

YOUR BIIL'S AND THEIR BII

ENT ELIENT

ALL MY BII SAY ... WHA

DON'T HAVE HALF OF WHAT I

> CHANGED TO "TROOP INSTALLED" ITEMS OR THE REPAIR TEMS ARE BEING PARTS LIST. BASIC ISSUE PLIOT





and lightened. So keep an eye out for changes to your equipment -10 TM's. You'll be glad to hear that: The BIIL's (basic issue item lists) for your equipment are being streamlined

a new "troop installed" list being added to the operator's manuals (-10 TM). related, expendable supplies are no longer BII (basic issue items) as such. There's The common tools, common hardware, repair parts, and other maintenance

end item over to your DSU. Also, the new rule is to use your -20P to get any repair parts the operator needs. This means you no longer have to turn in those things when you turn a major

maintenance or turned in to the supply system. And, like always, if any basic supposed to do-must be on board when the end item is evacuated for report of survey. issue item is short when the major end item is turned in, it must be covered by a All other BII-things needed for the major end items to do everything it's

> so look to your command's headquar mands in DA Msg 281313Z Apr 71, ters for the local rules on this change The word went out to major com-

So, hang on to those you didn't turn in ment equipment in the future it'll come parts and other expendable supplies to you minus common tools, repail When you're issued new or replace-

thorized to request these as you need ment's -20P manual, and you'll be auformer BII—will be listed in the equip-Later on, those things-and other



Issue No. 229 1971 Series THE PREVENTIVE MAINTENANCE MONTHLY

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Use of finds for printing of this publica-tion has been approved by Meadquarters, Department of the Army, 22 January 1971, DISTRIBUTION, in accordance with requirements submitted on DA Form 12-4



PS Magazine. MSG Half Mast Port Knox, Ky



HOYLE SPECIALS



para 1-5 of the SB says authorization document changes will be made as soon as practicable. So, if you cite the SB, it should be accepted as a valid authorization when used in block O of your request, DA Form 2765.

You use the SB not only for items listed individually in Chap 3 of the SB but also for expendable items of groups and classes listed as "authorized as required" in the notes on page 2-1. That covers thousands of individual items.



LET'S SEE UNDER CHAPTER 3 WE'VE GOT BAGS, CLAMPS, KNOBS, STRAPS, SLINGS, BUT NO TOUPEE!



Besides, AR 710-2 says requests for expendables are not to be shortstopped just because of lack of an "authorization" cited in block O—as long as the requested item can be identified. Practically every Army FSN is identified in the AMDF (Army Master Data File).

But you have to keep in mind, o'course, that items covered by the SB are subject to controls and limits laid down in the regs listed in para 1-4b(6) of the SB itself.



That means your CO must keep in close touch with your supply support unit and with the CO at the next level of command when necessary, to make sure that proper priorities are observed on maintenance-essential supply items. A 1-minute phone call may be all that's needed.



Dear Specialist C.O.B.,

There's no easy-does-it answer. Getting some items can be rough. A lot depends on the bare-bones definition of what's "necessary" to keep your equipment mission ready.

> supply authority in your basic TOE or other authorization document. (This is

Eventually this SB will be cited

the SB referred to in para 2-5 of AR 310-

eral supplies from SB

700-50 (Mar 71).

You can get certain expendable gen-

THIS IS A BARE-BONE NECESSITY,

will take years to complete. Meanwhile,

in the TOE or other authorization document

This planned incorporation-by-reference

-as spelled out in para 1-3 of the SB-

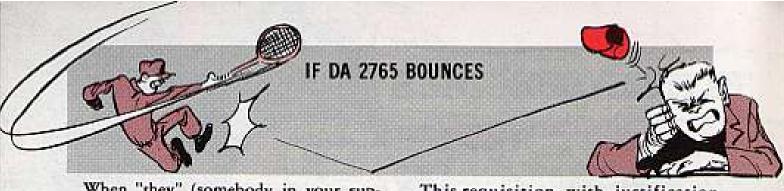
34.)

Repair parts, o'course, are authorized in parts manuals (normally -10P through -25P). But even these authorizations are subject to adjustment, based on demand

and sometimes for other reasons.

MAYBE I
CAN GET
YOU A NEW
SET... I'LL
CHECK
SB 700-50

MORE



When "they" (somebody in your supply pipeline) bounce your DA Form 2765 because of some real or imagined "supply control" rule, what can you do?

You can always: get help from your supply support activity for an exception-data request. It's a procedure to help you get necessary items where the source of supply is hard to determine from current supply catalogs.



You'll need a written justification (whyyou-need-it statement) on your paperwork. But if you can't "go" without the item, you may have to get it this way. This requisition-with-justification may be the most effective way to get items you can readily identify in supply catalogs (Army or GSA) but which are not listed in your unit's authorization documents. (If you really need 'em, that is.)



Also, it may be the best way to get some items identified in PS. PS is official but not directive, so it's obviously not an authorization document—even though some new or improved items identified in PS are critical enough to qualify for a not-operationally-ready/supply (NORS) type request, as spelled out in Chapter 2 in AR 710-2.

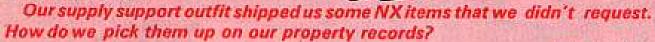


When all else fails, ask your CO to file a constraint of supply report for items you can't get that are really necessary. See Chapter 2 in AR 710-2. Just write it as a DF or letter. If there is a provable need, this constraint of supply report may shake loose those items in the supply pipeline—but don't use it for items just nice to have.





Dear Half-Mast,



SGT M.A.B.



DON'T WORRY, WE'LL JUST MAKE A RECORD OF YOUR ARRIVAL HERE AND SEND YOU BACK,



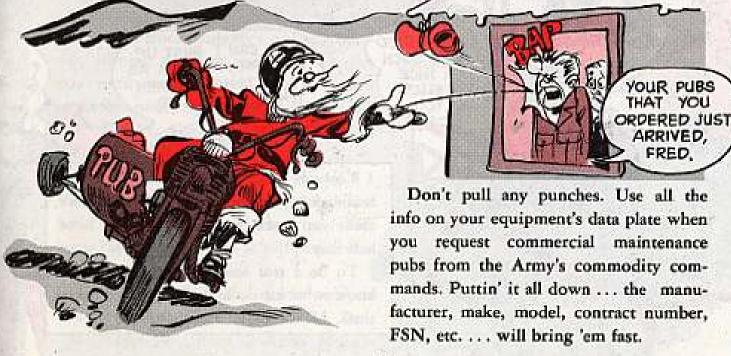
Dear Sergeant M.A.B.,

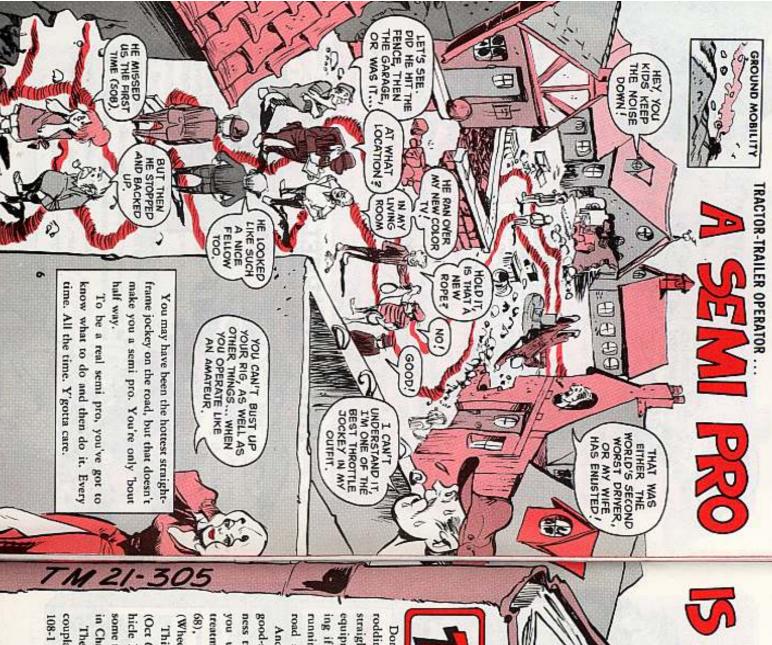
To cover yourself and to help supply account for the items, here's what you do:

- 1. Use the number on the item's issue form to post the items to your document register.
- 2. Make up a DA Form 2765-1 turn-in on the items. See Chapter 2, AR 710-2.
- 3. Post the turn-in to your document register.
- 4. File a copy of the turn-in in your document file.

Half-Mast

HELP YOURSELF... BUB





YOU MAY BE A GOOD MAN WITH A STRAIGHT FRAME RIG, BUT THAT SEMI IS A WHOLE NEW BALL GAME.

THANKING.

Don't let anybody tell you that ramroddin' a semi is the same as handlin' a straight-job. It just ain't so. You and your equipment are in for some real suffering if the only semi training you get is running a tractor-trailer outfit down the road a coupla hundred yards 'n' back.

And if you've never qualified in any good-sized truck, nobody's got any business turning a tractor-trailer rig over to you until you've been given the full treatment under TM 21-300 w/Ch 1 (Oct 68). Driver Selection And Training (Wheeled vehicles).

This'll get you into TM 21-305 w/Ch 1 (Oct 66), Manual For The Wheeled Vehicle Driver, And this's where you find some real good poop on semi operation—in Chap 15.

Then you fill in the cracks with a coupla training films listed in DA Pam 108-1 (May 69), Index of Army Motion

Pictures And Related Audio-Visual Aids:

—TF 55-1478, Driving The Semitrailer

General Transport Vehicles

-TF 55-1918, Loads And Loading of

All truck tractors are not the same. And there're a lot of different semitrailers. So you bury your nose in the operator's TM's for whatever tractor 'n' trailer you're handed. Bone up on their special features.

No matter which tractor and which trailer you've got, you can pick up some good stuff from this rundown on a real common rig—the M52A2 5-ton truck tractor and 12-ton M127A2C semitrailer.

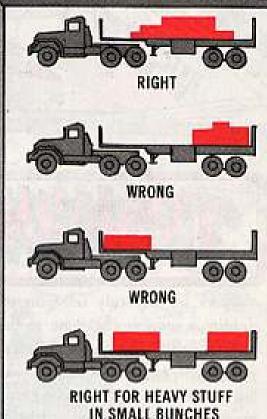




Before you even think about hookin' up your tractor to the semitrailer, make sure that trailer is loaded right. If you got the right kind of training, you know how it's s'posed to be loaded so the weight is best spread around.

If possible, you be on hand when your trailer's being loaded. Besides making sure everything's put in the right place, you see that your trailer's not tore up by the guys doing the loading.

Side loading (and side unloading, too) saves a lot of wear 'n' tear on your trailer when you've got the kind of cargo that can be handled this way. But beware of the "helpful" forklift operator who offers to loosen or lift your side (or rear) panels. Almost for sure, you'll get busted panels.



Loosen the panels with a bar, if they're stubborn, and lift 'em out of their pockets by hand. Then stack 'em out of the way someplace where they won't get run over by loading machines or other trucks.



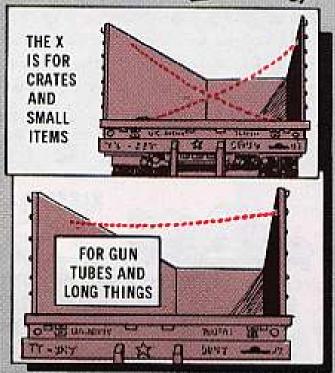
A NEAT PACKAGE



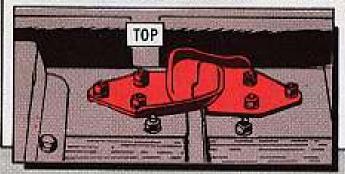


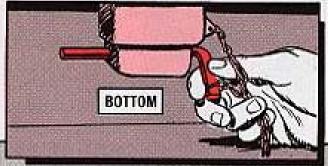
Then you lash 'er down snug. How you do it will depend on what cargo you're carrying—size, shape, how much—and what sort of ropes, chains and tiedowns your trailer has. The main thing is to keep your cargo from shifting around or falling off.

And you want to keep your side panels from spreading out. When you've got big crates 'n' such stuff, you can usually run your chains in an "X"—from the top of the panel down to the deck tie-down ring on the other side. If this won't work—like if you're carrying gun tubes—you run your chains straight across at the tops of the panels.

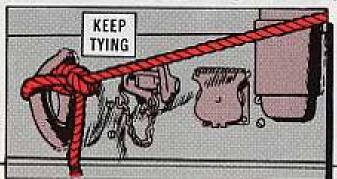


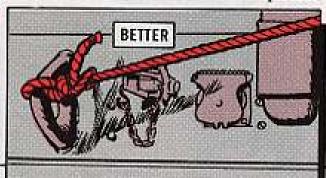
Check all the way around. Make sure all your panels are locked together at the top. And the bottom retaining pins are in place.





'Nother thing, when you're using a cargo cover, don't leave those tie-down ropes dangling down in front. Keep half-hitching those tails until they're up out of the way—or they'll get caught between your trailer 'n' tractor 5th wheel plates.







Real important, before you're ready to hook up, are those chock blocks under your trailer wheels. One of 'em, anyway, should be behind the wheels so the trailer won't roll when you hitch up with your tractor. Sure, your trailer brakes were set when the trailer was last parked and the air line unhooked, but that lasts only for a li'l while-until the air bleeds off.

Ready now to mount up 'n' hitch up? Not yet-not until you've given your tractor a full before-operations-check. Your

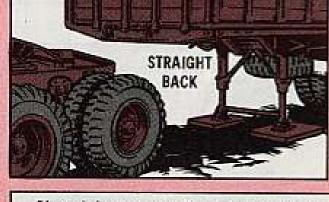


operator's TM gives you the rundown. (If your tractor's a multifuel job, like the M52A2, unlimber that copy of DA Pam 750-11, May 68, you're s'posed to keep close to your hot li'l hands.)

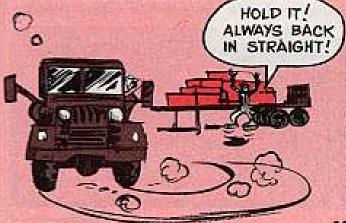


Get someone to lend a hand for a few seconds when you back up to your trailer. He'll guide you in lining up your tractor's 5th wheel slot with the trailer's king pin.

Always-always-back in a straight line with your trailer. Never come at the trailer from a side angle. More'n one guy has learned the hard way-a little too much speed-didn't stop quite quick enough-tipped over the trailer-cargo 'n' all. Talk about a mess!



Slow 'n' easy-until your tractor just kisses the trailer. Then shift your tractor into NEUTRAL and put your parking

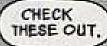


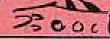


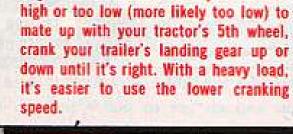
SLIP WILL SHOW

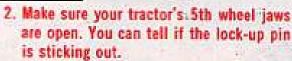
Here's where you can help make or break yourself as a semi pro. If you make just one slip, it can nail you cold on the road.

