

Issue 116

PS
★
1962 Series

THE
PREVENTIVE
MAINTENANCE
MONTH!



Did you hear the one about—



There was once a young private named Dave,
Who would keep a party lined in a cave—
He was trying to split,
He would often admit—
When he thought of the troubles they gave.

But he worked for a sergeant named Kees,
Whom Dinkler perpetually teases
Under paperwork trouble,
That always seemed double,
No matter how much time was spent.

Oh one day came The Ward, from Kees,
That next week they would ship out, by sea!
The rumors were hoarse,
Their rumors were hoarse,
And their hearts were bound bound, long and free.

Then their parts had was shown before half,
And in them, demand rates were a laugh.
As for parts in the cave—
There was nothing in cave—
So they both learned themselves for the gulf!

Now they know that their modest salaries
Make their wants and potential salaries,
Though they've decided their parts,
They can never save parts—
And their future looks dreary and dreary.



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PSYCHOLOGICAL SERVICES

IN YOUR OWN DEFENSE OR ON THE...

M60 7.62-



It'll shoot.

It'll wobble (when you tug it).

And it communicates in a language all its own.

No fancy Doo . . . the M60 machine gun is a rugged blagger that gives out a lot of fire power in a heavy and knee-cold-down-the-top dog box on its lighter and makes noise in low tide the field.

Not rugged or cool—the M60 will work in stores of pervasive maintenance medicine to keep its fighting edge.

Won't a guided view of the major capable good that can make impressive re-bagger and slip your trigger a Mickey Finn before it gets into action. Those in

Red text set the pace to-dock, please.

FLIGHT SUPPLEMENT—
Loose, worn, loaded with
oil, 100, 1000-1000
best, **spikes** **cracked** **split**
on loose, worn, **missing**

FLAKE—Cracked,
loosened, loose.

FRONT—Tender, up of
shoot, **shots**, hard to re-
load, won't lock a position,
left-hand, **broken**.

FRONT LOCK—**Best**, without
aimed at the way, **will not**
lock, **crack**, **broken**, showed
missing.

FEET—Rust,
washed, loose,
missing.

MM MACHINE GUN

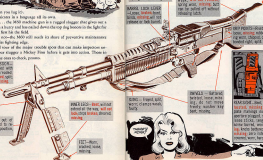
CARRYING HANDLE—
Tender, bent, missing,
sticks, won't fold down
properly, **plastic**, **loose**,
broken, broken, missing,
losing **area**, **missing**.

BARREL LOCK LOCK—
Loose, **broken**, bent,
loose, **missing**, will not
release or lock barrel.

BUTT STOCK—Bent, loose,
worn, **missing**, left hand,
worn, **will not release**,
spring **worn**, **missing**, but
can be pulled off without
releasing lock.

RINGED BUTT PLATE—Loose, twisted, **broken**,
missing, will not close or open at the way.

TRIP POINT—Bent, worn,
loose, **missing**, will not
trip, worn, **broken**, **split**, not
loaded right, **split**.



TRIP—Bent, split,
worn, **missing**, will not
trip, worn, **broken**, **split**, not
loaded right, **split**.

TRIP—Bent, split,
worn, **missing**, will not
trip, worn, **broken**, **split**, not
loaded right, **split**.



TRIP—Bent, split,
worn, **missing**, will not
trip, worn, **broken**, **split**, not
loaded right, **split**.



FOOT - Ballhead, stamped
up, finished/typical, turned.

TRING PIN SPRING -
Baked, hole broken,
sliding, broken.

COIL ACTUATOR -
Burred, cracked, air
has, white.

CATCH PIN - Burred,
chipped, worn, hole
big.

**CATCH AND
SPRING** - Burred,
worn, hole big,
loaded without bar,
spring weak, hole
broken.

BELT FLANGE PIN - Bent,
banded, hole, missing.

TRING PIN BUSHING -
Split, worn, cracked,
banded.

TRING PIN - Broken, bent,
missing, the barbed or
slightly pointed, spots
scored, banded, cracked.

BOIL ASSEMBLY - Not
loaded, sliding bar heavy
burred, removed filed with
carbon, legs chipped, worn,
banded.

EXTRACTOR - Chipped,
bored, banded, broken.

**EXTRACTOR SPRING AND
PLUNGER** - Worn, bent,
broken, won't hold extractor
finger to rounded, mis-
fit.

TRIGGER MECHANISM

TRIGGER ASSEMBLY -
Worn, matted, steel, banded.

TRIGGER PIN - Bent,
worn, banded.

SEAR - Worn,
is not fit,
rounded (should
be pointed).

SEAR FLINGER AND SPRING -
Worn, bent, missing and
banded, chipped.

SAFETY LEVER - Worn,
chipped, won't lock, slide.

**SAFETY FLINGER AND
SPRING** - Broken, cracked,
worn, will not engage safety
lever.

HOLDING PIN - Bent,
banded, banded, hole
big.

SPRING LOCK - Bent,
twisted, cracked, hole no
groove.

OPERATING ROD - Bent,
cracked, banded, roller pin
loose, not staked, worn,
small notch worn, banded,
rounded (should be sharp).

ROCK PIN - Springs weak, hole, hole too
big, hole perfect, cracked, plunger
worn, bent, (should fit with friction fit
- explain it, don't try to repair it)

ROCK - Bent, bent,
banded, cracked.

SPRING - Bored, twisted,
broken, hole to broken.

GUIDE - Head worn, spot,
cracked, broken.



TRIGGER HOUSING - Housing
cracked, bent, loading with
worn, broken.

FEED CORNER ASSEMBLY — *Replaces and works bridge plates barrel, loose, missing, worn, altered mounting.*

CORNER LATCH LEVER — *Replaces, breaks, loose, will not latch, latch spring weak, worn, missing, lost its function.*

FEED CAR LEVER — *Replaces, weak, broken, worn, bent, lost action.*

DRY HOSE BRACKETS — *Best out of line, broken, worn, loose, tear, joints on hose missing.*



FEED CAR — *Went out of place, changed track, turned, return spring weak, latch broken, missing.*

CORNER SPRING ASSEMBLY — *Spring weak, broken, missing, flat, no tension, hinge pin lost, bent, worn, large cracked, loose, twisted out of line.*

Always inspect the feed car for wear and tear.

FEED TRAY ASSEMBLY — *Bent, cracked, loose, broken.*



ROLLER — *Worn, bent, cracked, loose.*

SPRING — *Worn, weak, broken, missing.*

CHACT — *Burnt, not's broken.*

FEET HOODS PAIR — *Bent, lost, worn, missing.*

FIXING THE HOLE

Don't forget that the only approved way to load your M60 is the "Open Carrier, Safety On" way up... it's safe, sure and easy.

Make sure the hole is locked to the rear, safety on, whenever you remove the barrel. If the hole slides forward with the barrel on—the mounting can will run into the feed plate and you'll have a fused feed plate to replace in your weapon.

Speaking of barrels—how is mind

them... here's the equipment you should have to keep your M60 up to par—no matter how far away it is from an armory.

Item	Federal Stock Number	Photo
Barrel Cleaning Brush	100-224-174	
Chamber Cleaning Brush	100-498-218	
Receiver Cleaning Brush	100-498-400	
Carrying Case	100-801-226	
Ruptured Cartridge Extractor	400-882-990	
Magazine Assembly	100-011-1220	
Spent M60	41 25-288-0001	
Cleaning Rod (three sections)	100-506-827	
Combination Tool	100-800-176	

the idea is to swap barrels often enough to reduce the work load. The same barrel is used to clean the weapon and you don't bring and not to replace a barrel that's been more or less used. It's critical to the maintenance of the M60... good preventive maintenance will be spent on it of each barrel.

But it will your Public Reading No. 1 — you check your M60 daily. Keep a light coat of oil on all metal parts except the gas piston, the inside of the gas cylinder and the buffer. No oil in these three places—ever.

You don't have to clean the gas cylinder every time the weapon is cleaned. It's made of non-removing metal and needs cleaning only when you get short until the weapon won't stop. Disassembling the gas cylinder can often lead to irreversible parts and credits.

The clean parts that continue to give you all the way you need to keep your M60 more clean — 100-9-1000-224-12 (11 Jun 62), 100-9-1000-224-200 (11 Aug 62) and FM 29-27 (1 Jun 62). Add 100-9-1000-224-18 (11 Aug 62) to the plates and you're in business.

DO IT THE RIGHT WAY

Fast it, man, fast it.

Putting it in the wrong way can really leave you up.

For example . . . take the gas plates on the M80 machine gun.

There's only one way it'll work—that's with the head of the plate facing the rear—toward you—away from the back suppressor.

