTOR SPRING STUD** —  
*Worn, cracked, broken.*

**BELT FEED PULLEY ASSEMBLY** —  
*This cracked, bent, cast cracked, broken, pin loose, missing spring, missing, broken, weak, cast bent, broken, spring not installed, right hand end weak, left hand, with top pointing down and base from left hand good, arm, pin bent, broken, post block in rib.*

**BEARING PINS** — *Broken, missing*  
 lower will close off the gear weight if bent or spring, is bent or missing.

**COVER LATCH** — *Barred, broke, bent, spider missing, outer key missing, bent, bent wing.*

**COVER LATCH SPRING** — *Broken, weak, not seated over cover stud.*



**COVER** — *Loose in transfer block feed, jagged, cracked, bent.*

**BELT FEED LOWER SPINER STUD** —  
*Cracked, broken, barred.*



**COVER EXTRACTOR SPRING** —  
*Barred, broken.*

**SLIDE** — *Loose in cover groove, barred, cracked.*

**COVER PIN** — *Barred, bent, worn, missing* (bent) pin can be used as alternative.



## BOLT GROUP

**BOLT BODY ASSEMBLY** — Doesn't slide free & barrel (if ball) is extended with nose up and then over to closed and the bolt retracts, the bolt head over long will not seat in the bolt groove, giving you a ballhead long over a barrel head (i.e. firing pin hole plugged, not round).



**SEAR SPRING** — Not locked, all right should be in rear hole and catch in bottom of hole, deformed, weak.

**COCKING LEVER PIN** — Bent, locked.

**SEAR** — Bent, catch clipped.

**SEAR GUARD** — Needs to fit back in guide groove, notch for sear surface.

**BOLT'S LONG AND UP THROAT PROBLEM**

**COCKING LEVER** — Bent, locked — especially when it rains.



**BOLT GUN GROOVES AND FLARE** — Bent, cracked, chips or catches bulging in Tube.



**IF THIS SPRING IS MISSING — IT'S NO, NO FOR THE WHOLE POINT... NO, CHECK IT OUT!**

**DRIVING ROD AND SPRING** — Springs broken, weak, catch failure or (ball rubbing) and shows more than 1/4 in. wear when rolled at 90 degrees, cracked, broken, thick bolt, broken.



**EXTRACTOR** — Bent, case clipped, extractor pin not seated, broken.

**BOLT SPRING** — Bent, locked. One if lock ring is missing from M10 design.



**ACCELERATOR STOP & STOP LOCK** — Bent, bent.



**SEAR PIN EXTENSION** — Bent, bent, cracked, case which bent up, spring weak, locked.



**BOLT SWITCH STOP** — Loose, not seated, bent.



**EXTRACTOR PIN** — Bent, cracked, broken, too clipped, fit must be smooth and well-rounded.

**BOLT SWITCH** — Loose, bent, cracked, wrong. Wrong installation of ball catch case bolt is ballhead ball head lever if cover is closed and you try to function ball the weapon.



# BARREL BUFFER GROUP



**BUFFER** — Rod brass, front spring, **brakes**, metal cap base.

Long, accurate loading. It won't lock the breech. It won't.



**BREECH LOCK MECHANISM** — Must always be slight up and down movement to fit, **cracked, broken, don't stay in body, tested.**



**BUFFER BODY SPRING LOCK** — Steel, **set rotated, tested.**

**ACCELERATOR** — Glass and top **cracked, broken, tested.**



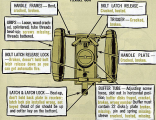
**BUFFER BODY CHECK** — **Rotated, tested.**

**ACCELERATOR PIN** — **Steel in, rotating, tests, rotating spring wear, rotating.**



# BACK PLATE GROUP

FRONT VIEW



FRONT VIEW

The components that're different from those on the list:

**SOLENOID** — Loose on buffer tube, isn't adjusted to the adjusting according to your FM's rating; burnt, loose, frayed, connector loose, bent, safety wiring broken, missing; plunger won't seat, broken; nuts and screws loose, missing.

**CLAMP ASSEMBLY** — Bent, broken, safety wire broken, missing.



**CLIP ASSEMBLY** — Bent, broken.



**SPRING, SAFETY & FILLER PIN** — Broken. Only M45 and M48 have all three parts. The first doesn't have filler piece.

**TRIGGER** — Doesn't fit weapon, loose on buffer tube, broken, safety wire bent, not attached, not set screw missing.



# RECEIVER GROUP

ALL TYPES OF GUNTS

RECEIVER AND OTHER PARTS: FIG. 24-A. **NOTE**—CHECK OUT YOUR RECEIVER-GROUP THROUGHOUT.

**TRIGGER BLOCK**—Steel, oil, drilled, ground.



**BACK PLATE FEEDWAY AND BOLT CHAMFER**—Steel, oil-hard.



**BOLT HOLDING FRIEZE**—Cracked, broken, steel, drilling, spring work, every kind, mixing, break, oil, steel, bolt, ball-bearing part, oil not included.



**BIG PLATE**—Steel, cracked, drilled, solvent extractor, roller, cracks, threads, drilled, oil, loose, mixing, roller, key, broken, mixing, spring work, mixing.



**CRACKS**—Steel, bolt oil.



**TOP PLATE**—Cracked, solvent, cracked, oil, Label 11 for (technology) can't be read, mixing.



**BOTTOM PLATE**—Mounting, broken, holes, not, cracked, plate drilled, cracked, steel, cracked, bolt, not, loose, key, forward, play, hole, that, slightly, hole, roller, key, or, safety, into, broken, mixing, not, spring, and, screw, mixing.



**ADJUSTABLE TRIGGER BAR STOP**—Screw, threads, drilled, hole, cracked, broken, not, loose, mixing, threads, drilled, spring work, bolted.



**TRIGGER BAR**—Steel, bent, cracked, broken, doesn't, lose, catch, in, key, not, broken, trigger, bar, pin, monthly, bent, mixing, bolt, broken.



**GRUBSCREW TRIGGER BAR STOP**—Steel, bent, broken.



**BOLT STOP**—Steel, bent, oil, mixing.



**BOLT MACHINERY**—Bolt, bent, broken, spring work, broken, total, broken.



**CRACKS**

FIG.

**BARREL SUPPORT PIN**—Not, mixed, broken, roller, key, mixing.



**BARREL SUPPORT**—Loose, cracked, leaving, surface, broken.



## RECEIVER GROUP FIG. 2ND AND 3RD STAGES



# RECEIVER GROUP

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**LINK CHUTE & ADAPTER ASSEMBLY** — **Painted, broken; link chute cracked; pin bent, broken; threads of studs stripped; nuts have stripped threads, missing.**



WEAK  
SPOTS

FIG. 845 AND 846

**CARTRIDGE STOP ASSEMBLY** — **Link stripper worn, doesn't move; barrel case broken; barrel spring weak; broken, missing; slingshot and pin missing.**



FIG. 843 AND 844

**TOP-PLATE COVER** — **Missing; some threads stripped; screws missing.**



**FRONT RING SUPPORT** — **Bent, barrel, threads stripped; one of balls not missing.**



**EASTON CHUTE** — **Bent, cracked.**



**MOUNTING BRACKET** — **(For M16) Cracked; pin bent; collar key broken, missing.**



FIG. 842, 843, 844 AND 845 AND 846 (FIG. 845 HAS FRONT-CARTRIDGE STOP ONLY.)