1. If your trailer's 5th wheel plate is too high or too low (more likely too low) to mate up with your tractor's 5th wheel, crank your trailer's landing gear up or down until it's right. With a heavy load, it's easier to use the lower cranking speed.



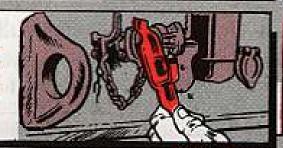






Junnymy.

3. Take off the trailer's dummy air couplings. Be sure to hang 'em both up or you'll chop 'em off in the 5th wheel when you slide under the trailer.





4. Connect your tractor's air lines to the trailer-SERVICE to SERVICE, EMER-GENCY to EMERGENCY. (You've got tags there telling which is which, but your CO can authorize painting—under AR 385-55—to make it easier 'n' safer. Paint SERVICE yellow, EMERGENCY red.)





6. Hook up the electrical cable from your tractor to the trailer. If the plug cover doesn't snap back 'n' stay back, get it fixed. Make sure the trailer receptacle cover latches into the groove on top of the plug so the plug won't fall out.





And, hey, that cover 'n' plug are no step -they're off limits to apple mashers!



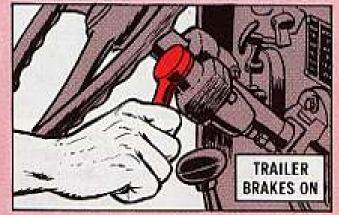
ONE PLUS ONE EQUALS ... ONE

Now you're ready to couple up and make a complete truck out of that tractor 'n' trailer.

Hop into the cab—parking brake OFF—transmission in REVERSE—hold the Johnny bar down to set the trailer brakes. (Oh, sure, you've got the trailer wheels blocked, but why take chances?)

Keep a sharp eye peeled back there where the action is. Give 'er the gas—slow 'n' steady. Slide 'er under the trailer until you feel a little bump that tells you the trailer's king pin locked into the tractor's 5th wheel.

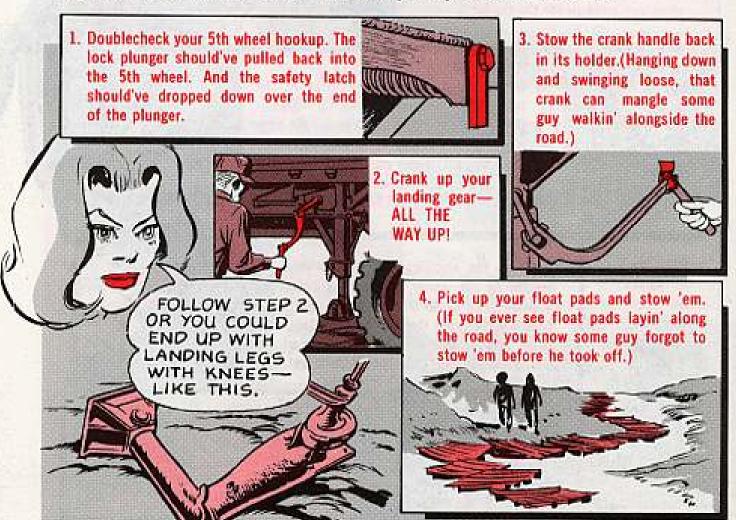
Shift into FIRST-Johnny bar still



down to hold the trailer brakes—feed 'er just enough gas to put a pull on the trailer. F'rgoshsakes, don't go pourin' on the coal! If your trailer's not hooked up good, you only have to jump ahead a li'l too far to tear your air hoses off.

WRAP UP 'N' ROLL

Before you climb down, make sure your gear shift's back in NEUTRAL, parking brake's ON, trailer brakes still ON (Johnny bar down). Then ...



 Same goes for your chock blocks. And make sure the chains are wrapped up out of the way so they don't dangle and get fouled in your wheels. Or, worse, they can whip off a brake line.

Now you're ready to roll, man!

ON THE ROAD

Here's where that good training you got really pays off.

You know you've got to allow more room for turning, because the tail end of your trailer will cut across any turn you make with your tractor—like when you go around a corner—or when you pull out around another vehicle on the road.



Most guys catch on pretty quick . . . they're mighty careful about that "blind" side.

But it's surprising how many drivers forget the same thing happens on their own side—the left side of the semi. Like the guy who—twice in one day—clobbered another

vehicle while making a left turn at a crossroad. He learned, the hard way, that his trailer wheels do not follow his tractor in a sharp turn—either right or left.



Backing your semi takes practice, too. Para 15-7b, TM 21-305 tells you how, but you've got to get the feel—with plenty

of practice—before you know how. Most guys find it's easier to back a semi-trailer than a smaller (lunette-type) trailer, because the semi doesn't "answer" so quick when you turn your steering wheel.

Also "special" for semi drivers is the way you use your brakes—especially on a slippery road. Jack-knifing is one of the biggest nightmares waiting for you if you don't operate your tractor brakes and your trailer brakes right, like it tells you in



para 15-2d(1)(e), TM 21-305. When the ice 'n' snow season starts, even the most experienced semi driver practices this special braking before hitting the open road.



No matter how good you are at backing your semi, you can't see what's right behind you. If you don't have somebody with you to lend a hand, it's worth a coupla minutes to hunt up an extra set of eyes—a guy who'll make sure you don't back into something. Or, worse, somebody! If you've got no choice but to back up without a guide, at least hop down and check good all around your rig for anything you don't want to run over or into. And if you've got to back up quite a distance, get out and check around again every 15 feet or so.

You'll rest better, too, when you know you've left your trailer the way you're s'posed to.

AFTER YOU'VE PARKED YOUR TRAILER DO THESE THINGS.

Put your tractor's gearshift in NEUTRAL and parking brake ON. Then pull your Johnny bar down to set your trailer brakes.

Set out your trailer's chock blocks. On level ground, chock in front of the wheels

on one side and behind the wheels on the other side. On a slope, you chock either the front or in back of the wheels on both sides, depending on which way the trailer's likely to roll.



Shut off both air valves on your tractor, uncouple both hoses from the trailer and hang 'em up. (Although this cuts off the air supply from your tractor to your trailer's brake system, unhooking the EMERGENCY air line automatically sets the trailer brakes.)

Be sure to put those dummy couplings back on the trailer's air line couplings. This keeps dirt from getting into the brake system. Also, it'll help slow down rotting and cracking of the rubber washer inside.

Unhook the electrical cable, slap over the cover to keep out dirt 'n' moisture and hang 'er up. And make sure the cover's down on the trailer receptacle, too.

Always use your float pads under the trailer landing gear. Make it a habit and you won't have to worry later when rain turns that rock-like dirt into mud. Blacktop? With a hot sun and a heavy load, your landing gear feet can sink right into a blacktop mush when you don't have your float pads under there to spread the weight around. Set your pads on the ground—no need o' throwing 'em down and bustin' out the handles. Place 'em so your landing gear feet will come down right in the middle.

Crank down your landing gear till the feet fit firm on the float pads 'n' hang the crank back up out of the way. It's hard to believe, but some guys have pulled out from under their trailer with the landing gear still up—real embarrassing when that trailer comes crashing down.

Pull the lock handle to take the 5th wheel jaws off your trailer's king pin. Doublecheck—peek underneath and see that the lock-up pin is sticking out. If the hook won't release the kingpin, pull the hook handle to force it loose.

Now climb back into the cab—parking brake OFF and gear shift in FIRST—and pull your tractor out from under the trailer.

You wrap it up with your reg'lar after-operation-check—of both the tractor 'n' trailer, as spelled out in the operator's TM for each vehicle.



HERE ARE SOME PM CHECKS FOR YOUR MIZT- SERIES TRAILER THAT SOMEHOW GET OVERLOOKED.

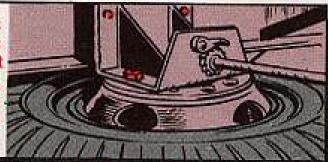
Believe it or not, that screw in each landing-gear-support-leg is where you put the lube in. LO 9-2330-207-12 (May 63) tells you when to lube and what lube to use.

But you've got to remember to turn those landing legs all the way down before you take out the screw and give 'er the lube. Each leg gets a pint of oil. Give the oil about 15 minutes to get down into the reservoir before you crank the legs back up.

No screw? Relax. You've got the new Westran-style landing legs. They're permanently lubricated in production.

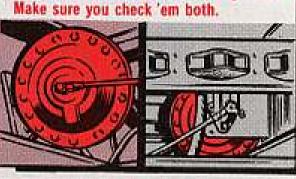


If you find your spare tire mount is cracked, it's probably because things weren't kept tight—wheel loose on the mount. or mount loose on the trailer. This lets that heavy tire 'n' wheel bounce and jiggle. That's what cracks the mount. Keep those nuts 'n bolts tight.



Another lube point that's missed is the spring seat bearing—both sides of your trailer, natch. It's kinda hidden down underneath. Like your LO says, you take out the plug, install a grease fitting and put the grease to 'er. Then you take out the fitting and put the plug back in.





On some vehicles with dual wheels, you always mount the wheels so the tire valves are 180° apart (exactly opposite each other). Like it says in TM 9-2610-200-20 (Jan 71), this makes it easier to find the valves in the dark. But this doesn't make sense for 5-hole wheels like you've got on your M127A2C-you wind up hiding the inner tire valve and making it hard to get at. So, on those 5-hole wheels, you locate the tire valves about 160° apart.



KNOW A LOT ABOUT TRUCKS CONNIE.





trouble comes from bum PM-weak baronly down to about zero. Most starting started by itself when the temperature's thing wrong with a truck that can't be else you've slid over in the charging or teries, bad points or plugs or something gnition system. You've got to admit there's some-

FIND THE PROBLEM? THE ONLY THING I DIDN'T HAYE TO FIX WAS THE HORN!



* weight oil) in your crankcase makes for Even wrong oil (heavy, summer-



PM OFF TIL TOMORROW,
ALWAYS TOMORROW!

build up in your fuel tank or fuel filters, you're askin' for starting headaches. And if you let water (condensation)



shape for cold weather, the jumper cables is just a crutch. If you don't keep your truck in good



stubborn about starting. And you've got suddenly pull a surprise on you-and get to get 'er goin' right now-if possible. But, true, even the best truck can

Y'GOTTA GO...

THIS PAPA? WHAT KINDA

유

MEIN SON

THAT'S THE TRACK

WHEN Y'GOTTA GO,

THING TOMORROW WILL COMPLETE THE TUNE UP TIME FIRST HONEST

GAVE THEM YESTERDAY! THOSE GUYS

got a battery cable that needs tightening. operator's (-10) TM. Maybe you've just trouble you can fix yourself. Or there's some other simple little out those "Troubleshooting" tips in your



tow by another vehicle will get you rollup a slave-starting aid. ing. This may be quicker than hunting If you can't find the "bug", maybe a

your operator's TM tells you. There're make doggone sure you do it exactly like miss one of 'em special steps for tow-starting most trucks -you can really mess things up if you Before you tackle a tow-job, though,



JUMP HERE'RE A FEW WINTER STARTING BUT PREVENT MOST HARD GOOD PM WILL TIPS

MORE

Before you go yellin' for help, check

JUMPER CABLES

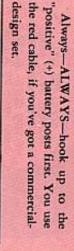
under the load needed to get your truck duty 98-cent specials-they'll burn out \$6 a pair. Stay away from those light "heavy duty"-they may run around \$4auto supply store. Just make sure you get can buy clip-type jumper cables at an local purchase (under AR 710-2), you With your local command's OK for

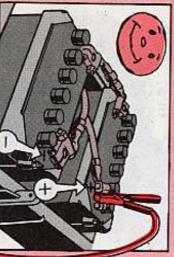
cables for you. The wire should be as heavy as your battery cables-AWG No. Or get your support to make jumper

> JUMPER CABLES CHECK YOUR QUICK

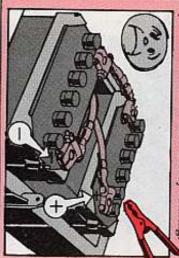
catch a turtle. burn out an alternator quicker'n you can -when he doesn't know how. He can 17 for slave starting is the guy handling 'em The worst trouble with jumper cables

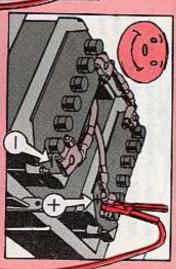
And the clips should be heavy duty.



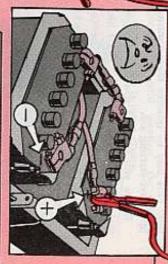


post in the vehicle that's already running. Clip one end to the "positive" battery

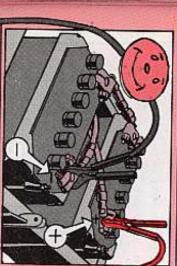




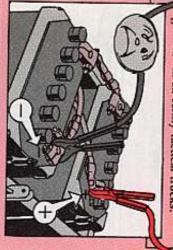
in the vehicle you want to start Then clip the other end to "positive"



you'll ruin an alternator. burn a hole in a fender. hot sparks snappin' at you. You can even cables at once-or you'll probably have Be careful! Never try to handle both



tive" (-) to "ground" in all Army tactical trucks. Then hook up the black cable-"nega-"negative" P That's



"ground" (black) cable—then the other, hicle started, unbook one end of the Then unhook the "positive" As soon as you've got the "sick" ve-

SLAVE-CABLE-AND-RECEPTACLE

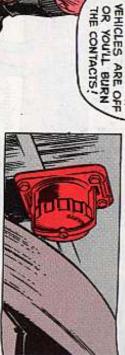
on every truck. because you need a receptacle installed This's the expensive kind of crutch

SWITCHES IN BOTH

THE CONTACTS

CONNECTING SLAYE CABLES, MAKE SURE ALL ELECTRICAL

BEFORE



ment. it in your No. 1 Common Shop Equip-The cable's easy-you've already got

month of the year is +5°F or lower." 9-16 (Aug 70) where it says the recepaverage temperature for the coldest tacle is "authorized for use ... where the For the receptacle, take a look at SB

part of the complete winterization kityou can get it alone under its own FSNlisted in the -20P TM for your vehicle. Although this receptacle is normally

"sicky" and the other end into the receptacle on the receptacle on the truck with power-You just plug one end of the cable into



perkin' again, you unhook the cableboth ends. Natch, as soon as you've got "sicky"

7



NEED TACOM EIR DIGEST?

Some units haven't been getting the TB 750-981-series (Equipment Improvement Report and Maintenance Digest, Tank And Automotive Equipment), because only 5 copies went to each pinpoint account.

There's no reason now, though, that everybody can't get all they need. Just tell your pubs supply man to put the number "Quantities" on page 5, DA Form 12-38 (1 Apr 71).

Same goes for the TB 750-982-series, Equipment Improvement Report And Maintenance Digest, Commercial Automotive Equipment.

There's a lot of good maintenance poop for everybody in these TB's.

LUBE FITTINGS FOR SPRINGS



YOU'LLV GET IN THE ACT AT THE FIRST "5" SERVICE.

What? No lube fittings on the rear spring seats of your 21/2-ton truck?

Could be. When the switch was made to bushing-type bearings, some trucks came out with no lube fittings.

