







There are some FOM 34 10-8 10-6000 lock washers that may fall in the .000-



to minimum-.000-to maximum thickness range has some washers stacked under this FOM size rather than the

minimum or about the maximum thickness allowable.

FOM 5120-003-1201 should get you a washer that's in the .000-to minimum to .100-to maximum range. But, since there have been reports of local production issues under this FOM that are outside the right thickness range, ask your support people to make any of these washers before you install 'em.

YOU NEED HELP? FINE...



Amos, brother, amos.

And here's the latest stomp on blank firing attachments for T&I armor with both the M11 rifle and the M16 machine gun.

On the M11 rifle it's a reader-see proposition... Issue FOM 3001-004-0901 gets you both the M11 blank firing attachment as well as the M11 blank shield.

And, much, the blank firing attachment gets shoved into the batt's magazine and snapped over the tapered lug while the blank shield is secured to the magazine guide-rail as seen in TM 9-3000-311-01, Chap 61, (the F1 114, page 7, "Slow Down—Shoulder Ahead" if you have problems).

With the M16 machine gun, it's a home of another color, and the FOM gets you one item.

In this case FOM 1001-004-0807 supplies you with only the M11 blank firing attachment. Just the waste piece is needed on the M16 since its never seen as the shield.





IF YOU DON'T BELIEVE IN . . .

Just  
a regular car  
that's just  
a little better  
than the rest?

# THE M151



Your new M151 military utility truck looks like a charmer and has on the gas.

Compared to the M58 series 4-cylinder it is lighter, shorter, has more cargo space, a higher gross weight limit, and will take you nearly a third further on the same amount of gas.

It's an entirely new vehicle from the ground up and none of the M58 parts won't fit it.

You'll see men from scratch and look it over like you never heard of any other 4x4.

You'll notice right away it has its divided coil-spring suspension on all four wheels instead of leaf springs. The frame and body are all one unit and the transmission and transfer are combined. Also, it has four forward gears instead of three to give you the right gear for any condition.

There are no exhaust manifold gaskets to worry about on account of the manifold has been ground-in to tight fit. Its drive shafts with universal joints instead of universal flanges, axle shafts. The front and rear main propeller shafts are different because they have no slip joints.

Another difference is the fuel pump. Instead of a mechanical pump, the M151 has an electrical pump in the fuel tank. This pump has a safety circuit that prevents it from running if the ignition switch is left on with the engine not running. This safety circuit also turns off the pump if the engine oil pressure goes too low. The pump won't give you the gas to run unless conditions are right.

# 1/4-TON TRUCK



WE'VE GOT IT IN 300-350-375  
IN 4-CYLINDER 2400 cc (150-hp) engine  
Transmission  
WE'VE GOT IT IN 300-350-375  
Range 11 (140-170)  
Range 2 (180-210)

### WE'VE GOT IT

IN 4-CYLINDER 2400 cc (150-hp) engine  
Transmission  
Range 11 (140-170)  
Range 2 (180-210)  
WE'VE GOT IT IN 300-350-375  
IN 4-CYLINDER 2400 cc (150-hp) engine  
Transmission  
Range 11 (140-170)  
Range 2 (180-210)



### CHECK US OUT



The M151 also has . . . but let's take all the points in order. That way we won't miss anything, and since impressive sales we'll be laughing on the inside.

The impressive look for the kinds of conditions it will operate in. All these conditions that make the vehicle suitable in operation, one operator or all-terrain operator or further damage is caused. All these make the impressive and collapse.

They will also notice another thing that would not create a breakdown or keep you from operating in a safe manner. These things have got to be considered as they proceed, but don't get your brakes in an unsafe about it.

The various conditions mean you have a vehicle that'll stand down when the



going gets rough, or a vehicle that's dangerous to operate, either way it's your work, as you're the guy who was there in gear.

To make them easier to open, the various manufacturers, like the inspectors will be mainly looking for one to build type.

Let's start from the front and work our way around the vehicle.

## FRONT

**WINDSHIELD** — Broken, cracked or shattered is bad driver's vision is obstructed. Cracks longer than two inches, flange or chipping around windshield lens or missing.

**WIND WASHERS** — **CAP** — Missing, broken, rusted.

**MIRRORS & BUCK OUT LIGHTS** — Mirror worn, cracked, painted over, obscured, dirty, convex mirror, blocked third mirror if not in place.

**BUMPERS** — Badly bent, loose, cracked, rusted or with missing missing.

**FRONT WHEEL** — If all multiple broken, tire should be replaced with correct, safe, check for correct side of the upper and lower ball to take parts.

**UPPER SHOCKS** — Missing, stuck, bent, loose, worn, noise, safety pin or chain missing.

**WHEEL SAFETY CATCHER** — Bent, broken, missing, not aligned right. Always have this engaged when you're working on the motor. This device could slam down and break your neck.

**MANDIBLES** — **WHEELS** — Bumpy, missing, one broken, rubber hardened or dead.

**REFLECTOR** — Broken, missing, painted over.

**FRONT WHEEL** — Don't be squeaky. Loose, not lubed, spring broken.

**TRUCK COMPASS** — **ROCKERS** — Missing, missing will not make good contact. Down missing.

**DRIVE SHAFT** — Bent and handle broken off, broken missing, sagged, rusted in place.

**DRIVE LIGHT AND TAIL LIGHT** — Glass broken, painted over, not operating.

**DRIVE SPRINGS** (front) — Damaged and properly seated.

**SUSPENSION** — **WHEEL** (upper and lower) — Bent, broken, damaged. (Check them often during drive—monthly operation.)



## REAR



**DRIVE PROBLEM** — Too heavy for a rear air line. Ripped, broken.

**DRIVE PROBLEM** — Missing, not properly attached, unworkable, not attached to 25 PSI, not missing.



**DRIVE PROBLEM** — Missing, bent, loose, rusty, broken, bolts missing.

**UPPER SHOCKS** — Missing, stuck, bent, loose, safety pin or chain missing.

**GASLINE CAN** — Rusted, retaining strap in fuel position, cap retaining chain missing, not attached.





**Q45 CAP-Blazing** - Always check before starting. Check wiring, fuses and warning or in wrong position. If the valve is in the Q45 position and there is pressure on the top when you try to loosen it, the valve is not working. Normally you should be loading and to prevent wear (ask) always remove, check or broken. Car load too high. Must be at least two inches taller to or tall.

**REFLECTOR** - Broken, wiring, pointed over.

**FIRE EXTINGUISHER** - Make sure equipped but don't let it get empty, as empty a broken, missing or not in good condition.

*Always check the engine oil level before starting on the road.*



**UNDER THE HOOD (LEFT SIDE)**

**WATER PUMP** - Inspect before you start. Check for leaks.

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Remember, always wear your seat belt. It's your best defense. Buckle up!