**FRONT CARTRIDGE STOP** — **Assembled wrong; life tight, bent.**



**GLASS CASE KNOB STOP** — **Assembled wrong; doesn't move; broken.**



**LINK STOPPER** — **Bent; doesn't move; prong bent.**



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MORE

# RETRACTING SLIDE ASSEMBLY

ED 400 845

**LEVER**—Cracked, loose on slide, spring installed wrong, weak, bent, not set under spring and not kept tight, missing, other key broken, missing.

**BOLT HANDLE** (shown used)—Bent, broken.



**BOLTS**—Loose, broken, not done, missing; other keys broken, missing.

**HANDLE**—Weld cracked, splintered, doesn't turn freely, loose in lever.

REMOVE THESE WOOD PARTS.

**SLIDE**—Bent, stuck in track.

**PISTON**—Bent, missing.

**BRACKET**—Cracked, sliding bent.

**SPRING**—Loose, broken.

**SPRING**—Weak, missing.

**PLUNGER**—missing.

**SAFETY PINCH**—Broken, missing.





# MIO CHARGER

BL, MFL, TACM AND UAB

IF YOU DON'T CHARGE THE MIO DON'T FUEL.



In addition to the guns, some of the equipment used with them needs other recycling.

# FLASH HIDER ASSEMBLY



## HEADSPACE and TIMING GAGES



**TIMING GAGE** — *Wear, broken.*

**HEADSPACE GAGE** — *Wear, broken, wrong markings (some gages have 00 on the thick end and 90-00 on the thin end. You want 00 on the thin end and 90-00 on the thick end.)*

**CHAIN** — *Twisted, missing.*

Remember to have people up the maintenance line check the gages regularly.

## KNOW YOUR PUBS

THE M2'S ARE ON WOODS STREET. . . M2 LIKE YOUR PUBS AND WE GUAR!



You also want to take a close look at your other tools and equipment now and again—take the cleaning rods and gun covers—to make sure they're not too loose and a bother from being in such bad shape that they can't be used again.

No matter what publications you might have—like TM 9-2118-211-21P (The 60) for the M118 and M118A1 uncrewed command and reconnaissance carrier—there's three others that you can also use. These are TM 9-65 (The 50) with Ch 1 (21 May 58) and Ch 2 (18 Mar 58) . . . TM 9-1000-228-12-108 (May 64) . . . and TR 9-1000-211-18/1 (27 Mar 64). The TR tells you what M2 M2-ers go on with what numbers.

And don't forget your PUL—TM 9-1000-211-20P (18 Jul 61)—when you have a weapon that's loaded with tank-ammunition equipment. And TM 9-1000-211-12P (24 Jan 64) and change 1 (27 Mar 64) is for you if your shooter's a regular TOR line item.

# RESCINDED MODIFICATIONS

Check the DA's instructions

Dear Wandy,

There seems to be just a little bit of confusion about aircraft modifications that have not been applied to our aircraft. The old FAR-1's, FO's, FI's and MWO's containing these have long since been cancelled.

Can you tell me how to maintain an up-to-date Col Form 3400-1 on this type of problem?

Sgt B. P. K.

Dear Sergeant B. P. K.,

No prob.

It's true that some parts were cancelled before all the aircraft were modified. In some cases, the aircraft configuration change was done, in fact, by the replacement of old parts with new parts.

In other cases the modification was not done, but it is not legal to apply a cancelled modification. You may be able to get an exception, tho, if you can justify incorporating the modification on the basis that without it (as an example) you have a safety-of-flight hazard.

In such a case your report should go to:

92 Army Aviation School Center  
ATTN: AVAL-102  
10, Fort Br, MDN

Ordinarily, tho, that's not the way you should fill out the DA Form 3400-1 on a rescinded modification.

On the left side, cover the usual info. On the right side of the form enter Rescinded by DA Cir 318-EX (and the date) . . . that's all there is to it.

A rescinded modification is not required to be done and therefore does not have any adverse effect on the material readiness status of your birds.

OH-13H	RESERVED
DATE OF CANCELLATION	DATE & TIME CANCELLED (DDMMYY)
BY IDENTIFICATION NUMBER (DA-100)	APPROVED BY (NAME, GRADE & OFFICE)



Whenever you make work with the main-rotor blades mounted on the Huey (UH-1) engine deck you're working with some mighty expensive equipment — the type that should be handled with hot gloves . . . and a few pointers.

First off, be sure your hands has all the right parts as listed in TM 14-1300.



110-2807 (14-1300-004). Especially protect the quick-release pins because a lot of weight hinges on them.



Take a good look at which the quick-release pin body and lock ring never get separated. The "weak link" lock ring was used to secure one leg of the brace and when a transmission



KEEPING . . .

# IN THE KNOW

was swinging away from the chopper — you guessed it — the ring breaks, the brace flings and the transmission could fly like a bomb!



Then, don't overload the brace on a transmission lift or the brace will take its toll. You have to keep a steady hand pull on the fast bolt to make sure the fast bolt on the brace begins to



take the load. Cranking the brace just the least release pins means you're trying to lift the whole kit and caboodle.

So, when a mechanic begins cranking on the brace carefully, something had to give. A pulley broke — as it's supposed to when you try to lift more than the brace capacity of 600 pounds. "Guess this personnel knowledge is a most costly bird plan. One of the mounting brackets also let go.

OVER CRANKING LEADS . . .



Finally, remember that lifting a weight transmission, again, is not load in a standard operation.

Be sure your hands are not getting . . . slip away. Put your left hand steady on the brace handle and your right hand steady on the brace handle.

Release the brace by pulling it toward you — but keep your left hand on the brace just in case — and crank



away with your right hand. When you finish cranking, put the brake on by putting your left hand forward, over "load."

To swing the brace for more the same is clear and, again, use both hands on the pivoting line.

WELL... I CAN CLEAN 'EM!

## CLEAN YOUR SPARK PLUG INSERTS

### Dear Editor,

Anytime you use more than hand pressure to put a spark plug into a jug you run what up with an under-torqued plug and, other words, a loose plug ... You're a healthy individual!

That's what happened to our Hoover (H-6) when carbon hardened in the brass spark plug insert. Although the torque wrench read right the carbon prevented the plug from getting tightened enough. So, we made up a little cleaning tool that works like a charm on mild inserts. Of course, the tool's not used on half-cut inserts because you might damage the threads or loosen the insert.

We took a steel 18-mm plug and cut it grooves in it—cutting them the first thread and deepening the depth to one half-way up the threaded insert.

Now, when a plug doesn't go into the cylinder with hand pressure we reach for this gear, put a little grease on it and screw it into the insert — one turn in — back off a half turn — one turn in. . . . The tool picks up the carbon and deposits it in the grooves.

With a clean insert you get a free-running plug and the right torque, every time.

Wade Strigg  
in Seattle, Wa.



**Old Man** — Looks like a good tip, especially if you're in the house and you don't have the tap to your spark plug cleaning kit handy. Just be sure you are the piston at top dead center and take out the opposite spark plug. Then you can use compressed air to blow out carbon that might have fallen into the cylinder.



