

Issue 209

PS

WFO Series
April

THE
PREVENTIVE
MAINTENANCE
MONTHLY



WE'VE
NOT
ESC,
BUT
I'M GREEN
TO GO!

GENERAL WOLFENBERG
SERIES

UNITED STATES ARMY
THE CHIEF OF STAFF

When I became the Chief of Staff of the Army, I outlined goals for the Army based on "The Four M's"—Mission, Motivation, Modernization, and Management. In this issue of P. S. Magazine, I want to emphasize Management.

Every soldier is a manager of equipment—not only of his personal gear but of his unit's equipment. The estimated cost of a million-dollar helicopter or a space-worthy million-dollar tank are the "realities" managers of these expensive items. And this is equally true of an artillery section chief or a jeep driver.

Know your equipment—know what it can and cannot do. Know how to keep it in excellent ready—and know where to go when you need help. Whenever you see the Army maintenance and supply system with complaint in your words, make it work for you.

Your equipment is essential to mission accomplishment. Learn to take care of it.



W. C. WESTMORELAND
General, United States Army
Chief of Staff



A MESSAGE
FROM THE
CHIEF
OF
STAFF



PS
P.S. MAGAZINE

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THE PREVIOUS EDITIONS OF THIS
ISSUE ARE JOHN BETH BAKER

IN THIS ISSUE

GENERAL
GENERAL BETH BAKER
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INFORMATION TO US

GENERAL BETH BAKER
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AN HONORARY UNIT

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ARMY'S MAJORITY OF US

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THE POWER OF US

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PS MAGAZINE
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FOR YOU

Legislative bills that have passed all 4 chambers of Congress and are now awaiting the President's signature.

THE FIGHTER

A guy like you in a fighting outfit seldom has to worry about a thing word like "logistics." There are several thousand military and civilian specialists spread from here to yon who do the logistics worrying for you.

But, sometimes it's a good idea for you to get a little whiff of big things when they happen in the Army's logistics business. Here is one of those times.

Top-level logists "whiffs" have been working on the supply business since business started, and they have come up with some big changes in the way things are managed. You may never hear about all of these because they are being made mainly in higher-level supply commands. The changes are aimed at giving you a fighting man—the equipment, repair parts and supplies you need when you need them.

Take DA Circular 708-11 (Nov 69), for example. It gives the word on what supply units, from Wash-ington all the way out to your own 1st unit, will do to make sure the items you need are supplied to you as fast as possible, and with the least cost to Uncle Sam.



One way this is being done is by chopping down the big stacks of equipment, parts and supplies in support units and depots, but they'll still give you quick supply of what you need by what's called "Inventory in motion." That means direct, continuing supply support from the source back to COMUS in wherever you're located.

Another way is speeding up handling of requisitions and shipping of the supplies. That means every supply unit will not in the long run have its own supply center in the middle, but transmission of supply data over communications networks is being made even faster. More shipments will come by air, like on the new C-130, improved jet.

Several special operations are "Go," and others are in the works. You may have heard of "Chased Loop" and "Fast Fix." There will be more.

All of this boils down to what General Abrams called a "Logistics Offensive" aimed at modernizing and streamlining the Army's logistics to match the modern soldier and his fighting outfit.

Keep an eye out for more to come. We're all aimed at giving equipment, repair parts and supplies to the most important man in the whole U.S. Army—YOU.

IN THE TIME OF A.M.

WORK LOAD REDUCER

TAMMS

THE MORE YOU KNOW ABOUT IT'S MORE TIME.



DA 2000-1

DA 2000-2

DA 2001

DA 2001-1

DA 2001

DA 2000-1

THE NEW REPORT

Business changed—from TAMMS to TAMMS. It's focused on record-keeping rates; it drops reporting on some equipment items altogether; and it makes some needed revisions to forms.

Best of all, it cuts down the equipment user's reporting workload.

That sums up to a T for TAMMS, due to the introduction of The Army Maintenance Management System, TM 38-750 (M 38c 05).

COVER STORY

Here's an overall wrap-up of major changes: DA Form 2000-1, the organizational maintenance form dropped by DA message and DA-GO 790-52, is removed out of service. It's now a dead-end tasker your OI won't be long seen filed in a log copy for a spell.

Five forms are revised and revised based on a better job. They are DA 2000 (log availability), DA 24 10-1 (aircraft component maintenance and condition), DA 24 10 (maintenance data), DA 2407 (inspectable or limited use log for calibrated items) and DA 2401 (maintenance rpt. All these revised forms have new data.



DA 2001

All 10 DA forms of the 71 series for warranty are deleted from TAMM. Expect long year records, though because new info is coming down the pike.

When equipment's in support on the end of a DA form 1000 report period (2265/114) of the report month, support's end via a breakdown of supply maintenance (2081/FORM).

DA 248

Time on DA 248, a new pencil-and-ink form. Otherwise, this breakdown will be sent to you in block 35 of DA 2407 when the equipment's returned. It's needed for your equipment's DA 241 and for DA 2486.

REPAIRS DA

DA Form 114 becomes a mini-work-book form in TAMM. Unlike the PM schedule for equipment, you'll copy down the equipment's organizational and support, instead of RCB/LNORM data, including data for commercial vehicles.

DA 114 IS STILL SO USEFUL FOR SUBJECT AND IS NO LONGER REQUIRED FOR ISSUES IN PM.

The abbreviated DA 1406 monthly machine report data are aligned with data for unit machine reports (AS 226-1 and AS 125-6). Dates are the 28th of March, June, September and December. (Note also interim monthly interim the data studied by unitlink in the TM's Appendix "C").



DA 214

TRAINING FOR

Transferring of maintenance action from DA Form 2484 to other forms is limited to organizational maintenance actions that require reports, and actions that require support maintenance requests.

An authorized DA manager and DA Civ 780-62, both organizational and support units use DA 2487 for required reports on maintenance actions.

Except for already and entered into file, responsible organizational maintenance actions are via link to application of MWO's, replacement of fuses and switches, vehicle original power packs, recording device calibration, locomotives, telegraphs and multi-motor vehicle tracks, replacement of gas or turbine tubes (2084M and above), and filing of equipment warranty claims when those apply. (Warranty claims are an added use of the form that applies to support level, too.) Don't forget to use the SCR (DA Form 2487) model designers about your defective gear.

DA 248

ACCURACY IS THE KEY TO DATA IN DA 2487 FORMS.

MORE DATA FOR USE

DA 110A

DA 110B

DA Form 2408-4 gives additional data on weapon identity, break steps and readings needed to comply with TM 9-1080-200-03 and TR 780-226.

For the main purpose, recording of gas and howlong tubes and breath mechanisms plus changes of their components, with equivalent full charge (EFC) records data, is required on DA 2408-3.

DOUBLE-DUTY FORM

This job for DA Form 2486-7 will be reporting equipment condition, gases and losses, but it'll also be used to report usage data (hours, miles and rounds) for tanks and similar and similar vehicles as designed in the TM's Appendix C. These reports are made quarterly (1 Feb, 1 May, 1 Aug and 1 Nov) for tanks and similar vehicles, and semi-annually (1 May and 1 Nov) for similar vehicles.



DA FORM 2406-1



FOR
DAILY...



AND
MONTHLY

Options are provided for use of DA Form 2406-1 at service schools and training centers (the equipment not reportable on DA FORM 2406) and at administrative support posts operated under AR 35-1 where equipment is dispatched by DA FORM 2406. At these posts this applies to both daily and monthly DA FORM 2406-1, if another means is used to record data normally entered on the monthly.

NAME CODE

Except for commercial vehicles, the old TAGED file numbers formerly used in TM 35-740 have been dropped. The equipment category codes (ECC, from Appendix C) plus file item numbers from SB 706-80 are used as a substitute for the former TM category file numbers on DA FORM 2406. On other records and reports, file number blocks may be left blank. It's optional with your CCs.



DA FORM 2406

The listing of equipment which requires log records (para 4-2F) is set up by ECC, except for commercial vehicles, which retain the 340000-series file numbers. Appendices B, C, D and E — as items required to be submitted — are set up in ECC sequence (again with the exception of commercial vehicles, which use in the 4-digit file number sequence).



NAME CODE

Appendix B, mailing addresses for forms, has an added section for ECR's as items not otherwise reportable. Addresses for these items can be identified by Federal stock classification (FSC) — the 4 left-hand digits of the item's FSC.

All collection data goes direct to US Army Materiology and Calibration Center.

The requirement for log records and data collection on medical equipment is eliminated — except for MFC records and reports.

Equipment failure codes, part name codes (Appendix A), and calibration codes (Chap. 6) are revised. In Appendix A, equipment category codes (ECC) are added to Table 2A.