## RIGHT SIDE



**REAR WHEELS AND TIRES**—Check tire pressure. Make sure tread is adequate.

**REAR BUMPER**—Check for damage, loose bolts.

## UNDER THE HOOD (RIGHT SIDE)

Start engine and check safety while in operating range and in gear before, back, or shifted away. When working with the hood open, be sure you have the safety catch engaged!

**STARTER FLUID**—Check level. Don't use petroleum-based products. Check total good condition and reserve.

**LUBRICANTS**—Oil, antifreeze, coolant, and brake, steering, rear axle.

**BATTERY**—Check, clean, secure, wires loose. Make it hold every 4,000 in lbs or semi-annually like a top of age. It at 20 1-200 12012 101 101

**OIL PRESS**—Low, leaking. Check every 4,000 miles or less, usually. Use standard oil change to replace.

**OIL CAP/STICK-OIL**—Make sure to add before it's full. Add oil FULL mark.

**BATTERY/CHARGE SYSTEM**—Check connections and tight, and secure. A lot of good connections have been getting broken during normal operation of mud and female connectors... so take it easy!



**WATERPUMP & BELT**—Make sure and female connectors are tight and in order.

**WATERPUMP**—Belts and fan chain missing, not secured to footwell. Insulator under front or cracked. Make it secure below the right level. Check if belt over the pulley in the 10-100. Should be slightly below bottom of filler neck. Make sure it's tight & good.



**FRONT WHEELS AND TIRES**—Check tire pressure. Make sure tread is adequate.

**FRONT BUMPER**—Check for damage, loose bolts.



**STEERING COMPONENTS**—Check, clean, lubricate, and secure. Make sure, tight, loose.

Remember, always wear your seat belt. It's your best defense. Buckle up!

**WIPER FLUID**—Check level, clean, secure, wires loose. Make it hold every 4,000 in lbs or semi-annually like a top of age. It at 20 1-200 12012 101 101

**OIL FILLER CAP**—Be sure it's attached with blue cap and not white. Make it in a locking round the joint, you'll be sure it's being replaced.

Always use proper technique when working with electrical components.

## DRIVER'S SEAT

**SEAT ADJUSTING**—Check level, clean, secure, wires loose. Make it hold every 4,000 in lbs or semi-annually like a top of age. It at 20 1-200 12012 101 101

**WIPER FLUID**—Check level, clean, secure, wires loose. Make it hold every 4,000 in lbs or semi-annually like a top of age. It at 20 1-200 12012 101 101



**STARTER MOTOR** — Starts mixing, power locks, etc.

**LIGHTING SWITCH** — Not working? Check fuses mixing. Turn head on, check what fuses. (See also "Tip for Driver" on p. 10.)

**HEIGHT ADJUST SWITCH** — Locks. Makes indicator in back seat not light at or high level.

**CLutch PEDAL** — Free play not adjusted right. Should be between 1/4 and 1/2 inch with starter located forward. Brake, clutch, after. Clutch pedal not removed. Are there 10-15-20 lbs. (1/2 inch) applied?

**WINDSHIELD WIPER MOTOR** — Broken, won't work.

**IGNITION** — Broken, won't work.

**STARTER MOTOR** — Broken, won't work.

**CLutch PEDAL** — Free play not adjusted right. Should be between 1/4 and 1/2 inch with starter located forward.

**WINDSHIELD WIPER MOTOR** — Broken, won't work.

**FRONT AXLE OR CLUTCH SHIFTLINK** — One not getting smooth. Should be able to be engaged and disengaged without bumping the clutch or stopping the spring when the vehicle is going straight ahead. Protective Boot Missing.

## IN THE DRIVER'S SEAT

**WINDSHIELD WIPER MOTOR** — Broken, won't work.

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**WINDSHIELD WIPER MOTOR** — Broken, won't work.

**PARKING BRAKE** — The weak free plug. Should be able to free vehicle or hazardous grade with brake only two-thirds engaged. Protective foot missing, etc.

**TRANSMISSION SHIFTLINK** — Check. Put out of gear, loose belt, hindering gear free.

**SEAT LOCKING PIN** — Missing, not connected to chain, not in position.

Remember to check that an emergency!



In a moment of inspiration.



# IN THE DRIVER'S SEAT

COVER STORY



**CRUISE CONTROL**—Not working, stuck, doesn't moving.

**THROTTLE CONTROL**—Sticking and operating, loose, stuck, will not return to pulled-out position.

**LOOK AHEAD**—Not in good position, cracked and flaking lens missing.



**MIL/POISSON LIGHT**—Lens cracked, painted over, not working, some signs or also a double engine 15 to 20 PSI.

**SPEEDometer**—3,000 MPH/110 & 000 MPH/110 — Not working, lens cracked or painted over.

**GASOLIN RODAMOR**—Lens cracked, painted over, not working. With the gasoline switch OFF, the needle should be at the extreme left as you face the dial. When the gasoline switch is turned ON, the needle should read anywhere from the middle of the YELLOW to the border of the YELLOW and GREEN, if your battery is OK. With engine idling the needle should read as high as it reads with all engine OFF—it will slightly higher. With engine at operating speed the needle should move to the maximum to high GREEN which shows that your operating system is operating right.

## BATTERIES

**BATTERY CABLES**—Broken-to-broken electrical cables were installed "under-wrap" or some wires, with almost no clearance between the cover and the battery terminal. Make sure the leads are installed for it shown in your CR or CR TM, get the 3 shown in some other publications. Any other way can cause trouble.

Fig. 2  
CR



**WASH LEVEL**—Keep it 3/4 inch above water table. Do not overfill. In hot weather check daily.

**BATTERY HOODDOWN**—Insulation coating worn through, wiring into, loose or missing, let water missing, lens not held together right.

**WORN PLATES**—Wiring, broken, through to good, wires clamped. Clear them out with a stiff wire.

**WATERHEAT**—Lens cracked, not sealed with grease.

# BATTERIES

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## SPECIFIC CHARGE—

Check each cell weekly with hydrometer. Each cell voltage is a reading of less than 1.200 at 80-degree temperature means battery needs recharging. See TM 9-62.40-20145 (Rev. 10) for all the facts on battery care.



**BATTERY COVER**—Use MFG 9-1709-218-20-9 (Spec. 62) to cover battery. It blocks off water to remove the battery cover. Another new thing is a safety strap on the outside of the cover's side. This strap can also be used to hold the unit in its forward tipped position. That way you won't have to take out the unit every time you check the battery.

## GENERAL

### BOTTOM FASTENERS—

Check operation of tire-burster fasteners. Six strap storage pockets should work freely.



### VEHICLE MARKING—

No agency, regulatory, and/or marking is called for by AF 141 2000-1111 Rev. 02.



**WHEELS**—Be sure they're tight but don't take with too much torque. Pull up each of the nut bars to the tight to tighten or to the left to loosen. Check for wear or cracks around the stud bolts, dust cap missing or bent, shock brakes, level, rim deflated, bent. If you were issued the 12-in. shock wheels, have your company mechanic cut the bottom off the nut so you won't get the wheel lug nuts so tight they shear off the studs. MFG 9-1709-218-20-9 (Spec. 62) gives you the authority. An orange and green light.