So, when you're putting the plates back into the gas cylinder after cleaning, make sure, doubly sure, that the head, or closed end, faces the opening

and before you replace the gas cylinder use and attention.

It's easy—and easy—to goof on this 'cause the plates'll go in the wrong way or assembly as it'll go in the right way.

But putting it in backwards can knock your MG out of action just as easy—as watch this wacky deal.

If you need any reminding of this message, just check out TM 9-1009-214-11 (Class 40) and you'll see the word spelled out loud and clear.



DON'T RAISE THOSE TABS

That's the new word—as far as the tabs on the two key wrenches of the gas cylinder on the M80 machine gun are concerned.

The tabs anchor the sections of the gas cylinder and act as extra braces to keep things from coming unseparated during firing.

Keeping them while disassembling the gas cylinder for cleaning covers them so they stay off.

The usual word's word the gaff-word holds it's not necessary.

To remove the gas cylinder use and gas cylinder attention, all you do is apply a little elbow grease with the

wrench end of your combination tool (PST 9005-006-1100).

If the use and attention are not in sight you can't loosen 'em with the wrench-ship it. Slip the M80 back to your support, 'cause it needs major surgery.

So, before you start using the tab raising pump that's in para 41 of TM 9-1009-214-12, talk it over with your support unit because the word has been passed on there that is not to be done. If you do this life will be a little easier and your supply man can smile from the wholebody member replacement business.



SARGE (SM)

MIA (SM)



And keep repeating it until you remember it as well as your name, rank and serial number.

Learn the "safety on, eyes open" method to be ready any time you need to load the M16 7.62-mm machine gun.

Follow the chart spelled out in TM 9-2095-204-13 (Jan 68) and forget you ever heard of any other way of loading.

Like it says . . . all you have to do is—





That's all, now it's time to go to the next training step.

Loading with the cover closed is not because, among other things, it led to double-loading by getting you back to the old "immediate action" habit you picked up with the M16-cal machine gun.

And that "immediate action" habit is a good one to kick—when you're using the M16.



A round can be chambered, but the rim of the cartridge is not seated deep enough for the extractor to grab it so the bolt doesn't slide into the locked position.

So, no, when you operate the trigger and nothing happens—you must be putting back on the operating handle right? Good! That's "immediate action." Good for the M16-cal machine gun, but trouble with the M16-cal machine gun—you're walking an egg shell.

The first round fails to go and your "immediate action" picks up another round and now it's not the old standard that caused the round—making for a busy situation.

Remember—the M16 does have an open bolt, as compared to the closed bolt used with the M16-cal machine gun.

Immediate action on the M16 buys you nothing but immediate trouble... as soon as one of us we'll have more problems than a belly slaver with the M16.

Never, like never, load a round into the chamber of the M16 until you're sure the chamber's empty.

And, unless you come equipped with Superstun vision, the only way to be sure is to open the cover, put it on safe and look.

Open cover, closed cover—use as few cover cover-buckles as you can. Fingers can also cause double loading. So make sure your M16 is equipped with the cover extension, P/N 10071778-0000. It's available and replaces the old extension, P/N 10071000-0000.

Connie Rodd's

"LUBE 'N' OIL DEPT."



That PE oil

When Max likes HPCP the details of that preservative (PE) oil in those wheelie or trucked vehicle engines and needed vehicle examinations... that is, will you're getting some one name.

You want to use this PE oil (MIL-L-23880) in engine levels from storage oil checkers oil change comes due (1974-75 and 1976, TR-8, 1977's, dated 8 September 1977).

The reason's simple. PE oil lubricates oil in OIL, only better. It has a preservative added.

The one (and only) time you'd think the PE oil right way is when the oil weight and the temperature don't match — same as with OIL. Always check the tag in your vehicle LO's and in TR-8 (204 119 Gas 811) and they'll give you the correct weight oil to use with the prevailing temperature.

Preservative lubrication oil comes in three grades (weights) — PE-1, PE-2 and PE-3. Grade 1 equals OIL 10; Grade 2 equals OIL 30; Grade 3 equals OIL 40.

So now you want know how you can tell what's in your vehicle when you get there? OK, think it.

Attached to the vehicle, or inside the second locker, is a tag (204 Form 8-11) and the grade oil (PE) or substance should be marked on it.



If your checking for the tag proves evidence — you just can't find it any place — then the next step's to call for help from your support unit. You're going to know what weight oil your partner uses and they can help you.

2000 *Level ground straps*



You get three ground straps for the six batteries in your M113 tank. That's an amount of you need these straps. One or two won't do the trick.

When you want to attach any battery, first remove all three ground straps... not just the one connected to the battery.

This is simple to do but if you forget in your positive cable can get it for you, but it accidentally touch any grounded part of the tank.

An wiring cable is a conductive

metal can do more damage than a lightning bolt on your way when you've got a red-headed wife.

In play it only and remove all three of the ground straps before you touch one of the positive cables.

You'll want to see TIE-DIE 1000 (2000) for 400 on unhooking ground straps in any kind of equipment.

ALL THE OTHER STRAPS WILL
BE UNHOOKED FROM THE
TANK TO REMOVE LEAKS



Steel *plug*

Here's the latest plug on the plug to use in the fan drive gear box on your M113 APC's.

First, TIE 9-1508-124-100 (Page M1) said to use Plug, PGM 4158-124-1000. This plug was a soft aluminum plug that tended to deform from the magnesium housing—especially if wet, and the head'd round off.

It then was thought that for us to

make the latest plug PGM 4158-124-1000 would do the trick, but, brass and magnesium don't mix kindly to each other... no more.

Now, the one you'll now use is Plug, PGM, 4158-124-1000, 4158-124-1000 (M1) 20 000-1000.



New track puller



The M48 and M48A1 continue to be having trouble with your new counter-weights and connectors?

The FMN 5180-707-5643 track connector and track puller worked fine on the old connectors but it won't fit under the new track type.

What you need is puller, track link and connector assembly FMN 5110-400-7061 which is authorized OEM on the M48 and M48A1 tanks.

The replacement link has been authorized as OEM for the M48 and M48A1 tanks.

You can use the new to Special Tool for B until you get out of your own.



Service job



This gas-tanker tank or trailer that supplies fuel to keep your tanks on the move has to be kept clean—inside. If not, it's apt to leave a trail of locked-up engine fuel systems everywhere it goes.

So, when you're operating a gas tanker, lay an eye over and clean on the inside of that tanker's mainline circuit.

If the tank's rained or gunked up inside, take it to your Ordnance support (your authority is para 1, TM 3-8011, Dec 54). They'll check to see if it needs recleaning (like it says in TB Ord 1811-118 Jan 52), or if just a screw cleaning will put it back in the plot.

Watch for Lines



You may be able to get rid of a headache before you get in. All you need is heavy cloth, news cloth or very fine sandpaper.

Some M143 models generate operation have been running into headaches with the automatic washers. If there's the line like line on the edge of the washer, it could bind when you go to adjust the wingout.

You may not think much about it at the time, but the next time you want to check the machine you'll find you're in trouble. You try to turn the wingout on the front window and it's dead again.

Then you check your TM 5-1044-100-12 to make sure you're going according to directions. That means you're turning the wingout counterclockwise. Well, maybe a little more effort goes will do it. Sure enough, it will run but when you finally get it back, you find the washer is broken off.

So, to keep from getting in a bind because of a bind, run your fingers around the edge of the machine. If you find some rough places, smooth them out with heavy cloth, news cloth or very fine sandpaper.



WASHING MACHINE



WASH
CLOTH

... ON
CLOTH

... ON
LAUNDRY



LET'S COMMUNICATE



MAGGIE NEEDS A WARM-UP

With a remote and a scan your AN/DPN-62 surveillance drone goes soaring... into the wild blue Yonder!

If it's carrying Transponder the AN/DPN-62 also could be heading for real trouble if you failed to give that bit of hardware its warm-up.

Like warming up the magnetron in the RT-50B/DPN-62 before launch. Just how long you warm her up depends on how cold it is, of course. In real cold weather you may need up to 15 minutes. In very hot weather, as little as a minute may do the job.

Without this warm-up period you're likely to get a frequency drift in the transmitted signal of the transponder when the beacon is turned on. And before you know it your drone is skipping hedges and prying trees—which is a little trouble for RUC.

To do the job up right, you need to

do a little improvising. You want to rig up a droid so you can warm up the receiver-transmitter before launch without draining the drone battery.

In fact at all, you need a battery like the one in the drone, and about eight feet of coaxial cable. On one end of the cable you attach Connector, plug, electrical, P/N 199-158-1849, to fit the transponder. On the other end you slip a Connector, plug, electrical, P/N 199-189-0404, to fit the spare drone battery.