## SHORT-TIMER NOTE

Any air-cyber who has been around a Cessna 441-B1 any length of time knows that the prop is a grease slinger — which is a pretty good reason for following the labor claim in TM 91-1510-209-20 (2 Aug 05) to the letter.

Convert this means hand-packing general purpose grease into the counterweight bearings during a daily on-prop without spinners (intermediate — with spinners) and into the counterweight shaft bearings every second Periodic. The main bearings on the gas treatment with low and high temperature greases every Intermediate.

When you take the counterweight bearings daily, also be sure you give your bird a good cleanup before the birds for the blue 'case, not a 'slide', more grease is going to land

ON THE WINDSHIELD, WING ROOT AND  
LANDING GEAR.



ON THE WINDSHIELD, WING ROOT AND  
LANDING GEAR.



on the windshield, wing roots and landing gear.

Then you can wipe off the extra grease so the pilot can see where he's going . . . can clean on post-flight writings.

Another point. When your bird is parked be sure the prop is turned horizontal. If it's left in a vertical position, rain will run down the bearings and speed up the grease eating process — for real!

## SPARK PLUG PUB RUB



You say that the pub for your spark plug cleaning kit, P/N 4910-100-0111, is the aircraft organizational & Supplemental, B and C Tool Kit has become a collector's item? OK, then just order a replacement pub on a DA Form 17. You want TM 9-4910-100-12-111 Jan 64-Ed. Spark Plug Cleaning.

## WEIGHT KIT HAS CLASS



REMEMBER...  
AERONAUT  
ELECTRONIC WEIGHING  
KIT, P/N 4470-008-  
0000, ALSO HAS  
RECOMMEND TO  
BE EXACT,  
NOT NEAR!



THAT'S NOT  
THE ONLY CLASS  
ELECTRONIC  
KIT!

Keeping the class in mind will save you a lot of time and stress looking thru the DA Form 110-1 index for the technical manual.

Like—you run your finger down the T80 55 line until you come to 6670 and there you have it... T80 11-6670-008-15 (28 Sep 64).

### NOW HEAR THIS!



Hold on before you fix the main call number on the tail of your aircraft as being the serial number for your T80 36-750 form.



True, the call number is taken from the serial number on the filed data plate as called for in TB ANN 7, Change 3 10 Feb 64 para 76. But the call number is not the serial number and there has been a lot of repeated info on past the point.

What happens when a form goes forward with a bogus serial number, or none at all? Well, the class processing center checks the number against a master file. The result is a rejected punch card that has to be corrected (right!).

To keep the straight going flowing — brass, clothes, studies, numbers — by slipping the whole serial number off the data plate.

# COWLING SAVER

Dear Editor,

Fastening really takes a beating when it's taken off an aircraft and held in position. Before you nail the bigger the bird the more places that can get damaged.

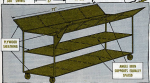
Well, that's the way it was here until we made up a couple of wood racks. We put them together we welded the angle iron together and bolted to the chairs of plywood.

No more cowlings stamped on, ripped over and returned to the fire canopy of the hangar for us . . . not with those silly portable rack bands.

John H. Schellie  
Ft Worth, Tex.



MATERIALS LIST:  
40 FT. OF 6"x6" PLYWOOD  
20 FT. OF 2"x4" PLYWOOD  
FOR 1" OF 1" ANGLE IRON OR  
EXTENDED ALUMINUM ANGLE.



Old Place—Looks real good for setting down on short metal supports.





Every member of Indian tribe Whitebird knows that Big Chief Chinook (number 47 in CH tribe) carries a heap of forked lightning in his cargo hook . . . the main attraction. UGH!

Big Chief wants to know our patients when they try hitch-up job at road-up class for downed birds or cargo. Bird weather looks like he's doing snake dance while full of "hitch-up" (take when he reaches hook in belly of Chinook. He should have look-on low runway and evacuation of Army aircraft. Tel 11-411-018 Apr 66A.

This patient's job has variable care for this drinking development. The answer is a discharge probe — an insulated brass rod shaped like a shepherd's staff at one end and joined by a length of metallic braid to a ground rod at the other.

When ready for a hook-up, ground crewman drives rod into earth like tape job. Then he takes probe and catches cargo hook.

When answer is made, Big Chief's post-up power now flies like arrow thru probe into the ground.

No static . . . no shock.

No sparks or lights spilled fuel . . . no under signal!

With probe, ground crewman catches the cargo hook so other ground types can safely grab the cargo hook to finish the hitch-up.



Caution! If the professional team contacts with the cargo hook, he must regulate it before the others touch the hook with their hands — otherwise . . . towel!

How-to make straight tracks to tape shock. Make with rods and hardware available and from probe, today!

## OIL-SOAKED SHOCKS SHOT



OH NO!

Dear Woody,

On a Perfection we inspect our Shocks (DA 12) before they are mounted to see if the rubber is still hot there to see shock that has softened.

Take DA 1220-208 (2) 1. you will step 5. you will give 2-18 days to check the rubber for cracks and for being oil soaked or deteriorated.

Now there seems to be oil on these before all the time, how do you tell when they're oil soaked?

DA 12, 10, 11.



CLEAN WITH  
WASH OIL  
AND WASH

12 HOURS LATER ...



... IF FULL OF OIL, REPLACE,  
IT'S OIL-SOAKED

Dear Specialist H. W. W.,

That — that ... these means do collect oil that should be wiped off during the Daily to make to cut down on deterioration of the rubber.

At the oil-soaked means, try this for size. Clean the rubber thoroughly with mild soap and water. About 12 hours later see the means and if a film of oil appears on the tile chopper, it's oil-soaked.

Course an oil-soaked, soft or cracked shock means is not going to dampen-out vibrations so it gets replaced, not 'half.

*Chief*

## MAYBE YES — MAYBE NO

Are you about a DA Form 2408-5 on an aircraft component? Well, maybe ... maybe not.

The secret way is to check the index, DA Form 2408-6. If you locate an RWO or one-line TB inspection on the component, you ought to have a modification record.

If you find no such page, you don't even need a DA Form 2408-5 ... that's the pump in TB 18-780, Ch 2 (18 May 81) para 4-50(1) and para 4-50c.

"THE SECRET  
IS NOT HOW WELL  
LOOKIN' FOR."



No, you don't need an inspection a DA Form 2408-5 that never was, right? Right?



# JOE'S DOPE

FUEL IS  
COOL... BUT  
MAINTENANCE  
MAKES EQUIPMENT  
GO!

MAINTENANCE!  
HOLY STEERHEAD,  
DUNNIE... LOCKIT  
OUR TOOLS!

WELL, TOOLS NEED MAINTENANCE  
TOO... THEY HAVE TO BE READY  
TO GO... AND PERFORM AT  
ALL TIMES!

OHAYO, HERE,  
WILL NOW GIVE YOU  
A QUICK TOUR - SHOW  
YOU THE ART  
OF TOOL CARE!

USE A SCREWDRIVER THAT FITS THE SCREW. GET THAT?



SHADE TYPE

PHILIPS

MINI-A-PENCE



USE THE WRONG DRILL BIT!  
CHANGE THE DRILLHEAD ON IT!

WHEN THE BLADE BECOMES POINTY OR BROADENED... GET IT RESHARPENED!