NEW GUIDELINE

DA FORM 2407-10



In addition to guidelines for aircraft repairs, para 4-31 limits entry of faults on DA FORM 2407-10 for other equipment to those with a checked status symbol or one that's less serious. (Only red and red slash symbols for aircraft are allowed on this form.)

Units with tools and equipment that require calibration (TR 750-250) are required to submit initial DA FORM 2416's (Master Record Card) to their calibration support for all items that get periodic calibration. After that, these forms are kept for scheduling and updating by the calibration support unit, if automatic data service is available. If manual processing is necessary, the schedule may be on DA FORM 2416 or DD FORM 2416.

DA FORM 2416



NEW GUIDELINE

After initial submission of DA FORM 2416, the user may need DA FORM 2416 as a receipt for an item turned in for calibration. But DA FORM 2407 may be used as a receipt — instead of 2416.

In addition, using units are required to submit DA FORM 2416's to a new calibration support unit upon relocation or inactivation, or when new items that require calibration are received or those on hand are turned in.

DA FORM 2407 is still required for calibrated tools and equipment — but only to request maintenance repair actions and submit ECC's — not to request calibration.

NEW CHANGE

Cast a sharp eye on those equipment lists in para 4-31 and the appendices. There're loads of deletions and some new items added.

HERE'S A FORM-BY-FORM GUIDED TOUR ON OTHER POINTS TO LOOK FOR!

FORM

DA 2400 and DA 2401 No major changes.

DA 2402 Equipment for use to identify any duty station exhibits is added, with entry of "F" in Block 4, and the serial number of the exhibit form which the item was reported in Block 7. Also, also, an unreported form collected.

DA 2403 In addition to items you listed previously, equipment for testing is to be listed under category for items reported on DA 2402, with other special entries permitted on PW services, for items reported on DA 2404, for the equipment for use in 100 in the communication block which helps in making use of DA Form 2404. When equipment is included, in DA 2403 you also.

DA 2404 In addition to a collection of items which entries, there are changes in also in DA and DA 2400 use. It support entries is necessary to record a full address this by entry of "M" Form 2407 Cont.



DA 2405 Item selection points may be additional for this form about 200 capabilities also.

DA 2406 Printed changes are in equipment items, 27 plus 100 use instead of 2000. The number, collection date and name of 2000/2000 use (DA Form 2407 and DA 2408 is DA 2404, then is this form. Separate reports are required for each affiliation code that applies to equipment in the reporting unit.

DA 2407 Only minor changes are the requirement to use this form for experimental maintenance reporting and addition of additional also use for security chains, subject capable to identify and selected items there after such appropriate maintenance action for other related equipment. For there are many changes in Block 4, Block 5 and Block 6 which are required for the various uses of the form. Note: Typically report's use of Block 20 for items, 2000 use.

DA 2408 No major changes, but if a component is damaged then in subject, Block 20, 27 and 28 and entry 1 requires action.

DA 2409 Initial check items. It is a pre-estimated printed.



DA 2410 New items and by report to report 2000/2000 items to use. Equipment is a support of and subject period 2000 (April 24, 2000 report month — Block 4, Item, September or December).

DA 2408 Each symbol are listed in General, by code of reference: C — cost action, initial T — manual, also — data, and Special task — form.

DA 2408 Major changes in content of an equipment for entry of 2000/2000 use in column 1. One of the columns is a local option, this rule applies spelled out the specific types of code.

DA 2408 Damaged entries required at top, showing first line on which the damage is indicated. It should and serial number plus the length and number of readings. Also, call out DA 2408. It must have date of last day or month service rendered by the US. Long entries must be made by support, but may be carried forward by separate reports.

CHART



DA 2400



Changes will be made if an item is added for action of and possible for being used or use for an item that's supported or use that's covered or required but not reported at the time the item is recorded.

DA 2402

Printed change is addition of equipment for usage report (Item 4.0) on this form for damaged equipment, for transfer use, block 20/20 Block used for commercial entries for those exhibits that it gets the 2000. Item 20 2000/2000, if items are 20, for all equipment. Items 17 and 17 are 100. Item 20 is 100/20 for commercial change exhibits authorized for initial use by 2000 or 2000.

DA 2408

Changes include use of service numbers for local support in Block 4, commercial entries 2000 in 2000 in that order of priority in Block 7, and 2000 subcategory entry in Block 11 when this entry.

DA 2408

Equipment for entry of gas and location items and branch maintenance, with 27 month when changed is added.

DA 2408

No major change.

DA 2408-10 Transfer that value symbols in Block 14 are with a Block 7 will not be covered or changed even if made in error. Each value change will be explained in the next space after the symbol form.



DA 2408-14 Entry added on guidelines, or both to be transmitted on this form for equipment after this entry.

DA 2408-10, DA 2408-10, DA 2408-10, DA 2408-10 and DA 2408-10

No major changes on these charts and record equipment form.

DA 2409

Major change on this form is for entries in section 2000. Besides the same entry, apply here as in DA 2408-10. Also, use for items in Chapter 2.



DA 2409

No major change.

DA 2406, DA 2411 and DA Label 20

Form redesigned with separate heading.

Item 4-10 provides control rules on disposition of records upon disposition of the equipment. Item 4-11 contains disposal of any records no longer required for specific items. They're to be kept or dropped of the 20's option. There are to be for serial value in commercial support units for use.



BRING WITH

SMOKE TO CHARLIE
WITH

YOUR RADAR PARTNER



Franger is with PM and TLC. Turn a right and your **MINER** radar will stop you from taking you to work that it will let go Charlie by it.

There's the **MINER** of your PM partner:

1. **PM** is a gear set and used to move the cable, graphite or rock.

Labeling you can push you up to make the hole of more than one hole you can all the way back to depth for repair.



2. **CONDUIT** the end of your cable will be the **CE-1000/1000-1** remote cable.

The cable plug on the **CE-1000** will mate with the male receptacle on the **CE-1000** control cabinet if you don't



directly connect the cable ends. Then, when you push the cable connector into place, the pins in the plug and receptacle will be bent or broken.



So, look before you connect. The male end of the connector goes on the remote cable receptacle on the **CE-1000** remote extension.

You don't have the problem with the replacement, the **CE-1000**. With each cable, though, you gotta remember to leave the male plug straight in. No bending or whipping... otherwise, bent pins.

3. If you can't quite make your remote cable go (see pages 2-15 and 2-17 of **CE 2** or **TM 11-1040-208-11**, keep about bringing in the **E1700** without using groundwater ("pin") by adjusting it with a pair of wrenches.



Could be cracking around a repair job.

And, using an **MINER** on the **E1700** you can damage the pins. Checking it out is a job for your support... which does it with a wrenchman bridge.

Besides, in addition to burning out the point-to-point, chances are great that you'll also damage the **MINER**.



Check around those connections to the pins, too. They're easy to break or otherwise damage.



4. The early model, **MINER** type power supply **177-1110** uses low-voltage long wire. It should be that wire occasionally (if possible) to allow it to cool. Also, when you start down the wire, be

make sure that it shows the power supply, too. It has its own switch, and if you don't shut it off, the power supply keeps working.



5 When you're through using the jet after clearing it, raise the antenna drive AB-992 to a "000" reading and secure the drive pin lock. This prevents shearing the gear pins... a way-up repair job.



Lengthen antenna threads by working on the RT with the cover off.

6 Watch that C800 capacitor in Block 000. The voltage doesn't bleed off. Touch it, and you get burnt with 600 Volts.



7 TP 2 wire pins in Block 000 also in a hot box. Keep your finger away.



8 These drive down the carrier power and timing adjust knobs tighten up after they're used a while... but keep the side grips and pilots away.



A light dab on the threads with all-rose compound FOM 6058-606-7510 will fix the knobs more long again.

9 Finally, release the lock of the tri-pod legs before attempting to change leg positions. Remembering that prevents shearing off the 5 retaining rivets.



AIM YOUR RECEIVER THIS WAY



Can you think of anything sadder than not getting the word on your AM/FMOC-12 radio here that your unit's been made a candidate for the Freedom Bird?

It can happen . . . if you forget the following delay on the RT-240 and RT-224 receiver-transmitters:

As soon power is off when you put the RT in its mount. Otherwise, you burn the motor pins so badly that sometimes you get a GI-level repair job.



You organizational mechanics should take off the side panels regularly (like once a week or so) in the dusty or muddy woods and clean dust and mud from the transmitter bank and cooling vanes. A clue that a cleaning may be long overdue: The blower motor keeps running even though you're not buying the set using the transmitter. The motor keeps running when the set's overboard.