With this set-up, you can warm up the transponder in place, checking the frequency stability in the tracking radar. [Just be sure you don't hit the transponder or and crash with the power on. This will cause it to heat up and draw up the inside.

Just before launch, connect the transponder to the drone battery.

No more hedge-hopping.



P/N 199 189 184-1849

WON'T BE LONG NOW



The next time you're around your trailer-mounted generator set (MUGGEN) II, take a peek under the belt feeder.

Could be the machine bolts that hold the power cable assembly mounting plate to the feeder are too long. If they are, they'll scrape the drive... especially when the trailer crosses rough ground.

If there's any doubt about the clearance, remove the bolts and screws (you'll see they won't go thru the feeder). After you tighten the nuts, cut off the bolts flush with the nuts.

Then file the bolts down six and smooth to get rid of any burrs.

DON'T GET HALF-MASTED



If it can happen, chances are it will. And if it has happened, chances are it will again.

Which is why you want to be mighty careful when you're setting up and taking down your AB-500TC mast for the ANGRM-6 radio tower set.

Too much tension on the guys... too much weight on the mast... and you can get a whipwhopping action that can shatter you.

A more rugged mast is being worked on for the ANGRM-6. But until it comes along, play it real cool with the AB-500TC.

FOUR GUYS ON THE LOOSE



Some guys need loosening up at the right time.

Heh, heh.

Like when the time comes to shift direction of the antenna assembly of your AN/TSC-10.

These big reflector guy poles are in the right direction because the four reflective guy wires keep 'em that way.

At any time a crew gets the word to turn their reflector one way or the other, these four guys have to be loosened up.

But some crews like to do it even while not loosening the four guys?

Causes the antenna "Phony!"

For one thing, these reflective guy wires will hold firm. So that even if the guy poles should actually start turning, the reflector won't budge. That means you'll actually be re-orienting the main beam out of shape. Bad.

If a crew applies even more muscle to the improper turning operation, he just might start pulling some ground water loose. No need to mention when that will lead to!



And it's best to handle them simple than even before you catch the guy poles into the guy pole cable. Cause it's best to catch them separate so that turning the guy pole right away.

Causes the question: "What damage

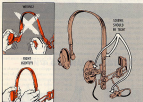
do I know up these four guys when you're heading for a turn.

Once your reflector is pointed in their own course, of course, keep 'em up right as they say that way 'til the time comes to take another turn.

LIKE IT WAS ON YOUR HEAD...

If everybody with a microphone headset gives it the same tender loving care when it was off his head as he gives it when it's on, the maintenance story on headsets would be quite a bit different.

Since there're many more banged-up headsets than there are banged-up heads, most of the damage must be done when the sets are off ... right? And these headsets have been taking a beating on the point where some of 'em are in mighty short supply ... like the H-37U used with your tank radio.



There's a lot of big fat clamping around in a tank ... but there's not a one as small where a headset ever stretched a fit. But the other way 'round ... and to the big rule for your headset is called Proper Positioning—in other lay it down where it can get stretched on, we down on or stretched on. It comes out the loose-weep clinic.

The second basic rule correct spreading the earpieces. It's an awful compromise at times to grab 'em by the ears and pull 'em apart. But this is just rule-

ing for trouble ... along with a big lick in the hip pocket when you get that awareness of change.

The slim connection between the wireless element and the headset won't stand this type of treatment long. What you do is wrap your big jaws lovingly around both the earpieces and the headset and use the photos apart gently.

And you should have an spread 'em little because you want a nice tight fit. But, there, not too tight ...

And speaking of tightness, this brings up the third big point: Keeping you well secured together.

Your harness has a number of small screws and nuts of the best things you can do it to keep you secured up right. If a screw comes out, the weight of the equipment can pull the wires loose, putting your air out of action.

TM 11-4865-2-49-15P (Nov 61) gives you screw, machine, PIN 1109-609-4737, and Washer, nut, PIN 1118-209-0791, to hold the equipment in place.

You'll want to check the screws at least daily as they won't slip across you.

Naturally, you want to keep the headband and equipment clean, using only

a clean, dry, lint-free cloth. Gasoline, grease or oil will rot the rubber . . . and water will damage the microphone.

The contents should be clean, with no dirt in the holes.



The tape should be snug . . . and have no dirt or small holes in the strip.

If your radio harness doesn't snap fairly into place, call for a replacement. Do the same thing if the seal around the microphone cover is broken.

Just one final thing more. All wiring should be free of cracks or breaks. Sound me for the equipment if your harness isn't up to snuff.

~~CHECK THE M&C~~

So your radio set cooks out. Or, an electronic component of your mobile system flips.

It can happen.

Being a pretty good organizational equipment guy figure you can fix it yourself. And, you probably could . . .



Can you find yourself backed by the Maintenance Administration Chain published in your equipment's TM. It says this is a job for somebody higher up.

So you mention something like "what

does-the-guy-who-wears-the-M&C-know-about-it?"

Well, maybe he knows that most guys in your vehicle level don't have the know-how to do the job without running the risk of wrecking the equipment (and for themselves).

Maybe he knows that you don't have the tools to do the job properly and safely even if you do have the know-how.

But, there's one thing he knows for sure—there's not much room for trial and error when working with some equipment, especially electronics. One wrong turn and . . . *plf!* . . . up goes your equipment.

It boils down to this . . . the good equipment knows when he doesn't know . . . and he doesn't hesitate to say "I'll say that, M&C".

WHERE'D THEY GO?



Both powered by Change 1 on TM 11-1804-200-1 (P for telephone TS-24 series) is located the TS-24 transfer and Generator GEN-24, GEN-24-A, B from the list of items making up an expedible equipment."

The two items were deleted because they're permanently attached to the telephone. For one supposed to be, at least. So, they shouldn't have been on the list to start with.

A LITTLE HOLE'LL DO IT

The magnets in your generator or PU 280-1 (AC) may or may have a drain hole in it.

If it hasn't, you could be in for some mighty nasty trouble caused by water condensing inside . . . and then refusing to disappear on its own accord.

To give yourself a fighting chance with this trouble, take off the magnets cover and drill a $\frac{1}{8}$ "-in hole in the magnets like so:



EASY ON THE DRAW

Free and easy on the draw.

Might hear that slogan in mind any time you're working the cars with your AN/URC-11.

Leave just a tiny bit of draw current in big trucks from the 14-volt truck's electrical system. Things get hot and burn enough sometimes to build up a chemical overload in the T. FANUCO 10 connector... especially in warm or hot weather.

It's usually the result of another hot wire and relay-type traffic at the same time. (Can't be helped sometimes, of course. Business is business.)



But let's say your connector is putting out only for the relay-type. No rules for the moment. You cut over the draw on the system by flaking the REVERSE SELECTOR switch to the CV position.

And by using the draw—you also keep the connector temperature down where it belongs.

ANTENNA PROTECTION



The antenna for your AN/URC-11 radio is missing something? Like paint, maybe? Could be.

If your antenna is not protected with OGP paint or gray chrome finish, try this.

Push the telescoping antenna element all the way in and assemble the antenna for installation.

Mask all the electrical and grounding connections... real good.

Now spray all bare aluminum with a clear, colorless lacquer.

What you need is Lacquer, acrylic resin, full gloss, five-minute drying time, colorless. Make purchased one. Rayline 1983 is good, ESN 8810-515-2487 (Eng), Whew!

PUT UP JOB



Put your arm up!

Up where!

Up in the air... where that!

Talkin' about the remaining arm in the battery compartment of your AMI PRC-4 radio set. The arm that holds the battery plug snug into the BA-1294 battery is popped into position.

It sort of flaps around loose until the battery is installed. And you allow that arm to be pushed all the way up and over—until it sticks out close to the PUSH-TO-TALK micro-switch.

So what happens in this:

When you put in a battery, you naturally have to push the socket-end of the battery against the retaining disc before you can drop the battery into position.

And as you shove back on the retaining disc—the retaining arm also is carried back since it's part of the same assembly.

Causes the trouble.

If the arm is leaning over backward during this installing process, it will be pushed into the micro-switch. Chances are good it will crush the plastic—and that means no PUSH-TO-TALK action.

All because the arm was sticking out—when it should have been sticking up.

So that's it. Any time you're putting a battery into your PRC-4, take at least one second to make sure the retaining arm is pointing up before pushing against the retaining disc.

That'll spare the switch and keep your "P" in action.



ARM IS
PART OF
DISC AND
MOVES WITH
IT...