**TIRES**—Inspect and check pressures often. Maintain these pressures:

	Front	Rear
Load, empty	18 lb	20 lb
Highway	20	20
Load, road, cross	18	18

### CANVAS STRAPPING-STRIPS—

Check top and both sides of windshield and body for full length of the strips for ratcheting or racking that would keep the sides from being used.

### CANVAS RETURN-ROCKERS—

Missing, unserviceable, failed.

### BEAR-SEAT-FL-

### STRAPS-FL—

Missing, not secured by chair.



This is important—M22 and M23 tires are the same size—but don't interchange them because the M22 tires are specially designed for low light weight for that vehicle. The tires and valve the tires cover 2,000 miles. Tires were specially done for recycling out to fabric, across west. Values best, say wrong.



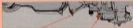
**CAVING**—Parts missing, too low side curtains, belt not done. Canvas will be good condition, followed, repair the canvas bag, bottom between, straps and handles, missing or unattachable.

**WINDING**—Bag, distribution of cloth was sufficient to prevent driver's vision.



## GENERAL

## UNDER THE



**TURNING, SHOCKS**—Steer plug should be cut except for driving. If you leave it in, it will make up your clutch. On early production models keep it in the tool compartment under the right front seat. In later models there is a steel bolt for it in the fender housing.

**TRANSMISSION & THROTTLE**—Looking at plugs, plug loose. Check over full-size level plug and two main plugs. In late you don't take the main level level plug out for the transmission fit plug.

**OVERHAULS**—Looking out wrong at drive plug is at 18-inch level plug. Check for loosened and/or turn into a plug to the plug level. Keep dry or plugged, both missing.

**FLANGE GROUND**—Bent, screws loose, bolt(s), nuts, lock-washers or lockwashers missing.

**ENGINE OIL, FUEL**—Looking at plug, plug loose. Don't make with too much torque when you put in this plug. Keep it under 100% torque.



**WHEELS, COILS**—All pressure shaft and axle drive universal joints label bolts and nuts at each joint, making, not tight.



CONTINUED



**LARGE HOOD**—Rusted, bent out of shape. Clean and refinish, get missing or unattachable.

**GENERAL VEHICLE APPEARANCE**—Only, not spots, marks, paint, wheels polished here.

## VEHICLE

**DRIVE SHAFT & HOOD CONNECTORS**—Bent, leaking. Lower, broken, broken, broken. Can surface loose.

**BRAKE CYLINDERS**—Leaking, wheel cylinders.

**REAR DIFFERENTIAL HOUSING**—Flange, gear washers and screws not in place. Early production models don't have them as spare equipment for the rear differential. If you have an early model, have the washers and screws put in to your differential gear or don't put out.



**TAILORE**—Broken, clogged, badly dented, clamp loose, wiring checks into the spot.

**WHEEL PROPELLER SHAFTS**—Bent, wrong. All shafts must be checked with their spine and case bolts attached to the differential. See the wheel.

**BUFFLE SYSTEM**—Bent in, missing or pipes, lines, leaking. Clamps missing, no locking, no locking, broken mounting bracket.

**FRAME & BODY**—Bent or cracked, welds pulled loose. Note: Pay real good attention to muffler brackets because some of them have been breaking. Keep engine mounting legs secure to prevent vibration. Being transferred to muffler brackets.

NOTE



# TIPS FOR THE DRIVER

**CHANGING WHEELS**—Changing a wheel is a tricky job. Start with the steering lug wrench. It's mighty easy to press on one wheel pressure and snap off a wheel nut. That happens and you need the whole assembly. (Hot Wheels wheel spins to RIM 2040-078-1270 OFF-ROAD) and you get to order it through your support unit. Best to go slow and steady.



**TIGHT TURNS**—Tight turns in 4-wheel drive or going real slow in 4th gear will make your power train back which is OK for a new pump but not for your M10.

**STEERING DUFF**—You can get corners quicker and sharper than you did with the M8 but don't push your M10 to the limit. It can wear over . . . repeat . . . it can wear over. Remember, it's a vehicle, not a cow pump, and you're a driver—not a "cow-boy."

**FOUR-WHEEL DRIVE**—You can go into four-wheel drive and shift your transfer lever back to 2-wheel drive without slowing in your clutch, stopping your vehicle or even slowing down, provided your rear wheels have traction. But if your rear wheels get spinning (like in mud or snow) you have to take your foot off the gas before you shift your transfer lever into 4-wheel drive.



## FRONT AXLE SHIFT LEVER

Work your front-axle shift lever when you make your pre-operation check. If you can't engage it or if you think you've got it engaged but you don't get any drive power on your front wheels, stop right there, and call your company mechanic. Might be the transfer detachable drive pin worked loose and backed out of position. When this happens you can lose all the oil out of your transmission.

**STOP**—That's what you have to do . . . STOP completely before you shift from forward to reverse or reverse to forward. You already know this but don't forget it when you are "working" yourself out of a snow drift or a mud-hole.



**STOP LIGHTS**—The M10 has a military-type light-switch. What the selector looks it is OFF position, everything is off and your stop lights won't show when you hit your brakes. If you want stop lights for daytime driving, raise the selector lever to STOP LIGHT position.



You can move the selector lever from OFF to SO NUMBER or from SO NUMBER to OFF without first coming up on the unlock lever. But for any other change in position of the selector lever you have to first raise the unlock lever.

There is one exception to this—or some switches you can move the selector lever from STOP LIGHT to SERVICE BRAKE or from SERVICE BRAKE back to STOP LIGHT without coming up on the unlock lever. On other switches you can't make these movements

without using the unlock lever.

Both types of switches are OK, but if you can't move your selector lever without first moving the unlock lever in any way not provided for above, your switch is bad and needs to be replaced.

**TRAILER**—The M100 trailer used with the M10's won't work with the M101. A new trailer, the M101, will do the job.



**TIRE CHAINS**—You'll chew up the electrical wires in your tail lights every time you run with tire chains on unless you keep the chains snug.



**SHOCK ABSORBERS** (rear only)—Get in the habit of checking the upper and lower mounting bolts and nuts of your rear shock-absorbers every day. If they're loose, tail your category vehicles because if they break, the spring seat and assembly will drop and your coil springs will fall out.



**ADJUSTING SUFFLE**—Lock nuts not secure on adjusting screw on tail light bolts.



**PERMANENT AIR**—Check nut and collar pin on pillow arm, idler-arm nut, spindle nut, wheel-spindle support and all other parts of steering linkage that can be reached from under the vehicle.



**WARRANTY FACTS**—The frame on the M101 is rugged enough for ordinary use, but, let's face it, the M101 will never replace the tank-mounted bulldozer. So don't be using it to knock over trees and such. You can bend the frame pretty easy by using the M101 for pushing and tamping jobs beyond its capacity.