Dust and mud in the cooling vanes can overheat the set.



That radio experience goes: keep the module based pins safety-wired. Otherwise, the pins work loose, short out the set, fall in the gear train, etc.

It's an old, old story, but if you want to get the word on The Bird, or direct artillery fire, or get outta wherever you gotta get outta, connect and disconnect your antenna cable with care. Be sure the guide key is in the keyway before you twist it in place. Otherwise, you break the impedance connector . . . and you may not know it until it's time to spread the word. And then you won't know it.



GENTLY, GENTLY



Plug the two RT-104 or RT-09R front-panel connectors to the AT-1719 or AT-312 antenna. No hard twisting when you install or remove the antenna.

Position the CC-4722/20 cable assembly as far back on the R-T panel connector as possible, then run gently to line up the CC-4722 grooves with the marker on the front-panel connector. This way, you'll not pull the caps off the connector pins.



TIGHTEN WITH CAUTION

You don't have to tighten those 1/8-inch 8-1 and 4-1/2-inch 8-2 fastener caps as hard as all that, man. Save a little muscle and cut down sleeve buckling on the fasteners of the TD-153/20 multiplexer.



ARC-54 HOT SPOTS



Beat the heat and watch the heat with your AN/ARC-54 radio on you.

Too much heat and too much heat (from vibration) can put your set down, but then again too little heat won't help it at all.



First-time, when you turn on the set, let it warm up for at least 3 minutes before you crank. If you throw the power to it with no warm-up, you can zap the PA tube and the modules.

On the other hand, don't over-crank it, or you can get the set too hot. Cut the keying to a minimum, and hold the long talk for ground connection. Too much heat can throw the set out of adjustment.

As for heat, testing checks in the RF amplifier stage have from vibration

especially in Hays's . . . which means you gotta cool 'em while they're still adjusted.



If you can't get standard water like glycol or kerosene a dash of that near-white opaque aviation fluid or candle wax can do the job.

Some reminders: When you wash the aircraft, remove the radio . . . if possible. Water flows power supplies. If you can't take 'em out, be careful with the joints like cover 'em up.



Be sure the power source is disconnected before you remove or install the set. Saves all kinds of damage . . . no fuses, connections, components and so forth.

When replacing screws, especially in components like the RF amplifier, be sure they're the right size. If they're too long they can damage parts, short out wiring planes and cause all kinds of headaches.



PRESSURIZE THE ONE SET

WHY JUST AS I SUSPECTED... GARRI... CALL BIRD!

CAN'T... KNOW'S... LOW... PRESSURE!

The big deal about the AM/ABC-510 and 5100 command rolls are in that they are pressurized to provide the high-voltage circuit with an atmosphere to prevent arcing at high altitudes.

Side benefits of a pressurized R-T are — low moisture, no dust, and lower operating temperature. The modules are cooler and will last longer.

Ask your OH unit to pressurize the



AM/ABC-510

set in your budgettopping bird. They have maintenance-free, electronic equipment MK-TM, with a pump to do the job.

From this on, eye the set for the B-B PMA called for in para 3-3 of TM 11-5810-510-20 (May 68) — every preventive maintenance interval.

When the pressure head on the pressure indicator wicks out you've got the right pressure.



STOPS ANTENNA SLICING



To keep the ABC-54 antenna on your B model UHF-1 from cutting up like a piece of bologna, substitute Ch. 1 (31 Oct 65) to MWO 55-1500-200-2010 for your bird. It puts a wedge spacer between the antenna base and tail fin to tilt the antenna away from the blade. Other UHF models already have the spacer.

CONNECTOR PROTECTORS

WHERE'S YOUR BAIT?



I DON'T KNOW, I HAD IT WHEN I CAME IN!

Basic connector pins are common and include indicators, gyroscopes and the like. However, a happy fisher may snap straight off a cable connector gone back over 'em.

To keep pins on your wireless from being bent you can get the following protective caps for the equipment head:

SKU #	QUANTITY
321300111	500
321300120	500
321300131	500
321300141	500
321300151	500
321300161	500
321300171	500
321300181	500



You can find protective covers of varying sizes in Table M, page 506, on page 508, 509 and 510 of *Dial-Casting* C700-EL-A Vol 5 (3 Mar 79). The diameter given is inside diameter, which should be just a hair tighter than the diameter of the connector in order to insure a snug fit.

For 'em on whenever the pins are exposed . . . and especially when you're shipping 'em off to support for repair.

PLAY IT BY EAR

Your Chiroak (CR-47) landing gear wheels take a lot of weight and punishment. Rim and wheel bolts can get damaged. So, before you take the side out off on a wheel removal, deflate the tire to at least 20 PSI. Prevents the possibility of a . . . POW!

NEUTRAL POSITION, PLEASE!

Just after you Capra (CR-48) throttle linkage work area from near the cyclic to neutral and leave it there. Otherwise, under windy conditions, the main rotor blades can make helogas out of the tail boom. Course the drop stop ring prevents downward blade travel, only after overflight there is hot during engine stopping and starting.



HOW EASY AND SWEET

LESS MAINTENANCE SWEAT

THERE'S NO END TO THE DIRT AND GRIT. BUT HERE'S A FRESH TRIP TO MAKE YOUR CLEAN-UP EASIER.

YEA, IT'S A BIT OF A CONFESSION.

'Round and 'round the gobs and where the stings, everybody knows—right in the middle of your EasyGloves (545-535) ... or any other cleaner for that matter!

There's no getting away from the clouds of dirt in the Dry States. The most likely culprit is inescapable mud and crumb. It sticks on oily cables, slips to exposed concrete rock and settles in chemical compounds.

Likewise in dry work, dirt gets and grime will eat away at cables, rock and on the steps for corrosion—unless you keep your bird clean.

Whether you take your body to the drylands or the handy depends on what cleaning facilities you've got going for you.

No water handy? You've got your work cut out for you. So, an drycleaning solvent, P-2-200, Type 1, ERM 0000-241-1 001 will get you a 1-gal can.

Be sure you never use the solvent around engines because the two can mix to form a highly explosive vapor.

DEYCLEANING FIXES

Opening up all the access points and cleaning the birds' interiors is most important. Getting rid of dirt, oil and grease will give you clean components and lines ... and important when you're trying to stick down oil. Fuel or hydraulic leaks.

Clean with a cloth or sponge wet with solvent.



Let the solvent sit a minute or so to give it a chance to work. Then agitate the area with a cloth or sponge to loosen and remove the grime.

Wipe the area thoroughly dry with a clean wiping cloth.

Keep the dry-cleaning solvent off escape-proof plastic because it'll damage the plants.

To guard against sick scumbers, especially in salt water areas, whip up the dry-cleaning process by using solvent to spot-clean the exterior of your bird.



LAUNDRY DYEING

When you have water handy, go with a soap-and-water dyeing because it's the preferred method. Soap-and-water means you don't have flammable hazards, and the bird painter job won't take it on the skin.

Look into a suitable water-based dyeing compound, such as MIL-C-28799, which can be used on painted surfaces. MSD 6892-015-0005 will get you a 55-gal drum of liquid concentrate. MSD 6892-015-0006 is a good number for a 5-gal pail of it.

Mix one part concentrate to 5-15 parts water, depending on how strong you want it.

Spray, mop, sponge or brush the mixture on the exterior of your bird. Keep it off the escape because it may damage the plastic if left on for any length of time.



While you're at it, have a look-over at the full quantity drum. Check with serial numbers before 07-11794 had a bogus drum reading "247 gallons." The drum should read "230 gallons." If not, make a note in the log book to get it changed, pronto.

Never pressure spray your blind. You want a continuous flow of compound or water flow at no more than about 5 PSI.

A pressure spray directed at the access door for the impedance matching network, for example, can really load up the works.

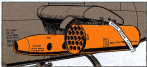
Mistmats buried inside the cavity will corrode the contact points. Some of the mists will be knocked out, for good.

The contacts are coated as you don't clean 'em; if you do, you'll remove the protective coating. The only maintenance action is to change a corroded plastic seal.

For the best cleaning results do not mistmats or clean. Leave the compound on the die a few minutes because this tends to harden on exterior surfaces. Rub it off away with a brush to remove grime.



Don't forget the weapon replacement jobs—they also get the "clean treatment."



Rinse off the compound before it has a chance to dry.

Do much the exterior cleaning to protect the joint and head of weapon. Your baby linker might drop.

OPEN 'EM UP



Being is thin deep. The real savings of maintenance down-time and elbow grease comes by keeping the innards of your bird close.