ARM POINTS
UP

PERK UP

With or without.

It makes a difference.

Especially, take your "Perk-U" handleable.



If she's equipped with an H-10/PT handle, then the whole assembly is known as an H-10/PC-4 kebab set.

But if you're handle' out with an H-10/PC-4 handle-assembly by itself, then, strictly speaking, you don't have a PC-4. It's just an H-10. Period.

Either way, of course, you can go on the air. Having the handle simply makes things a bit easier.

Confusion could set in, though, when it comes time to pull inventory or doing an equipment count. Check your property book and check your hand receipts. That way you're sure of what you have and what you're getting.

Just as with any

H-10/PC-4 sets for H-10/PC-4 with
H-10/PT handle

FOR ISS-14-PCB

H-10/PC-4 handle-assembly

FOR ISS-14-PCB



You'll note the PC-4 sets are as similar as possible. Only the last digits are different.

ONE-WAY STREET



That's where you may feel yourself when you fold the seven sections of the 10-foot-long whip antenna of your AN/PWC-9-10 radio set.

And, when you try to go against traffic—by wanting to fold from the bottom—you'll almost sure to run smack into trouble.

Working from the bottom, your folding job will go just slow and steady until you get to the last section or two. Then you feel it hard to pull the wire end of one section from the female end of the next because you're putting unnecessary strain on the antenna post, nylon covered cable inside the antenna. The same goes for the spring in the base of the antenna.



To do a neat, quick folding job, try this:

Starting from the top of the antenna, pull the first section out just far enough to clear the second one. Fold it back against the second section.



Keep top end of section on level.

And, keep the middle of the 10' bundle when it comes time to set up the antenna again. Shake the antenna by the base and throw it out like a fisherman casting his line. As you throw, let go of all the sections except the base of the antenna.



With the help of a little whip action—and some practice—you should be able to straighten out the whole antenna in one throw. But if one or two sections don't fall into place, it only takes a second or two done down by whipping the antenna again or by pulling the final sections out by hand.

NO MORE SHAFT PITTING

When you're got something slipping, assembly and disassembly aren't something that doesn't leave room for some baggage, right?



Take the shafts of the linear actuators on the rollers of your *AM-1000*—4 or 44 roller set, for example. They fit these cylinders and coasters fine, which means there's no room for dust or grit to take a free ride. When the dust is pulled from the cylinders by the shafts, it digs right in... and your actuator and up all shaft-pitted.

To head off this kind of trouble all you need is a clean cloth with a little oil on it. Wipe both shafts before you separate them to get rid of any dust. The oil will help protect you from rust. For assembly, the oil will also catch and hold dust, so you want to make with the cloth before each operation.

SWEATING IT OUT



The shaft's wrong, too hot or too cold!

Your *AM-1000*—4 or —27 roller set can't get set if shaft's cold—and at the right time the shaft do you make good if the gear overloaded.

And it's that overheating that has to be watched. Which is why there're two motors inside the rollers—transmission chains that do nothing but move air around to keep the temperature just right.

Even the best builds up heat's it should be the gear of the chain—near the motor that runs in when the laser

and laser creates a certain degree.

Things get so hot, however, if fact, that a new, stronger, heavier-duty motor is the only way to cool things off.

To wipe away the excess, Reed, the Signal Corps is plucking out the person motor and replacing it with a more powerful version. It goes under the name, shaft, and serial number set.

Reed, Reed Supply, 115 East 10th Street, New York City, 10011, Tel. 212-487-1344 (24).

Also part of the deal is Reed's set, electrical control, Reed Master Co. No. 11884, 1224 15th St. N.W., (404).

DANGER

MIS1 DRIVE SHAFTS



If you get a good load on your shoulders and you want to keep it there—check the propeller shafts on your MIS1 hi-tac truck.

A drive wheel drive shaft installed wrong can look when you make a sharp turn. If you're going fast the vehicle can rattle over and you're likely to break your neck.

For free neck insurance, check your two drive wheel drive shafts and yoke assemblies.

The drive shaft has a spline on one end which fits into the yoke. If this yoke is attached to the differential, you get no worries.

But if the yoke (spline) is the yoke end attached to the flange which drives the wheel hub, yep! load and clear for your company mechanic and he will take it from there.

(This goes for the two propeller drive shafts as the rear as well as the

front as the front has as the rear it's not so dangerous.)

It's easy to tell which is the yoke end of the yoke-drive shaft combination. The yoke is thicker and it has a sleeve that fits over the spline end of the drive shaft.

If the thick part and the sleeve are close to the differential pressure all right, but if they are close to the wheel, the thing is assembled wrong—no more yeping.

It's your neck-on check is not a... yep.

If the shaft's wrong, get your company mechanic to put it together right like it shows in fig. 183, page 119, of TM 9-2310-210-20 (Jul 60). Also remind him to torque the U-bolts over evenly, in steps, to 21-28 pound-feet because a U-bolt that gets torqued unevenly won't last long.

JOE'S
DOPE

THE OLD
QUESTION:
SEEP
OR LEAK?

When does a SEEP become a leak ... and which is which ... and why?



ONCE there was a famous teacher who travelled from army post to army post giving advice to all who would listen ...



One day she came upon a group of soldiers.

**HOLD IT
MEN!**

she said.

WHAT'S THE
PROBLEM, MA'AM?

WE ARE JUST
FORWARDING UP FOOD
TODAY'S. **CALL!**

By this, they meant that they were preparing all sorts of arguments and "wharves"—to use in case they had to face rather-rising questions on the matter.

WHICH
DO YOU
WANT STAY
ON LEAK
OR SEEP?

Well, this threw them into another argument... for, they had always taken this business of leak for granted... indeed they discovered each man had his own way to determine a seep from a leak.



But mostly they said they watched for stains of lubricating fluid and...



By rule-of-thumb they would decide it's a leak and...

THAT'S A DEFECTIVE SEAL... REPLACE IT!

BUT I REPLACED IT LAST TIME WE INSPECTED!

Y' COULD BE WRONG... AND THERE'S A DAMNED AUTHORITY TO PROVE IT!

SHUT!



Joe's Dope Sheet

It's the end of "Replace 'em-or-fix-it" over seats that are "leaky" or tight. When you use the TR it is easy to use — Now everyone can always be right!

TR
TIGHTENING
RELEASE



SEEP

LEAK

GOOD SEAT PLAN

NEW SEAT PLAN

AND USE UP SOMETHING LIKE 10% OR MORE OF THE LUBRICATING FLUID BETWEEN SCHEDULED SERVICE'S*

**SEAT COULD BE DAMAGED...SEE YOUR TR*

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

IF YOU WANT TO DISPLAY THIS ADVERTISEMENT ON YOUR BULLETIN BOARD, SPIN, SCRAP, LIFE IT OUT AND POST IT UP.

FIRST

She said when the hubbub died down...

...**ALL SEALS USE THE OIL. THEY RETURN TO LUBRICATE THEMSELVES!**



SECOND

She added as they drew close

...**ALL SEALS UNDOUBTEDLY HAVE SOME SEepage!**



THIRD

She pointed out to the great crowd

...**YOU CAN'T ALWAYS DEPEND ON YOURSHE. OFTEN THIS LEADS TO ABRASION IN JUDGMENT AND TOO MUCH REPLACEMENT OF PERFECTLY GOOD SEALS!**



...**THEN WHAT'S THE ANSWER? ...WHAT'S OUR GOAL?**

THE QUESTION YOU MUST ASK YOURSELF IS: HOW MUCH FLUID IS LOST IN HOW MUCH TIME?



A **SEEP** becomes a **LEAK** when leaks can be seen dripping in the form of drops . . . or beads of oil.



PHONE IS **TB 9-255**
[IT MAY NOT BE YOUR
REFERENCE.]

OR you have a **LEAK** when excessive amounts of labor . . .

USUALLY ABOUT
10 PERCENT OF THE
AMOUNT CONTAINED IN THE
DEAR BOX ON HOLIDAYS!

. . . ARE **LOST** between sched-
uled labor services . . .



AAA...AND
PHONE IS **TB 9-255**
[IT MAY NOT BE MY
AUTHORITY FOR THIS.]

Well, yes, the next day when the inspectors came the CMI went so well...



...that the sergeant in charge received many many compliments...



...not the least of which was for the "uncanny" ability of his men to properly judge which was a leak and which was a soap. No mean feat I might add because of the wonderful saving in unnecessary replacement that resulted.



QUESTION AND ANSWER DEPARTMENT



PUB STORAGE

Dear Sgt. Dwyer,

Is it necessary to install the same publications rack on Engineer equipment which comes with compartments already built-in for storing operations and maintenance parts?