No sweat—for a while, anyway. That spring seat bushing setup comes factorypacked with GAA.

But you fix 'er up for regular lubing when your truck's in for its first S service or sooner, if it's in the shop for work on the springs.

The poop on drilling 'n' tapping for a grease fitting is in TB 750-981-3 (Jul 71). The same dope'll be showing up in a change to TM 9-2320-209-20.

Then you lube like the LO says.



Rest easy if you find hydraulic fluid (pink stuff) in the power steering reservoir of your new M809-series 5-ton truck. It's OK.

Sure, LO 9-2320-260-12 (Feb 70) says you use OE in the steering reservoir—and you do.

When that hydraulic fluid level drops, just add OE like the LO says—they'll mix fine.



NO LUBE NEEDED- AT FIRST

TRUCKS AND ENGINES GET

components. engines now have contractor warranties that give you free replacement parts or Six more groups of vehicles or vehicle

covered by the warranty. quired when they fail within the period purchase contract and if reported as re-Free, that is, if they're covered by the

with the ENDT 673 engine (new or re-M561 and M792, M809, all 5-tonners built) and commercial vehicles. The 6 groups include the M123A1C,



with warranty period for each: Here's the list of vehicles (or engines) covered (with contract number) and the TB

Commercial Design Vehicles (GEN)	5-ton Vehicles w/Mack ENDT 673 engine, rebuilt— DAAE07-70-C-4651	M561 Gama Goat & M792 (Detroit diesel engine 3-53 only)— DAAE07-68-C-2597	M123A1C 10-ton (V8 300 Cummins diesel engine only)— DAAE07-67-C-5022	5-ton Vehicles w/Mack ENDT 673 engine, new— DAAE05-68-C-0010	M809 series 5-ton w/Cummins NHC 250 diesel engine & steering gear— DAAE06-69-C-0009	VEHICLE & CONTRACT
TB 9-2300-295-15/9 (Jul 71)— warranty period varies as indicated on decal on instrument panel	TB 9-2300-295-15/8 (Sep 71) —2 years from delivery or 25,000 vehicle miles	TB 9-2300-295-15/7 (Apr 71) —1 year after Government acceptance	TB 9-2300-295-15/6 (Mar 71) —I year from installation or 18 months after shipment from factory	18 9-2300-295-15/4 (Apr 71) —3 years from delivery or 50,000 vehicle miles	TB 9-2300-295-15/3 (May 71) —3 years from delivery or 50,000 vehicle miles (whichever comes first)	TB & WARRANTY PERIOD
						ITEM

BY A WARRANTY HOW CAN I GE IS COVERED MY SLEIGH IT FIXED?

NEW SLEIG

WITH DA 2402. BUSTED PARTS

'N' TAG YOUR

JUST FILE A DA 2407

FILING CLAIMS

Until the warranty claim is approved,

spelled out in para 3-7.4.2 and Fig 3-22 representative. ment is by the Army or by a factory of TM 38-750-whether repair or replaceor replacement on DA Form 2407 as You file claims for warranty repair

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10-	4	
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	A COLUMN TO SERVICE OF THE PARTY OF THE PART	The state of the s

value of parts and labor. If it's by a factory representative, list

component if you have them. failure-with photos of the failed part or support), include parts and labor value claim status and warranty exhibit disalong with a complete description of the If it's by the Army (organizational or

the DA 2407 warranty claim on the DA tagged with a DA Form 2402 as spelled number-and the control number from out in TM 38-750. (Put the end item identification-including serial or USA 2402.) ACCIDENT, MISUSE WHEN FAILURE RESULTS the failed part or component should be OR NEGLECT. FROM COMBAT

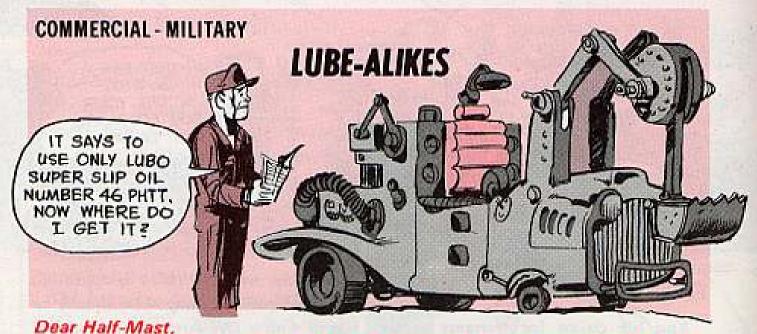
2300-295-15-SERIES Check with your support on local SOP WARRANTY POLICIES IN TB 9-

other items. and there may be special guidelines on of failures by a special warranty card, The M809 contractor asks to be notified

ren, MI 48090-marked ATTN: AMSTA. Army Tank-Automotive Command, Waras spelled out in TM 38-750 to: CG, U.S. TB is available, submit your DA 2407 If you know there's a warranty but no

warranty period for the equipment, give position within 90 days. ment data plate. You'll get back info on the date of manufacture from the equip-If DA Form 2408-8 doesn't list the

warranties. So don't pay twice for those parts with



We've got a lot of different kinds of commercial-design equipment. Maintenance info for most of these items is in commercial pubs that came with the equipment. In a few cases, the pubs are Army TM's, but the info is commercial—pretty much a commercial pub with TM covers.

The problem is lubricants—grease, oil, hydraulic fluid, etc.
When the specified lube is a commercial type, how do we get it?

CW3 R.E.C.

Dear Mr. R.E.C.,

The U.S. Army Petroleum Center will lend a hand. They'll tell you what the Army supply system has to offer as an equivalent to the commercial grease, oil, hydraulic fluid, etc.

Get ahold of DA Form 1988, if you can. Fill in the form like it says in AR 708-1 (Dec 70), para 3-7, and send it to:

Commanding Officer
U.S. Army Petroleum Center
ATTN: AMXPC- LS
Cameron Station

Alexandria, VA 22314

If you don't have the form, put the same info in a letter. Give all the info possible about your equipment, including the part you need the lube for.

If there is no equivalent lube in the Army supply system, you'll have to order what you need just as it's specified in the equipment publication. Your supply support will see to getting it for you by local purchase—per AR 715-30, Local Purchase of Civilian Type Items.





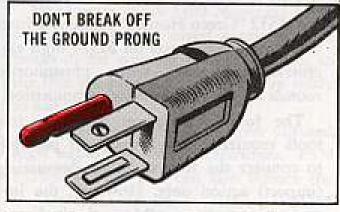
A short-sighted short-cut on electric cord plugs can short-circuit you and your career in pretty short order.

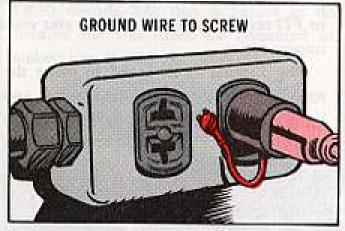
If your electric tools have a 3-pronged cord plug, never break the ground prong off. Either find a 3-hole receptacle, or get an adapter, FSN 5935-081-8025, that has 3 holes for the 3 prongs but has 2 prongs that'll fit the receptacle.

Fasten the safety ground wire on the adapter to the screw in the receptacle cover.

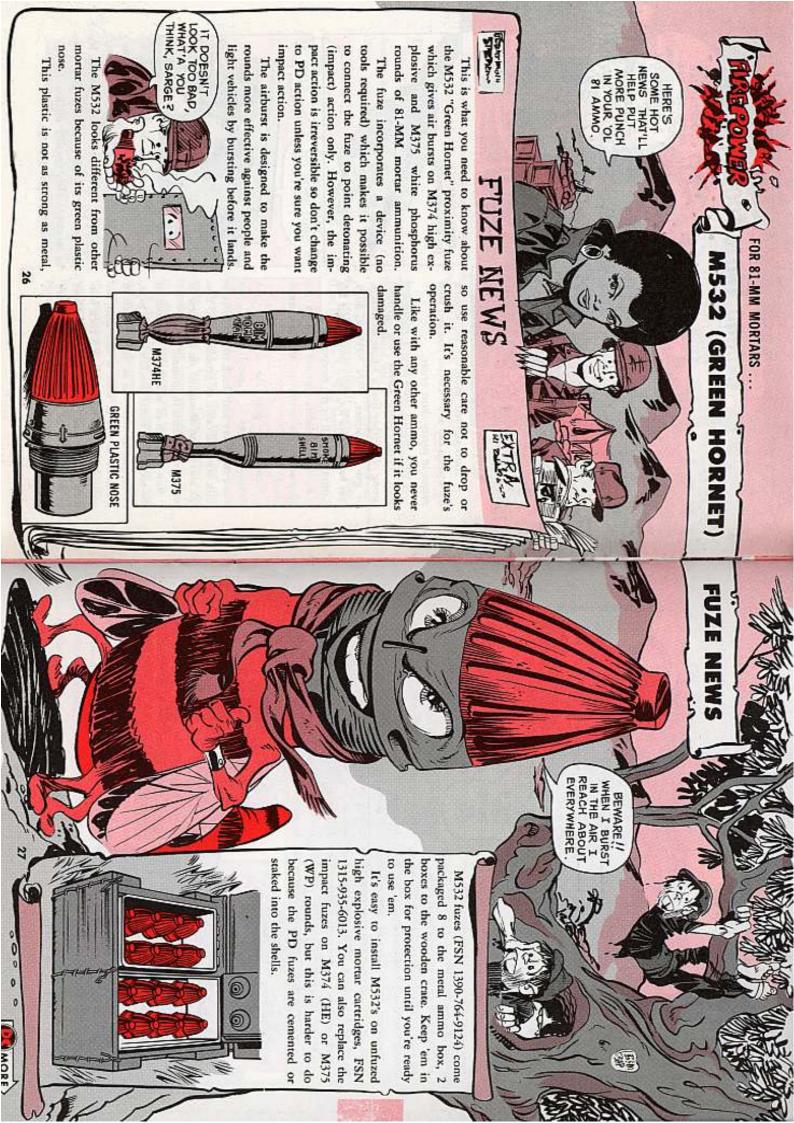
First, make sure the screw in the receptacle cover is a good ground. Remove the cover and check for metal conduit, armored cable, or ground wire. You can also use an ohmmeter on the screw to make sure it leads to ground.

Run a length of wire from the tool to the receptacle, metal conduit, water pipe, or an iron or steel rod at least %-inch in diameter driven at least 8 feet into the ground except where you get a rock bottom. If you can't drive that rod 4 feet or more, then use an 8 foot rod and bury it in a horizontal trench.





If your portable tools and appliances aren't protected by an approved system of double insulation, or its equivalent, then your tools should be grounded. If your tools are double insulated they will be marked. They usually do not have a cord with a 3-prong plugs.



A loose fuze may not down until the wavy ly compressed, and

Use a strap wrench to hold the cartridge and an M18 fuze wrench to take out the PD fuze and install the proximity fuze.

A loose fuze may not work, so snug it down until the wavy washer is completely compressed, and makes a tight seal with the round. If there's a gap you can't close, either put on another fuze or reject the round. Never hammer on the fuze wrench, use a "cheater" extension handle, or stake a proximity fuze.

> HEY, MAN E-A-S-Y



You don't tighten the fuze by holding it by its green nose and turning. Reason: When the nose is twisted at least a third of a turn in either direction the M532 is converted from a proximity fuze to a point detonating (PD) fuze.

USE A

STRAP

WRENCH

The M532 is made this way so it can be used in all terrain conditions including firing into heavy tree canopy.

However, once you turn the fuze ... that's it ... it's permanently converted to point detonating (PD), and you can't change it back to proximity operation.

The M532 is not built to work at Charge 0. Some will, but you'll get a lot WHEN YOU TWIST MY NOSE. Of duds. Use Charge Los higher to give the

of duds. Use Charge 1 or higher to give the arming clock enough time to complete its cycle.

You can get hurt if you try to take this or any other fuze apart. It's a good idea not to use or even handle any fuze or fuzed round that seems to be damaged or is in a container that was damaged by dropping or other mishandling.



Never disturb (or even go near) any kind of dud round. This applies to Green Hornet rounds that were fired but didn't explode. Let EOD take care of 'em.

M532's used to have a Confidential classification but that was removed by DA Cir 380-4 (Mar 68). So if you should get some boxes still marked Confidential, paint out the marking.



You're driving your tank—an M60, M60A1 or M48A3—and suddenly you can't brake and you can't steer.

A nightmare?

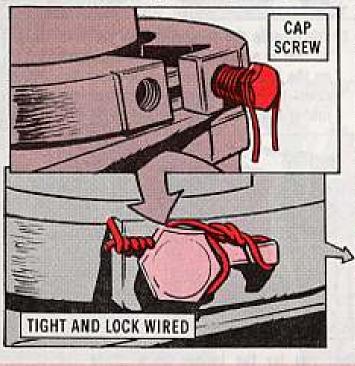
It can really happen, but it won't ...

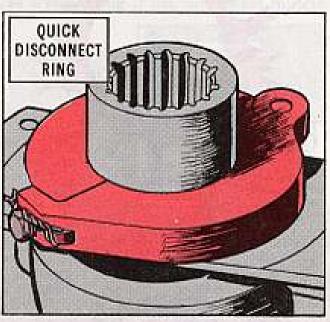
Not so long as you check out the cap
screws on the quick disconnect rings of
your final drives.

Pages 2-195 and 2-397 of TM 9-2350-215-20 (Feb 65) show how to install the locking wire, FSN 9505-191-3680 (1/16 inch thick), through the cap screw, FSN 5305-939-9267, on the quick-disconnect ring of the final-drive assembly.

The nightmare can only happen if the cap screw vibrates loose and falls out (which it can't do if it's lockwired). This lets the quick disconnect ring drop off and then you can't brake or steer.

So check the cap screws to make sure they're tight and lock wired, 'specially after removing or installing the tank power plant or universal joint. Do this and you'll never have a nightmare in the daytime.





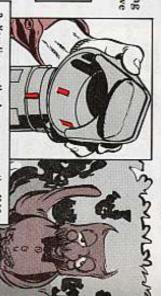
M728 OBTURATOR PAD

Obturator pad worn out on the main gun of your M728 combat engineer vehicle? Get a new one and a replacement shim set under FSN 1025-127-2976. It's better than the one listed in TM 9-2300-378-20P/2-2 (Aug 69).



The components of your M76 training set (Redeye) can do a mighty effective

 You don't point the M49 trainer at the sun. If you do, you'll have to wait a coupla days before you can use it again. job for you, providing ...



You line up the lens cover on the M49 so that it needs only a straight-in push on the keyway. If you have to twist the cover to line it up you can break the rubber keys.



3. When you lay the trainer on a stand

on the uncaging switch. You can tear it up. Rest the trainer on the side opposite

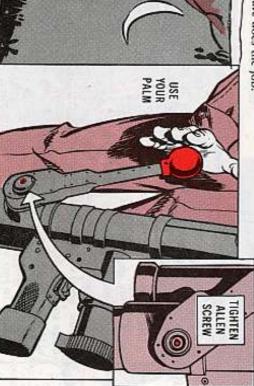
be careful not to snag the rubber boot

MISHANDLING OF YOUR MT6 TRAINER CAN CAUSE SOME BIG HEADACHES.