AND NEVER USE FOR PITCHING OR CHISELING! AND DON'T HANG ON THE HANDLE.



NOW WE COME TO WRENCHES...

COMBINATION

STANDARD

TORQUE

ALLEN

IMPACT

THEY ARE ALL TYPES FOR ALL JOBS...

OPEN END

BOX

ADJUSTABLE

SLURRY

ONE

SOCKET





**NEVER** TRY TO ENLARGE, HOLES BY TYPING FILE

**NEVER** LET AN OILHEAT (OR GETTING ON...)

**NEVER** FILE WITH A LOCKED CHAIN, OR MAY BREAK

**NEVER** THROW AWAY IN TOOL BOX, YOU'LL POLLUTE THE BOXES.

TRY TO ENLARGE, HOLES BY TYPING FILE

LET AN OILHEAT (OR GETTING ON...)

FILE WITH A LOCKED CHAIN, OR MAY BREAK

THROW AWAY IN TOOL BOX, YOU'LL POLLUTE THE BOXES.



KEEP 'EM CLEAN AFTER USING



**Joe's**

# Dope Sheet

KEEP 'EM RUST-FREE  
WITH A BIT OF LUBE

USE 'EM  
ONLY  
FOR WHAT  
THEY'RE  
MADE  
FOR

Maintenance begins with good tools -  
To you, they're the family jewels.  
With know-how and care  
They'll always be there...  
Just learn a few plain-simple rules!

KEEP 'EM  
CLEAN

FIX 'EM  
WITH  
LEWIS  
CARE

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



**NEVER** TURN YOUR PLIERS **NEVER** TAKE WHOLE OF YOUR HANDS OFF





## SAWS!

WITHOUT THE RIGHT  
ONE, YOU'RE IN THE  
DICK! AND ... TREAT  
THE GOOD AND THEY'  
GUT GOOD GOOD.



WHEE!  
NOW IT'S  
DONE.



KEEP SAW  
AT 60°  
ANGLE FOR  
RIP SAW  
AND 45°  
ANGLE FOR  
CROSS CUT  
SAW

WHEE GOOD EVEN  
STROKES!

## PM TIPS

KEEP TEETH SHARP  
WITH FILE  
AFTER USE.  
KEEP OILY



DON'T CUT INTO  
NAIL

## COLD CHISELS

ARE NOT CUTTING  
WELL ... SO USE ONE  
THAT IS THE RIGHT SIZE  
FOR THE JOB.



WHEE  
SCHEW!  
WHEE  
CHISELING!

## PM TIPS

THE LARGER THE CHISEL,  
THE LARGER THE HAMMER

USE A VISE IF YOUR  
IS SMALL

ALWAYS CHISEL  
FROM THE

POINT CARRY IN  
POCKET

SOAK OFF RUST  
AND USE OIL



# PINCHES

(NOT THE PINCHES  
HANDS AND THERE  
ARE MANY TYPES)



## PW TIPS

WASH YOUR PINS,  
KEEP CLEAN,  
+ CLEAN AND LUBE.



WE MAKE OUR TOOLS WITH A PROTECTIVE COOL-ALUMINUM FINISH, THAT WAY,

KEEP YOUR SKIN IN AN ORGANIZED MANNER, AND YOU'LL KNOW WHERE THEY ARE ALL THE TIME! ... BE CAREFUL ABOUT CHOOSING THE OUT!



HOW ABOUT A GRAB-BAGGET THEM. HOLD-BANDY TO VERY PORTABLE!



COULD YOU TELL THEM ABOUT  
**TW 9-245**  
KEEP GOIN  
INTO A GREAT  
BOOK ON  
YOUR  
CASE,



**AWRIGHT!**  
WAS THE  
WELL-GUY NOT  
SIGNED AND  
FINISHED?



## COMMUNICATIONS



WANT  
TO GET  
A MESSAGE  
FROM?

HAY!

Next, the AN/URC-4 radio set is being replaced by an improved AN/URC-19, but until then, you've gotta live with what you've got, and you've got the URC-4.

So, about once a month minimum would be a good time to check the set's battery for leaks, corrosion and output. If it's not in good shape, replace it.

While you're checking the battery, you might inspect the set screws in the three contacts on the side of the set — the ones, receiver and transmitter push buttons.

The set screws work loose, and, when you lose control,

If they're loose, it's the main operator's job to tighten them. Because the screws can be over-tightened, and the equipment will be damaged. It takes a knowing hand.

Finally, something when you change bands with the CH-1 band switch, make sure will sit between the switch contacts and the chassis, shorting the switch. You can't remember, of course.

Hold the screws. There's no way to, since either you or your equipment can get a piece of insulating tape across the contact double the case, that is. Naturally, no using.

IF SCREWS ARE LOOSE,  
A DAB OF INSULATOR WILL  
KEEP YOU TIGHT NUT!



SET SCREWS



## THE ARMY CHECK



LIFE, THE SET YOU HAVE MAY  
RESEMBLE THE MODEL.



**STOP STOP  
BREAKAGE**

Circle's previous piece, Feb. . . . , on successful, modeling mountain models in climbing when you're mounting up your ANTRC-25 radio set with an ANVGR-500 radio set control group!



The much existing on the TR-25 volume control knob can break the stop . . . breaks hitting your hand with your mouth.

## TR-25 TOOL KIT BOWS OUT

Don't panic if you can't find the TR-25-4E (PN 5100-400-1000) listed in the latest supply catalog. It's been delayed on purpose and has been replaced by Tool Kit, Model Number 15-11 (PN 5100-410-1010). You'll find that one on page 4-87 of Red Cat CH-80-E-A 11 Jul 68. Don't worry in your TR-25's, though. You replace them, as needed, with the 15-11. It'd pay to grab a look at SO 11-544 (Rev. 67) on conversion of the TR-25 to the 15-11.



## BE AN INSULATOR INVESTIGATOR



When lamp-changing time rolls around for the RC3 dial of your RT-70 receiver-transmitter, be cautious.

Chance one, an almost invisible insulator in the recess of the lamp screw will try to get away from you. Be watchful.

The glue on the back of the insulator dries out, and the insulator can drop

EL-7



IF INSULATOR DROPS —  
CHECK FOR THE GUESS.

without you seeing it. Worse, since it's transparent, you've got to look twice times before you can tell it's missing. Be persistent.

Observe, pretty quick after you replace the lamp screw you'll know the insulator is not there. Like, just about as soon as you turn the power on.

Without the protection, the lamp screw shorts the filament voltage to ground . . . which sends your set off the apples.

Naturally, that does not put much light in the dial window.

A burned-out lamp can give you other problems. First, notice, if the lamp's dim and you turn the RT's function switch to CAL position, you trip the thermal relay in the power supply.

The set will stop operating . . . but no sweat on the fix.

Turn the set off. Let it cool for a minute or two. Turn it on. It should work fine . . . and if you replace the lamp you can even turn it back to CAL.

BURNING INSIDE



IF BURNING, . . .  
TURN SET OFF

**TOO HOT  
TO HANDLE**



What . . . Happ? . . .

Before you turn the juice loose from the generator into your communication equipment make sure the voltage is hooked up right for the load your equipment will handle.