Clean parts wear longer. Take the tail cone control cables, chains and sprockets. The cones drive into under the delimitant covers. Any grease on clean parts will hold the dust. The grit forced can eat on these cables and cause early replacement.

So, keep them tall cone controls boundary. Reach into some multi-ethylbenzene, TT-80M1. P/N 691436. 2780 will get you a 1-gal can.

Caution, now! That stuff is strong and will take the hair off your chest, so

to maintain the point off your bird. It'll even melt plastic.

The gloves and put the solvent on with a rag, making sure you use it only on the cables and chain. It does a terrific job on bare metal.



WASH YOUR TIP

When you mount a wet bird to open up some covers be careful of slippery surfaces... slips hard!

Step only where you're supposed to step. NEVER place your fingers on the weapons subsystems or you'll knock 'em out of orbit.



You know what that means? A lot of rain water when the pilot sprays rain-forest everywhere but on target . . . another bonfire going down.



Walk on the forward part of the wing which has the walkway composed on it, not the trailing edge.

Figure 1

WALK UPSTAIRS, WAYS

Be mighty careful when you direct any cleaning compound spray and when rinsing the compound off. Otherwise, you could have compound and water get into and into un-poured electrical components to foul up the works.

It's true! Some early birds will have some un-poured cannon plugs. It's a good idea to get over your change at the first opportunity to see that the plugs are poured.

FSN 6814-508-7516 will get you an 8-oz tube of insulating compound, MIL-5-1000, electrical, pour form. Crowbirds or radio technicians can pack it in the plugs like putty—to keep moisture out.



Never use a direct spray on hydraulic wires and structures, either. Otherwise, water will be forced past the seals and compromise the hydraulic fluid. Wipe 'em off with a clean rag saturated with hydraulic fluid.

Course, you also want to keep any direct spray off avionics equipment so you don't short out the radios.



DOGS DOGS DOGS!

When you go from one screen door to another make sure the door steps are not broken or missing. They prevent bird poop from getting heat up.



Take the transmission door, for example. If the door step is missing, the door will chafe the transparent plastic.

You could be spending some spare time polishing out scratches, instead of polishing off a couple of cool beers!



... IS DEFLAMING SOUND?

In areas where you can't spray, such as the electrical compartment, use a clean rag saturated with deflaming solvent.

Use dry air and wipe with a clean cloth where you have electrical wires or where a compressed spray might penetrate seals. Use deflaming solvent on the engine to get rid of oil, grease and sludge.

It's OK to spray compressed air on the engine deck and other areas relatively free of electrical connections.



Make sure the water drains. If necessary, use a rag to dry up trapped water. Then you can loosen up your body.

Before you wind up the cleaning chores and head for your beach give the cockpit a good going over.

odds are you don't have a vacuum cleaner, so reach for an old tooth brush. A paint brush will also do the job. Sweep the dirt up and out.

Dirty transparent plastic can drive a pilot to distraction, so, make with a suitable polish. Fibreic polish, FSN 7100-044-0440, does a first-rate job on rolling dirt off windscreen of the canopy.

Yacht-ers, a cleaning is just about the best preventive maintenance you can pull on your fibred. Abrasive wax, 3M.



STEAM CLEANING? CAREFUL, NOW!



When a bird needs a paint job and your unit has a steam cleaner, never direct the pressure spray toward vital parts. The compound will be trapped behind seals and porous components—you'll do more harm than good!

Spray the compound at 100 PSI maximum pressure, keeping it off propeller blades, hull seals, generators, starters, switches, relays, control actuators, bearings, rubber door seals, etc. . . . just about everything but the bird's skin.

Rinse the compound off cleaned areas with plenty of water to break-off the remains.

Cleaning compound, MLLC-11541, will give good results. FSN 6246-715-4708 will get you a 55-gal drum, FSN 6246-715-9008, a 5-gal drum. Mix 1 to 1-1/2 gallons of the fluid with 60 gallons of water. Heat the mixture to 100 degrees F.

TM 11-60-1 (Jul 66) Chap 2, has the gump on steam cleaning. Maintain the cleaner according to the manufacturer's pub, backed up by TM 11-60-8 (Apr 66) Chap 3, Sec V.

JOE'S DOPE

HOW ESC WAS BORN

OUR
MISSION
IS TO BOMB
THE REAL
DOPE IN
ATLANTA!

OH, THAT MEANS
WE GOTTA
KEEP CONTACT
READY AT
ALL TIMES...
WHAT'S THE
CONDITION OF
OUR EQUIPMENT?

IT SHOULD
CHECK OUT
OK...

OK...



WELL...
WE GOT A
LOT OF CHECKS
ON BEHALF OF
FOR. BAD TECH
... I THINK!

HOW MANY
VICTIMS
ARE
GONNA
DIE?

OH...
I DON'T
KNOW.



NOT GOOD
ENOUGH
WE GOTTA
KNOW
EXACTLY!

ARE
WE THE
HEAD HONCH
YET?...
WE'RE ONLY
OPERATORS!

IT'S ALSO THE
OPERATOR'S
WORRY...
UNLESS WE
CAN LOCK
AHEAD—

FOR
BASTY
LIKE, IF
WE DON'T
KNOW
WHEN

HOWTO, WE
KNOW WHAT
WE NEED— OR
WHAT KIND
PERFORMANCE
PROBLEMS WE
GONNA
GET.

THE FUTURE
WILL TELL US
THAT WE GOT
THIS SORT
SYSTEM SO
WE'LL KNOW IF
OUR EQUIPMENT
IS GOOD OR NOT
GO!

HEY, GARD, I
GOT A SWEET
LEAD...
YOU...





THIS IS A CHECK THAT THE MAN IN THE WHITE SHIRT HAS ISSUED FOR THE MAN IN THE BLUE SUIT TO BUY THE EQUIPMENT—AND HE DECIDES IF IT'S BUY OR NO BUY.

THE MAN



Item	Quantity	Price	Total
Engine Room	1	1000.00	1000.00
Electrical	2	500.00	1000.00
Eye Wash	1	100.00	100.00
Mouth	1	100.00	100.00
Transformer and Bridge	1	1000.00	1000.00
Electrical Control	1	1000.00	1000.00
Cutting Edge	1	1000.00	1000.00
Electrical Control	1	1000.00	1000.00

THEN WE HAVE A MASTER LIST OF ALL ITEMS, CALLED AN EDC-101.

YES, LET'S KEEP IT IN A LOCK WITH OTHER PAPERS—DO IT'S ALWAYS READY AND WE CAN KEEP THAT ONE IT LET'S KEEP IT IN THE LOCK WITH OTHER PAPERS.

NOW... NOW EVERY 90 DAYS WE'LL HAVE AN INSPECTION TO SEE WHAT'S SERVICING!

URGENT IMPORTANCE CENTER

**NOW, WE'RE GONNA
NEED A WHOLE CODE TO
READ THE STATES-GAMBLER...
THE BIRTH IF IT'S GO...**

**AND AMBER,
IS IT JUST BECAUSE
A MAJOR REPAIR
TO MAKE IT GREEN.**

**...TEAR NOW
ABOUT RED FOR
NON-CREATIONAL
FOR MAJOR REPAIRS.**

**I'M CURIOUS-
MAY NOT
TELL YOU?**

**...BECAUSE IT'S THE
OL' BIRTHDAY LIGHTS!
THEY WERE WE INSPECT
THE MAJOR PARTS--
WE LIST THE TROUBLED
ON A FORM.**

**YEAH... WE CAN
USE A FORM LIKE
THE ONE, IT'S
IN SERVICE AND
AMBER CHECKS!**

**THEY
WE CAN
HAVE
THE
EQUIPMENT
ON A
WHOLE
RED, AMBER
OR GREEN!**

**I DID,
LIKE THE
OVER-ALL
SATING-CRAFT
BE, ANY
HIGHER THAN
THE BIRTH
OF THE
MIGHT
ITEM ON
THE
FORM.**

STATE-GAMBLER		MAJOR PARTS		TROUBLED	

Joe's Dope Sheet

READY OR NOT

Your chances to win,
in a fight,
depend on your gear
being right.
Just one gadget does
put it in the RED
"Stay GREEN and keep out
of this plight!"

A hand holding a blue pen is positioned over a 'SALES ORDER' form. The form contains several sections with labels and checkboxes, including 'SALES ORDER', 'QUANTITY', 'PRICE', 'TOTAL', 'TERMS', 'DATE', and 'SIGNATURE'. The form is partially obscured by the hand and the pen.

*To know your credit
limit, call 1-800-745-5

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

IF YOU WANT TO DISPLAY THIS ADVERTISING ON YOUR BILLBOARD BOARD, OPEN STALLS, LET IT GO! AND FOR IT GO.