For a change of pace, read the gas pump handle warning on page 2-8 of TM 9-6920-428-12. The people who wrote the book weren't kidding when they said use the palm of your hand when you return the pump to stored position. If you wrap your hand around it, your fingers can get squeezed between the handle and the chassis. And man, that hurts like—you wouldn't want it to.

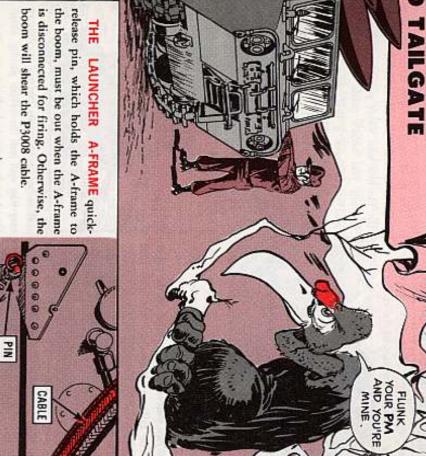
RUBBER BOOT IS

Another point on the pump handle: if it has an inch or more of play, the Allen screw is loose. So, a fast way to cure it is to remove the setscrew and insert a 5/32-in Allen wrench through the cover to the screw. Snug it up, but forget muscle. A slight pressure does the job.



If the screw backs off and you don't snug it up, the handle will go 'round and 'round and 'round.





WHEN FIRING ASP (Annual Service Practice) fire over the side of the SPL. If you fire over the cab, you'll bust the windows with concussion. There's an

te MWO on the way for a windshield blast L. cover, but meanwhile, watch where you be point.



A after you lay the cable ... which saves damage to the equipment you're hooking to, as well as to the SPL.

HOSES CLEAR.

CLAMP OUT?

close to the gate.

away from the tailgate, the gate can cut the hoses in two when you lower it. So, don't do the hoses in by snugging 'em too

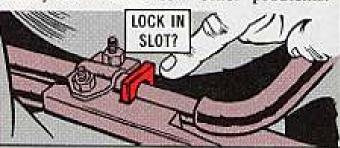
33

TRACK'S ENGINE OVERHEATING?

Then eyeball the gear box disconnect lever ... under the seat in the cab.



The lever must be fully engaged (with handle locked in the slot). Otherwise, the fan belt and water pump are disconnected, you won't build air pressure, and you'll have a few other problems.



CABLE RETRIEVING is a wait-aminute deal if you want to save your buddy some bruises and breaks.

When you're ready to take up the cable on the tailgate spools, get the reels and cable started . . . first.

Then, as the cable feeds onto the spool, have your buddy hold the cable and guide it in place.



CABLE IN PLACE

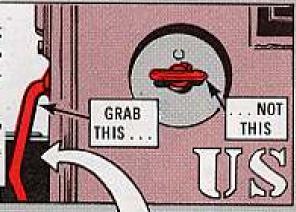
Best bet is to push the reel switch in easy-like and get the cables going, slow. Don't push the switch all the way in.

As the cables slow down from the initial start, a man can lift 'em up and feed 'em without danger.

DON'T FEED
THE CABLE
BEFORE THE
REEL STARTS
OR THIS
COULD
HAPPEN!

PRE-CAB POINT NO. 1 Grabbing the red handle on the side of the cab to hoist yourself aboard creates a frosty situation.

The handle's a fire extinguisher knob ... and fills the engine with CO2 when vanked.

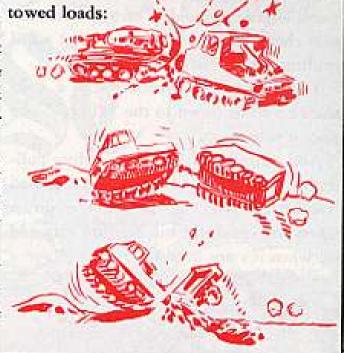


The handhold is the one to the left of the red one. COUPLA' 3 POINTS on retrievers and towed loads:

If you're pushing a tank retriever at the SPL to tow it, have a buddy on the ground guide you. More'n one SPL has been crunched because the tank retriever operator got too close.

When you're tooling down the road with a towed load on the SPL, control the urge to pivot steer ... or the load will jackknife and spill.

'Nother point on a towed load: jumping a ditch with it will make you a 2vehicle family. The SPL will make the ditch, but the tow is gonna stay.



EYEBALLING THE ENGINE compartment can turn up some cry-for-help areas.

Like with the oil pressure safety switch. The top is wide open, just begging for water ... from the hose you wash the vehicle with, or any other source.

Trouble is, when water settles in the switch top the unprotected generator leads which dip into the top get wet.

And, when you start the generator, it kicks out, immediately. The water, natch, makes for a dead short.

So, when you're washing the track, or otherwise have the engine compartment open to water, cover the switch. If water gets to it, dry it out.



You can prevent damage to the starter ground lead and jackshaft-to-fan drive belts by repositioning the lead away from the belts.

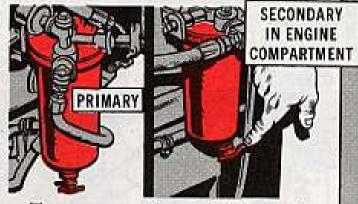
Loosen the screws securing the lead to the hull, and reposition it.

Then, start the engine to be sure you've got the belt-lead clearance you need.

THE FUEL CELL filters are moisture traps (and rightly so), and the draincocks on the primary and secondary filters should be checked daily for water.

Crack the draincock on the primary filter. If there's water in it, crack the seccondary and get the water out of that, too.

If you've got moisture in the fuel cell, you can get to the cone type filters through the access plates.



To prevent moisture build up, keep the tanks full whenever you can. ON AN OIL LEVEL check, do it with a warm engine. Same deal on the transmission check. If it's cold, you can get a full reading, which isn't necessarily so.

The same "full" reading on a cold track could be down to the "add oil" line after it warms up.

And, turn the dipstick free before pulling it out. If the dipstick isn't turned free first, it won't go all the way down when you check the oil. So, you may add oil when it's not needed.



THE HYDRAULIC CLUTCH oil level needs checking weekly during regular use. If you don't check it, and the level drops, the clutch'll burn out from overheated bearings.

To keep the level right, remove the 2 drain plugs. Pour oil in the top opening, and when it comes out the bottom, you're right.

Just don't stop pouring till it comes out the bottom.

THE NO SURGE PURGE is a must with this beast, friend when you've got a motor that needs tuning. If you get gay with the foot and zap the juice to a rough running engine too quick, you'll crack the quill shaft and put the engine down.

In case you haven't seen it, the original requirement of 12-15 lbs torque on the transfer step-up pulley bolt has been changed to 32-38 lbs per USATACOM engineers.

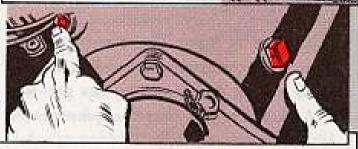
That's on the outside bolt only, so just retorque the one.

Replacement pulley bolts and washers should be in place. If not, you need FSN 5306-763-7730 for the bolt and 5310-058-

7081 for the washer.

The replacement is easy to spot, since the washer is 1/4 inch wide compared to the 1/16-in width of the original.





DRIVING IN THE WRONG GEAR range burns out engines, so get familiar with the range used for your various speed and terrain conditions. Check the caution note in Ch 3 and the ranges in para 2-104 of TM 9-1450-501-10 (Nov 67).

The generator overspeed switch, at the left rear of the engine, shorts out when it gets wet ... so protect it from water during washing, etc. And don't overlook some oil for the switch when you lube the engine attachments.

DROP THE LEVELING ARMS before you try to lock down the launcher.

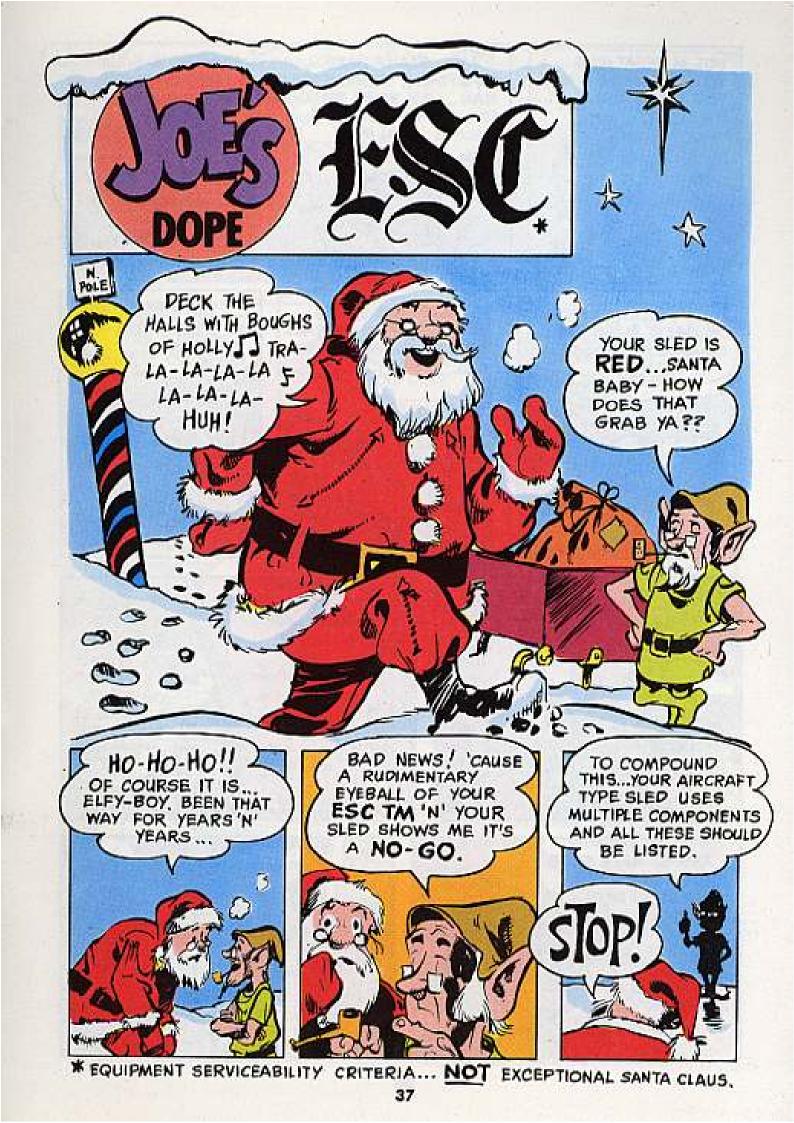


If you don't drop the arms, you'll break the pins on the launcher locking handle.

In a bind for the preformed packing in the linear actuating cylinder assembly?

Preformed packing FSN 5330-579-8157 listed in TM 9-1440-517-25P will do the job for you. (It has 2 applications.)









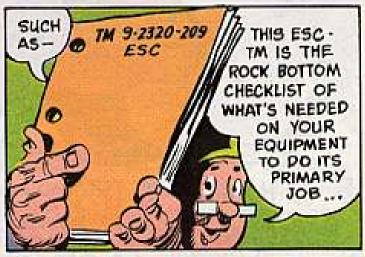




















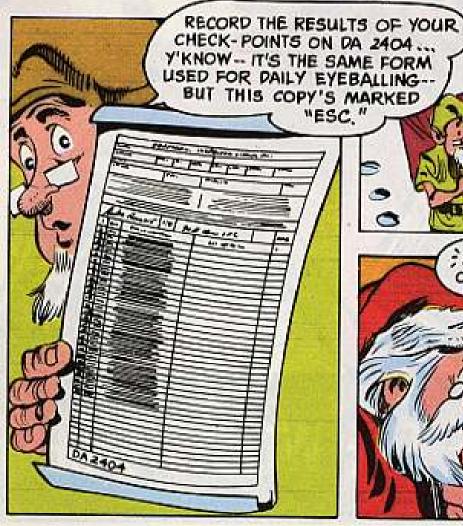


NO POINT SCORES ANY MORE-YOU DIG?



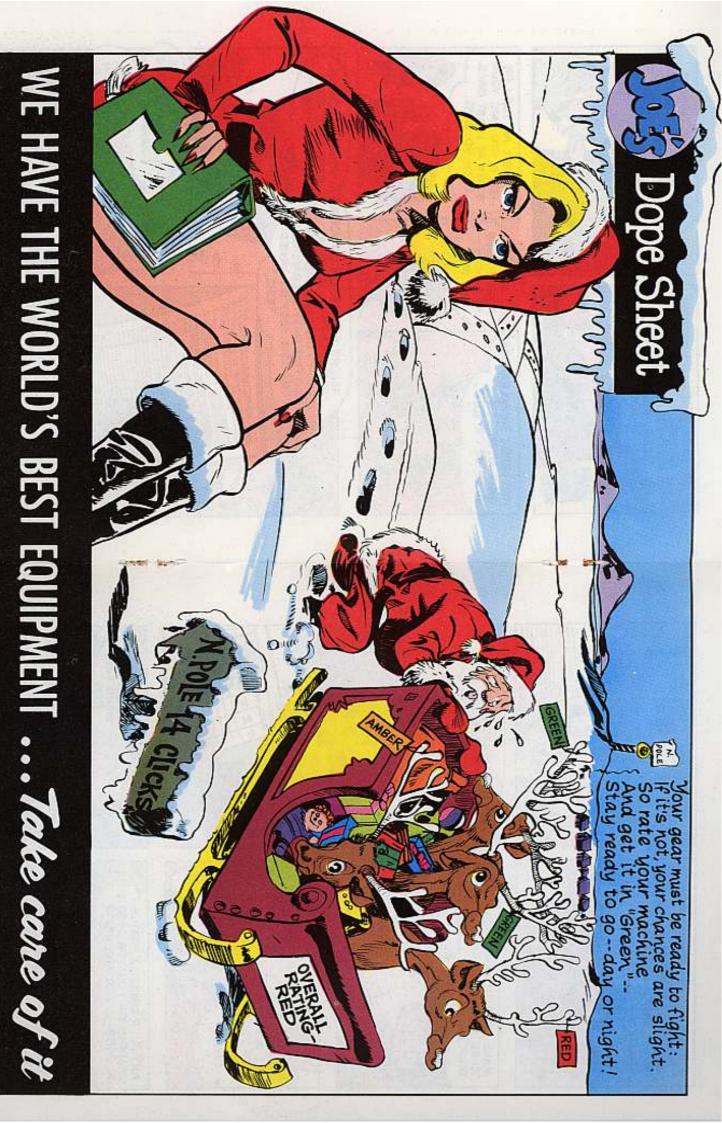
UNDER AR 220-1 OR 135-8, YOU RATE YOUR STUFF AT LEAST ONCE EACH 90 DAYS.





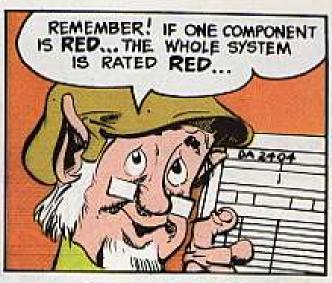
YOUR ESC CHECK MUST RATE EACH COMPONENT.