Take, for instance, the AN/MCC-4 radiograph telephone terminal, 2B-675/MSC or 2B-611 patching communication panel. About all the power any of 'em will take is 115 volts for 60-cycle service.

Forget, and don't, say, 220 volts or 'em like you would get from a PL-474/M (PL-106-AC/1500) or 2B-12-202 model generator or which has multiple voltage and . . . POW!

That extra power will burn out your equipment and our communication qualitar's a bench-type can change his mind.

Of course, if you're extra lucky, a fuse will go flat and OVA burn your assholes!

Your best bet is see to it the generator hookup terminal plate, phase frequency selector switch or whatever type power converting system is used is set for 115 volts on a 120/240 V multiple-voltage generator set.



# HANDLE THAT TT WORM GENTLY

Resisting or jamming and pulling, or tugging on your teleprinter unit's governor adjustment worm can keep the message coming in garbled.

That's right . . .

So, your best bet's to gently push the worm in or spread up the worm or gently pull it out or slow 'er down on a bit, like Pitman's, a TT-4(1/2) or TT-18/20C.

Tapping your rising fork on the heel of your hand and spring out of the little slot on the governor cage'll let you know whether the worm's fast or slow.

If the dot's moving to the left, push the worm in.

If the dot's moving to the right, pull the worm out.

Wait a minute or three, though, before adjusting the worm speed as the worm'll warm up.

And, remember, gently does it or you'll lock the governor worm spring and all the pushing and pulling won't get the motor geared for 40 WPM.

A locked spring means a trip to your supplier to fix 'em.



**'HANDS OFF THE GOVERNOR, GOV!**



Rudely well dally with the worm speed adjust, if you must. You can even have a go at your teleprinter motor and range slide . . . or the line carrier.

But, please — don't touch the governor, Gov!

The other adjustments are in your Old Ballywick, but the governor adjustment is strictly a job for support. Obviously.

So, 'hands off Gov, Gov.



**HOLD IT!**

SEE THEM  
BOOMER JACKS  
DON'T  
WHIP 'EM  
HERE.



Your engine (gasoline, multi-fuel or diesel) can be pumped to death — — like when you use lightweight winter oil before cold weather really sets in.

Just as well, you'll see some water-based types rush in when the first fall frost withers the pumpkin vines. They figure winter's right on top of 'em, so they drain their heavyweight summer oil and fill up their crankcases with winter-weight oil.

Guess a stretch of Indian summer — warm, overcast, downright hot weather — and that your oil's engine is dying' for both of good lubrication.

To make sure that's really Old Man Winter breaking' down your neck before you make your seasonal oil change, a week of steady cold usually is a signal that winter has really set in. But check the TM's and LO for your equipment to get the exact grip on seasonal lube change.

## MIST U-JOINT LUBING

Your Adams, guess you sampling, FSN 4950-200-0111, is your No. 1 Common Tool for lubrication kit is just the thing for putting the lube to your M10 or new truck's U-joints. You can get this flexible adapter alone. It's listed in SC 4950-10. Then M10, and is furnished in Lube Kit, FSN 4950-10-0102.



YOU CAN  
GET THE  
FLEXIBLE  
ADAPTER  
ALONE.



## ELECTRIC BRAKE LOCK

**Dear Staff-Alert,**

When operating our 4044 1-ton wrecker's crane or rear wheel, we're supposed to have the electric brake lock applied. Should the brake lock be used when operating the wrecker's front wheel?

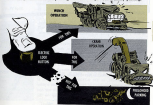
SFC B. A. P.

**Dear Sergeant G. A. P.,**

The front wheel usually is used almost only for recovering the wrecker itself. You'd either be using the wheels for extra power or you'd want 'em rolling free, so you wouldn't want the brakes on.

But if, for some reason, you're using the front wheels almost for recovering another vehicle, you should have the electric brake lock on.

Just about as important as when you should use the brake lock is when you shouldn't — and that's for ordinary parking. The lock keeps constant pressure on the hydraulic brake system and, if held on for a long time, could result in a burn-through in the lines. There's one much point in taking the risk when the wrecker's got a mechanical parking brake meant just for ordinary parking.



WHY THE TRICK . . . .  
**HOW MUCH GROUNDING?**



Dear *Roll-Over*,

TM 10-1182 (Jul 55), para 48b(7) says the dispensing nozzle against the fuel tank opening is enough of a bond when refueling tracked or wheeled vehicles from a tank truck. "No other bonding or grounding is necessary."

So, is a bonding wire and clip on the nozzle a required part of the MFC's 24-hour fuel truck's equipment when the wire's not used?

Edgar W. B.

Dear Sergeant W. B.,

First off, you do need a ground in addition to that bond. AR 405-11 (Sep 69) says, in para 13b(2): "Tank trucks will be heavily grounded prior to approaching the collector of non-tanks with the delivery nozzle of the tank truck."

About the nozzle bonding wire, yes, it's part of the MFC's equipment, along with the filtering system, that makes the MFC a dual-purpose nozzle — for refueling tracked and wheeled vehicles and also for refueling aircraft.

TM 10-1184 (Jul 55), para 13c, tells when the nozzle bonding wire must be used for refueling aircraft.

The bonding wire comes as part of 75-400, fuel dispensing, RUC 4730-004-0044, in TM 5-2530-289-289 (Jan 55). If your nozzle wire's missing, you can make one from a piece of cable like's on the main grounding rod. Secure one end securely to the nozzle and put an electrical clip on the other end.



## TARP TIEDOWN TRICK



These pipe-clip style wedge locks set-up on the side of your cargo truck was just there to make things easier for you—wasn't that the idea? No, it's a latching-eye wedge lock (PSN 21-48-798-026A).



This does away with complicated roller-eye knots, and makes putting a tarp on or taking it off just a matter of a few flips. Easy to get a tarp that's over the top, too.

## SAME FOR M35A2

Your M35A2 2 1/2-ton truck or other M35A2-series 2 1/2-ton vehicle uses the same air cleaner indicator that's on the M35A1-series vehicles. It's indicator, air filter, PSN 25-40-900-2415, found in Fuel Cut Control Kit A-11 Aug 66. The indicator's an included item for TM 9-2328-209-20F items.



LETS TAKE TORQUE AS AN ESSENTIAL PART OF MAINTENANCE TIPS.

### IS THAT TIGHTENING AGONY?

Anyway you name it—torque is tight, the kind that produces tension. It's such a crowd-pleaser that it takes one kind of measurement to peg it: It's measured in inches and pounds and feet and feet. These lock pounds make a fine pound.

Torque equals force times distance. It's based on the law of the lever. Torque is not waste, which has to do with pull.



### TORQUE (WITH A WIPER BRUSH PAW)

### YOU KNOW WHAT...

Long ago, engineers found that ordinary joints together with bolts and nuts had to be tightened just right to remain plain to give maximum service. To just snug down or tighten a nut or bolt would's look it!

They found out, for example, the spark plugs and bearings had to be torqued just so to get the right performance.



FOR MORE SATISFYING TOGETHERNESS



They discovered that engine cylinder head clearance could be lost by over-tightening head bolts. The results — loss of compression, wear and tear on the valves and valve guides, poor fuel economy and light's early engine failure. Engineers used designed light-weight equipment and torque became even more important.