**SECTION-SHAFT NUT**—Check section-shaft nut for looseness. If it's loose, tell your company mechanic.

**GAS GAGE**—This shows the amount you're actually got in your tank, not the amount you can still use. That means you'll be out of gas before the needle reaches C for EMPTY. So run every driver knows about this.





## *A good tow job*



To do a good tow job on a 4-ton G-741 series truck, you must go by Change 5 (June 60) to TR 5-8030-1 May 61.

Change 5 proposes the chain that you've got to use to keep from causing transmission synchronous failures.

When a 4-ton M1 or M1070 or any G-741 series vehicle is towed, the transmission main shaft must first always get made safe. This is very important and will create no harm if your tow job is under five miles. But when you tow beyond five miles, the bulk of labor is made up on the transmission synchronous.

So, if a tow job is more than five miles do either of these two:



Disconnect the main propeller shaft at the differential.

**OR-**



Disconnect the intermediate propeller shaft at the truck.

And make sure you tie the disconnected prop. shaft tight to the frame so it won't fall loose while towing.

# TWIN TROUBLES



Like maybe you've got a crazy mixed-up collection of M1 and M14 rifles in your small arms-and accessories room—nothing things get kinda tricky!

If that sounds flapping around you... here's a pair of handbooks to help you fully blast pistol fire, so you're lightning down the freeway in Touchdown!

That's for sure—these both do real and the now-right-direction look picture necessities so both rifles can give for firing results. And to add to the confusion... they can be interchanged with each other.

Can be, but shouldn't be. On purpose, or by accident.

When you're back out in the open—and you're looking so damn side by side—it's a mistake to open the door that the one for the M14 rifle has a longer

mag. But, if you're reaching into a pile of rifles, while pulling it up with a buddy, the chances are you'll get the wrong one more often than not.



One thing you'll find you assemble the short mag now in the M14 you'll know about it in a hurry... your fire power will be limited to finger spreading because you can't get automatic fire with this one.

And now, the alternative picture solution.

Again, if you mix a real close look,



## HOLD IT BACK... THEN RELEASE IT



Yep, you've gotta hold the trigger on the M14 machine gun all the way in the rear to automatic fire. Once you're through firing, release it slowly. If you don't, the rear lever against the bottom of the operating mechanism, the rear and rounding the rear mouth in the end.

you can easily spot the difference—but this pump is for guys who take a long-range gender at things.

To begin with, the M1 knob is marked off in cartridges (1,200 of them) while the M14 knob is graduated by rounds and goes up to (100).

The second signal is the "M" for meters that's stamped into the knob assembly of the newer T-42 and M14 rifle.

Mixing the knobs may not be the worst thing you can do... but it'll sure make things rugged when your mate's checking the round so if you ever get in a situation where one partner doesn't mind whether whom's out or in.

OK, now that you're a pro, check that rifle the next time you pick it up (even the post and make sure you have your P's and Q's—as well as your ears and hands).







Start with the accessories and look to the M41 M5000 gun. This one's a little tricky. It's indexed under "Common, gun, M41" and not under "Gun, M41" like you might expect. But it seems to indicate the fact that if you want to get all the info in the DA 116-4, you really have to dig for it.

The next major component of the accessories is the T149 combination gun mount. Going by the index entry in the title, this line your digging will lead you to "Accessories, gun (combination)"



under this heading you'll see that DA 116-4 tells you the T149 has been renamed the M87. Opposite the M87 are some M870's, a T8 and two T87's.



OK, go for better—check down the J3042, M1 BR machine gun. If you found it under "Gun, machine M1, J3042" you came up with a list of jobs that include a TM, IG, BR and four T8's.

Continue this line yourself then and see what jobs are listed for the rest of the accessories listed for the M41 in TM 8-7012.

Now, let's hit the engine and accessories of the tank.



TM 8-7012 tells you the tank is powered by either Continental engine models AF-1790-1R, AF-1790-7 or



AF-1790 and AF-1790-9C. Checking the 230-4 under "Engine, gasoline", you'll discover that a pair of T8's and a TM are listed.

A quick look at the accessories data plate on the tank is the TM 8-7012 shows you that the accessories in either an Allison-GMC CD-808-1, CD-808-1A or CD-808-1B. The DA 116-4 comes up with an M870 and a T88 for CD-808-1B.

The M881 — like most tanks — is loaded with sighting and fire control instruments. All of which play a key role in getting that flow than an engine.

So it figures that the more a gun knows about these instruments — the better his chance are to hit the bulls eye. Right?

And — like maybe you've noticed — the DA 116-4 is the key to gaining that all-important know-how via the job code.

Tapping the list of sighting and firing controls in TM 8-7012 is the T10 automatic indicator. DA 116-4, under "Indicator, automatic" shows you the setup for this indexed under the M18 indicator.

Plus, perhaps, a range finder, a telescope sight, a gunner's quadrant and a ballistic computer also are listed under their own headings. Dig them on your own for practice.



The extra work you went through means paying off dividends too because the DA 116-4 shows that the M41 has an M870 supplied to it as well as a new TM that's sure to prove helpful.



Rails and telephone communications for the MORGAN are provided by connection of AM/FREQ-3, 4, 7 or 8 or AM/FREQ-7, AM/FREQ-8 or AM/FREQ-20 with the AM/FMA-1.

Information on the auxiliary telephone equipment is found under exactly that title while the radios are covered under "Radios" in the DA 110-4.



Now, before you get carried away, read something BMD. IT'S ALL written in the book for you. You want the right a book, you'll find it in the manual carrying the number 110-4.

Like *Falnama*, you should use notes to mind-tracks. All tasks have tasks. That figure. Scribble here's a job dealing with mark tracks that might come in handy.

Good old DA 110-4 won't let you down.

Listed under "Tracks, Components, Rubber" is TM 5-1550-100-14. A job every mark track ought to have handy. It's jaw-breaking title is "Identification, Inspection, Classification, Maintenance and Disposition of Solid Rubber Tires and Rubber Track Components" and it works its weight in situations.

Now that you've general you really "dig" that DA 110-4 with the MORGAN

task as an example—just what you've learned to good use by checking out the major items in your work.

One final thing to keep in mind is that the present 47 manuals listed in DA 110-4 need to be prepared as supply manuals like the 7, 8, or 9 IML's and many of these are still current.

So, if you're working on equipment that still uses IML's or IM type manuals you'll find them listed—according to each service that prepared 'em—in DA Pam 510-11 through DA Pam 510-58.

And to get the complete job picture you've got to check out the exact DA 510-11 through -58 index as well as the DA 110-4.





# JOE'S DOPE

## HANGAR QUEEN

HEY, MORGAN! I GOTTA GET MY GEAR READY FOR A HOT MISSION... HOW ABOUT BRINGING A REAL PAL AND SHOW HIM A FLAVOR...HURP!

OK, I'M A REAL SOLDIER!