Sgt. E. M.

Dear Specialist E. M.,

Nope. There's no need to install the publications rack (PNS 7130-070-0010) on equipment with built-in compartments designed for this purpose.

Sgt. Dwyer

A LIGHT SUBJECT

Dear Sgt. Dwyer,

Supply Bulletin 1-189 (30 Mar 67) says that flashlight components will not be stocked in the Engineer supply system.

OK, but what's the story on electric hand lanterns? The catalogs contain no data on lantern parts, but some are available.

Sgt. P. E. D.

Dear Sergeant P. E. D.,

A steady question. You can look for lanterns to fall into the same classification as flashlights and for the spare parts listing for this type of item to be deleted from the catalogs.

It'd be a lot more economical for you to repair electric lanterns by remounted lantern than to stock and supply spare parts for these items.



Sgt. Dwyer

ARMOR VEST STORAGE

Dear Herb, Matt:

Can you tell us how to go about storing body armor vests at the organizational level? We can't seem to find anything on this in the guide.

LT W. J. M.

Dear Lieutenant W. J. M.,

You're right, Sir, the guide doesn't have anything on storage, but TM 9-21 (18 Jan 81) has a lot of info on cleaning and drying these vests—two steps that're important in the storage deal.

However, the first step is inspection. Eyeball each vest carefully for broken zippers, torn or damaged outer shell, dirty or mildewed webbing, punctured vinyl casing, damaged or missing hardware, chafe or strap fasteners that won't work and missing or badly corroded hardware. Get into any garments that need cleaning or repairing.



Like TM 9-21 (18) says, you brush and clean the outer cover to get rid of dirt and grit that could break the material. And brush and clean the slide fastener teeth to get rid of grit and other stuff that might foul 'em up.



To remove stains on the outer cover, scrub the stained area with a detergent

solution made by dissolving one tablespoon of spot remover (Spot remover, provide them . . . FM 5620-1-13 (25-1) . . . 1 B-2QM) in a gallon of water. Rinse with clear water, but be mighty careful to rinse gear from the armor insert. Then let the vest dry out good. But don't use heat.



Don't try to repair your vest. If it needs anything more than minor repair, send it in. Of course, in a tight spot you might be able to salvage some vests by cannibalizing replacements with good parts from otherwise damaged ones. The important thing, though, is to make sure each vest will give the best protection possible under the circumstances.

Keeping 'em clean and dry is the big trick during storage. First, clean the slide fasteners and flaps and fold the vests into compact, compact garments.



Then you can tie boards or canvas or open bins inside a day building or tent. Last, cover the outside joints with cloth or plastic sheet to keep out dirt, dust and other stuff.



In wintery areas, though, that you don't make them out of wood or heavy canvas where they might get wet—of even damp. Cover if any of the vents do get wet or soiled with you'll have to separate them from the others and use all over again on their inspection-cleaning-drying job.

GEAR LUBE

Dear Sgt. Down,

Here's my problem: I'd like a grease to lube the exposed gears of our arms and trucks. The only type we have is taken from a TM which says "Grease, Black, Heavy-duty, 30 wt., Type CM".

The only store here and post office is in SN 30-1-04-1 about the Navy at the only way to get the grease is from:

SFC J. J. D.



Dear Sgt. J. J. D.,

Wow, that's a tricky one. Sure deal. What you need to keep you and your Engineer friends happy is Lubricating Oil, Chain-Wire, Exposed-Gear, CW Type II. It comes in three grades depending on whether you intend it for cold, warm, or hot weather use. In most cases, you'll probably use the warm weather type.

Here's what you want:

NSN 93-00-000-000 Grade A, Cold Weather 15 lb. gal
 NSN 93-00-000-000 Grade B, Warm Weather 25 lb. gal
 NSN 93-00-000-000 Grade C, Hot Weather 25 lb. gal



They're QM items and you'll find them listed on page 43 in SN 30-1-04-1 (30-41).

Sgt. Down

SHOCKS vs. SHOCKERS



Dear Mac/Mac,

I'm a *hard man* from 'way back and I thought I knew a shock absorber from a marble. Now I'm worried.

The new F10's have pictures that look like marbles but the writing says they are shocks. Is this a new kind, and does the new girl's imagination see that?

Dear Privacy R. R.,

FVC R. R.

Nothing new and nothing to worry about.

Two kinds of shock absorbers are used on heavy tracked vehicles. One kind has spring-mounted wheels; the other kind filled.

The spring (friction shoe) type is generally called a friction absorber, but the TM's also call it a friction shock absorber . . . same difference.

The oil filled type is generally called a hydraulic shock absorber but some TM's just call it a shock absorber.

Both the spring type and the oil filled type are known as shock acting shock absorbers—confusing, isn't it?

You pull inspection on a friction shoe shock absorber. Sometimes I had an hour when you step your vehicle on a corner of if you wheel make it much worse you'd try your legs. If this type of shock absorber is working right it'll run **HOT . . . HOT . . . HOT**.

If the hydraulic type shock is working right it'll be just a little warmer than the ball after you've used some your tank.

So even, with any type shock absorbers, make like it's a hot man and spin on it like man if it's too hot to handle.

Only one other thing to remember, the spring type and the oil filled type are handles of shock absorbers. A spring type from one tracked vehicle, like say an M50 VTR, won't work right on an M50 tank. They are both the same type but the spring weights are different and they go under different FVC's.

Just between they're the same size and shape doesn't mean they are the same. Like a man or a cigarette, it's what's inside 'em that counts. So always check your TM and use the shock absorber that it calls for.



THIS TOP IS MADE OF TWO TUBES THAT SURROUND THE PISTON ROD.

THE TOP HAS A SPRING THAT HELPS HOLD IT TOGETHER AND KEEPS THE OIL FROM LEAKING OUT.

TAKE A HEAP OF 'EM TO...

KEEP RUST ON THE RUN



There's no doubt it takes a lot of 'EM to keep the Army's heavy ships—ships with rear and rearward lights!—you every inch of the way.

Take your light LCM-6, medium LCM-8, and heavy LCU-1000 landing craft. They'll move troops and equipment to the beach without a hitch if you give 'em a little attention.

Causes the problem with landing craft is that you may not see 'em regular-like. Well, they must have the care called for in the operator and organizational maintenance manuals, looked up by TM 11-507 as "Floating Craft Preventive Maintenance," and TM 11-508, "Landing Craft Operator's Handbook."

GO GET 'EM TO THE BEACH

But you don't want to go overboard maintenance lighting 'em by using air gauges over everything in sight.

Take the luber fittings on the ramp cables, for example. On the cable assembly points along the hull. Some types have been known to point 'em so they're sealed tight, leaving no way to get to the end of these cable grease fittings.



If they all-goes wouldn't want to go in for a landing and have the ramp hang up at the beach, so it takes a squad of troops jumping on it to bring it all the way down. But that's what can happen to the ramp if these cables don't get greased, proper-like.

You don't want to use a grease brush on the rubber covering your right rear wheel hub on the wheel boss, either. Cause pointing over it will crack the rubber just as should when the point dies—really let in the damp salt air... maybe foul up your rear wheel for real!

USE CARE OF COVER

There's just no help in guarding a ship against damp salt air. So you want to be sure all your electrical jack covers



are always put back on when you take them off. This Daini Massey won't be able to show a corrosion patch inside the cover. The same thing goes for all other covers on board—they want to be covering what they're supposed to cover.

But you don't want to use too much muscle power on a cover so you have a job guide to call upon, either.

Take the auxiliary steering cover plug on your ECM-6. Sometimes this plug will be loose after . . . and putting a hammer and chisel on the ferris ring will only bugger it. You want to work with the plug wrench in your main-



line general mechanic's tool kit so you won't lose the plug. Then, to keep it from getting stuck over time, try smearing some grease on the threads of the cover plug before you put it back in . . . works best.

USE THE RIGHT TOOLS

There's nothing worse than using the wrong tool to do a job—and that's for sure! Just like using a hammer and chisel



on the cover mounting spacer wrench slot of the deck stuffing box on your ECM-6, it may seem like the easy way out at the time, but you could damage some mighty expensive equipment. Using the tool made for this job'll not only save your equipment—it just might keep you out of jail, too.

ARMY AIRCRAFT

A G.P. AIR MAN ...

MAKES 'EM HARDER TO LOSE

Does it be pretty annoying when your Stinson 110-110 ground handling wheel won't stay in the lowered position—your gear clerk says no more locking pins (P/N 1148-154-2473, P/N 47-808-808-11) in stock—and you were due at the other end of the ramp two minutes ago.