This means applications. A bolt may be stronger than the parts it holds together. If that joint happens to be aluminum or magnesium, over-tightening can produce real headaches. Light-weight metals can be squeezed out of shape and distorted. If they're in the form of a casting, they can be cracked, or the threads in 'em can be stripped. Then you'll find yourself 'stiller' and 'supple' for sure.



## THE FIBER HAS THE POOP



Not only did the engineers find out that special pulcra<sup>®</sup> is a must — they noted target values as they designed the machine, and they passed those on to you in the pulp that goes along with your equipment.

The organizational maintenance job may have a table with the standard target values, and special target values may be called out in the text.

No standard work habits would tackle a job without the target wrench and the knowledge of using it.

## EXTENSION MARK

If you're using a regular target handle without an attachment that adds to the length of the wrench, you just compare to the value indicated in your pulp.

If you're using an extension that does add to the length of the wrench, though, there's a little more involved, and you'll have to put on your thinking cap and do a little algebra<sup>®</sup>.



Now just suppose that you've 'wiggled' up a job on your equipment, and you come to a nut or a bolt that has to be torqued, but you can't get at it with a regular wrench. Let's say it requires a 6-in. wrench on that torque wrench to reach it. The pulp says the nut is supposed to be torqued down to 65 foot-pounds. First

HERE'S HOW YOU FIGURE IT:

FORMULA, SYMBOLS

$T_A$  = TORQUE AT END OF ADAPTER

$T_W$  = DIAL SETTING

$A_A$  = LENGTH OF ADAPTER

$L_A$  = LEVER LENGTH OF WRENCH

TA = 45 ft-lbs

$T_W = 43.5 \text{ ft-lbs}$

$L_A = 12 \text{ in}$

$T_W \times L_A = 43.5 \times 12 = 522 \text{ in-lbs}$

$522 \text{ in-lbs} / 12 \text{ in} = 43.5 \text{ ft-lbs}$

$T_W = 43.5 \text{ ft-lbs}$

$L_A = 12 \text{ in}$

As you apply them, usually present on this torque wrench handle all the dial reads about 43 foot-pounds, and you're good.

Before you torque any nuts or bolts, be sure the threads are in good shape. Worn and loose have to be free running. A hole all the way through will help (when a torque value calls for it). If they aren't free running, you can't get an accurate reading.

### USE THE RIGHT WRENCH

There's many different torque wrenches available. Just be sure you use the one that has the right torque range for the job you have at hand.

The most common types are the bar or cam-type, and the flexible beam type. You set the torque you want on the handle of the bar type, and tighten until the wrench slips or "breaks". That's the signal that tells you that you've got the right torque and no more oil on the bar.

The flexible beam type usually have a dial or a scale right on the handle, and you tighten until the dial indicates the torque you want.

Some torque wrenches are designed for special jobs, like the T-shaped, gas-air torque wrench in the aircraft general mechanic's toolkit. It's intended for tightening hose clamps.





### TRIP TO TROOPY

Torque wrenches may be made of steel, but you've got to give 'em the highest treatment if you expect 'em to get out like they're supposed to. They won't stand for banging around, and you'll be the one to suffer if you drop 'em on the floor or the roof rack.

You want to be mighty particular where you lay 'em, too. They usually come in a special box, under special wraps. That's where they belong when you're not using 'em, not in the tool box



along with the rest of your tools where they'll get scratched or dented. It doesn't take much more than a scratch to throw a reading off.

90-90  
90 DAYS  
90-90-90...

### KEEP THE MET—IN CHECK



Your torque wrench need regular servicing. TI's publications will show you the torque wrenches requiring calibration, and give you the time interval and level of certification.

For example, TI 790-03-15/1 (M-6) says to take 'em in for calibration

every 90 days — or more often if need be, like — if you should drop one accidentally, it should be calibrated before you use it again.

If it's not one of the wrenches that have to be sent back to the factory (like the TCI-700), the TI's also tell your direct support unit how to do the calibration.

When a torque wrench is calibrated, the man who does the job fills out a DA Label 88 and puts it on the wrench. This label tells you at a glance the date the check was made, and the date the next calibration is due.

Remember now, tightening nuts won't be gonna' guess when you tackle 'em with a torque wrench that's in shape.

AS YOU GO 'ROUND AND 'ROUND...

## KEEP COUNT AND WRITE IT DOWN

ALL YOU'VE GOT TO DO IS  
WRITE DA FORM 2408-1.



Every tick or every tick — and maybe both — means some-  
thing special in the life story of your equipment.

That's why it's equipped with meters like the odometer  
and/or hourmeter.

And that's why you've got the dash 1 daily and dash 1  
monthly logs on most equipment that's going steady. Get  
the file, see page 4-25 of TM 10-7100.

If you're an operator or crewman, that DA Form 2408-1  
daily means something special to you as well as the equip-  
ment. It's your job to see that it gets the proper entries —  
top to bottom and side to side — through someone else (like  
the maintenance supervisor) file in column 5. And the dis-  
patcher may fill in column 6.

When you start with a new DA 2408-1 daily, you want to  
get away on the right start — no scribbling off and no chaf-  
ing of gears.

Even though it's called a daily log, you're required to make  
entries only on days when the equipment is operated — or  
at least started up to complete an inspection or OIC check.

And you start a new form the first day of each month or  
after all lines (front and back) are filled. Or, if the equipment  
is operated only a few days each month, you can start a second  
month log month in the same DA 2408-1.



So, here's the way you keep your record of ticks and miles — and other required info — on DA 2400-1 daily. Follow it block by block and column by column.

- Block 1—**  
Instrumental read from a or DA 2400-1 meter (tick & mileage).
- Block 2—**  
Type of fuel used (gas, oil, kerosene, etc.) and its unit (gallon, quart, etc.) and a note on the type.
- Block 3—**  
Date and full location for transport by way through this column the date, the hour and minute intervals in hours.

TRUCK, CARGO MTR		3 NOV 66 12,000		3 NOV 66 12,000		3 NOV 66 12,000	
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8

- Block 2—**  
Register or total meter.
- Block 3—**  
Cost "daily" fee.



Your dispatcher should have a Julian date calendar. If you can make up a Julian date calendar, take the last 4 from 1966. Then follow that with the number of days since 1 January 1966. Since 4 July 1966 is the 189th day of the year, the Julian date is 193.

Each hour and miles meter are required in column 6 if the equipment has both an hourmeter and an odometer. Sometimes these meters show other meters, too. Sometimes the instrument's location as a government, and sometimes an hourmeter — as in the case of the MFLA1 meter — is included in the performance.



- Col 1—**  
Register, register or meter.
- Col 2—**  
Type fuel used (gas, oil, kerosene, etc.) and its unit (gallon, quart, etc.) and a note on the type.
- Col 3—**  
Date and full location for transport by way through this column the date, the hour and minute intervals in hours.
- Col 4—**  
Type of fuel used (gas, oil, kerosene, etc.) and its unit (gallon, quart, etc.) and a note on the type.
- Col 5—**  
Date and full location for transport by way through this column the date, the hour and minute intervals in hours.
- Col 6—**  
Register or total meter.
- Col 7—**  
Cost "daily" fee.
- Col 8—**  
The location of the meter by instrument or instrument register.