HE... BRING THE GUY IN? I'VE GOT TO GO WITH BOB... HE'S STARTING TO GET THE BUG... HOW ABOUT LETTING HIM HAVE SOME?

NO, NO... YOU'VE GOT TO GO TO CAMP... I'VE GOT TO GO TO CAMP...

COULDN'T BUY OLD BUCK... THERE'S NO TIME TO SUPPLY IS PROBABLY SHORT SUPPLY... (GROG)

WELL... OKAY... BUT... I'LL CHECK THE NEW BRANCH OFFICER!

YEAH... IT ALSO GAVE YOU ONE OF THOSE... I'VE GOT TO GO WITH BOB... HE'S STARTING TO GET THE BUG... HOW ABOUT LETTING HIM HAVE SOME?





# JOE'S Dope Sheet



Though huntin' for certain you are,  
Don't try to fix the AE;  
Give the system a try—  
Check all means of supply—  
Parts searching can be carried too far.

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

IF YOU WANT TO DISPLAY THIS CENTERPAGE ON YOUR MILEAGE BOARD, OPEN STRIP, LET IT OUT AND PIN IT UP.



at the days pass...







## QUESTION AND ANSWER DEPARTMENT



### SEMITRAILER SCORESHEET

Dear Half-Han,

We've got a 4-wheeled 25-ton rear-loading semitrailer with data plate that will fit an Eitel Model ELS 25 Exp 1961, 78-7400-021-100—does any judge?

Have you found any Engineer plate listed in D&D Post 1184 for this rig. What's the story?

Exp J. R. H.

Dear Sergeant J. R. H.,

You sure need a scoresheet to find plate for that one, Sarge.

That one is now an Ordnance item in the M171 series, along with the M171 11-toner and the M172A1 25-tonner. And the ELS 25 is rated 15 tons like the M171.

There's an urgent MWD—MWD Ord Q 170-071 (11 Apr 57) w/Change 1 118 Jan 59—calling for replacement of the M171 and M172A1 loading ramps. But the work's to be done by support, and they're also supposed to apply MWD 9-2160-211-001 (28

Aug 60) and MWD 9-2160-211-002 (18 Nov 62) on the M171 and that Model ELS 25.

Maybe this plate assembly will help shape-up those semitrailers. To finish the shape-up, get the trailer's data plate changed to an M171 plate.

Model ELS 25 is a commercial-type semitrailer. When Ordnance got it from the Engineers, it was redesignated semi-trailer, Low-Cap, M171. Because of the limit of the towing vehicle, it was changed from 25-ton to 15-ton. A new payload inscription plate is in the works.

Follow me back to:





## MIDI SAFETY STRAPS

Dear Half-Blat,

We need more safety straps for our M100 hi-ton tracks. That's the strap that keeps the front-seat passenger from going AFDC when you hit a bump. What is the P/N for the strap and for the eye-bolt that fits into the dash? WFO J. E.



Dear WFO J. E.,

Ask for Strap, Webbing, safety belt, P/N 1140-001-0440.

The eye bolt is P/N 1100-000-0140.

These parts are organizational-owned solution items and your supply can get them for you. Of course you get to prove that you need 'em.

*Half-Blat*

## MORRIS TIRE PRESSURE

Dear Half-Blat,

Could you give us the correct tire pressure for Truck, Utility, Hi-ton, mounted with the 190-psi recapped rifle M40, complete with fuel cross and ammunition load? WFO C. E.



Dear CWO C. J. L.,

You'll find a tire pressure change in Change 1 (7 Mar 64), on TM 9-8214. Paragraphs 7 and 148 change the tire pressure to 25-PSI for both highway and cross-country travel for the M561 and M70.

Although it's not spelled out in the change, this tire pressure also goes for the M561C... complete with tires, mounted rims and axles. The reason is that the "C" with its lighting load, is still within the gross weight capacity established for the "41".

*Harry Albert*

## OIL YOUR JOINTS

Dear Staff-Sgt.,

There are a couple places I've noticed get rusted on all types of military wheeled vehicles—the axle and steering cables. The lifting shackle pins are also likely to be either rusted or so greasy up with joint that they can't be moved. The master pedal shaft on the M561 H-rod jeep also rusts where it slides through the floor.

Wouldn't it be a good idea to have the drivers lub these joints every time they give their vehicles a lube?

*Edg. E. J. L.*



Best Sergeant E. J. L.,

The places you mention are all oil-on points. The latest thinking of the man who writes the MCO is that these joints and all other working parts that are not equipped with bearings, or

the MCO does not specifically prohibit lubing, should get a going over with the oil can every 1,000 miles or quarterly.

*Harry Albert*

DO

DO

# CARBON COOKER



Dear Mr. Editor,

It's dumb a Honda CG10-AC/1000 generator, Model CG10-AC/1000, that cooks up carbon so fast we have to pull the engine head about every 100 operating hours.

Is this a rare case, or do they all carbon up so fast a head lift?

ROY M. GARDNER

Dear Specialist H. B. D.,

Hey, it's not rare on these rigs. But when an engine builds up carbon that fast, chances are you need to check out your operation with these DO and DON'T reminders—

**DO** remember to clean the choke after the engine's well started. An open choke makes the fuel mix too rich to burn clean.



**DO** remember, when you clean the plugs, to check for all that buildup worn piston rings. Oil pumps collect carbon the quickest.



**DO** remember, when you clean the plugs, to check for all that buildup worn piston rings. Oil pumps collect carbon the quickest.

All the oil in Oklahoma won't bring worn rings back to life—but you can keep 'em bring a long time with the right amount of clean oil in the crankcase.

**DO** remember, when you clean the plugs, to check for all that buildup worn piston rings. Oil pumps collect carbon the quickest.

**DON'T** forget to keep the air cleaner in all shape. The engine can't burn the best mix clean when it's choking for air.



**DON'T** forget modern multi-gap spark plugs, then check timing. You can't get

**DON'T** forget the air filter. The



standing work on this engine is a metal trap for soot and scale. Unless you remove it for cleaning, the soot and scale will fall back into the combustion

How to Start

# A SORTA SEAL DEAL



Assembly



There's something missing on the motor end: the seal, gasket and retainer assembly for the starter motor on your PU.2004/0 and PU.2005/0 generator sets.

It's a wraparound seal or gasket between the voltmeter end and the switch plate, that's not.

Which means water can get into the assembly and feed up the whole works. Ugh. Probably doing it right now, too.

Since there's no regular gasket or pre-formed seal supposed to be there, what's needed is some sealant—the Permatex or stuff like that there.

You can't say you'll do the job yourself, so deal your support unit in on the operation.

Ready?

Sure??



OK. With the assembly removed from the starter motor:

**1** Take off the switch plate cover. Check for any signs of water corrosion or rust. If there aren't, right your support unit and seal face to take care.

**2** If everything's OK, consider the included wire from the switch plate.

**3** Take out the three screws (SIZES) that hold the switch plate (SP00) to the voltmeter end (E001).

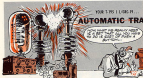
**4** Move the switch plate forward along a groove of an inch and get some sealant between the plate and thread to give you a water-tight seal.

