

Issue 118

**PS**  
★  
1983 Series

**THE  
PREVENTIVE  
MAINTENANCE  
MONTHLY**

ON PAGE 10000 There's a whole world of preventive maintenance tips for your equipment and your maintenance crew. It's all yours to read!



**SPRING SERVICE  
ADVANCES  
ROLLER FOR HELPERS!**  
ON PAGE 75

THE BIG CHANGE IN MAINTENANCE  
FOR  
COMBAT EQUIPMENT WILL BE COMING—  
EASY  
IT'S COMING ... NOW!

# OPERATION ARM



Get ready for the big change in Army combat equipment maintenance. It's shaping up to roll down the pike.

You know how it's been ... maintenance guys spend half of "normal shifts" on other things ... like training subalterns, painting barracks, and the like. Equipment maintenance wasn't really neglected ... it just didn't get the emphasis it needed.

But, it won't be like that when "Operation ARM" gets underway.

Who says so? Well, the top bossman himself—the Army's Chief of Staff.

The big deal is called "Operation

ARM"—for Army Really Maintained. It's getting us to go more.

The aim of "Operation ARM" is to make sure the equipment in your unit will be ready to fight if and when it's needed ... any time ... anywhere.

What's happening?

Well, the people way up inside of the Army are making plans, leveling out, and making maintenance maintenance that's never been done before ... ever.

Here are a few examples of things being worked on where you likely will be seeing changes:

# OPERATION ARM



### **Maintenance Records System** —

You've already seen this in the Army's New Equipment Record and Procedure System in TM 35-750 and RS Issue 115.

**Standards** — It may be like Gene, she's ready to fight; Arthur, she's ready, but with some tinkering; Red, she's just not ready to fight.

**Maintenance Plans** — Tanks, guns, trucks, etc. may be available for the fighting units to have while their own equipment is tied up with maintenance.

**Training Plans** — The high level guys are studying whether the Army should furnish equipment especially for training and maneuvers so your unit's fighting equipment won't get worn out before it even gets close to a battle field.

**Responsibility Authorization** — TCE's being showed over to make sure they give an outfit enough men to do the maintenance that has to be done to keep equipment ready for combat.

**Funding** — Every bit equipment dedicated for repair parts because your outfit's "maintenance funds" aren't great! No doubt there'll be changes so your maintenance will get the support it deserves.

**Maintenance Training** — This'll make sure there's enough men trained to get the maintenance work done. Army schools, as well as units, will be doing more training on maintenance.

**Command Interest** — Every commander — from platoon right up to the top — is going to be pushing this job of keeping equipment ready.

**And there are more** — It's all aimed to do one thing — to make sure every piece of Army Equipment is ready to go



into combat, as well as use and fix the job it was designed to do.



"Operation ARM" will help keep your equipment ready to fight.

**WHERE YOU ARE**—In the months to come you'll likely be seeing some of the Army's specialists who'll be out trying, testing and studying some of the things you've read about on these pages. They'll be looking to you for help—you may have some ideas, questions or suggestions on ways to keep the Army's equipment ready. They figure that since you work with the equipment all the time you're the best man to talk to.

**MEANWHILE**—If you've got any ideas or suggestions you want to pass along right away, remember that Sgt. Half Man here at PS Magazine is ready and willing to run your word along to the wheels who can do something about it. Send him a postcard or letter today.

And don't forget to see AR 11-14.15 June 62 for the scoop on "Operation ARM."

Write your letter, ideas or suggestions to:  
Sgt. Half Man  
PS Magazine  
Attention: Editor  
Mailbox 101

Sgt. PAUL



# PS

## THE PREVENTIVE MAINTENANCE MONTHLY

ISSUE NO. 118      DATE MARCH 1962

Remember the Department of the Army for the latest tip or suggestion on equipment and parts problems. Its experts work throughout the Army to solve the most vexing problems you face. Send us your letter of inquiry, letter about, or letter of appreciation, today.