Next time you keep reminding your ground crew those pins will not be lost, but they're only human. In the new free thing is coming up with a chain and clip attachment to make sure the locking pin and the wheel axle don't part company, at any time.

And that's exactly what TC is doing about the situation. A new pin (P/N 4028-807-80-02, P/N 1148-154-1088-11),

complete with clip and chain, is slated for TM 11-71 20-204-204 to replace the original one . . . and is available in the supply system right now.

The clip attaches to the wheel axle and the 1/2-inch chain connects the clip to the locking pin. So if the pin is dropped while changing the wheel's position, the pin just dangles there until you lock the wheel in position again.

NEW PART OR OLD PART ...

HANDLE IT WITH CARE



The way some maintenance types take care of their parts or assemblies once they've pulled them off their equipment, you'd think they never heard of the word "replaceable." But just 'cause they're finished with that part, doesn't mean the Army feels the same way about it.

Could be that replacement part you're so glad to have, your hands-on man was treated to as a "replaceable item" just a short time ago. And you have to only because some other maintenance troop treated it with the same care as a new part.

If he'd handled it like a piece of junk, don't probably have it would've ended up. And then you might be sitting with an RDP on your hands because you best part was available in the supply system when you needed it.

If you think this kinda way's been handled around enough already, here's a couple of "careless hands at work" on an O-70-11 (Red Dog) (L-19) engine



A BURNED
OIL TANK

IF THIS
NEW PART
HANDLED
BY...

learned her overhaul. It took a lot more than overhauling by the time it got where it was going—namely, new-looking manifold pipes, ignition cables, oil dipstick and oil pump. All because somebody didn't bother to mount the engine to the machine correctly.

And a camp who'd been gunk and burned up hardware scattered around the bottom of the same machine probably wouldn't give a hoot about corrosion protection, either.

Besides the instructions on the machine's manual, there're some pretty detailed rules in TM 58-158 on "Pre-creation, Packaging and Packing of Military Supplies and Equipment" that



could've been followed. But their instructions are only as good as the man who reads 'em.

All it takes to correct a normally measurable item like an economically interchangeable part is — maintenance.

RIGHT FIRES UPPER...OR!!!



The Bird Dog (2-15) may fire all upper plugs—or it may not!

No—the right mag fires your right upper and left lower...or what's on third base!

You get the same on what mag fires which plug right-off, by checking your TM 58-158:203-20 (15 Apr 61) maintenance manual. It's in Chapter 3, Section III, page 3-19, paragraph 3-64.

Which means the ignition hook-up pump on your G-470-01 and G-470-01 engines in the original TM 1-28-8478-1 and TM 1-11-FN71-3-5, is out the window!

So instead of the right mag firing all upper plugs and the left mag firing all

lower plugs (like it was in the old manual), the new setup goes like this.

The left mag fires the lower right and upper left spark plugs—and the right mag fires the upper right and lower left.

WATCH YOUR THROAT HOSEING

The reason for the switch is so that you'll get a more uniform drop in RPM when you check the maps. As it's easier to identify a loose plug during trouble shooting. The book *THE AUTO 23-5-1 (24 May 84)*, Chapter 6, pages 58-59, has three more easy tips on the ignition switch.



REMOVE
THIS
WIRE



... NOW LEFT
WIRE FIRST—
REMOVE WIRE
AND UPPER LEFT
SPARK PLUG

Like, *Forwards*, the US *Engine* says the O-470-11 engine ignition leads are changed so they will better distribute the engine gas to overhead ... in fact so good!

Meanwhile, if you have a spark plug 'coughed' up a stream with uneven map change maybe even leading out the plug before the 1200-hour overhaul then with 'normal' give your leads a quick check.

There's a lot of work to check the leads so give with your 20 that it has got bogged down in a case of trouble shooting. The replacing leads, magnetos, maybe even the carburetor.

After all, one of the three maps is 'control' say stick hand is to be sure you have all the right parts ... and they're connected on the right places.

MADE-UP FOR ENGINE THREADS CAN SAVE YOU A ...

LEAKY BEAVER

When it comes to draining a female water with a male plug you want to go easy—or you may end up playing 'water' in your hand with a bad plug.

Take the carburetor lead service on your *Beaver* (L-28A) — a every periodic inspection you give it the big eye for clearance and damage like it sees in the periodic inspection part of *TBI* (L-28A) 117 Jan 82, on page 21.



WATCH YOUR THROAT HOSEING

Taking the stream out is no problem, but putting it back can get real hairy. The water plug is made of brass and you know how soft that material is. Those threads

and back on you right quick if you cross-thread the plug threads with the threads in the magnesium housing . . . and give you a hard look for sure.

It's not hard to see how cross-threading can get started since the screen comes in the quite a lot of materials for inspection.

ON THE WAY OUT—



When you put your writer back, rotate the plug counter-clockwise, say half-turns or so, to make sure you've got a good flat starting point at the first thread. Then slowly start threading the plug into the carburetor housing in the usual clockwise direction. That should do the trick.

FORGET THE '90—

When the plug is snug against the gasket and housing, torque it to 110-120 inch-pounds—or more! This is a special torque just for this plug, so it's given right in your TM 1-11-20A-2 (28 Nov 55) maintenance manual . . . page 106, para 5-101.

If you use torque, you can crush the writer's gasket and strip either your writer's plug threads or the threads in the carburetor. It doesn't matter much which one gets "ruined" you get the same result—a leaky carburetor. Happens again often.

Even so, you may find a later type writer, P/W 16577 (classified as the anti-plug model) has optional P/W 1 16589 (classified as the plug model), bronze carburetors, breaks the threads on some housings first, then getting banged up from on these materials, and new threads

have to be tapped further inside the housing when the carburetor is over-hauled. So you need a new writer and gasket to fit the new threads.

The same careful threading and torque rules on the new writer will go for . . . only more so. For example, if you over-torque this writer, you may not strip any threads, but you'll crush the writer into a pencil.



So-o-o . . . if you want to keep your head from being described as replacement of a leaky carburetor, remember "easy does it" with that carburetor that writer. And it's good maintenance to use a new gasket, or, at least, inspect the old one before you put the writer back together.

DOES YOUR CHOPPER HAVE AN FBI ...

DON'T BUST THE BUBBLE!



A leak in a chopper's bubble—no, it's a hole in a chopper's bag—by more than one-tenthousandth of an inch can be downright troublesome!

That's why preventive maintenance is a must on your Bell H-1H, Kaman H-150 and Schweizer H-300C helicopters. They can run a much ragged 'pluggin' hole.

Take the area where your chopper is parked, a good old-fashioned broom is your best bet for keeping the ground free of objects that might cause a puncture in a bag ... and loss of air.

BUST BAG!

Having the right air pressure in your bags is mighty important. That's why you must give those hoses a daily pressure check. You can use any suitable checking gage. The important thing is that each compartment in the bag should be inflated to the PSI pressure given in your Bell's maintenance manual.

ONLY
CHECKED
ON PRESSURE
AT
TEMPERATURE
TO
MAINTAIN
SAFETY



Temperature and altitude changes can increase those pressures to the danger point though, so you want to check



TEMPERATURE
AND ALTITUDE

your manual for pressure info. Keep in mind that if your hoses don't have a pressure relief valve, you don't want the pressure to build up enough over the bag over time.



When you give your bags the big eye, look for cuts or unusual wear or frayed fabric. It's a good idea to give your old patches the once-over also, to see that they're holding their own. And if you come across one embedded in the new joint, be sure you break it out. If you don't, that'll be one sure way to pop the fabric ... and get you to playin' 'Dag-bag' with a magnifying glass looking for a leak later on.

HEATING COILS

"Cause if your bags get the regular attention they need they won't get no leaks! Like a patch-work quilt. That's why cleaning is mighty important.



When you see
holes in the
filter—clean
it!

This means if oil or grease is spilled on the bags it should be cleaned off, pronto. You can use dry cleaning solvent, Specification P-3000, P300-0800-200-0811, to do the job. The only thing is, after you use the solvent, be sure you follow up right away by washing the soiled area with soapy water.

You can use plain water and non-alkaline soap on your hoses after a minute. But if you sprayer in salt water it's a good idea to use lubricant water and soap. Washing the hoses is especially important if your bird comes in salt water. It can contaminate your hoses for real.

LEAKS

"When it comes to ruggles" a leak you're dealing with a hole smaller than the one the boy found in the ditty and plugged with his finger. Any big hole is a job for your rigging.

But you can plug small leaks with repair kit, P300-3000-770-0000? ... check your JSP for it. All the instructions you need to put the patch on come right with the kit.