**5** Now backtrack by the numbers, getting the assembly back together per the manual's the way you built it apart.



... apply PERMATEX sealant to the threads. HELLO?

# AUTOMATIC TRANSMISSION—MORE OR LESS



"You want the 'smooth ride' of a car? That's why you need the 'A' of a good suspension!"



"This 'conditional' lamp would do it!"

"You'll get a 'burst' of light just when you need it!"



And then one day from the laboratory came a report, a spark and a certain note and they named it the **ADJUST-O-TUNING**.



"It's an automatic 'ADJUST-O-TUNING' system for the 'ADJUST-O-TUNING'!"

Take that electromechanical channel selection system, **ADJUST-O-TUNING**, it's called. Even automatic preset channels and auto channel for manual tuning. And handy, to say the least.

Anything that'll do all this for you deserves a little extra care, guidance and know-how. Right?

That T-RS-11 transmitter has a little parallel you might to know about. It sometimes gets a little fuzzy when you try to shift frequency from the main and position of the tray upon channel switch.

In fact, sometimes nothing happens... and you sit there wondering what this electronic marvel is going to get on the "cross-channel" beam.

Well, all you've gotta do is shift the channel selector back to a lower channel. Easy thing to do, but let it complete its cycle first. Then shift on up to channel again. ♪



That **ADJUST-O-TUNING** is going with the job a lot better and faster than you could do it yourself so don't try to hurry it. Just increase your hands and feet for a moment, don't try to give a little extra here and a little more there.

When you change channels, you should wait—no less 10 seconds before you key the set. If the **TUNING INDICATOR** light does not come on when you work the **PUSH-TO-TALK** switch, look-off and wait a little longer.



Sometimes when the transmitter has been manually turned from one frequency to another in the same band, the light may not come on at all when you return to transmit. In you turn the **BAND SELECTOR** to the next higher or lower band... let it cycle down... and then turn it back to the band you want.



This makes the lamp and you should get the green light.

Speaking of the **BAND SELECTOR**, take a look at it and the **TUNING CONTROL** knob. You see those locking bars?



Well, never operate the transmitter unless those locking bars are lighted down.

Above all, never move the **PRESET CHANNELS** switch without first making sure the locking bars on the **BAND SELECTOR** and **TUNING CONTROL** knobs are light.



If these hoses aren't locked when you switch from one channel to another, you're going to lose control of the power channel frequencies and the advantages of the Automatic system.

### Easy... Safe... Stable... Sure

Your T-121 really gulps in the air. It takes a constant stream of air to keep the transmitter from heating up—and that air has got to be clean.



That's why you have to watch the filter like a hawk and change it as soon as it gets loaded. And it won't take long to get loaded when you're hawking around the busy trail.

You just have to make a practice of checking the filter every couple of hours or so under real busy conditions.

As far as real or steady operations...

right Good's always the way every good transmitter's got, and anything you can do to protect it and its air supply is money in the bank.

There's still a lot of impressed blues you can rig up to help keep out the mud and dust. Any blunder who's had much experience with the APL-200C-12 can show you some neat tricks for this.



### Behind the Back

You're no doubt well aware that there's some mighty dangerous voltage present in your T-121. One of the places you have to be real careful about is the antenna terminal, which should be covered by a terminal cap or cap.

But those caps have a habit of getting lost and you won't find 'em in your wife's purse anymore. You have to get good support to round up Cap, Elmer-



cal, FOM 5540-505-5801, and it's listed in YIM 11-5820-505-54P for the T-121.

## Battery in Between

It could be your transmitter is a T-192B. All the B models have connections in the power supply.

When you're operating or testing this model, always be sure you've got a battery between the set and the power source. The battery will prevent the transmitter from any excessive voltages that may exceed the maximum voltage rating.

Don't go looking for the maximum voltage because it's so fast and fleeting it won't show up on a meter or oscilloscope. But it's there and it can flush up your maximum.

## SHOOT FOR THE MAX



That's right!

All the way over to maximum is where the meter (M5011) needle should be when you're checking out the RF position on meters (with M5011 of Radio Shack RT-66, 67 and -68/69C).

The RF indicator is not like positions 2-11, all of which call for a near red meter reading when pushing. RF needs the white... all the way over to the right. The maximum.

Also unlike positions 2-11, the RF indicator doesn't have to be checked out regularly. You adjust it when the antenna is first installed—and then only when there's a change in antenna or antenna clearance or a big change in the frequency range.

The purpose of the RF check is to be-

sure proper matching between the antenna and the antenna output circuit.

To get the maximum readings adjust the TRANS ANT COUPLING screw and the TRANS ANT TUNE control screw.

The TRANS ANT COUPLING screw is easy to work with. Just give it a turn.

The TRANS ANT TUNE screw is tricky. Remove the wingnut cap (attached to the set by a retaining chain) and insert a screwdriver into the hole. Then push the adjusting screw in until it engages. Make sure it does engage... otherwise, you'll turn it all day with no results.



Para 13-6, page 17, of TM 11-200 (3 Dec 54) spells out the procedure in detail.

## RUGGEDIZE 'EM



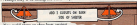
Anything that's had as many ups and downs as your 8-55 (1170 to 2400 C. 1) NIBC shifter is just bound to be holding right poorly. Specially in and around the lifting straps, which have been bearing the burden so faithfully for so long.

So, better give 'em a break before they decide to take care on their own ... with some damaging and dangerous results.

What you want to do is beef up the lifting straps by adding another gasket for each strap. And at the same time you can make each assembly stronger by using large washers on the mounting bolts inside to help spread the strain around.

If your shifter is scheduled for some support work you might ask your support unit to do this at the same time. But if it isn't, you can handle the job yourself with maybe some help from your support unit.

You need to fabricate four additional gaskets just like the four gaskets that ... except they'll be facing the other way.



You would mount the gaskets just against the present ones. When you insert the mounting bolts through to the inside of the shifter, you use large washers so they'll spread out-but beyond the heads of the bolts, giving 'em a better grip. You'll have to remove the washers to get a good fit.

And, speaking of lifting, it's a good

idea to remind yourself as always that clear of them the hole when they're being lifted and moved. These lifting straps have been known to break—and sudden like. What's it why you're beefing 'em up now.

So pay close-eyes when they're re-lifted.



## FOR SHORT LINKS: LONGER HOLES



Well, that's the way it goes.

You come up with a nice little bridge to span the gap... and then suddenly you find the river's widened.

This makes for one of those famous "field" situations, which calls for some on-the-spot improvisation.

The factory-issued links for your BB-600<sup>TM</sup> battery are just the right length to couple up the BB-600<sup>TM</sup> cells—so long as the cells aren't too fat.

But some of the new cells are wider you might call it the upper limit of allowable thickness. Which means you may have to lengthen your bridge a mile to cover the longer gap.