### IN THIS ISSUE

Subject	Author	Page
Army and Navy Use of "Oil Seal Off" Method	John J. ...	4-10
Army and Navy Develop "New" Oil Seal	John J. ...	10-11
Army and Navy Develop "New" Oil Seal	John J. ...	11-12
Army and Navy Develop "New" Oil Seal	John J. ...	12-13
Army and Navy Develop "New" Oil Seal	John J. ...	13-14
Army and Navy Develop "New" Oil Seal	John J. ...	14-15
Army and Navy Develop "New" Oil Seal	John J. ...	15-16
Army and Navy Develop "New" Oil Seal	John J. ...	16-17
Army and Navy Develop "New" Oil Seal	John J. ...	17-18
Army and Navy Develop "New" Oil Seal	John J. ...	18-19
Army and Navy Develop "New" Oil Seal	John J. ...	19-20
Army and Navy Develop "New" Oil Seal	John J. ...	20-21
Army and Navy Develop "New" Oil Seal	John J. ...	21-22
Army and Navy Develop "New" Oil Seal	John J. ...	22-23
Army and Navy Develop "New" Oil Seal	John J. ...	23-24
Army and Navy Develop "New" Oil Seal	John J. ...	24-25
Army and Navy Develop "New" Oil Seal	John J. ...	25-26
Army and Navy Develop "New" Oil Seal	John J. ...	26-27
Army and Navy Develop "New" Oil Seal	John J. ...	27-28
Army and Navy Develop "New" Oil Seal	John J. ...	28-29
Army and Navy Develop "New" Oil Seal	John J. ...	29-30
Army and Navy Develop "New" Oil Seal	John J. ...	30-31
Army and Navy Develop "New" Oil Seal	John J. ...	31-32
Army and Navy Develop "New" Oil Seal	John J. ...	32-33
Army and Navy Develop "New" Oil Seal	John J. ...	33-34
Army and Navy Develop "New" Oil Seal	John J. ...	34-35
Army and Navy Develop "New" Oil Seal	John J. ...	35-36
Army and Navy Develop "New" Oil Seal	John J. ...	36-37
Army and Navy Develop "New" Oil Seal	John J. ...	37-38
Army and Navy Develop "New" Oil Seal	John J. ...	38-39
Army and Navy Develop "New" Oil Seal	John J. ...	39-40
Army and Navy Develop "New" Oil Seal	John J. ...	40-41
Army and Navy Develop "New" Oil Seal	John J. ...	41-42
Army and Navy Develop "New" Oil Seal	John J. ...	42-43
Army and Navy Develop "New" Oil Seal	John J. ...	43-44
Army and Navy Develop "New" Oil Seal	John J. ...	44-45
Army and Navy Develop "New" Oil Seal	John J. ...	45-46
Army and Navy Develop "New" Oil Seal	John J. ...	46-47
Army and Navy Develop "New" Oil Seal	John J. ...	47-48
Army and Navy Develop "New" Oil Seal	John J. ...	48-49
Army and Navy Develop "New" Oil Seal	John J. ...	49-50
Army and Navy Develop "New" Oil Seal	John J. ...	50-51
Army and Navy Develop "New" Oil Seal	John J. ...	51-52
Army and Navy Develop "New" Oil Seal	John J. ...	52-53
Army and Navy Develop "New" Oil Seal	John J. ...	53-54
Army and Navy Develop "New" Oil Seal	John J. ...	54-55
Army and Navy Develop "New" Oil Seal	John J. ...	55-56
Army and Navy Develop "New" Oil Seal	John J. ...	56-57
Army and Navy Develop "New" Oil Seal	John J. ...	57-58
Army and Navy Develop "New" Oil Seal	John J. ...	58-59
Army and Navy Develop "New" Oil Seal	John J. ...	59-60
Army and Navy Develop "New" Oil Seal	John J. ...	60-61
Army and Navy Develop "New" Oil Seal	John J. ...	61-62
Army and Navy Develop "New" Oil Seal	John J. ...	62-63
Army and Navy Develop "New" Oil Seal	John J. ...	63-64
Army and Navy Develop "New" Oil Seal	John J. ...	64-65
Army and Navy Develop "New" Oil Seal	John J. ...	65-66
Army and Navy Develop "New" Oil Seal	John J. ...	66-67
Army and Navy Develop "New" Oil Seal	John J. ...	67-68
Army and Navy Develop "New" Oil Seal	John J. ...	68-69
Army and Navy Develop "New" Oil Seal	John J. ...	69-70
Army and Navy Develop "New" Oil Seal	John J. ...	70-71
Army and Navy Develop "New" Oil Seal	John J. ...	71-72
Army and Navy Develop "New" Oil Seal	John J. ...	72-73
Army and Navy Develop "New" Oil Seal	John J. ...	73-74
Army and Navy Develop "New" Oil Seal	John J. ...	74-75
Army and Navy Develop "New" Oil Seal	John J. ...	75-76
Army and Navy Develop "New" Oil Seal	John J. ...	76-77
Army and Navy Develop "New" Oil Seal	John J. ...	77-78
Army and Navy Develop "New" Oil Seal	John J. ...	78-79
Army and Navy Develop "New" Oil Seal	John J. ...	79-80
Army and Navy Develop "New" Oil Seal	John J. ...	80-81
Army and Navy Develop "New" Oil Seal	John J. ...	81-82
Army and Navy Develop "New" Oil Seal	John J. ...	82-83
Army and Navy Develop "New" Oil Seal	John J. ...	83-84
Army and Navy Develop "New" Oil Seal	John J. ...	84-85
Army and Navy Develop "New" Oil Seal	John J. ...	85-86
Army and Navy Develop "New" Oil Seal	John J. ...	86-87
Army and Navy Develop "New" Oil Seal	John J. ...	87-88
Army and Navy Develop "New" Oil Seal	John J. ...	88-89
Army and Navy Develop "New" Oil Seal	John J. ...	89-90
Army and Navy Develop "New" Oil Seal	John J. ...	90-91
Army and Navy Develop "New" Oil Seal	John J. ...	91-92
Army and Navy Develop "New" Oil Seal	John J. ...	92-93
Army and Navy Develop "New" Oil Seal	John J. ...	93-94
Army and Navy Develop "New" Oil Seal	John J. ...	94-95
Army and Navy Develop "New" Oil Seal	John J. ...	95-96
Army and Navy Develop "New" Oil Seal	John J. ...	96-97
Army and Navy Develop "New" Oil Seal	John J. ...	97-98
Army and Navy Develop "New" Oil Seal	John J. ...	98-99
Army and Navy Develop "New" Oil Seal	John J. ...	99-100