One more thing... if you have trouble locating the leak be sure to check your inflation valve to be sure the valve

WASH EVERY PART OF
BAGS
WITH WATER
LATHER



Circle your hoses do big work get double on the hoses. "Cause more than just the hoses touch the water—the whole bottom of your bird runs in it.

So if your blow-up is so close to salt water, the hoses, landing gear and bottom part of the fuselage get the best treatment. Also, the wheel assemblies mean to be salt-water and the wheel bearings repacked with grease after each daily operation.

And if your bird has not over eight hours in salt water, you want to remove, disassemble and inspect the hoses. The same goes for the landing gear, and wheel and brake assemblies.

Another thing. Check inside the fuselage for water. If you find any you can remove it through your drain valves.

Check your choppers you'll find washing the bags will also help you detect punctures—just keep your eyes peeled for the tell-tale bubbles caused by leak.

BE UP

See that it stays in good condition, and the plug is covered down right.

Treats, it takes a heap of PSI to keep your hoses inflated...



A FINE JOB,
BE SURE YOU
BE THERE ON

... But it's a lot easier on the eyes to prevent a leak than it is to find and fix one.

HOSE HUNG HIGH?

Clunky?

If the hoses on your new **NEW! Hot-Gear CE 15-AC/1000** generator hang too high in relation to the fan belt—your **Hot-Gear** is about to have a few issues unless you make use of these changes . . .

1. Change the belt, if the old one is stretched or frayed.

2. Loosen the hose clamps, and back the hose off as far as you can without losing the connection, then re-tighten the clamps.

3. If the belt still rubs against the hose, compensate the length of the hose by moving the end of the bracket. Two more good right-angle cuts will solve the problem.

SHOTGUN WEDDING

You can marry a **Shotgun** with a **NEW! generator**, **1500 4311-770-0001**, with an **American Air Filter 400,000**. **BTU** heater, **1500 4320-000-7511**—but you'd better prepare the house for the wedding before it's time for these two to get together.

First off, the 14-to-15 terminal eyes on the heater's four-wire electrical cable are too small to slide over the 14-to-15 legs on the generator's control board.

So you have to strip off about 1/4 inch, and replace 'em with bigger eyes.

Next, you want to tag each wire so be sure you get the right hookup between the heater motor and the generator. A wrong hookup would reverse the motor and ruin the heater's fuel pump.

Here's how you tag each wire, so there's no guess when it fits into its mating leg:



You're right—there's a stinking mark missing on some of the new 410W and 600W Cummins Model H-5-G generators.

This mark belongs in the box on the upper left end of the gear case cover. When it's lined up with a matching mark on the accessory drive pulley, your engine is in position to start adjusting the intake and valve timing on the number one cylinder.

Take a look-see, first time you open the left side doors, to be sure the mark is there when you need it for the adjuster job.

If there's no mark in that box, you're forced to do some test and check chiseling—the old



WHIP THAT BOUNCE OF ENGINEER REPAIR PARTS REQUISITIONS

Choosing parts for Engineer equipment, however Engineer items—usually more costly of components and assemblies.

With a rule like this, it often is almost a sure bet that your requisition won't be used to make right before you

a man can get whipsawed several ways without really saying, "any equipment—costs in several brands, models and parts, as well as a variety

of performance with his requisitions they don't become too hard up—thoughly for equipment. As it should's happen, you, have to quickly check on some wrongs you can find the requisition—



WRONG MATERIAL

Right?



Before the title page on your 100-1 and 100-2, 1 and 2, or 100 supply manual matches the 10 photos on your copy to all details of make, model, serial number, etc., you're looking on the wrong data. Check the paragraphs 210-4 and 210-5 to make sure that you have the latest publication.

WRONG COMPONENT



When you're requisitioning equipment items with numbers are made of component—the engine, motor, fuel-injector—your operators to identify the component, then match it up your part manual.

WRONG DESCRIPTION



WRONG DESCRIPTION: 100-1 AND 100-2
WRONG DESCRIPTION: 100-1 AND 100-2

Engine items have many standard features particularized with other similar items that the length, thread, mounting holes. When you check out standard catalogs for the size, use an engine feature your way will bring back the wrong part.

WRONG SOURCE



Be especially in your supply manual, you which best source can fill your order. Using this rule the first time can save your egg a lot of trouble, and shorten the deadline time on your requisition.

WRONG QUANTITY



When the accurate part "10" shows on your requisition, you write "100" if the part can be replaced, replaced by fabrication, or substituted. "10" means you require that many of the part, as a requisition line is how collected writing to parts 10.

BLANKET BLANK BLADES!!

If your supply people give you a new blade that's too long for your rig—hold the phone.

Chances are you've got the new military standard cutting edge that replaces those ultra-wide commercial blades you've been using.

Those military standard blades, marked as PFC 1014, 1015-1115, replace the following PFC's when supplies run out—

PFC 1014 is a 1014 and is Cut 1014's twin

PFC 1015-1017 is a 1015 and is Cut 1015's twin

1018-1020-1021 are 1016's, 1022-1023's and is the 1016's twin

The military standard blade comes only in the 17 1/2 inch length—which is OK for the PFC 1014 and 1015—but has to be held one hole on the Cut 1014 model and the PFC 1015.

In any case, you want to hold the old blade as a pattern for checking the hole hole lineup and overall length.

You can lay the new blade on a bench, then center the old one over it and drop all the holes into their holes—so be sure there's no wobble. Bring up the new blade when you finish it.



Also, while you have the hole holes lined up, you can mark the new blade where you have to cut off any extra length.

Right then is the time, too, to get an record of the new blade's manufacturing lot, any way. If the hole holes don't line up, for one thing, you want to fill out a DA Form 2407, Maintenance Request, with a full ER report and file it off before sundown the same day.

CAT 12 GENERATOR DRIVE

If the generator in your Cat 12 grader with a model D-5H engine won't work because the drive gear and idler gear are worn or missing, stop before their time, all is not lost.

Now there's another longer-lasting gear pairing in the supply system, and it's yours for the asking.

These silver gears last longer because they run a lot slower—they still run enough to keep the batteries charged.

Any time your Cat 12 generator gears lose their grip fast, get your stop-part and replace your hand.

Here's the new gear . . . you'll need one of each . . .



Since the slower drive is longer than the original setup, it calls for a new gear housing and gears.

You can get the parts through your regular Equipment repair parts supply channel.

A GOOD HAUL

Many well-meaning operator operators, when screening cargo to the rear, are in the habit of keeping the tailgate forward and the spars up. This makes the big explosion and rough to handle—especially when you're bouncing over bumpy ground.

Experienced operators know that keeping the tailgate back and the spars down gives them a no-nonsense ride, makes for easier handling, and cuts down the chance of slipping over while highballing along tooth-jarring haul roads.



GET SOME FREE PLAY



A little free play never hurts anyone. Matter of fact, sometimes it's good to have some play—or a little free movement.

Like on your Hyster-Walker Model 40 road grader. You should have about three inches of free movement from the time you foot like the clutch pedal until the clutch begins to disengage. The absolute minimum is two inches.

You measure the amount of free play from the bottom of the floor plate to the center of the clutch pedal cup.

Now, with normal usage, the clutch bearings will wear. And, as the bearings start to wear, you lose some of your free play. The clutch should be adjusted when the play is cut down to two inches. With less than two inches of free movement, the clutch'll mean slipping and'll make for extra wear and tear on your rig.

ADJUSTING THE CHOCK

To adjust the chock, first loosen the locking nuts. Then, turn the yoke to lengthen or shorten the chock link to get the movement you want. Once you've made the adjustment and have the right chock pedal movement, all you have to do is tighten the locking nuts. And, your grader's ready for work.



WHOA, NAPOLEON!



Couple of things you never ever do in the world of a Hobas' Warner D grades. Because why?

Because this beast is built to handle a shift different from most rigs. First and foremost—**YOU NEVER SHIFT TRANSMISSION GEAR WHILE THE ENGINE IS MOVING.**

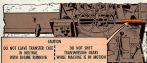
You run the Hobas' Warner from start to stop in one gear at a time. When you're got to shift, you keep your clutch-pedal's' paws away from that shift which would you bring the rig to a halt, dead stop.

And, you—

NEVER USE THE ENGINE WITH THE TRANSDRIVE DRIVE IN MOTION.

Like the TM tells you, the upper transfer shaft gets on later while this drive is in motion. So you shift in—one way or the other—when the engine is idling.

To be sure **NOBODY** misses this message, James spot this warning plate on your Hobas' Warner's dash, ahead ahead of those shift cables—



A CRUSHING BLOW



Everything went smooth as a baby's cheek.