IF YOU WANT TO DISPLAY THIS CENTERPIECE ON YOUR BULLETIN BOARD, OPEN STAPLES, LIFT IT OUT AND PIN IT UP.







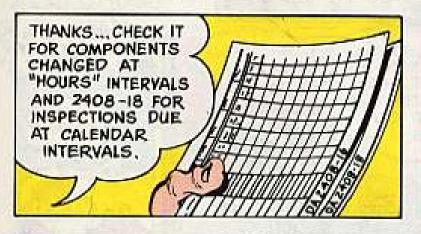




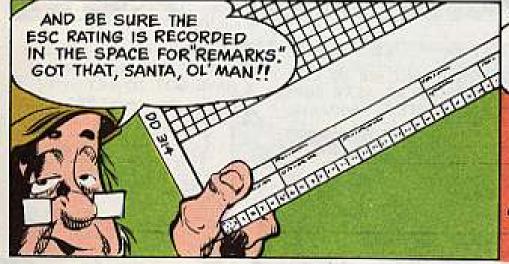




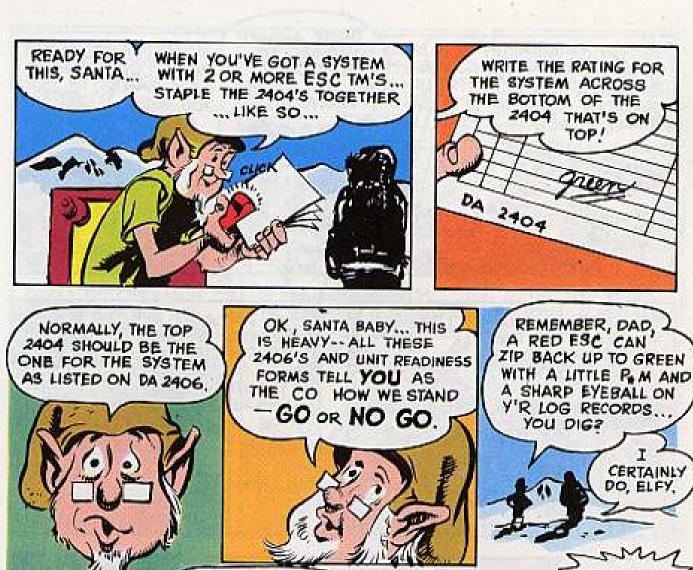








KEEP YOUR 2404
UNTIL THE NEXT RATING,
TUCK IT IN Y'R LOG
BOOK OR IN YOUR
UNIT FILES—UNLESS
YOUR CO SAYS
OTHERWISE.





I





The newest way of checking the health of a turbine engine has made the scene, birdmen. It's the Turbine Engine Analysis Check (TEAC).

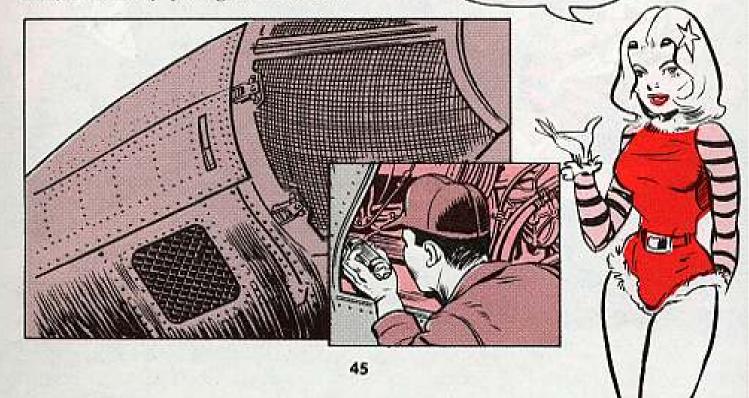
Pull the TEAC on a new engine, after replacement of a major component, during periodic maintenance, and when it's indicated by the results of Daily Engine Recordings (DER).

The DER is your monitoring system. On the Chinook (CH-47B,C) for example, write up the DER as spelled out in the special inspection check sheet. If the instrument readings are not normal, analyze them by pulling the TEAC in para 5-26A, Chg 12 (May 71) to TM 55-1520-227-20-1.

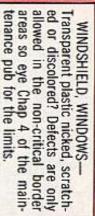
The DER gives maintenance types, via the DA Form 2408-13, a daily history of engine performance by comparing actual output with what the engine's supposed to to put out according to the manufacturer's data sheet.

If engine performance starts dropping, as confirmed by a TEAC, take a close look at the engine to find the trouble.

> PULLING PM NOW CAN SAVE AN ENGINE ... EVEN AN AIRCRAFT!







Plugged with dirt? PITOT TUBE-

3

gain. Instead, ask supply for-Indosil 21. parent plastic. It never really did a perfect FSN 7930-634-5340, or equivalent. With it job and was an all-day affair, in the bartoothpaste to polish out scratches in transyou can polish out scratches in short order. PM tip. You no longer have to use

ACCESS PANEL—Eye the panel for damage, closure and positive lock-



all latches should not be excessively worn. the rotor blades!! barrassing than having a panel sail into You want a snug fit. Nothin's more em-PM tip. The pivot pin and receptacle on

(B, C Plugged? Models)-SAS PORTS

ANTENNAS, SUPPORTS — Damaged? Secure? Make an entry on the DA Form 2408-13 for faulty it on the spot. equipment, even tho you correct

especially after a wash job. To keep a strong collect water during the rainy season and signal, loosen the drain plug and release PM tip. The FM antenna coupling can





STATIC PORTS-Plugged with dirt?



EYEBALL THE LEFT SIDE OK, LET'S

LIGHTS—Covers cracked? Dirty? ANTI - COLLISION NAVIGATION



drains clear? Tank serviced? Filler cap on tight and seated? Drain fuel water in the fuel into a clean, dry sample bottle. Use detection kit, aviation, fuel, FSN 6640-892-2264, to check for FUEL TANK-Vents and sump



SUPPORTS Secure? ANTENNAS Undamaged?

UNITED STATES ASKN

SHOCK STRUT-Eye the strut for leakage, damage and normal exnoisna FORWARD LANDING GEAR WHEEL BRAKE-FORWARD

SEARCHLIGHTS-Damaged?

LANDING



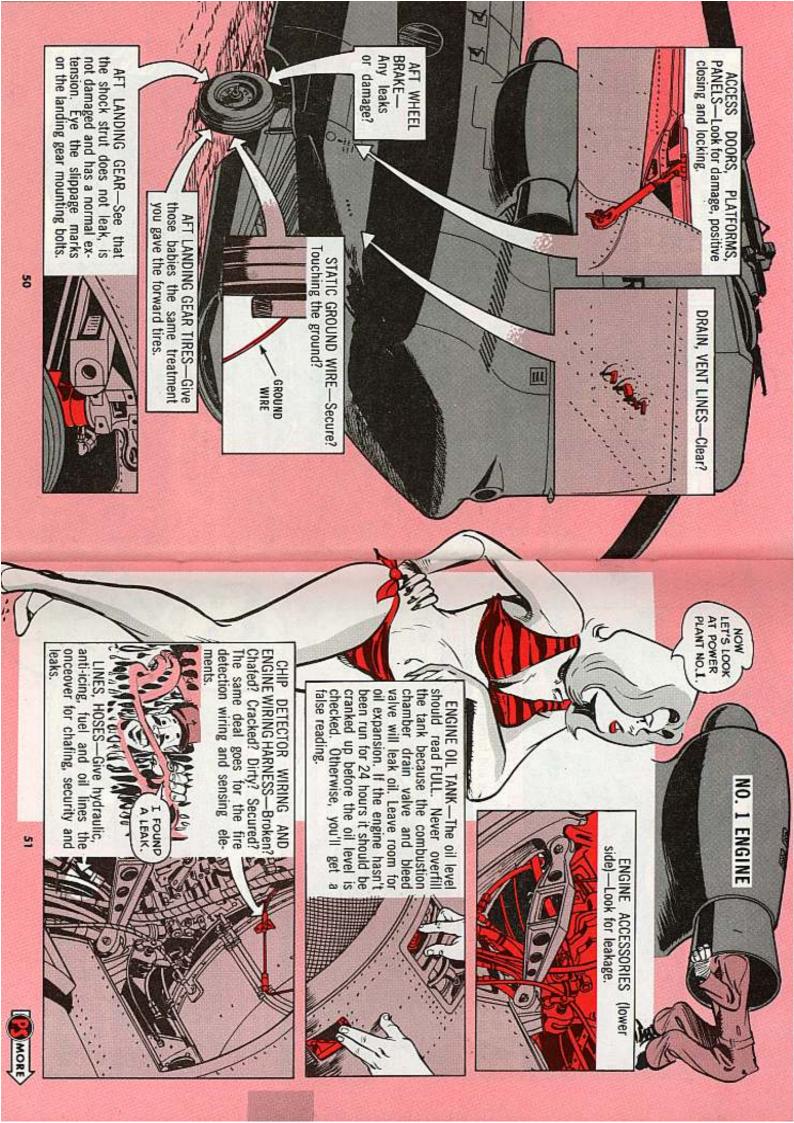


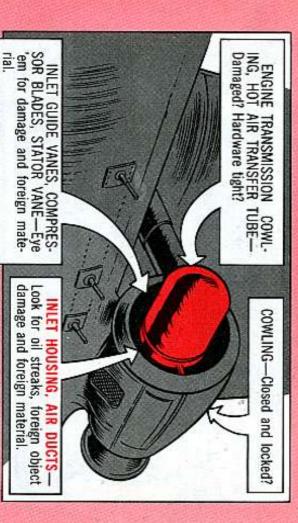
flation, cuts, blisters, wear. Slippage marks aline? —Eyeball the tires for proper in-FORWARD LANDING GEAR TIRES





8







on the inside, next to the mounting flange ring.



ROTARY WING HUB OIL TAN

ROTARY WING HUB OIL TANK— Leak? If the oil level in the sight gage is below half-full add oil to bring it up to midway on the sight

AFT ROTOR, PYLON

Leaks?

PITCH - VARYING HOUSING-



The oil level should be midway on the sight gage. Eye the housing for cracks, focusing on the flanged bushing and leaf spring (A Model), pitch lock pin hole and the horizontal area from the pitch lock pin hole outboard to the inboard end of the housing on the trailing surface. All the inspection areas are shown in Chap 8 of the maintenance pub.

VERTICAL HINGE PIN OIL TANKS

-Oil level OK? Both sight gages should show half-full. Any oil leak-ing?



PM tip. All the oil tanks on the rotor head hold a small amount of oil. If you have leakage thru the seals you want to get the seals changed before the tank runs dry.

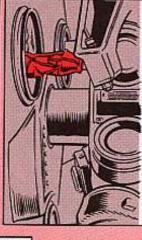
When the oil level in the sight gage drops from the half-way level to the bottom of the gage after 2 hours of rotary-wing operation, it's too much ... change the seals.

SHOCK ABSORBERS—Hydraulic fluid level OK? Oil should show to the upper level line. Any leaks? B and C Models—eye the bull's eye sight gages.



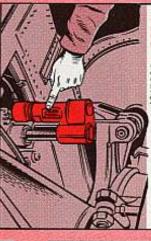
52

chafing, security, damage and unbearing liners. bonding of the upper and lower PITCH LINKS-Eye the links for



PLUG—Secure ACTUATOR LONGITUDINAL CYCLIC CONNECTOR TRIM

mark? If not, add oil.



ing nuts and bolts for cotter pins. damage. Check for security by eye-COLLAR-Look for cracks and other UPPER, LOWER DRIVE ARMS

> -Look for actuator leakage and PIVOTING ACTUATOR, SUPPORT



rotating housing which would mean overheating. Eye the tank for cracked sight gages. tion)—Look for discoloration of the LATE (grease lubrica-

5 check the hardware for security loose or missing rivets. Eye the support for cracks and

deck. The same goes for drug angle, P/N 114S4117-55, below the thrust deck. be sure you eye the drag angle, P/N 114S4117-57, on the top side of the thrust On birds prior to 64-13132 that don't have MWO 55-1520-209-40/9 incorporated

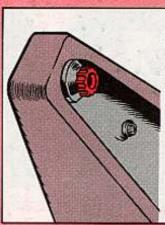


tor popped: DRAULIC FILTER—Warning indica 1 FLIGHT CONTROL

signs of overheating. Run and security of oil lines. for cracks, loose or missing rivets peapers over the support structure HOUSING—Look for oil leakage and AFT ROTARY - WING DRIVE your

> tanks should be at the FULL DRAULIC FLIGHT TANK—Leakage? CONTROL level.

on the four nuts. Replace any missing or broken nuts. MWO 55-1500-210-30/35 (13 Jan 70) gives you softer mounting nuts which are less ikely to crack MOUNTING POINTS-Focus ROTARY -



-31, web, P/N 114S4117-105 (station 541 to 575.5) and support channels, P/N on thrust bearing supports, P/N 114S4806-1, longitudinal angles, P/N 114S4117-29, 114S4118-15, -17, -19, -21, -23, -25, -27 and -29. On birds prior to 64-13132 without MWO 55-1520-209-40/9 complied with, focus

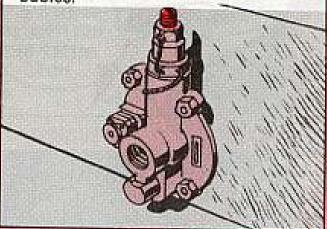






FILTERS-Check the filters for extended warning buttons. The bird organizational maintenance Dub tells how to trouble-shoot those babies.

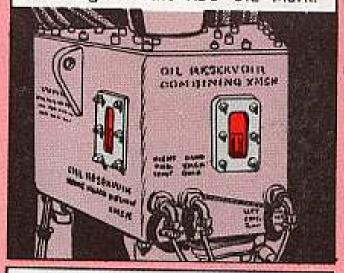
SWIM!



COMBINING TRANSMISSION

Look for leaks. Excessive leakage over a period of time will give you a messy work area ... maybe lose your footing!

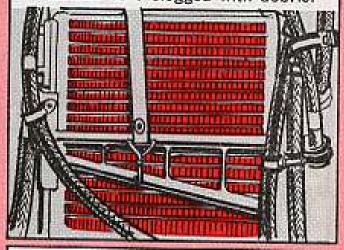
The oil level in the sight gage should be at the FULL mark. The maximum allowable leakage after a 2-hr flight is the ADD OIL mark.



COMBINING TRANSMISSION TO AFT TRANSMISSION DRIVE SHAFT ADAPTER, PLATE—Secure? Cracks? Too much gap between the plates? Look in Chap 7 of the maintenance pub for the gap limits.