Sgt. Half Man  
PS Magazine  
Attention: Editor  
Mailbox 101

For a complete listing of the publications listed on page 6, Department of the Army, it has been reclassified in accordance with regulations. See AR 11-14.15.

PS Magazine  
is available with regularity throughout the year.



## USING UNIT SUPPLY BUSINESS...



Have you seen AR 750:11 (Old Mar 63), "Supply Procedures for TSB Units, Organizations and Non-TSB Activities?"

It reprinted AR 750:11 (Old Jan 58) and its Change 1, 115 (Old 60), and Section V, VI and VII, Chapter 1, of TM 5-1440 (Aug 54).

This AR strips up established procedures and rewrites and reorganizes some of your old supply manuals. It tears out some old ways-and-means and gives you the guidelines on other ways.

Inter-divisional accountability and supply records, for organizations and individuals property, may be organization (division, trade group, or non-TSB activity) level.

And, your unit (company, battery, troop, platoon, detachment, section, subactivity or separate company) always has credit to the organization or activity property book office (PBO) by the fastest means possible, to advise supplies on handwritings issue from the PBO, and assume direct responsibility for the mail to go.

The PBO makes up and sends in the supply requests, and normally the supplies will come back directly to him. He records the supply transactions, makes-up the handwritings, and yells for the unit to come and get 'em.