3-CATEGORY EQUIPMENT HAS A SUBSYSTEM, THAT GETS ITS OWN INSPECTION... THE EISC-TM FOR THE SUBSYSTEM IS KEPT THERE IN THE LOG!

SOMETIMES THE EQUIPMENT'S WORN PARTS ARE HEAVIER THAN THE LOWEST RATED SUBSYSTEM!



ALSO, WE'LL NEED A FORM TO LIST CURRENT TOOLS - OR COMPONENTS OF EISC-RATED COMPONENTS.

AND A FORM FOR MODIFICATIONS?

YES... BECAUSE, IF THE MODIFICATION IS URGENT, EQUIPMENT IS REID UNTIL IT'S MADE!



FORM #1

NO.	DESCRIPTION	DATE	STATUS
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			



FORM #2

NO.	DESCRIPTION	DATE	STATUS
1			
2			
3			
4			
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6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			



HOW ABOUT A FORM TO RECORD THE RESULTS OF REGULAR DAILY, WEEKLY AND MONTHLY INSPECTION RESULTS.

YES! SOME OF THE FAULTS THAT TURN UP COULD BE ON EISC COMPONENTS.



... IN WHICH CASE YOU UPDATE IT TO YOUR EISC CHECK LIST.

FORM #4

NO.	DESCRIPTION	DATE	STATUS
1			
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6			
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11			
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15			
16			
17			
18			
19			
20			

SOME KINDS OF COMPONENTS
CAN'T BE REPLACED (BUSTED OR
NOT) AFTER A CERTAIN AMOUNT OF
TIME OR USE... IF YOU DON'T FIND IT
WHEN YOU'RE SUPPOSED TO...
YOUR EQUIPMENT IS DEAD!

LOOK AT
THIS, AND
IT'S A REAL
CONCEPT!

WE'RE GOING INTO A SPECIAL
ZONE TO RECORD **FAULTS** THAT
HAPPEN TO GEAR WITH UNCORRECTED
FROM ONE INSPECTION TO ANOTHER.
THEM THAT ARE **LOG** ITEMS
AND DRAG THESE GUY'S.

7888-11

7888

FOR FLYING EQUIPMENT—YOU
SHOULD HAVE SPECIAL FORMS...
AIRCRAFT HAVE SPECIAL PROBLEMS!

I ALREADY
THOUGHT OF
THAT!

7888-10

7888-12

7888-11



YOUR NEW J-TON ACCESSORIES...

NO-NO'S AND DO-DO'S



J-TON TRUCK
LIFTING WEIGHT



Keep yourself and your crew really safe a "no-no" is the use of the new J-ton cranes (JSM 4518-261-RPO2), new part of the No. 1 and No. 2 Common Tool Kit.

Sticking out like a sore thumb would be any of these goof's:

1. Overloading the J-ton capacity.



2. Letting loads on tracks in the line.



3. Crawling it up to the last inch.



4. Placing it under the weaker body sections, like the gas tanks, the steering levers, and the levers.



Of course, the "do-do's" come with the new J-ton too— plenty of 'em.

A solid, square and square fit is a must.

Put 'em up against the axle bearings, the spring shackles and the frame rails.

When you're on unstable field ground, support each one with a flat rock or a strong board.

But, even if everything is doing pretty, you definitely don't work a mouse under the shade of the of truck.



SECURE WITH STRAP WHEN ON SOFT GROUND

GOOD PLUGS FROM BAD

BEHOLD THE LOWEST SPRING PLUG OUT OF SIGHT — OUT OF MIND — I MEAN THE SMOOT BAY OF THE PMA TRUCK...!

SAVE UP! COINING... THERE'D SOME SMOOT LEFT IN ALL OF US!

WOW! A REPLY!

I'M WHOOOFT. I MEAN JUST COOL, HOORAY!

SMOOT OUT OF HERE!



IT'S A BOSH UP!

It's usually not wear or tear that kills plugs out, just too much carbon. It's the way they're used that does it. Plugs in Oxygas vehicles have it rough. They run on gas or in the furnace a lot. Either way, it's long-term run time. And they like a lot. Engines carbon up fast, running slow or killing. But the script don't have to read like that.

You mechanics can give them a new lease on life. All they need is a dressing job... but like your uniform, laundry is the word...



There's got to be a trick. No one dies in all these. No need 1947 (O) with it, it's not a work horse.



If you shop on city, get off the oil and gas. No approved oil, no carbon in or gasoline. It's an open-air job — no fire or smoking.



MADE IN U.S.A.



Don't be fooled with a real look.



Don't get going on the road. Shell makes the 1947 to 1949.



Fit the adaptor that's right for your plugs.



Use the adaptor that fits 2 or 3 screws. Blow out the sand with air blast.



Blow out the sand.

On both channels and on flange, roll the plug around.



...Repeat 2 or 3 times. Then re-roll your plug.

Clean all the plugs from one engine at one time. That way they don't get mixed with plugs from some other engine. Keep them in order as you go.



When you get a set of plugs that's cleaned, get 'em for the truck.



Send also your paper book for the truck.



Now for the medical team.

STEP 11



Use the metal adaptor to fit your plugs. Turn up the gas right, no more. Set the gas-gage dial.

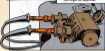


You can check the cleaned plug against a new one of the same type and make.



Get the gas to match the cleaned one and then put it in the other test bracket hole, adaptor control.

Don't hook your jake into the one, then the other.



Use up advance grease each time.

Two might be required.

The real plug might be the largest.



Fact, your old plugs might all show better sparks.
So then you know why not to plug your plugs too soon.
And you know some makes plugs hard to get....
Fact, some guys might steal your tool, but not get any—
Which is a favor to nobody but Charlie.

OTHER TIPS

If you can't get regular advance, don't give up.
Blow sand or gunner sand or "red" granular sand will do.
Sift and screen it until you get the clay out.
And don't use tools a charge for more'n a couple dozen plugs.
Then put in the regular compressed when you can get it.
Even, straight-bladed wire brushes help a lot—
Naturally, the smart thing is to make plug-cleaning a habit—
Then you'll already have good wire brushes in stock, and—
Then you'll have fresh advance in your PLE.



Now mix up an set of plug with another.

It's equally bad to mix one size-size plug between 2 kinds of engines.

You wouldn't want the plugs from an M101 in an M102, for instance.

That's wrong because there's lots more to plug size than just the hole they'll screw into.



It's awful not to plug plugs. That's an easy way to crack insulation. Forbidde you'll freeze.

Exits cool down inside, out of sight. You might not even catch it as hot.



Even the plug could fall when the going get rough, like in a fire fight.



A HEALTHY MENSURE BAG

Make maintenance on your sports plug cleaner and less a real life-saver.

You'll probably have to do it yourself.

It's like coffee—most people want to drink, but nobody wants to wash the pot.

So don't waste being pre-occupied — equipment cleaning rights will save your neck along with some others. . . .



Buy your supply club to keep an extra metal adapter for maintenance on plugs . . . and don't forget your other items. Lenses, gauges, wire profiles, levers, pumps, and bearings other stuff on plug, too.

Have a spare metal adapter for each of your common sizes in the spare box, too.

STEEL ADAPTERS FOR BLASTING



A hot box adapter just like helps from plug electrodes — but no major repairs, plus.



FIGURE BY THIS

Signs, numbers that could be handy use:



You'll do about as well with Gaps, Gap Setting, 419-287-4000, in your Automotive Mechanic's Tool Kit.

For low-wire electrical-type cleaning use, TM 5-952-022-12 (Jan 84) or TM 5-952-024-10 (Jul 84) provide pump good, but don't apply these standards to vehicles plugs. TM 5-8028 (Dec 84) is fine for general plug information.

TM 5-952-100-20F (Jan 82) give great general work shops. That's for the Champion hair-dressing kit.

To get with it, and quit complaining about a cold-engine wire.



5-TON EXHAUST TIE-DOWNS

Dear Half-Hearted,

I've been in the shop a long time on loose and cracking exhaust systems of the 4-cyl models. Got a right?

SPY B. F.

Dear Specialist S. F.,

On the gasoline trucks like horizontal pipe systems, you look for excessive vibration first. Check the timing and the ignition. Check for loose engine mounts. Then, make sure your pipe mounting brackets are flexible. They'll crack if



you tighten it too much. And whenever a nut works loose or it's removed, replace it with a new one. Old ones just won't hold.

If problems still bother you, require that special self-locking nuts. For the 1 1/2-in. studs, you use FEN 1510-411-700 and for the 1 3/8-in. studs, it's FEN 1510-411-6014.