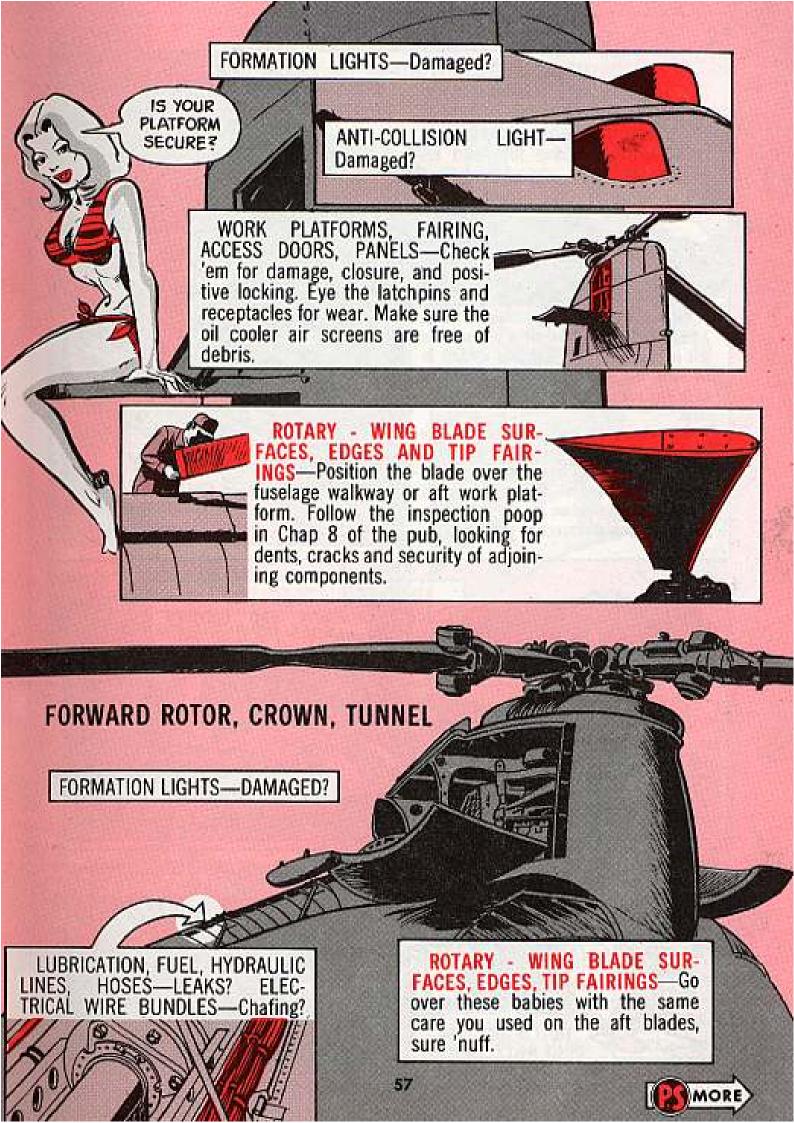
FORWARD, AFT, COMBINING, EN-GINE TRANSMISSION OIL COOLERS Leaks? Core clogged with debris?

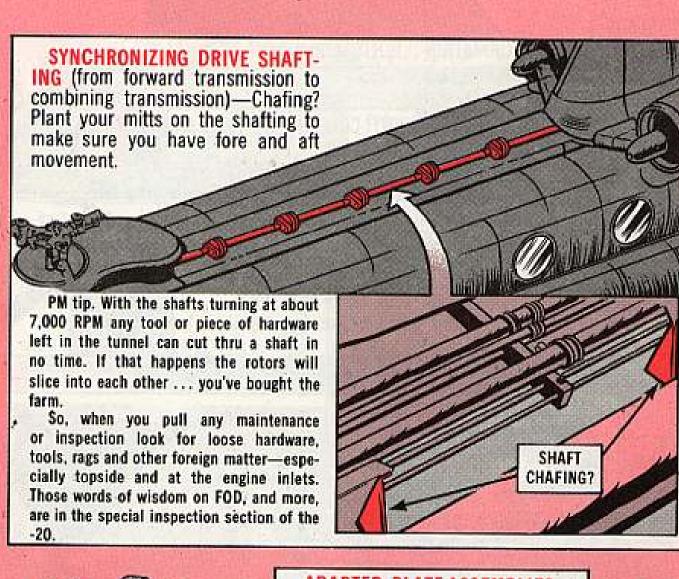


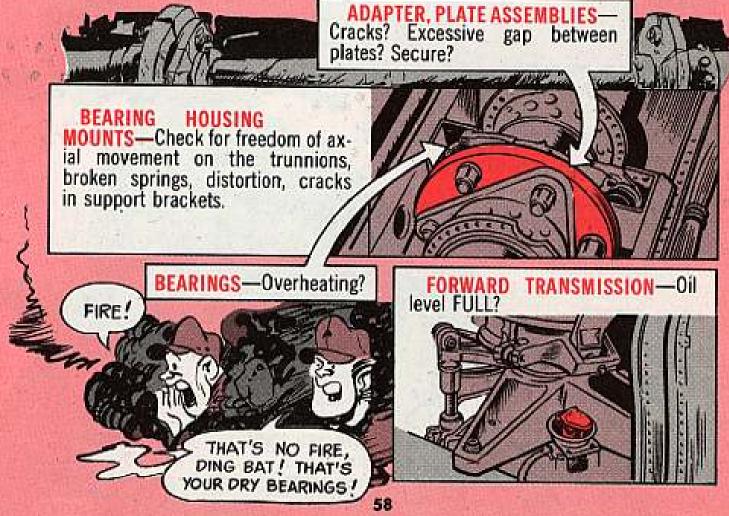
2 FLIGHT CONTROL HY. DRAULIC TANK—Fluid level FULL? Leaks?

NO. 2 FLIGHT CONTROL HY-DRAULIC FILTER-Warning indicator popped?

SWIVELING ACTUATOR—Secure? Some leakage is allowed. Eye the maintenance pub, Chap 9, for limits. SUPPORTS—Look for cracks and loose or missing rivets.









GIVE THOSE COMPONENTS
THE SAME EAGLE-EYE
TREATMENT YOU GAVE
'EM.ON THE AFT
ROTOR SYSTEM.

SWASHPLATE-

PITCH LINKS

PITCH - VARYING HOUSING-

PIVOTING ACTUATOR-

SWIVELING ACTUATOR-

VERTICAL HINGE PIN OIL TANKS

SHOCK ABSORBERS-

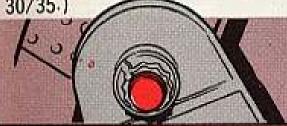
LONGITUDINAL CYCLIC TRIM ACTUATOR, CONNECTOR PLUG—

UPPER, LOWER DRIVE ARMS, COLLAR—

SWASHPLATE OIL TANK-

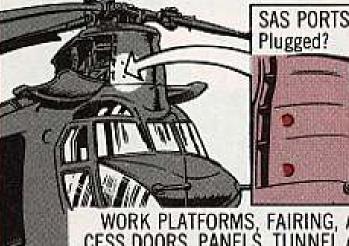
ROTARY-WING HUB OIL TANK-

FORWARD TRANSMISSION MOUNTING POINTS—Make sure the four mounting nuts are in place. Replace all missing or broken hardware. Eye the slippage marks on the mounting bolts.(Applies to choppers without MWO 55-1500 - 210-30/35.)



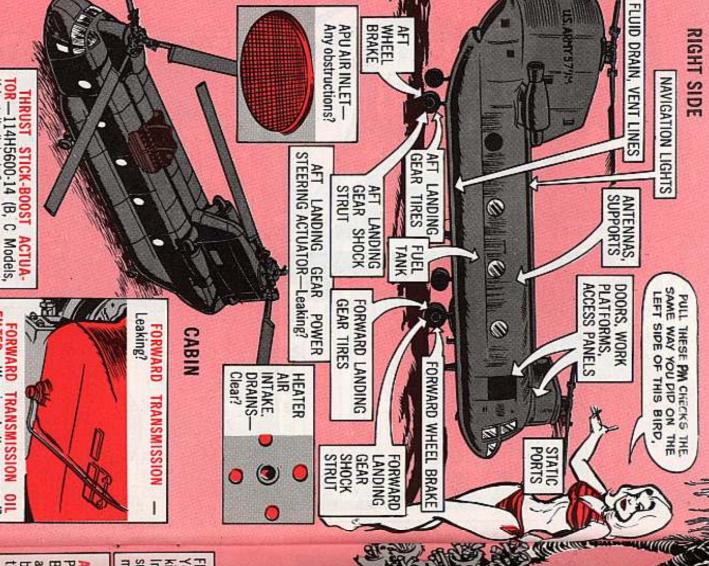
LUBRICATION, HYDRAULIC LINES, HOSES—Leaks? ELECTRICAL WIRE BUNDLES—Chafing?

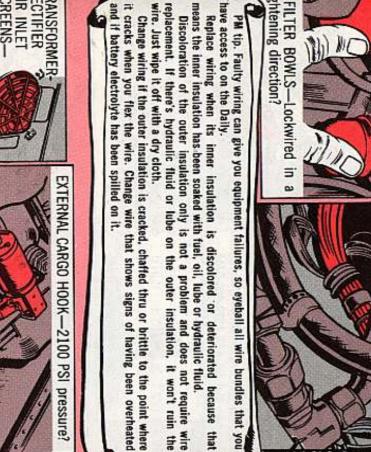




WORK PLATFORMS, FAIRING, ACCESS DOORS, PANELS, TUNNEL ACCESS COVERS—Look for damage, positive locking and closure. Eye latchpins and receptacles for wear. Make sure the tunnel cover latches without safety straps are lockwired.



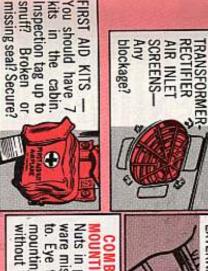




tightening direction?

FILTERS—Buttons popped

CONTROL HYDRAULIC



around the coupling attachment Be sure you inspect the lug areas P/N 114D3067-2 and -4 for cracks. adapter lugs. the coupling plates next to bolts, the bathtub key slot area and PLATE—Eye assemblies No cracks allowed RANSMISSIO





installed) leaks?

8

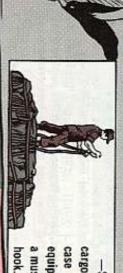
FILTER—Warning button popped



external load and never could figure out how it happened, the probable cause was that you didn't have 2100-PSI minimum air pressure needed to hold the hook closed. Service the actuator with the compressor in your CH-47 organizational maintenance airmobile tool set, FSN 4920-906-9740.

—Be sure you hook up the safety harness when you're hauling external loads—you wouldn't want to lose your balance and take a header out the hatch!





—Some units SOP's call for carrying a cargo net, clevis and doughnut onboard in case ground types are fresh out of that equipment. 'Course, a "shepherd's hook" is a must to loop the doughnut over the cargo hook.



LUBRICATION, HYDRAULIC, FUEL
INES—Chafing? Leaking?

Broken springs:

SHOCK MOUNTS

Secure?

30/55 complied with.

with engine mount forging? Applies to choppers prior to S/N 66-

9042 without MWO 55-1520-209



AFT TRANSMISSION TO COM-BINING TRANSMISSION DRIVE SHAFTING—Chafing?

AFT TRANSMISSION MOUNTING POINTS—4 mounting bolts and nuts in place? Get broken or missing hardware replaced. Check the slippage marks on the mounting bolts. (If MWO 55-1500-210-30/35 is not applied.)



AFT TRANSMISSION—Oil level FULL? Eye the transmission for cracks and leakage at the aft housing below the pressure port and forward of the accessory gear box mounting flange.

AFT TRANSMISSION OIL FILTER -Warning button out?





ADAPTER, PLATE—Look for cracks, excessive gap between plates, security.



BEARING HOUSING—Look for discoloration of the housing or melted grease which would indicate overheating.

Warning button popped?



UTILITY HYDRAULIC PRESSURE TANK—Hydraulic fluid FULL? Any leaks?

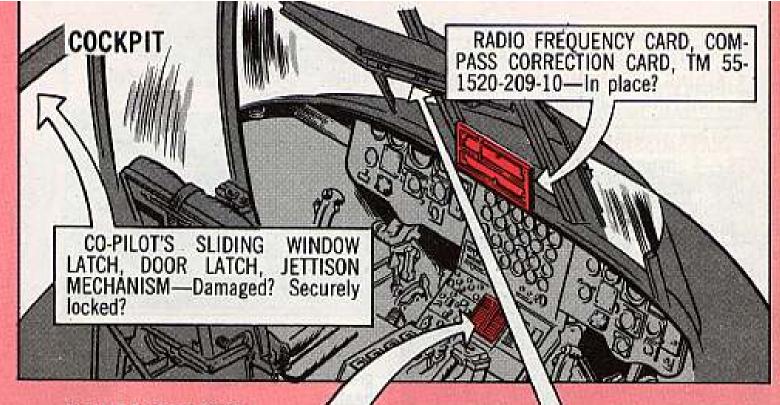


APU—Oil level OK? Eye the accessory section and hydraulic pump for leakage.





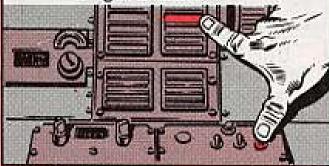
8



POWER CHECKS

AND TRANSMISSION

CHIP DETECTOR CAUTION LIGHTS
—The light will be on if metal is present. Test the master caution panel lamps by operating the caution test light switch.



CABIN EMERGENCY EXIT LIGHTS -Work? RAMP EMERGENCY EXIT LIGHT -Work?

SHALL WE WAIT FOR AN **EMERGENCY?** NAW, LET'S JUST CHANGE THE BULB!

BATTERY EMERGENCY BUS RE-LAY — Operates?

EXTERNAL CARGO HOOK RE-LEASE—Hydraulic operation OK?







A CASE LIKE THIS ...

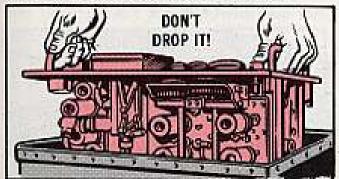


DEAR WATSON, THIS
IS A SIMPLE CASE OF
SCRAPED, BANGED, BENT,
BROKEN, WARPED AND
UPENDING

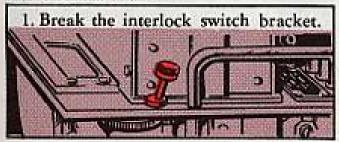


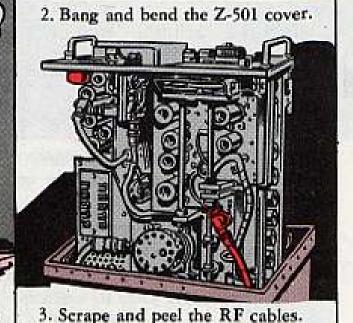
The RT-211() receiver-transmitter on the AN/TPX-26 and -27 interrogator sets can get banged up in several areas if the RT is dropped—not guided—into the CY-944A/TPX case.

It's easier to drop the RT into the case, what with all that weight behind it.



Trouble is, by shoving its weight around, the RT can:

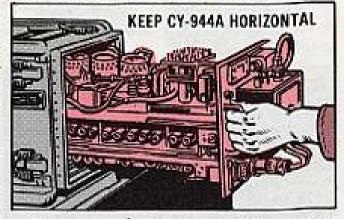




- 4. Warp the chassis.
- Bend the 2 guide-pins inside the connection end of the CY-944A.

Case the RT-211() like this:

Keep the CY-944A horizontal. Match the RT rollers to the case tracks and slide the RT in smoothly. If you feel any resistance as you slide the RT, pull it out and start again.