You didn't even take a twist going through your air-laid procedure routine your Mike-Harvest launcher.

You had you hadn't remembered what is kept in paragraph 4 (11-11) on page 178-4.1 of change 4 in TM 9-1480-280-20. You know . . . make sure you secure the safety device assemblies before you service the launcher.



Now you go to replace the launcher rack assembly (photos) when you spot the four safety device assemblies on the revision extension. **Trouble** — in big black letters. The brackets have been creamed-like maybe somebody with a slighthammer on 'em. And you can't figure it out.



If you don't leave the assemblies up and out of the way like this, the cylinders will make unnecessary use of them. All's you need is some string.

GET ON THE NEW PUBLICATIONS BANDWAGON



Now that this year's annual and regular new-pub-lications distribution of your new pub is here, DA G-100-61 (14 Dec 50) will tell all about it.

It means that all new publications dealing with your system—TM's, TR's, SM's, SR's, MWO's and LO's—will be delivered right to your organization.

It also means you'll get the pubs you need—when you need them.

And you'll be kept up to snuff automatically on all changes and revisions and new publications just as soon as they're put into print.

There's one major word you gotta watch to go with this job-propelled pub program. All you have to do is make sure DA Form 12-12, "Regulations For Initial Distribution of Publications and Blank Forms", is filled out properly—and properly—and sent to the AG Publications people in St. Louis. The full address is on the form.

DA Form 12-12 is a five-section form. But, aside from the first page which spells out the purpose and instructions, Sections I, II and V are the only parts you make and submit guys here to fill out.

The main thing to remember is that DA Form 12-12 lets you order in advance — by category and quantity — all the pubs dealing with your system which may be published.

You don't have to worry about the pub numbering system or picking out publications for certain pieces of equipment.

All you do is tell St. Louis how many copies of a pub (changes, revisions and new pubs) you want—dealing with a certain category—and the job's done.

For example . . . take the Ground Handling, Support and Service Equipment category in Section II. If your CO decides he wants 3 TM's, 4 TR's, 4 Type 4 SM's and three copies of all SR's, TR's, MWO's and LO's dealing with any new



piece of ground handling equipment—all you do is fill out that category—like so.

Category	1	2	3	4	5	6	7	8	9	10
1. Ground handling equipment										
2. Ground support equipment										
3. Ground support equipment (GSE)										
4. Ground support equipment (GSE)										
5. Ground support equipment (GSE)										
6. Ground support equipment (GSE)										
7. Ground support equipment (GSE)										
8. Ground support equipment (GSE)										
9. Ground support equipment (GSE)										
10. Ground support equipment (GSE)										

Complete all the categories that deal with your response systems this way, and every time something new hits the field you'll get all the jobs on the new equipment economically.

Paragraph 6 of the instructions makes it real clear that it's up to you to keep St. Louis posted on all changes and revisions on your job demands—we give a periodic look-see on your job requirements.

Here're a couple of more things to bear in mind when you fill out—no change—the DA Form 12-12.



1. A job publication library is one of the best to buy and better practice maintenance.
2. The cost of a manual is, perchance—compared to the cost of the equipment or the penalty for not keeping it contact ready at all times.
3. Because you are expected to refer to many copies of each job or manual, it isn't well paid just enough to replace the ones you wear out and to take out of our sights.



To order as many jobs as you actually need—if you need more than one and can't get handbook you listed or give your demands enough thought, it's your duty. That's nobody to pass the buck on.

It's better to have an extra job hanging around than paying an armed guard over the department one that all hands have to use.

Once you've established a DA Form 12-53 account at St. Louis you can get replacement copies of any job by filling out a DA Form 17. The DA Form 17 goes direct to the Publications Center in St. Louis—it does not go to the job office on your post.

Replacements apply only to jobs that you've ordered in your initial DA Form 12-12. You're got to list St. Louis with a change on the first form or—if it's a one-time descriptive fill a DA Form 17 with full justification for your special request.

Now, here's a model to help you show you fill out the SA form 12-22.

SA FORM 12-22 SALES TAX STATEMENT (To be filled out by the seller)	
Date of sale: _____ Seller's name: _____ Seller's address: _____ Seller's phone: _____	Buyer's name: _____ Buyer's address: _____ Buyer's phone: _____
Description of goods sold: _____ Quantity: _____ Unit price: _____ Total price: _____	Tax rate: _____ Tax amount: _____ Total amount: _____

DATE—Write your SA sales selling date.

TYPE OF PURCHASE—Buy, the first time check the initial box. After that a change or a rest box.

BUYER'S ADDRESS—If buying here, it looks will judge it, unless you have an established account with the SA seller.

YOUR SALES TAX—Your full and name, location, phone, SA number or level.

If you want detailed and unclassified jobs, place "D" in each box. If you want not into make into use "B" the type you want. Don't forget, if there's a difference of three or more copies between your classified and unclassified jobs demands—your jobs need to two separate SA form 12-22 to complete the sale.



Quantity	Unit Price	Total Price	Tax Rate	Tax Amount	Total Amount
1	100	100	10%	10	110
2	100	200	10%	20	220
3	100	300	10%	30	330
4	100	400	10%	40	440
5	100	500	10%	50	550
6	100	600	10%	60	660
7	100	700	10%	70	770
8	100	800	10%	80	880
9	100	900	10%	90	990
10	100	1000	10%	100	1100

Place "D" in your middle option. If you have two or more similar requests, place an "X" in each of quantity of jobs you want in the same. If quantity is different, make out separate SA form 12-22 for each customer requirement.

Filler your requirements in each category as needed in above table.

The type B (B) is a check list of components of rate, bill and cards.



Two two black marks filed in by your editor.



This title file lists the many topics of published general articles and magazines dealing with your system you read.

This gets you acquainted together from before dealing with your system.



ON THE LEVEL

The warning is there in big black letters on the front end rear of your M201 and M201 A1 Nike missile transporters. See for yourself.



But . . . your support people have worked on most of a few transporters that've been "ripped" because they were moved with the lever in PUMP or LOCK, instead of RIDE. Once the wheels start to roll with the lever in a wrong position, the insides of the transporter's cylinders are headed for a beating.

And that's not all. The air pump valves are thrown out of shape, which means you won't be able to fill the transporter to level the bed.

Conrad Rodd's

BRIEFS



Keep 'em together

The toolers who use the #271 7-40-ram machine gun ... don't go substituting the best parts with the cheapest available hardware weapons. Before you get an #271, the carburetor is adjusted for that gun. When you put it on another weapon, it'll cause other changes at the same time—like uncontrolled fire, being able to fire with the safety on or not being able to fire—period.

#260 don't startin' up

Before you start your #260 tank for you you have the shift lever in P Park, breaks set, and the steering wheel centered straight ahead. Anytime the shift lever is in P Park or H Manual with the breaks not applied you're just one kick away from trouble. It's easy to turn the wheel off center and then the tank'll pivot in the direction the wheels turned. So—p-p-a, shift lever P Park, breaks set and wheel straight ahead ... and save the twisting for the dance floor.

#255 APG don't die

Having trouble getting the Home Performance engine cooling fan. For your #255 APG the fan is identified page 24 of TM 9-1000-200-204 (Oct 58) under FSN 3100-200-0444. Try ordering it under FSN 3100-450-4111, the new number. It might help to include the old number, too. There are plenty of fans at the depot.

Safety pin what you

Take only 15 minutes, but could mean a lifetime. Putting a safety pin and lanyard on the right carrying handle of your 24" rearing chisel. That is, there'll take up the right connector strap when you're using the "W" harness from standard equipment. The full strap's spelled out in trigger memo 10-1200-214 28, 1 Oct Jan 62.

#251 don't joints

Getting felled up trying to order a Socket Assembly, ball joint lower arm, for your #251. It's got number A28 224 2 under FSN 3100-470-1360 (81400136). The upper arm is FSN 3100-470-2076 (81420176), but you don't order it unless you can give a complete justification, on account of it is a non-supply item.

Automotive general mechanics

The General Mechanics Tool Kit is now the Automotive Mechanics Tool Kit. The latest GM is 18-4-2300-A/3 (27 Jan 62), which takes the place of 18-4-4-2100-A/2 (28 Aug 54).

Chain clamp

If you break a chain clamp on your #602 welder's W-type universal toolset, FSN 4910-173-0444, there's no need to get a whole new toolset. Just order the Clamp, snap, side chain, FSN 4910-173-0444. You'll find it listed in Change 4 (2 Feb 62) in TM 9-2120-211-364.

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

KEEP THE
"PREVENTIVE"
IN
PREVENTIVE
MAINTENANCE

PM