- Col 1—**  
Type fuel used (gas, oil, kerosene, etc.) and its unit (gallon, quart, etc.) and a note on the type.
- Col 2—**  
Date and full location for transport by way through this column the date, the hour and minute intervals in hours.
- Col 3—**  
Date and full location for transport by way through this column the date, the hour and minute intervals in hours.
- Col 4—**  
Date and full location for transport by way through this column the date, the hour and minute intervals in hours.
- Col 5—**  
Date and full location for transport by way through this column the date, the hour and minute intervals in hours.
- Col 6—**  
Date and full location for transport by way through this column the date, the hour and minute intervals in hours.
- Col 7—**  
Date and full location for transport by way through this column the date, the hour and minute intervals in hours.
- Col 8—**  
Date and full location for transport by way through this column the date, the hour and minute intervals in hours.

ON THE FIRST OF THE MONTH, MAKE A "MILEAGE SUMMARY" ENTRY ON YOUR DA 2400-1.

Miles — even if there is no hourmeter — estimated hours are required on DA 2400-1 if the intervals for laboration or other services are stated in hours.

On the first of each month, total hours and/or miles accomplished must be brought forward in the first open line of the DA 2400-1 — if it's a new form. (Those supervisors needs monthly could be DA 2400-1 monthly.)

When you make entries on forms in volume 1, check both the DA 2084 used for the before-and-after operational checks — your daily inspection — and DA 2408-14, the Uncovered Truck Record, in the log.

Symbols to be used for trucks you find are listed, with definitions, on DA 2408 in the log and in para 3-4(1)(7) of TM 33-710. If there's a question about which symbol to use for a fault, ask your maintenance supervisor.

If your maintenance supervisor asks you to make the entries on DA 2408-1 monthly, get the totals from the DA 2408-1 daily and make the entries as shown below. Leave columns a, f and g blank.

GENERALLY, YOUR MAINTENANCE SUPERVISOR WILL NOT WANT MONTHLY LOGS.



TRUCK, CARGO WAGON						
DATE OF INSPECTION	NO. OF TRUCKS INSPECTED	TRUCKS WITH DEFECTS	NO. OF DEFECTS	NO. OF DEFECTS REPAIRED	NO. OF DEFECTS NOT REPAIRED	REMARKS
Aug. 66	15	3	2			
Sept. 66	15	1	1			

NO. OF TRUCKS WITH DEFECTS	
NO. OF TRUCKS WITH DEFECTS	REMARKS
10	S. J. Smith
5	S. J. Smith

## EMPTY DECON HOLDER

When the situation allows (and local O&P says not you can keep the 2011 portable decon (P29-4236-728-1402) stored in the supply room, instead of hanging on your equipment.

The decon's brackets, itself, needs, must be inventoried and kept in good order. But, the empty container, its nitrogen cylinders and the DRI-2 decon agent, can sit safely in storage until needed.



An empty decon bracket, of course, needs a bit of special care. You gotta be careful something else isn't hung on it, for one. And, you have to take care it's not banged, bumped or used as a foot stool.

The OR on having the decon in storage is in Change 2 (C2 Dec 04) in TM 1-4236-204-13.

### OTHER NEWS

The change, which incidentally changes the 11 TM to an organizational manual, also gives you a cold-weather caveat. It says the decon's not effective in temps below approximately -15 F.

It also OR's use of a three-strand-wire lead seal like the kind used on some fire extinguishers) in place of the two-strand-wire seal (P29-1348-138-3421) listed for the decon on page 26 of the TM.

The three-strand-wire seal is a non-stocked item, tho. So in addition to getting P29-1348-138, you'd best also quote the TM change, if you order the seal.

Getting going with a rotary air compressor takes know-how.

First is, if it's a job 200-000 work, there's a job you need to do before you ever start the first class, whether it's a new machine or one just back from the shop.

THESE ARE THE STEPS TO DO A PROPER OPERATION TO REAP THE MOST FROM YOUR COMPRESSOR.

1. Look for the third plug on top of the secondary fuel film. On all films — see locate that plug.



2. Turn the ball of the hand over, the push-button drops on the fuel film into the primary fuel film, and there on the pump control film.

Keep the small only pump fuel — no air bubbles — together and focus around the plug. Then tighten the plug back good and wipe up the spilled fuel.



TO START THE SP

1. Be sure the fuel supply valve is OPEN and the control line valve is OPEN. Make sure you are in control line valve is OPEN. Make sure the engine oil is about 1000 PSI while running.

THE SUPPLY VALVE



2. Be absolutely certain engine valve is OPEN.



3. Look neither way a half hour or so at a time, by pushing control button and lifting up, then pushing again until it's turned over 2 or 3 times. The door will come off the model otherwise — look for more, and it's the most important item of all.

4. Turn engine valve ON and push start button.



5. Hold start button DOWN until all pressure is over 11 PSI. Release the engine oil film.



6. If the engine does not, make sure all air pressure is drained away, and then go through the whole start procedure again. Turn ON, push 2 or 3 times, until ON, and start. If you don't look at the valve to be checked when the engine, we will back your compressor down and wipe out the whole valve.

THE SHIRT ISN'T OVER LEFT  
AND THE SHIRT'S ON SWITCH. NO,  
HERE'S HOW YOU DO IT.

1. Pull snap collar flat, then over machine 2 to 3 times with steady button only, then push snap collar flat.



2. Pull collar control-207, then push steel button and safety switch button at the same time. Hold safety switch down after snap collar-roll of pressure is more than 15 PSI.

And if either hand won't kick off after 30 seconds of trying, give it a 2 minute rest.

NEW LIFE PRESERVER OIL —

## GET A CHARGE OUT OF THIS

Spended in your search for CO<sub>2</sub> for a long life preserver? Here's how to match your life preserver to your cylinder or cartridge.

PREVIOUS P/N	NAME	CO <sub>2</sub> P/N AND TYPE
4220-00-074	McPherson, Model 100-0-7	4220-00-080, Cartridge, Carbon Dioxide, Type I
4220-00-104	McPherson, Model 100-0-1	4220-00-078, Cartridge, Carbon Dioxide, Type I
4220-00-071	McPherson, Division 90-1, 0-01 (for multiple operation)	4220-00-080, cartridge, Carbon Dioxide, Type I, 90-1/0-01, 10 years
4220-00-087	McPherson, Model 10-1	4220-00-076, Cylinder, Carbon Dioxide, Type I, 10-1/0-01
4220-00-088	McPherson, Model 1-0-01	4220-00-076, Cylinder, Carbon Dioxide, 90-1, 10-1/0-01, Type I, 10 years

## ALCOHOL AND DIESEL FUEL

Change 1 (24th Ed) to TM 9-287 has a caution saying that alcohol should not be added to diesel fuel. This change and the above blurb in 95-115 (page 11) and PS 158 (page 10) on this re-allocated list was meant only for tactical vehicles that've covered by TM 9-287. Engines type equipment is covered by TM Reg 347, and commercial vehicles are covered by specific manufacturer's instruction. Some tactical vehicles were made exempt by special storage-directives and are not involved in the anti-alcohol caution. Before applying the re-allocated-fuel info, check your class and see whether TM 9-287, Change 1 (24th Ed) applies to the equipment you're maintaining.