The modified vertical exhausts with the 461-L engine can be secured at the subexchanger by using 3 lockplates, FEN 1510-009-2503, on the adaptor

exports. Torque the exports 23 to 27 lb-ft. Then, bend sub-exch brackets exports.



You can stop flange cracks on the vertical pipe with these replacement parts: Spring, FEN 2000-121-4184; Studs, FEN 2000-121-6086; Nuts, FEN 1504-710-4175; Ws, FEN 1510-010-1071 and 3 washers, FEN 1500-800-1075. This hardware will give it flexibility.

DRAG LINKS — BUGGED?



You can't keep the bugs away from the 1-ton truck steering linkage with a magic spray. You need down-on-earth PM.

You've got lots of small parts in the drag links, the relay lower and the brackets. If any one gets bugged, you could be in a pinch, fast time.

Your truck can wander and wobble. The linkage can wear, loosen — even snap. You'd sure be looking for a new one.

Is it a broken bushing? A bent axle?

Maybe a cracked ball joint? Or spring action gone?

Hold up — and think.

You can head off breakdowns if you catch the troubles before they begin.

Here's how it's done with the drag links:



With this plan and TM 9-2020-211-20 (Mar 63), you'll never get the wrong plug.



NOT FOR MULTIFUEL



If your 2-1/2-ton truck has a multifuel engine, don't bother looking for the "stop collar" mentioned in page 208, TM 9-2130-209-20 w/Ch 1, 2 & 3 (Aug 63). Only the gasoline-engine job has a stop collar on the front-wheel steering shaft.

LUBE MUSCLE HELPS HUSTLE



Think the Rough Riders were out with Colonel Teddy B? You can get a rough ride yourself by overlooking post 2-1/2-Ton or 3-Ton Truck spring and bearing lube points.

The 3-Ton/over "B" Service or 3,000-mile lubeing, the drive-and-a-half have to be lube'd every 1,000 miles, the LG's say—

But some 3-Tons get lube'd with plugs where grease fittings go— the dis-
proportion crew overlooks the transition side— somebody sees the plugs and thinks that means it's a sealed unit (there's 1,000 cc each side).

So transition sides get shored up, CMM's give gigs, or breakdown such is



Correct. As sure as the grease fittings get put in and get used... with bearing caps loosened for the old grease to get out like the LG's say. And every "B" Service have post lubeing necessarily check bearing adjustment... the 30 TM's give the adjustment technique. If post 2-1/2-ton doesn't have a plug or fitting, hand pack it.

HERE'S THE CASE!

LONG SHOT, BUT...

If your three truck is getting on its years, check out its horn-mount brake.

Three bad marks can show up—on that small unit on the steering column under the hood—ratt, a crack and too long a ROWE.

Any one of these could trap you in a squeeze play. So, give it an eyeball.

You'll find it handy and easy to work with.



CRACKED?

Wipe the dirt off the frame from crossmembers of your 3-1/2-ton truck—especially if it's a rust-bucket engine job—and eyes more especially if it was built under Contract No. DA4836-68-C-0007 or DA4836-68-C-0011.

New look alert for cracks in that crossmember. Deal close!

Find any? If so, get that truck up to your supports—can even—be a repair job. They'll weld the crack and then reinforce the crossmember to hold it up to per item 13, TB 790-841-4 (DA195).

If your truck comes under either one of those contract numbers, it gets the reinforcement anyway, even if the crossmember's not cracked.

LOOK FOR
CRACKS IN
THIS
MEMBER



REPAIR
IT SUPPORT

GOT THE NUTS?

WANT MORE
TUBES FOR
A NUT AND
WASHER?

Hold it! Before you take off in that 3 1/2-ton GM4-series truck, take a peek at the dera plate at the right end of your instrument panel. If yours shows Contract No. DA4836-68-C-0007, you'd better check those 4 U-bolts holding your springs to the front axle. Some of 'em accommodate a nut 'n' washer.

If you need 'em, get Nut, FSM 1500-710-1041, and Washer, FSM 1500-913-1141.

Torque for the U-bolt nut is 100-200 lb-ft.

GET ALL THE
NUTS AND
WASHERS



FOULED BRAKE FLUID



How can rust get in if water gets into the brake fluid of your M151 1/4-ton truck?

How could water get in there?

Just point to the master cylinder filter cap, and you'll be the wiser right on the button.

Before you touch the cap, take a good look at it— as it sits under the hood.

If the cap's 3 vent holes are straight up and down, you're building up rust in your wheel cylinders, master cylinder and brake lines.

Here's what happens when it rains:

1. Water drips off hood edge onto cap.
2. Cap shoulder turns backward onto cap vent hole.
3. Water flows steadily into master cylinder.

Now, it's time to take action. Plug the vents with **HELL-B-DRILL**, Type 1 Sealing Compound (PN 6000-247-232) and drill a new 3/16-in. vent hole down through the center of the cap.

That'll do the trick, like it says in the **HEB Digest**, TB 750-081-5 (Jul 68).

But, to sure you don't goof up the works by tightening the cap too much, this could've been the problem in the first place.

THE PROBLEM



THE CURE



DRILL NEW ONE

DON'T PIVOT — FILL!

Keep your dikes off the pivot "nut" when you put oil in the 1/4-in. truck transmission.

The correct fill plug is what you want.

Sure, both look alike, and they're on the same housing. Also, page 3-28 of TM 9-1128-218-20 (Aug 68) calls the fill plug the drain. So, you figure you gotta go right....



Ms. Ms. Ms. That's a pivot's good. Here's the right poop.

If you loosen the pivot you'll screw up the works — but good. The inside arm assembly drops off its track and locks the gears.

Remember the difference. The pivot sticks out, and the fill plug is recessed.

If the fill plug is twisted, just scratch a bit.

HOT BOX



IF IT'S BURNING, IT'S HOT!

A short circuit — an alternate output — no juice going into your batteries — dead batteries — no go.

That's the story if the junction block cover gets mashed down against the battery lead on your 60-amp alternator.

Keep your feet off the junction block cover and be careful you don't drop wrenches 'n' such things on the cover.

If your cover is dented or bent and you can't straighten it out, just leave the cover off. A better cover will be coming out on newer alternators.



... BE CAREFUL OF HOT SURFACES!

WHAT GUNS NEED THE ...

EXFOLIATION



Any gun with an M16A1 5.56-NATO rifle glued to his legs knows that rough field is usually a hard one assembled on to the receiver. It does for 2 reasons.

First, it cuts down light reflection during patrolling actions. Second, it protects the metal from oxidation.

Exfoliation? That's right. It just means have aluminum parts flaking off once the protective rough coat's gone. Because that rough finish is usually a hard one applied on to the receiver.

If you use your rifle here cleaner (CR) and LSA regularly, this protection should last for a long, long time. But once it's gone, and the shiny aluminum shows through, you need to turn over your weapon to the real armorer for quick maintenance on the bare aluminum parts.

ARMORER CAN HELP IT

If you get your rifle to your armorer before oxidation starts, all he has to do is paint the shiny areas.

If you don't get there in time, your armorer has the proper tools to stop oxidation for flaking action.

That means you armorer can smooth off the oxidized area with coarse cloth. Then wash off the bare metal with dehydrating solvent. Finish the bare aluminum with solid film lubricant and let the parts dry for 12 to 16 hours in a well-ventilated area before you reassemble the weapon.



CONTROL WITH THAT CARTRIDGE!

If any of this lubricant film system builds up on receiver parts, wash it off with degreasing solvent. The inside receiver areas for the magazine parts are one sight to allow any film to build up in there. This will definitely interfere with the weapon's operation.

These rules apply to the upper receiver, lower receiver and lower receiver extension . . . depending on how much of the weapon's aluminum needs cleaning and recoating at one time. Be sure you check all 3 parts anytime you have to fix any of them. And when finishing it always go on aluminum weapon components.



SUPPLY STORE

The supply side of this maintenance situation requires knowledge for OEM's:

Life Line . . . 800-233-3333	Degreasing
Down East . . . 800-234-6666 (24 hr. hotline)	Shore . . . 800-666-6666 (24 hr. hotline)
. . . 800-234-6667 (live mail)	. . . 800-261-7767 (24 hr. hotline)
. . . 800-234-6668 (E-pal mail)	Mid Size
Irony Club . . . 800-233-3333	Lubricant . . . 800-342-8888
[24-hour faxing]	[24 hr. service mail]

By the way! Don't mix your patch with heavy cleaner until you're sure of what you're getting.

If your cleaner doesn't show MIL-C-1011 some place, use it back.