Never upend the case and leave it to weight, gravity and good luck to make the placement.

past, some ingenious person came, upon the most beautiful FM radio set the Army has ever had.



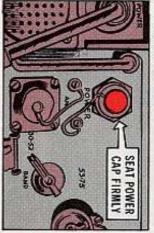
Worked great. Minimum maintenance. Simple PM. Operated months on end without problem No. 1. So they called it the AN/PRC-25 and later made some internal changes and called this version the AN/PRC-77. There aren't many hang-ups, but here're some to watch for: Stay away from the A9 and A10

only stepping on it if you think you can cure or improve a problem by experimenting with adjustments.

When you replace the POWER CAP on the RT-505 for any reason (including

modules in the RT-505. Adjusting them is a support job ... not yours. You're

When you replace the POWER CAP on the RT-505 for any reason (including when you remove the RT from the vehicle rig for back-pack operation) be sure you seat it firmly. Otherwise, you'll have an open circuit and you won't be able to transmit.



PRC-25, PRC-77 ODDS 'N ENDS



And talking about the vehicle rigs (AN/VRC-53, -64, AN/GRC-125, -160), be sure you unscrew the ANTENNA CONTROL connector in the rear of the AM-2060 all the way out before you try to pull it loose.



You could pull the blue insulator of the jack out with the connector.

If you're powering your RT with a BA-4386 battery which sports DAAB05-70-C-1472 contract number, and the RT-505 plug doesn't line up with the battery receptacle, blame the battery.



That contracts, and a few odd batteries on other contracts, came out faulty, meaning you've got to play with the battery to line it up.

AN/PRC-25

SAW ONE

OH, BROTHER

THAT'S A

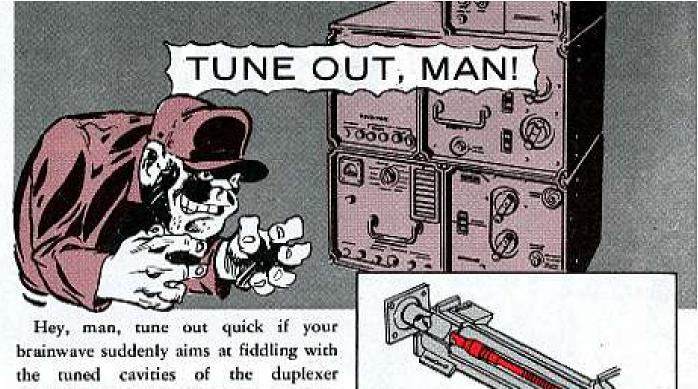


If your AT-271A whip antenna has any age on it, check out the ferrule.



Some are coming apart ... which doesn't help much when you're trying to keep the sections together.

If yours is loose or sliding, turn it into your support for repair or replacement.



(2A1A1) in your AN/GRC-103 radio set.

That's a double tune-out if your fingers want to wander toward the 4 receiver section tuned cavities (2A1A1A1Z1).

Removing the end plate of the cavities, or even just turning the slotted screw in the end plate, will deadline the set.

What's more, the defective amplifierconverter must be sent all the way back to depot for repair (even though it normally can be replaced in the field; normally, that is, providing nobody's messed with the tuned cavities).

STAY AWAY FROM

TUNED CAVITY

So stay away, Ray, unless you're a depot-level repair type.

GRC-103 EXPENDABILITY

Dear Half-Mast.

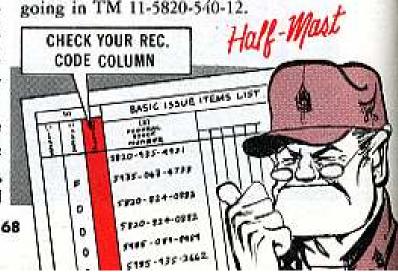
What's the story on expendable and non-expendable items on the AN/GRC-103 radio set? The TM isn't exactly clear on it.

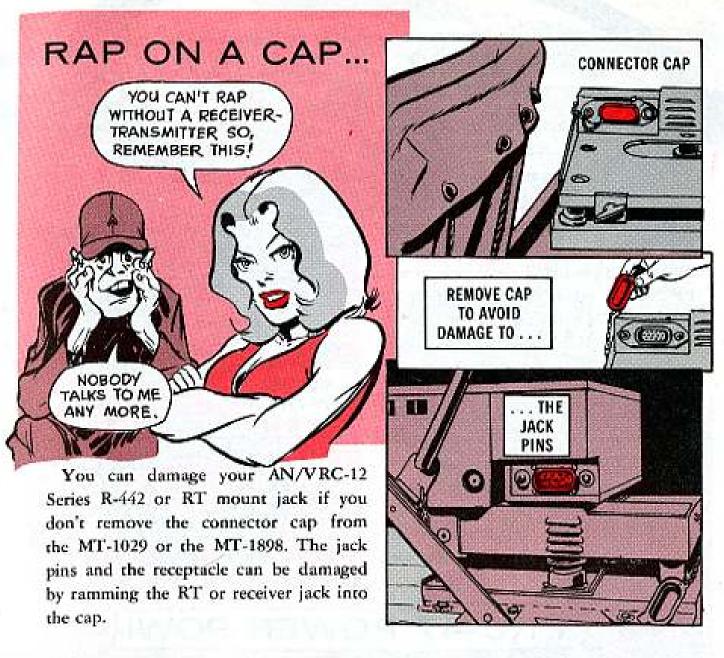
SGT. H.H.H.

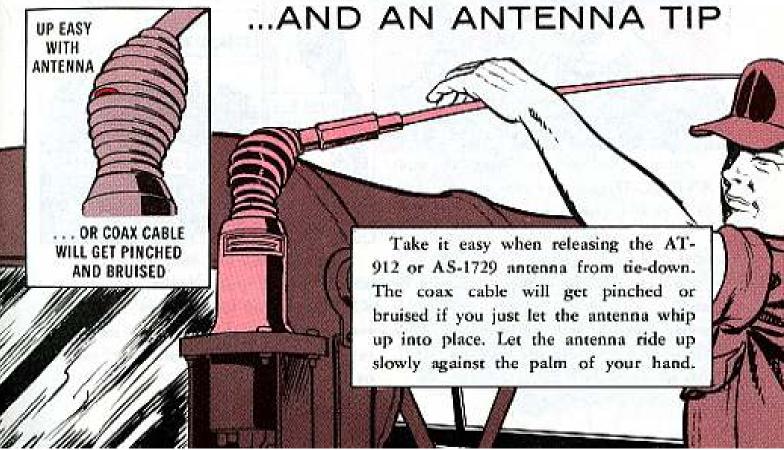
Dear Sergeant H.H.H.,

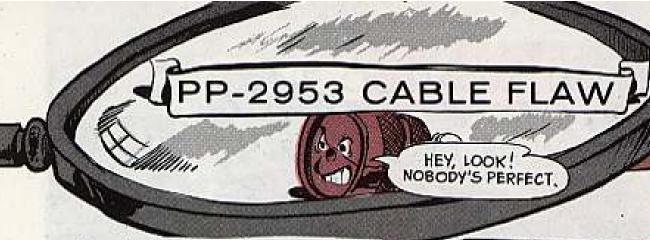
Items like small cable assemblies, stakes and other hardware are expendable. To clarify any BII, if the recoverability code block is blank, the item normally is expendable. If there's an "R" in the block, the item is non-expendable.

Latest word from the head shed on the GRC-103 is that all items are expendable except the AM-4316, DA-437, R-1329, T-983, AM-4320, AB-1072, RT-773 and CG-3443. That's in line with the note in the BII list which shows the radio set as non-expendable. A correction is going in TM 11-5820-540-12.









If you're bench-testing or operating your RT-246 or -524 from a fixed AC source, and you can't get power to your PP-2953/U power supply, suspect the PP's CX-4524 cable assembly.

Especially if it's a replacement cable and you're using it for the first time.

Some of the cable assemblies came from the manufacturer defective ... with pin C instead of pin B wired to ground (B is the ground in the PP).

If you get one, ask for a new cable ... and fire off an EIR (DA Form 2407) to USAECOM. If you can, include the cable and the contract number (off the package).

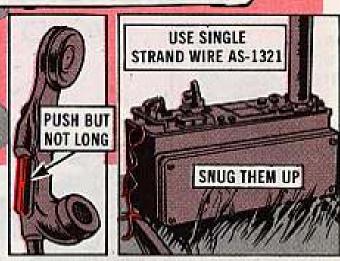




Putting the key too long to your AN/PRC-47 radio set can put the pow to its power transistors.

So, key it for 1 minute at most, and let it cool for 9 minutes.

You can also blow the transistors by feeding the antenna through a coax cable rather than through the required single strand wire. So use the wire (AS-1321, that is).



TRANSPORT TIP: snug up the captive screws on the panel cover before you ship the set off to the shop or wherever. Otherwise, they bounce loose and get lost ... which is gonna delay repair or use.

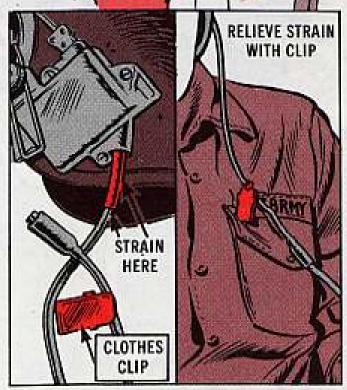


If you use the clothes clip on the MK-1039/AIC kit of your CVC helmet, you're a cinch to cut down breakage in the upper cord assembly.

By siphoning off the strain from the 2 main strain-points, you'll give that headset-microphone cord assembly a better crack at a good life.

Breakage is likely to come around the midpoint of the protective sleeve leading from the switchbox, and just below the sleeve.

You've got the same situation with the MK-525 and MK-526 kit cord assemblies. Trouble just hits in a different place, below the cable clamp.



STEADY THE NEEDLE

When it's movin' time, there're a coupla things you can do for your TS-352B/U multimeter.

First, set the ME-9()/U FUNCTION switch at DC CURRENT or the 1000 ohms/volt position. Either setting will hold the needle at travel rest.

Without one of the settings, the meter needle could take a jump with every jolt, jiggle and jounce of the vehicle that's carrying it ... and get fouled up.

Second, pack 'er well.





More slack may be needed when you're working in stuff that packs or clogs the tracks. Never adjust tracks too tight. Tight adjustment will quick-like wear out the tracks.

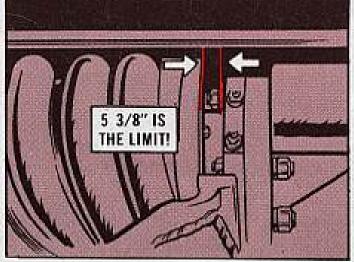
See track adjusting info in TM 5-2410-214-12 (Jun 68), page 3-8, for the D7E and in TM 5-2410-204-10 (Jun 62), page 112, for the D8.

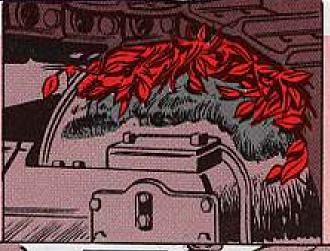
BEFORE YOU START ...

Before you start to adjust the track, always clean off all debris, sticks, mud, dirt, etc. from around the front idler. The idler moves when you adjust the track, so you don't want anything blocking it.

And, never try to adjust the tracks on the D7E if the space between the nut on the idler-rod assembly and the front idler-yoke assembly is less than 4 inches.

On the D8, the track's reached its adjustment limit when the space between the spring-pilot assembly and the cylinder is more than 5% inches.







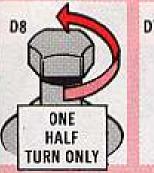
When the track adjustment limits are reached on either tractor, your Cat's in need of track assembly repair by your DSU.

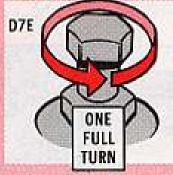


Always use clean grease in the trackadjustment grease fitting. Clean the grease gun and the grease fitting, before you start to tighten the track. Dirty grease will damage the relief valve and the fitting.

TIGHT TRACK

To loosen track adjustment on your D7E, the warning on the inspection plate says you can give the relief valve 1 turn (counterclockwise).





On the D8 you give the relief valve only a 1/2 turn (counterclockwise) at a time.

CHECK OUT THAT INSPECTION PLATE BEFORE STARTING.



When you figure you've bled off enough grease, tighten the relief valve carefully, and drive the tractor back and forth for a short piece to equalize the track adjustment. If the track's still too tight repeat the pressure-bleeding operation as carefully as before, move the tractor again, and re-check the adjustment.



When the track's too loose give the track-adjusting grease fitting a couple of shots with the grease gun. Move the tractor back and forth to equalize the adjustment. If the track's still too loose give the grease fitting a couple more shots, and re-check the adjustment.

Always use the grease gun sparingly ... never just pump away. You'll just

be making sticky work for yourself because you'll have to bleed the excess grease to relieve the cylinder pressure to get the track adjusted right.



Anytime you're adjusting the track it's best if you can get a buddy to work the grease gun and check the track slack, while you move the tractor to equalize the track adjustment.

DRAIN OIL COOLER BONNET

If you have to drain your D7-series tractor cooling system, make it a complete job. No matter whether you're flushing or cleaning out the sludge, sending it off for overhaul, or what, take out the bottom plug of your transmission oil cooler bonnet. Otherwise there'll still be water in that jacket that could freeze and bust in a cold climate. The cylinder block valve and radiator drain don't get it all out.



TM 5-2410-214-12 (Jun 68) does not outline how the D7E tractor's engine oil level is to be checked. My question is, should the level be at the dipstick's FULL mark at all times or does it change under varying conditions?

MSG D.W.S.

Dear Sergeant D.W.S.,

Where the engine's oil level shows up on the dipstick depends on when you make the check.



Here's where the full level should be during specific checks . . .

CONDITION No. 1

Tractor parked overnight—engine not running—oil cold. Level can be about 1½ inch above FULL mark.

CHECK WITH ENGINE RUNNING

DO NOT OVERFILL

BULL

ADD OIL

COLD

CONDITION No. 2

Tractor engine running at idle—oil at operating temperature (hot). Level should be at FULL mark at start of days operation. This gives protection against getting below the ADD mark during the work day, especially when working on a slope.

CHECK WITH ENGINE RUNNING

DO NOT OVERFILL

FULL

ADD OIL

OPERATING

CONDITION No. 3

Tractor engine not running—oil at operating temperature (hot). Never add oil at this time. Wait until it's cold or check with engine idling.