# FIX 'EM

## ATTENTION OPERATORS—

ONE GOOD WAY TO KEEP YOUR heavy equipment running is to use the best repairing tape available. We have you left a practical, handy tip:

ORDER THE RIGHT ONE, FOR #110-002-0071

Sealing Compound, The Repair



#110-002-0071

Repair Material, From The Element

#110-002-0072



Repair Tool, Solution For Repair

#110-002-0073



Rolls, Strips

#110-002-0082

Sticks, Repair Tool

#110-002-0074



Look Before, From The

#110-002-0075



Applicator, Plastic, Seal Detector

#110-002-0076



Box, (Steel), For Repair Kit

#110-002-0077

Big K's available for U.S. Army Weapons Command, Fort Belvoir, Illinois 62205.

# ROLL 'EM

The left's easy to see, since you get the hang of it there's what you do.

## FIXING AND REPAIRING COMPRESSORS AND PUMPS

1. Adjust needle length to 2 inches sticking out above blocking base but no handle bar, you want needle to go out. If you want get hold of the needle, remove head of tool and push needle over the needle to reassembling component. Substitute one position, following direction of letters. (You don't have to be so out of the to make repair.) Then pull needle out of the.



## REPAIRING WIRE

2. Cut needle out of tool to full length. Use material out of tool and thread it back into needle, use for light duty use. (Check for heavy-duty tool.) For large pistons, thread into the needle then needle and then thread back into the needle thread. Then push needle back into tool to 2 inch length.



## UPPING AND REPAIRING

3. Slip end of threaded needle to back into component. Slip tool in from hole needle and push needle into hole with steady pressure, following direction of piston. When head of tool reaches the, release tool and then 2 more inches of needle into tool. Repeat process until only 2 inches of needle at a time and back out of material to 1/2 inch from the.



## WORKING WIRE

4. With steady pull, withdraw needle and tip to 1/2 inch outside of the, but material still inside eye. Repeat 1 through 4 until piston is out is plugged. If it for any this tool, but never ever pull. Pulling material diagonally makes a joint for water-leaking of needle.





YOU CHOOSE WHAT SIZE YOU WANT THE KIT WITH ONLY 400 NOW! THE IMAGE ON THE SIDE REMAINS.

1. You should pour exactly equal and repeat the same steps. You do this until you think there's enough thread in the gutter. **STOP OVER FIRST.**

2. Take the cap off of the plastic bottle and use it as your measure for both directions. Use a half cup of both directions in a full bottle of water. Shake well, run upside down and spray against area. If frozen, then you'll need to add more thread.

3. After the gutter has been repaired and sealed for leaks, then cut the threads to, and from the face of the tin.

Equipment getting this kit as OEM (BELL) includes loader, grader, wheelbarrow, tractor, scraper, 20mm RT cream shovel, and the 5,000- and 10,000lb RT truck lifts.

This kit will be issued as part of OEM for new equipment. Operator's TM changes as equipment will include the kit for bulldozers, rough terrain fork lifts, dump loader, road grader and covered scraper that roll on rubber pneumatic tires.



## TAKY ON THEM... TAKE 'EM OUT

In spite of everything some Jews get chip-happy with, waxes when they're cleaning the inside of their tanks. When they do, they're putting their gas-purification filter out of commission.

Those tanks aren't waterproof and when water gets in, the filter becomes saturated with water. When that happens, it would be like trying to breathe through a wet sponge if you tried to breathe through the filter tank.

To make sure you don't ruin the filter units in your tank, take 'em out before you do that cleaning job.

It's simple to do once you get the hang of it. It is easier the first time with than the following time however.



Then lift the filter unit out—and have it out until you're through with that scrub job.

When your tank's going into storage you can save those filters if you'll take them out of the tank, wrap them in waterproof paper, and store them in a dry place until you need them.



NOW THAT WE'VE  
ALL DONE WITH THIS...



WASH 'EM  
AND CLEAN 'EM.



## WARRANTY GOLD STRIKE



Getting new parts for your equipment fast-tracks is just about like finding the gold at the end of the rainbow.

It takes a little work to get to that gold, but not as much as you think for first parts if your equipment breaks down while it's still under the one-year warranty.

You start the work on the company document that provided the equipment by sending them a DSI Form 2087. Maybe the piece of equipment has faulty materials in it, or maybe some of the parts have gone bad, then fill them on a 2087.

Here's some of the commercial-type items covered by a one-year warranty:

Refrigeration equipment, ice making machines, waste coolers, food cooking, baking and warming equipment, pressure operated kitchen equipment, office machines, commercial appliances, industrial and household laundry equipment, printing and duplicating equipment, heating and dehumidification equipment, dishwashers and coffee units.

Be sure to list make, model, serial number, contract number, and any other info that might help identify it. And the sooner you send in the form as you can get within that year's warranty.

Send the 2087 to the U.S. Army Mobility Equipment Center, ATTN: ADJMSM-MAJ, 4080 Goodfellow Blvd, St. Louis, Missouri 63123.

## TOOTH MIX-UP



There's one way to make sure you're getting the right loader tooth for your Model 115A-2221 Clark back-hoe loader, and that is to measure the tooth.

If you get one from supply that's the wrong size (even though it looks like the right FN and Part No. on it), turn it in and tell them you need one of the right size.

FOR 115A-2221 Part No. 115B2221 should get you the tooth listed in FN 1-1891-28-100, as follows:

MAX. DIA. 17 1/2"  
THE BUSH 10"

CHINA  
NO. 115B2221



## Comic Rodd's BRIEFS



### CMC / Precision

By and by the CMC setting crew will visit you. Be make sure you get a preview of what to expect when they inspect. How you're rated is already stated — from team competition to repeat the position — to EM Form 150-10 (Jan 65). Could save your skin . . . skin.

### A/E Torque Table

When you straight types don't find a torque table in your maintenance job — like the Pump 10 50-150.21 1.30 (20 Jan 64) — there's always 10 50-400-2 (20 Aug 62) in aircraft hardware. Section V, Table IV is used for standard H40 and H2-out and bolts.

### Hold The M.A. of

You're right that "50-milligrams" (200 on page 9 of PL 100 is wrong). The way it should've read was, "If your (20) SELECTOR switch is set on "50," you should adjust the bias resistor (of your TT-74 or TT-94) for a reading of 12.20 milligrams. If the (20) SELECTOR switch is on "20," you should get a reading of 8.72 milligrams.

### For New Outfits

If there's a newly organized outfit near you . . . pass the word. Change 7 (20 Aug 65) or AR 210-1 gives for 20000 on how they get off the publications they need to start operating. Pass the word.



Would You Stake Your Life <sup>with your</sup> on  
the Condition of Your Equipment?\*

# STOP!



IS THAT  
TEMPERATURE CHANGE  
CONSISTENTLY  
IN THE NEXT RANGE  
ON YOUR LO?   
IF SO, DON'T SWITCH  
BACK BECAUSE OF A  
SHORT CHANGE IN  
WEATHER...

UNIT	TEMPERATURE RANGE	STATUS	REMARKS
1st BATTALION	50 - 60	OK	
2nd BATTALION	60 - 70	OK	
3rd BATTALION	70 - 80	OK	
4th BATTALION	80 - 90	OK	

## STAY CHANGED!!