Could be another brand of cleaning compound which both your fingers and your weapon wouldn't appreciate contacting . . . such as this MIL-C-11850 variety. That's a degreasing solvent which has nothing to do with cleaning boxes.



WATCH YOUR OPERATING PM



Rearward to-Go! ... Know what to load — that's the gist of the belt story when loading your M813 M100 machine gun. Never forget it!

Yeah, it happened. A guy liked the cover, pulled the belt to the rear, loaded his ammo, put the cover down and started firing. He got off one shot, and that was it.

What happened? Was that pulling the belt to the rear placed the feed arm over front on the left side where the feed lever couldn't engage it also to put the cover down. One shot ... one more feed ... here's a picture to go ... just ... BEEP!

<p>1 THE M100 FEED ON LEFT</p>		<p>INSIDE OF COVER ...</p>	
<p>2 THE FEED LEFT BRIDGE</p>		<p>3 FEED ... LEFT BRIDGE!</p>	

So, you're aware, huh? Get your TM's procedures down pat and follow the script every time, like so:

<p>1. Lift the cover. If the belt's already in the gun, draw the chamber of rounds. For if the belt's forward, first get the safety on OFF, then pull the belt all the way back and check for rounds. Lower from the safety on LEFT when retracting the belt.</p>	<p>2. With the safety on OFF, retract the belt forward. Lower the belt down forward.</p>
<p>3. For the cover in the gun, pull back stop, draw the cover and drop your gun. If you're not going in for right away, put the safety on OFF.</p>	

This is for you guys with 8000 or 8100 self-propelled artillery.

Your 8071's Dynamic diesel engine can burn up if you don't know what to do when the warning lights come on.

So here's what to do when you get the warning lights:

1. Put the shift lever in neutral (N) and cut engine speed to fast idle (2000 to 1200 RPM).



2. Check the engine and transmission oil pressure gauges. The engine should read between 20-30 PSI and the transmission between 10-15 PSI. If either reading is low, reduce engine to idle, stop the engine by pulling the fuel shut-off control handle and find out why the pressure is low. Get help from your unit maintenance if you need it.



HERE'S THE WARNING... SO WOTTA



2. If the oil pressure is OK, check the two pressure gauges. Engine coolant temperature should not read above 220 degrees and transmission oil temperature not over

180°F (82°C)



200 degrees. If either gauge reads higher, use your engine at a fast idle (1500 to 1200 RPM) until the reading goes down to 150-180 degrees for the engine coolant temperature and 120 degrees for the transmission oil temp.

If it takes more than 1 minute to get the temperature down, stop the engine and find out why.

YA' DO?



When you have to add water to your radiator for you never do it with the engine hot. Let it cool down to 170 to 180 degrees at least. Follow the instructions in your operator's manual for adding water to the radiator.

After adding water, get the radiator cap back on tight and run the engine at least

10 minutes at 1200 RPM. When you add water, you have to open the pressure when adding coolant so you can purge air trapped in the cooling system.



The radiator cap, 24 (1984-1994) 25 (1995-2000), on the 8100 and 8100A engines, has a vent. Make sure you have the vent cover in place, and that the vent is fully sealed and locked after you add water.



1 minute at 1200 RPM. Check the coolant level again and add more if necessary.

In late 8100's, the cooling system pressure is control through a pressure relief valve. 24 700-870-104 25A 0891001.

You'll find the correct radiator cap and its parts manual T30 9-2700-217. 2001's (Jan-01) on page 507. It includes from 10 to three 12 depending on your vehicle serial number.

REGULAR REAMING DOES IT

WE CALLED FOR SUPPORT
FIVE TWO HOURS AGO—
YOU GUYS GOT A HEAD
SPACE PROBLEM?

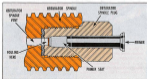
YOU
GOT ANY
CLIPS ON YOUR
A FOUL-BRED
MECHANISM?



A change that fails to fit is a possible clue to a locked broach mechanism on your 115-1180 medium-sized lathe.

But why wait that long to find out something's wrong when regular reaming and cleaning of the narrow passages in your broach mechanism could have kept your plant from locking in the first place.

Some powder residue works its way past the advancing pins and through the obturator spindle vanes each time you fire the weapon—and finds its way into the small space between the vest and primer vanes.



The way to use the vest system and closing tools varied in your bowman's BBL (Basic Bow from Left).

However, if loading of this vest has gone too often, you might recheck your headgear according to page 114. The 9-8827-200-12 (P/N 614). If headgear is wrong—the primer vest will be loose. And the neck headgear lets

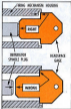
primer/bowback help us load the bow's mechanism.



DOX BEFORE (LOADING)

Also be sure the M1 firing mechanism fits in exactly locked into the firing mechanism housing before firing the bowman. This means screwing clockwise the firing mechanism into its housing until the handle hits the stop stud on the bowback carrier.

Otherwise, the firing mechanism can back off during firing—or even blow out of the bowback... and maybe take part of your bowman's eye with it.





HERE'S A HANDFUL OF TIPS TO TEND TO

ON YOUR LOCOMO...

HERE'S A DING DONG DOZEN

You might not think so, but look at that movie's masses of love, but your 2008 Tractor needs some tender, loving care they didn't receive back at good old New Holland.

Fear, there's a dozen or so things you need to 'tend to that might not have been spelled out in J&T—

NO ENGINE OIL

Take a little thing like getting out of a jam, it's essential. It's normal when you crank out to get a tow line and for somebody pull you if you can't maneuver fairly good. On this mobile beast, that could be dangerous... If you're pulled backward, that's a. Never, in no gear, but no ever, should you reverse-pull. If you do reverse on a 2008, you quickly and most effectively work the push rear pump. That's a feature on the lower right side of your transmission, P/N 2130-099-4750, 0141 each there must be a cheaper way to get going!



LET'S YOU REPAIRING IT THAT'S FOR AGAIN, YOU ONLY EASY

PLUMB! DON'T BURN IT!

Oh let's suppose you're just making a normal case, Your engine caught a couple of times and starts running slow and easy.

You're feeling real happy and you're eager to go out into the lovely woods of beautiful Southern Woodstock... on do you see of heavy the warning on the engine engine!

No, you do not... unless you've got some good pieces to wear a new rear axle bearing and maybe a rubberhanger (shock absorbers included, that's over \$4 Grand).

The thing is, it takes a little time to get either your turbo bearings or your rear axle lubed after your engine begins to run. Low RPM show the vehicle continues warning—can over 100' over engine—brake.



The same this goes for starters. You idle down for 3 minutes. It takes that long for your turbo to calm down, and it can't get off unless your coolant pump is going.

STAYING FRESH

By you're headed over to equipment pool for a new scraper. You've dropped your old leather off, and you have your universal coupler look like so. (Is you just normally hang over the hill or good speed for your pickup?) Like you guessed, NO. At least no before you sit that one in the rear with some steel cable—and right. The lock link just is not enough, a 2008 ball joint is the price of towing trailers without a trailer.



BY A GEEK

With these examples, maybe the idea is a little clearer. So to make sure with the other points, check these:

A. Change air cleaner cover as soon as you get a red flag in the restriction indicator, because this is a Go-No-Go system. You can help that filter last even longer by cleaning the unloading tip if it ever sticks in wet weather.



B. Don't think your LO is incomplete just because it doesn't monitor a pressure being for your water pump. That pump is factory built, and gets ground again only by support maintenance or higher. But if drag develops and loosens your drive belt, do better for support—it'll save your bearings.

C. Before you move out every morning, check those diffusing rods. If they're not right and straight, they can bend your main pan enough to land you in Chip's Creek—you literally can't see where you want to. A check on your gun cylinder and sprayer/cleaner is if you can't see it from right at that time either . . . and might keep you from leaving later.



D. Keep intake valves healthy so you can get rid of condensate water collected in your air brake reservoirs. The 'em before every run. A 40° grade—loaded—is no place for water in the brakes. They're valves, drains, code 004011, P/N 271126, and you can run emergency substitutes if there's no other choice.

E. Make sure your rain cap—your "butterfly" on top of your exhaust—is healthy and working, even if there's not a cloud in sight. If that butterfly gets sick, whichever thing happens is bad—if it sticks shut, the exhaust blows wood back into your air cleaner and ruins it (which ruins your engine in a half hour to maybe 3 hours). If it sticks open, rain gets in your exhaust and most likely blows-out carbs, our manifold, one set of cylinder intakes, and one stack.



F. Clean your radiator hoses and flush and drain with compressed air or water less chilly. Even if you don't see dirt, the block can be clogged. And drive on the hottest hours the most, because that makes your oil temperatures very high—that's the part of your radiator your oil cooler's on. And let all gas equal engine overhaul. For more, discuss....