CHECK WITH ENGINE RUNNING

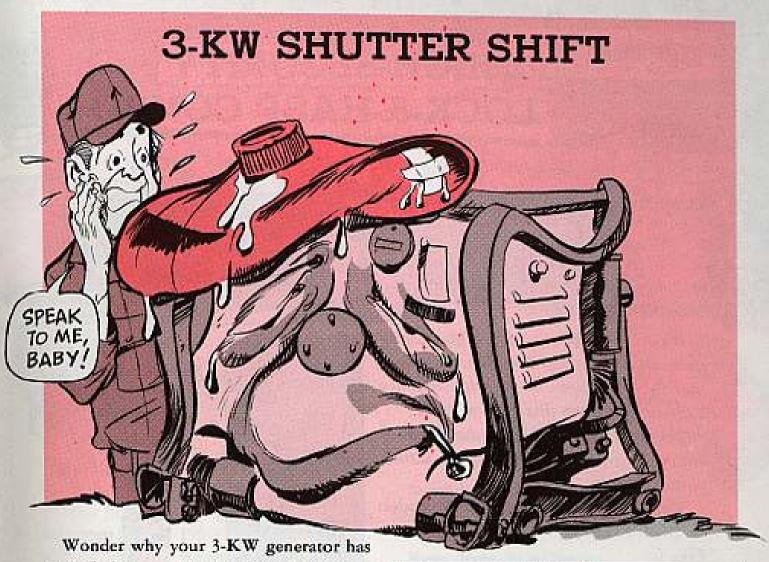
DO NOT OVERFILL

E111.1

ADD OIL

A HOT EXPANSION RANGE

Half-Mast



Wonder why your 3-KW generator has its bad days ... just won't perk the way you want it?

It goes into shakes, rattles and rolls and bugs out on you just when you need it most.

There's a good reason, OK. You're not using the engine's air cleaner intake shutter valve.

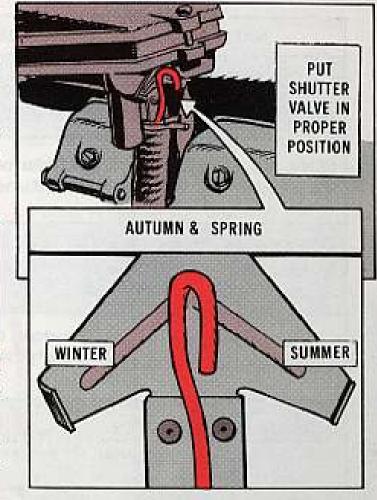
The control is simple to work.

From +25°F and below, put the shutter control into the WIN-TER position. For days over +50°F move it

For days over +50°F, move it to the SUMMER position.

Between +25°F and +50°F, like in spring and autumn, put it in the MID-DLE position.

After a while, you'll get so good at it, you'll be flipping your switch on unseasonable days too.





HASP

SHACKLE

When you request the high-security padlock, FSN 5340-799-8264, for your outfit's arms room, be sure to order the high-security hasp that goes with it.

The lock has a shrouded shackle so it won't do you any good with just a common-type hasp.

The special hasp comes in 5 models to fit different type door arrangements. Like so:

Like so:		141	
HASP	FOR	8	KEY
FSN 5340-178-7872, Model B&E	Single door on flat wall (right-hand installation).	WALL	DOOR
FSN 5340-178-7881, Model D&B	Single door on flat wall (left-hand installation).	S DOOR	WALL
FSN 5340-178-7880, Model D&A	Single door on off-set walls (left-hand installation).	} DOOR ↓	WALL
FSN 5340-178-7873, Model F&E	Single door on off-set walls (right-hand installation).	WALL	DOOR
FSN 5340-178-7875, Model D&C	Double sliding, or open out doors.	3 DOOR	DOOR :

When welding is required, the hasp'll be installed by a post engineer welder, or some other qualified welder. So check the door with whoever will do the job, so you'll know for sure which hasp to order. And, remember, overheating during welding will destroy the hasp's tempered strength—and blow your security. So the important word for the job is—keep it cool.



The high-security lock-hasp combo is required by AR 190-11 (Aug 71), Physical Security of Weapons, Ammunition, and Explosives. It's authorized only for your arms room door.

If none of the authorized hasps will work on your arms room door, your DSU or local engineers will manufacture 'em for you. But the home-made hasp must meet the specifications in MIL-P-43607 (GL), Amendment 1 (13 Mar 69). Info on the type of metal used, and other design info, on the manufactured hasp becomes part of your unit's records on the arms room lock.

ARMS ROOM LAYOUT

The AR also spells out new layout, maintenance and accountability SOP for your arms room. It authorizes a secondary security padlock for your arms racks. FSN 5340-158-3807 gets you a padlock with a chain, for your racks. FSN 5340-158-3805 is for a padlock without a chain.

AR 190-11 and your local supply and security SOP give you the authority for requesting the locking devices and otherwise fortifying your arms room.

RECORDS AND REPAIRS

Records on supply, use, location, etc., on the arms room locks and their keys are kept by your outfit's security officer. And, that's who gets the word if locks or keys break, are damaged or lost. He'll make arrangements to have the high security padlocks returned to the depot for repairs or key replacement. The locks get sent to:

Commanding Officer
Commanding Officer
Letterkenny Army Depot
Letterkenny Army Depot
ATTN: Mark 4 (A2523J)
ATTN: Mark 4 (A2523J)
Chambersburg, PA 17201

Secondary padlocks will not be re-

EASY DOES IT

Keys have been known to bend or break in the lock due to rough handling. Easy is the word. Some keys have their low cut at the back near the turn plate making this point easy to bend or break when handled roughly. If your key is cut this way then extra-easy is in line when unlocking. And be sure to press the key all the way in before you start to turn it. Also, dropping the lock with the key inserted may damage the guts of the lock—so hang on to it.

-LUBE -

Since the lock is normally used indoors it usually does not need to be lubed. But if it gets stiff, lube it with molybdenum disulfide, technical, powder form, FSN 6810-264-6715 (1-lb). The stuff is listed in SB 38-100, page 35, or use graphite, FSN 9620-233-6712. It's listed on page 32 of the SB.

This is a selected list of recent pubs of interest to organizational maintenance personnel. This list is compiled from recent AG Distribution Centers Bulletins, For compilete details see DA Pam 310-4 (Jun 70), and Ch 4 (Feb 71), TM's, TB's, etc., DA Pam 310-6 (Jul 71), SC's, and SM's; DA Pam 310-7 (Apr 71), MWO's; and DA Pam 310-9 (Jul 70), COMSEC Pubs.

TECHNICAL BULLETINS

TM 5-2010-202-20P Jul 165 HP Diesel Outboard Motor TM 5-3431-227-24P Jul Arc Inert Gas Wolding Set TM 5-3655-219-12 Jul Carbon Diaxide Conversion Unit TM 5-3895-330-24 Jun Towed Aggregate Spreader TM 5-3895-336-20P Jul Gas Eng. **Materized Roller** TM 9-1005-257-12 C3 Sep Armoment POD XM18/XM18E1 TM 9-1005-257-20P C2 Sep Armament POD XM18/XM18ET TM 9-1005-298-12 C2 Sep Armoment Subsystem XM27E1 TM 9-1015-221-20P C1 Sep M40A2 & M40A4 106-MM Recoilless Rille TM 9-1015-223-12 C5 Sep 90-MM Recoilless Rille M67 TM 9-1090-202-12 C2 Sep Armoment Subsystem M21 TM 9-1090-203-12 C4 Sep Armoment Subsys XM28E/XM28ET TM 9-1430-512-12/3 C9 Jul Howk TM 9-1430-560-24P/2 & -24P/3 Jul AN/TSQ-51 TM 9-1440-585-12 C11 Jul Chaparrol TM 9-2320-230-ESC Aug TM-230-Series 5-Ton Truck TM 9-2320-260-ESC Jul TM 260 series 5-Ton Truck TM 9-2330-267-14 Jun TM-267 Series 1 Ye-Ton Troiler TM 9-2350-201-12 C13 Aug M41 Sories Tooks TM 9-2350-210-12 C9 Aug M55 TM 9-2350-300-20P Jun XM163 20-MM TM 9-2920-203-34P Jul SP Guns M42/M42A1, M56, M53; Carrier M75; Howitzen M52/M52A1, M55 M44/M44A1; Recovery Veh M51, M88; Tonks M41/M41A1/M41A2/M41A3, M47, M48/M48A1/M48A2C M103/M103A1; Tractor M8A1/M8A2; and Flame Thrower Tanks M67/M67A1 TM 9-4931-334-14/1 CT JAI XM163 20-MM Gun

TM 9-4933-209-14 May XM16



20-MM SP AA Gun TM 9-6920-428-20P Jul Redaye TM 9-7004 C11 Aug M44 & M44A1 HM 9-7002 C20 + 1 U 1000 C 7 - 1

TM 9-7022 C20 Jul M48A2C Tank TM 10-3930-627-12 Jul GED Forklift Truck: Mdh MHE 221 and FJF-040 TM 10-3950-206-12 Jul 10,000 th Cap GED White Truck Crane

TM 10-7360-201-20P Aug Baking Equip

TM 11-5805-582-15 Aug Central Office Manual Telephone AN/TTC-29 TM 11-5820-520-12 C1 Aug AN/GRC-106 Radio Set

TM 11-5820-538-12 C1 Aug AN/GRC-50 & AN/TRC-24 Radio Sets TM 11-5820-556-15 Jul AN/TRC-112 Radio Terminal Set

TM 11-5820-602-15 Jul AN/TRC-121 Radia Terminal Sat

TM 11-5821-248-12 C2 Sep OV-1A, B, C; U-1A, 6A, 8F, 10A; CH-21B, C, CH-34C, CH-37B, CH-47A; UH-18, D TM 11-5841-241-12 C3 Sep U-8D, 8F, PLLSD

TM 11-6625-1749-24P Jul AN/GPM-61/APS-94D Radar Calibrator Set

TM 55-412 C1 Avg AF & RW TM 55-450-16 C1 Avg AH-1G TM 55-1100-375-12-5 Avg CH-54 TM 55-1500-204-25/1 C5 Jul AF &

TM 55-1510-202-20 C4 Aug O-1 TM 55-1510-203-CL C1 Jul U-6 TM 55-1510-203-10 C2 Aug U-6 TM 55-1510-204-10/5 C5 Aug OV-1D TM 55-1510-204-10/5 C6 Sep OV-1D TM 55-1510-204-20-1 C14 Sep OV-1A.

TM 55-1510-209-PMD & -209-PMI Aug U-21

TM 55-1510-209-PMP Jul U-21

B. C.

TM 55-1510-209-20-1 C1 Aug U-21 TM 55-1510-209-20-2 C1 Aug U-21

TM 55-1520-202-20PMP C3 AI CH-34

TM 55-1520-206-10 C1 Sep OH-23

TM 55-1520-206-20P Aug OH-23 TM 55-1520-209-10 C11 Aug CH-47A

TM 55-1520-209-20-1 C30 Aug CH-47A

LO 5-3655-216-12 May Gas Gan Equip LO 5-3810-290-12-3 Jun Wheel Med Conne

LO 5-3895-339-12 Jun Blum Hoofers LO 10-3930-242-12-1 & -12-2 Jun RT Forklift Truck

LO 10-3930-243-12-1, -12-2 & 12-3 Jun 10,000 Lb Cap Dd Eng Forklift Truck LO 10-3930-618-12-1 Jun Gas forklift Truck

LO 10-3930-626-12 Jun Gas White Tractor

LO 10-3930-627-12-1 Jun GED Forklift Truck: Mdh FJF-040 and MHE-221 LO 10-3930-627-12-2 Jun GED Forklift Truck: Mdh FJF-040 and MHE-221 LO 10-3950-203-12-1 & -12-2 Jun 10.000 Lb Cop White Truck Crone

MODIFICATION WORK ORDERS

9-1240-312-40/1 Sep M551 Sheridan 9-2300-257-30/2 Aug M577A1 Dal, L1 Trkd Cond Post Carrier 9-2300-257-30/6 Aug M106A1 Monor Corner: Replacement of Periscope Retaining Clamps 9-2350-215-30/27 Sep M60 Tank: Inutal of 5-Man, 20-CFM, Tank, Gas-Particulate Filter Unit Kit M13 9-2350-217-30/23 Aug M109 SP Howitzer 9-2359-247-30/2 Sep MS48 Corrier Replacement and Relocation of Seat-Belt Anchors 11-5810-221-45/23 Aug Mod of Commo Sucurity Equip TSEC/KW-7 11-5821-261-40/1 Aug OH-58: Mod

MISCELLANEOUS

of Radio Set AN/ARC-116 to Prevent

Erroneous Transmitter Shutdowns

FT 4.2-H-2 C1 Jun M30 4,2 in Mortar FT 105-A5-2 C5 May M108 and M102 Hawitzen SC 3830-97-CL-E01 Jul Road Sweeper Magnet SC 8465-90 CL-P07 Jul OV-1 Cold Climate Individual Servival Kit TB 55-1510-209-20/2 Sep U-21 TB 55-1520-217-30/6 C1 Sep CH-548

MWO Of The MONTH

Siouxmen—fly lighted and help avoid mid-air hangups, MWO 55-1520-204-40/1 (May 67) gives you an anti-collision rotating beacon light and other night flying equipment for OH-13E, G and H models. Make sure your bird has the mod.



New SB 700-20-1

New SB 700-20-1, to be issued quarterly, will provide your AR 711-5 reportables—starting with the December report. It supplements SB 700-20, issued semi-annually.

The new quarterly will include a summary of changes for updating your property accounts. When reportable items are flagged, the quarterly summary is all that is needed for update of property records.

Make sure you include SB 700-20-1 on your DA 12-34 as spelled out in DA Circular 310-24 (Aug 71).

TOW Item Reports

Make this update in your TM 38-750 App E. Instead of the 2 items listed under ECC CB as reportable on DA 2408-8 and DA 2408-7, you report the following 7 system components: Lchr, tubular, M220 1440-179-4152; Tng Set, XM70 FSN 6920-179-7320; Trk, Jeep (TOW), FSN 1450-176-2712; Trk, Mule (TOW) FSN 1450-176-2709; FSN Trk (TOW), 1450-878-9024; Carrier (TOW), FSN 1450-176-2697; Btry Chgr (TOW), FSN 6130-087-1528. DA 2408-8 should be submitted immediately for each of these items (except a previously reported XM70). Submit DA 2408-7 only on transfer or other change that calls for it. Word went out in DA Msg DCSLOG-MED 191633Z Aug 71.

Welding Electrode

Check your welding electrode, FSN 3439-775-6476, before you use it. If you have a 1-lb spool, Alloy 5356, size 3/64-in, MIL-E-16053K, made by United Wire, don't use it. The welding wire feeds from the welding nozzle in a curve and you'll get burning and sputtering. Ask for another spool of electrode that meets spec MIL-E-16053.

EJR Shift

For your DA 2407 EIR's, mark this change to Section II of Appendix B in TM 38-750. Effective immediately send all EIR's for supply classes 3110 thru 3130 and 5305 thru 5365 to: Director, USA General Materiel and Parts Ctr, New Cumberland Army Depot, New Cumberland, PA 17070. Word went out in DA Msg DCSLOGMED R51831Z Aug 71.

5- Tonner

Eight little words got left out of the TM on the M809-series 5-ton trucks—and it does make a ding-dang of a lot of difference. Para 2-12, a(4), page 2-33 TM 9-2320-260-10 should say "Place battery switch in the OFF position only after the engine has completely stopped rotating." Otherwise that alternator up front can burn out bulbs and fuses and diodes and stuff all around.

Would You Stake Your Life wight now