So you take a file and elongate the holes in the links. filing toward the ends. Just be sure you don't file away more than 1/4" on each hole.



**DO NOT FILE  
MORE THAN 1/4"  
ON EACH HOLE**

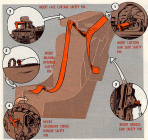
Since you may have to file a battery link, you'll want to use a file and the right file for the job. You can buy a file, hand, round type, single cut, smooth cut face, 4 inches long, FSN 5110-204-0000, and Handle, file, round, 1 inch diameter, 4 inches long, FSN 5110-204-0012.

For the most part, you'll only have to file that on the shorter, 1/2" file links.

But before you do any of 'em you'll want to try making 'em with this one-to try to keep from having to file any thing at all. You only file the links as a last resort.







With the new ground safety locks in place and the five safety pins installed, the red streamer will now remind everybody the cockpit's been subjected... but it's still loaded.

## TAKE STREAMER OUT

Cancel the time when your bird is about to take to the air again: the streamer needs to come out—watch—in order for the operation team to do a job of it's needed.

So, while the aircrew does his Martin Baker seat harness, you just ensure the five safety pins attached to the red streamer in reverse order from the way you put 'em in: 5, 4, 3, 2, 1.

In other words, the operation gets

safety comes out last. But he won't you leave the primary lifting handle safety lock and the secondary lifting handle safety lock in the UP (locked) position. This means the seat can't be fired by accident when the aircrew is strapped into the bid... and here's where he could use a helping hand.



## SEAT BUCKLE-UP

- 1 First, hook up the right and left pads above seat straps.



- 2 Next thread the seat leg restraint cords through second straps on the fabric garter, and plug them into the buckles on.



- 3 Then the shoulder harness attachments are hooked onto the top left latch and the top left buckle.



- 4 The last step is to sit out by the engine, with outside, built primary and secondary living handles by flipping down the ground safety harness just before take off.



All of which proves that the Army and the manufacturer thought enough of your favorite thruster jockey to go all out for him on the safety side... not to mention your own safety whenever you're doing maintenance in and around the cockpit area.

But you don't want to be wary of the Martin-Baker seat when you are out of it—just kind of “unperturbed”, like you would with any loaded gun.

After all, it only takes one thoughtless act to blow the whole deal sky high!



Dear Finley Winback,

THE MARCH/APRIL (7 Mar 67) on the APF-1 flying below the capture zone of the front, center, and back wing lines at a low-altitude hold ... as I'm stuck with it?

*But what do I do with a liner that falls out all the time?*



Dear Sergeant H. E. K.,

Right now you have tried everything from chewing gum to shells (to hold the pads in place). Chewing gum won't hold a liner in your gunk, and shells will hold it in—*for keeps*. What's needed is a happy medium. Something that'll hold the liner in but will also let you take them out for replacement without creating up the liner.

You've been lucky but strip or two of pressure-sensitive tape between each liner and the helmet. PFM 8145-149-0773, listed on page 158 of *Infantry Supply Catalog CO-18-51* (19 May 67), is just what the doctor ordered because it has adhesive on both sides. Price for CO-18-PL shows it's a QM level purchase item, though.

You may find it easier to get the 2-1/2-wide pressure sensitive tape stuck on-

der PFM 8145-149-0000 (QM). It's also listed in CO-18-51, page 158. Since this tape has adhesive on *one* side only, you glue two strips back to back using rubber adhesive. PFM 8145-149-0816 (QMG). If you happen to have any extra around, this adhesive is packed in storage capsule kit, PFM 8145-161-0757 (QM).

Before you make with the tape, strips, it's a good idea to get rid of the old adhesive on the liners and helmet. That way you can get a better bond. Water or alcohol on a piece of coarse cloth, plus a little elbow grease, should do the trick. Any other field cleaner might dissolve the foam plastic.

After putting a new riding pad in, roll the surface with the ball of your hand or use some round object. This is better.

*Finley Winback*



Dear Editor,

We've got a repair for loose bomb-attachment adaptors on the B-52D (L-151). The victim in this case is stripped female threads in the wing.

If you have the problem you take the adaptors off and discard the bolts that hang the washers. Then you fill the adaptor bolt hole in the wing to get rid of the stripped threads and make way for a new retaining bolt, nut, and washer.

Next look up to two 1/2-inch bolts strong enough to take retaining nuts inside the wing, retaining nuts, and washers.

Then mount the adaptor by putting the old flat washer under the bolt head, and install the bolt through the adaptor and wing. Insert the bolt with a washer and nut inside the wing.



Even better, one of the adaptors will hang your bird like a long, hot rod.

The Ground Crew,  
 51 ABWG, Gruber Airport, M. I.

*Old News*—Looks like a good fix, but get your COP's permission before you start the surgery. ☺





Another example—MPO 15-114-202, 24/4 150 Nov 61, "Installation of Camera Power Source Replaces (L-19 aircraft)". The aircraft affected are all L-19A and B models requiring the use of KA-214 or KA-214A camera. In the "When to Accomplish" column in the key: "As required, prior to the use of KA-214 or KA-214A camera."



Yes, if you're not scheduled to use those cameras in an L-19A or B model, your bird wouldn't get the modification, but it would still get the MPO/Comms—month.



When you're filling out the 2405-S remember that it starts with the Component Installation and Removal Record, DA Form 2405-10, and Component Removal and Repair Checklist Record, DA Form 2410.

All these items are spelled out in TM 18780 as give you a visual keeping set up that covers one of the toughest than has plagued maintenance types for many years, namely, what's supposed to be installed in a hole, and what usually has been installed.

Now ... does your 208-1 get the latest MWO entry or doesn't she? Could be—in all depends on what bird you're working on these days!

## TIGHT SEAL

No need for your slipper to message size decrease pump, or make with a local purchase order, when you seal a ploughman window in your bird—

When there's a compressed right in the supply system. Run your papers over External Supply Catalog C11-51 (Etek and Stock Class Group 04), for Sealing Compound, P/N 600-671-1064 (E/M 02-01). Make that ploughman tight as a drum.



## SLIPPERY BIRDS

You air types mounting aircraft at the crack of dawn for loading or other maintenance want to give a thought to the early morning dew. That will in prevent lightning under foot. So using your maintenance stands and ladders, along with cheap-wearing rubber soled shoes or boots, put the odds in your favor again: winding up with your arm in a sling or worse. If your outfit isn't authorized rubber soled shoes or boots yet, run your papers over AE 20-01 (11 Jul 67) and TA 20-11 15 May 61 ... they're all the authority you need.

## NEW A/C MECH'S TOOLS LIST



Watch the mail for SM 11-6-1188-504 (30 Mar 61) if you want to keep your hand-recipe list current on the Aircraft Mechanic's Tool Box, P/N 5400-315-4592.

This Transportation supply manual updates SM 11-6-1188-570 and carries the latest maintenance and stock number changes. You'll also find most of the work printed in the back of the new manual.