CAN I SEE?



DON'T
DEPEND
ON GOOD
LUCK
PIECES!

YOUR GOOD LUCK PIECE

Since there aren't many rabbits in the bookshelves, your supply of rabbits' feet luck pieces is probably kind of short.

But there's another charm that's better... and don't laugh—it's wheel and nuts.

What you do is, you spot-check torque on 240 ft lbs about once a week. And every day, you eyeball eyeball all 4 discs on ax if there's any white-line signs of slippage. Long before, several hours before, you ever have any danger of losing a wheel, you'll see little oval-shaped marks around loose nuts where the big ring casting has been crumpling up nutlines.

The reason that'll bring you good luck is, it'll help keep you from losing a tire on a grade, possibly snapping an axle, and rolling over. The future of a 2000 border is a million is likely to be very bright.

So there's the spiky secret of spiky success. Have at it.



RADIOACTIVE SAMPLE



The MX-10000-PUR-17, radioactive test sample, is due a package that normally, like it says in part 7c, TB 1-6661-201-11 1200 666. The 11-6661-201-11, which says the test is part of the assembly check, is getting changed to fit with the TB's instructions.

DRAINING OIL THE EASY WAY

**DON'T
WASTE
ANYMORE
OIL!**

Draining the crankcase oil from the engine of the 10 GPM liquid dispensing tank and pump unit can be a messy business. Sometimes it even all over the pumping assembly and down into the trash bin.

You can solve that messy problem by the following steps:

1. Remove the oil drain plug for the tank and keep it. Then put a 1/2-in NPT x 3-in nipple, PN 475-754-101, in the engine oil drain hole.

2. Next install a 1/2-in NPT x 90° elbow, PN 475-000-443, on nipple.

3. Now screw a 1/2-in NPT x 7 1/2-in nipple, PN 475-000-101, to the elbow.

4. Then put a 1/2-in NPT x 1 1/2-in coupling, PN 475-000-201, on the end of the 7 1/2-in nipple.

5. Now install in the pipe one plug the original 1/2-in oil drain plug that you removed from the engine oil drain hole.

6. Add one 2-piece oil drainage cap and clamp from 1/2 in with a 1 1/2 in thick steel clamp, making each piece 1/2 in long. Now install the fabricated 2-piece clamp around the oil drainage and on pipe from fitting area. Then lock it down with a 1/2-in x 1/2-in screw bolt.

DONT LOSE YOUR COOL



Capillary lines on the Redwax™ RCP-1000 trailer axle have been vibrating in use and making big loads of frozen fare.

Soaps that capillary to the liquid line that runs up and down. No need binding the 2 lines close — just enough to stop the shivering.



NUT

IN

TIME

Before you tow your 36-152 (Dual Model RUT-5T) trailer-mounted laundry unit, check one thing. Better add an additional locknut to the washer structure transportation tie-downs mounting bolts to keep those mounting bolts from vibrating loose while towing.

You'll need a 1/4-in. 10 LPHC locknut, PN 1110; 041-1009, for each basic mounting bolt, nut and lock washer.

While you're on the go with your laundry unit, take time to check the mounting hardware to make sure it's tight.

ADD EXTRA LOCK
NUTS AND WASHERS



SNAPLINE MAY

**SNAP
SNAP**



Your mountain pine snapline, ESN 8400-508-0008, may let you down when you're depending upon it.

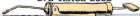
Some of these snaplines may have a loose pin on the end that opens.

To see if you have one with a loose pin, apply pressure to that pin with a piece of wire (like a paper clip). If the pin drops out, better get another snapline (but give it a check out before you use it). Turn your bad links into supply. They'll report them to the Commander, Defense Personnel Support Center, ATTN: Director, C and T, Dir. of Supply Operations DPCO-THE 3000 LIME Street, Philadelphia, PA 19181 for replacement items and disposition instructions.

T ITEM REPAIRS

When the code in the IOR column of a part manual read PTT (like on page 12 of TM 5-2808-117-10F), the F—the maintenance part of the code—means direct support can repair the item. That's so, even when an item coded T (its recoverability normally is repaired or overhauled as depot, as explained in F manual for most military standard engines.

D7E TRACK LUBE



Watched almost what is use in your D7E track adjustment gear! The armor's simple—plate of GAA. That's the word from the handbook.

FILLED ROD CARDS



Nope. You needn't transfer current info from a filled DA Form 318, Record of Demands, card to a new card. You can just note "Not Enough Paper" across columns a and b of the new card, close the entry, and attach the new card to the filled card.

Keep the filled card until its info is no longer current for your quarterly review, and then use it up.

ROD card info is current for 12 months (3 review periods) after its last date goes on your PIR. After the first 12 months all you need is demand info for the current 180 days (3 review periods).

You can continue to use the old side-panels with a new card—just current the info as needed. Besides you have to re-make a side insert, of course, you must transfer the date the first went on your PIR to the new insert.

00001, 000-000 'Good' Man/Power		MS	MS	23
1100-00-1000	Lang. Development	9	4	3

The records cut-off SOP, DA number 14-37, para b, page A-33, AR 340.2 (Sep 88), can be used on your record of demands cards.

GENERATOR TM CHANGE

There's a new TM series now for the 600-Hz 100W Military design generator gang— it's TM 1-6115-45A's, not the -45J series as listed on the data plate.

FOLLOW THE FAT SB



What do you do when SB 706-20 and your TCR or CTA, or your property book disagree on an item's LHM?

No sweat. You follow the SB. It has the final say on an item's LHM. You can use the SB's info to update your authorizing document and your property book (in pencil) like it says in AR 711-5 (the SB), para 2-11b.

To cross-check LHM's in other authorizing documents with LHM's in SB 706-20, you use SB 706-12. But, be sure to read para's 1 and 2 in the cross-checking SB, before you use it. And, hang on to it . . . it'll see its expiration.

If another SB answers your question on an item's LHM . . . and, you think the item's responsible, you can report the problem like it says in AR 711-5, para 2-12a.

MASK SALVAGE...?

Hold it, Mr. Property-Book Man. A CBM mask never goes to the salvage heap.

Whether it's classed in by FWT, or otherwise . . . or, it's yours, a mask must be turned in to your supply support unit. That goes for the M17-series field protective masks, the M14 and M15-series CV versions' masks, the M16-pilot and aircraft-crewman's masks—and, any other CBM mask you may have on your book.

Normally, supply support turns the masks in for repair, or as directed by special instructions from its backup supply support.

DA Ck/TM-20 (Apr-59) has the word on this and other special supply info on the masks.



Connie's
Mini Mini's

CONNIE...



Class Action Needed

When you buy our your latest model belts to check 'em for damaged belts or needles, try to keep 'em off the ground. Lay the belts on a clean bench or lay white papering them. Otherwise you might pick up dirt and crud that could cause stoppages.

Calibration TB

Specify the latest listing of Calibration Requirements for the Maintenance of Army Material in TB 750-316 (Oct 64).

CMEM? Tip

All you CMEM readers may want to latch onto a copy of Ch 3 (Oct 62) to J4 750-3. It has new word on reading of fluids found by CMEM teams under rules of the AF and DA Form 750-10.

Thermostat Check

Please pass the word—When it comes to testing the thermostat in your equipment's liquid-cooled cooling system, follow the steps in Fig 78 and page 94, TM 9-2820. In other words, you've got to let the thermostat float in the hot-water container. So, heady 2-out the bucket shown on page 15, TM 195.

Scratch 2-03


Scratch that 2-03 out of PS-5 tabs all that scrub into page 20 of PS 203. FM 9150-105-0625 is no longer in the system.

New Model Scoop

If your heavy C model has been upgraded to an M model with a T-100-13 engine, run your fingers dry the white pages of TM 40-1200-200-20. Ch 3 (27 Sep 64) has all the poop on the new engine.

DA Form 17 Change

You won't get the changes with the book pub automatically when you get out that DA Form 17. You have to list on your 17 exactly what you want—or you won't get it. For example, list "TM 9-2100-200-20" when you need only the book; "TM 9-2100-200-20 and changes" if you want the book and all changes; "TM 9-2100-200-20, C1" (when you need only the last change). If you need C2 and C3, you list "TM 9-2100-200-20, C2 and C3". Sometimes, if you want the book publication, be sure to put that word "and" between the publication number and the changes you need.

Would You Stake Your Life  on
The Condition of Your Equipment?

TURN IT OFF...

AVOID
BURNED-OUT
PARTS ON YOUR
VEHICLE - ADAPTED
DANGER!



...BEFORE YOU START OR STOP
YOUR ENGINE