There's just one tool change ... the flexible arm flashlight has been replaced by the standard type, which is P/N 6000-515-2185 (Eng). The flashlight P/N in the current SM is a printing error.



The Champion CE 36-18 air compressor is easy to live with in every way, but not.

It'll put out 175 PSI or 21 CFM as long as you keep its two valves closed, and take it like it says in the I.O.

The one thing this Champion is real touchy about how you handle it is when you replace a valve—or a valve part—in the air compressor.

This is a time to do nothing until you ask yourself certain questions, and double-check the answers. First comes:

### IS IT A DISCHARGE VALVE, OR AN INFLATE VALVE?

Both types look alike, they're the same size, and some parts are common to both. But they're **NOT** interchangeable.

### NEVER PUT THEM BACK ON, OR TAKE THEM OFF, BACKWARDS!

In this case, intake valves face down. Exhaust valves face up. They'll fit either way, but they won't work when faced the wrong way.

You'll be lucky, in fact, if a valve that's installed wrong just sits there and refuses to work.



Fill this bladder with one of the high-pressure discharge valves—and it'll top up the cylinder block like the one shown here.

**TRICK!** Never lose out the power of a small compressor.



## NO TOUCH, NO TIME



A sharp operator knows the value of good timing.

He also knows when the situation calls for touch or no-touch.

That's why many operators with diesel engines using Kewanee-Master fuel injection pumps keep hands-off and never attempt to time the pump when the engine's running.

In order to time the pump, you have to loosen the mounting nut on the pump flange. This shoves the pump out of line and the rotational force of the drive shaft is transferred to the pump housing. When this happens, the pump mounting studs shear off and the pump housing is damaged. And, if that's not bad enough, you're also taking a chance on being injured.



No, that's flat with trouble.

Keep hands off, and never, never try to time a Kewanee-Master pump when the engine's running.

## HUBER-WARCO FUEL GAGE



Time say you've got a fuel-air 40 Huber-Warco combine that needs a new fuel gage?

Then you DON'T use the number in your '60P manual. That's the wrong

Warco electrical and that comes with wiretized rigs.

What you DO want is the Kewanee mechanical fuel gage, and the stock number is 131140 3300-C55. Get it

## GRIND 'EM SMOOTH

YOU'LL WANT TO GRIND AWAY THE BOTTOM.



Parade—but is your protrusion showing?

Give your hull-maintenance project boat with aluminum hulls a look-over. There are the protrusions that're part of the aft section of your light metal floating bridge.

Some of them have a lead extension which just isn't about 14-inch — you'll find it shows the low coating when the lead and low meet.

When you rent the hull sections in groups of eight for transport, it's easy for the lead of one boat to jostle against

the nearest ribs of the boat directly above it. With an extra from the lead protrusion, the ribs are bent and torn.



and another boat is put out of action.

No need to taking the bump-out of your troubles. Just grind down this protrusion until you get a smooth curve between the lead and ribs.

This'll make for easier coating and less possible damage.



## TRY AN ANGLE

Here's a tip that when you're operating your Model 4000 and 4070 Constant-Speed Diesel electric generators, the two new charging generators (alternators) mounting bracket vibrates on one end.

This vibration causes the steel nut to work loose.

Since the AC generator bracket is mounted to the engine block by bolts and nuts located at the motor and front end of the bracket, this leaves the rear end of the bracket free to vibrate.

You can keep the bracket from doing a shimmy by welding a 1/4-in support brace to the rear part of the bracket.

# FIRST THEN LAST

Before you want to work on certain jobs in your Cadillac vehicles you've got to shut off the alternator power from their 24-volt electrical system.

Just removing the battery cables will do the trick, but there's a right and wrong way to do this . . . See TRS Card 1091 (29 Jan 63).



To disconnect 'em—

Always take the ground—negative ground—cable or cables (if more's used) off **FIRST**.

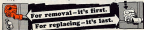
Coupling 'em back up? Then be sure to put the same ground cable or cables back on **LAST**.

To ignore this coupling-uncoupling sequence may be hazardous to you.

If the wrench should ground to the vehicle (with ground cable still on) it'll get "red hot" and if you can't drop it (hand frozen) you may end up with that famous "Tuna Sandwich" job done on 'er . . . or—it could cause the battery to blow up.

The heated wrench puts a terrible current draw on the battery (even in laying the wrench across the battery post). This causes a lot of heat inside the battery—enough to explode the battery and send acid all over.

So, please to remember on the sequence to follow with the ground cable . . .



## *Cornie Rodd's* BRIEFS



### *Open*

If you've picked up Tel. P. 1179-200-71, "10-Cap-Capacity Handle Operated Blasting Machine," dated 14 Sep 51—check out paragraph 16c 71, where it says: "solvents are flammable and should be used near open flame." Make it now to put a "cap" after the word should. ... or it reads: "solvents are flammable and should not be used near open flame." Match solvents and fire don't mix, so shall this be as a printer's mistake.

### *New M15 shaft*

You'll get the shaft—the accelerator pedal shaft, that is—if your M12 PC has a serial number from 24 through 514. The poop is in legend MWD P-100-114-28/1 (24-51). When ordering the new parts or any replacement part, cite this MWD and Tel. P. 1179 as authority. Your tracked vehicle mechanic will get on the new, hand-cast, aluminum for pedal shaft guide which is made as it used to be made and fixed.

### *Caution... M15 breathing apparatus users*

If you haven't yet had your M15 modified per MWD 1-110-21/1, **DOWN!** This MWD has been suspended because the valve stem behaves erratically.

If your breathing apparatus has been modified, red tag it, and turn it in to your maintenance support outfit as soon as possible. They'll remove the stem and safety valve and return the breathing apparatus to usable condition.



### *It's for all*

Been wondering what to do all this time because MWD 715-1058 (4 Aug 50) modified the gear operated shut off valve on your M15-M160s (search)? The old valve had a groove fitting that you used to shoot in (ick ...), and the new one just has what looks like an all-31 hole. That's what it is all right. And you ought to cover it lubricating all monthly.

### *Look before shooting*

In your school learn the M15-160-man maintained heavy gun or maybe one of those three self-propelled weapons: M44 100-mm howitzer, M32 160-mm gun or M15-160 howitzer? Then load up, eye or two. You know that the M15 firing mechanism is the weapon; lay up safety and the primer can be fixed with the breechlock in any position. So... please to make sure that the breechlock is closed and the breech opening lever is locked before you get in the games.

*Would You Stake Your Life on  
the Condition of Your Equipment?*





**IN BRAKE SYSTEMS  
USE ONLY  
NON-PETROLEUM  
HYDRAULIC FLUID**

PETROLEUM-BASE HYDRAULIC FLUIDS EATS THE INSIDE OUT OF RUBBER LINES AND PARTS —

SO, USE BRAKE FLUIDS  
WITH FEDERAL SPEC.

**VV-F-451A  
VV-F-910  
ONLY!!**