Let's up to your organization or activity commander to decide on which level handwritings issue will be made by his PBO. Whenever practical, though, the bill goes OK on handwritings issue down to the actual unit.

Separate companies, detachments and other units of an organization when it's not possible to assign 'em to an organization for supply support are authorized to set-up individual property records and operate as an organization property book office.



• **DA Form 2064 "Document Register for Supply Actions"**—This old friend, with a new name and a changed face, continues to record supply action. FPO's for DFE organizations keep a consolidated document register on a DA Form 2064 for organizations and installation property. FPO's for non-DFE activities will keep a document register on DA Form 2064 for all installation property.

The form's face is revised and simplified, and its head columns allow plenty writing room. The top of the page has space for your organization's name and its organization supply code. The first two pages in this "Form" book, and the first of the last volume in the page pack in the "DA" book, show each page in combined response.

**Remarks—Check number:** some kind of item requested or found in a single-line item request, or remarks as needed on other supply documents.

**Head Receipt File No.—Number of head receipt file for which item is requested.** Applicable.

**Date of posting.**

**Date when it completed.**

DA Form 2064	Organization	Item No.	Item Description	Quantity	Unit	Remarks	Date of Posting	Date when Completed	Head Receipt File No.
1	100	1	100	1	1	100	100	100	100
2	100	2	100	1	1	100	100	100	100
3	100	3	100	1	1	100	100	100	100
4	100	4	100	1	1	100	100	100	100
5	100	5	100	1	1	100	100	100	100
6	100	6	100	1	1	100	100	100	100
7	100	7	100	1	1	100	100	100	100
8	100	8	100	1	1	100	100	100	100
9	100	9	100	1	1	100	100	100	100
10	100	10	100	1	1	100	100	100	100
11	100	11	100	1	1	100	100	100	100
12	100	12	100	1	1	100	100	100	100
13	100	13	100	1	1	100	100	100	100
14	100	14	100	1	1	100	100	100	100
15	100	15	100	1	1	100	100	100	100
16	100	16	100	1	1	100	100	100	100
17	100	17	100	1	1	100	100	100	100
18	100	18	100	1	1	100	100	100	100
19	100	19	100	1	1	100	100	100	100
20	100	20	100	1	1	100	100	100	100
21	100	21	100	1	1	100	100	100	100
22	100	22	100	1	1	100	100	100	100
23	100	23	100	1	1	100	100	100	100
24	100	24	100	1	1	100	100	100	100
25	100	25	100	1	1	100	100	100	100
26	100	26	100	1	1	100	100	100	100
27	100	27	100	1	1	100	100	100	100
28	100	28	100	1	1	100	100	100	100
29	100	29	100	1	1	100	100	100	100
30	100	30	100	1	1	100	100	100	100
31	100	31	100	1	1	100	100	100	100
32	100	32	100	1	1	100	100	100	100
33	100	33	100	1	1	100	100	100	100
34	100	34	100	1	1	100	100	100	100
35	100	35	100	1	1	100	100	100	100
36	100	36	100	1	1	100	100	100	100
37	100	37	100	1	1	100	100	100	100
38	100	38	100	1	1	100	100	100	100
39	100	39	100	1	1	100	100	100	100
40	100	40	100	1	1	100	100	100	100
41	100	41	100	1	1	100	100	100	100
42	100	42	100	1	1	100	100	100	100
43	100	43	100	1	1	100	100	100	100
44	100	44	100	1	1	100	100	100	100
45	100	45	100	1	1	100	100	100	100
46	100	46	100	1	1	100	100	100	100
47	100	47	100	1	1	100	100	100	100
48	100	48	100	1	1	100	100	100	100
49	100	49	100	1	1	100	100	100	100
50	100	50	100	1	1	100	100	100	100



**Document Number—When items, covered by one supply document, continued to more than one use, a separate line will be used for each use, but the same document number will be used to insure 1. Continued document numbers will not be assigned.**

**Quantity Requested in Remarks—Total receipts will be noted in pencil. Totals will be recorded when receipt copy has returned from the accountable officer.**

**Quantity Requested.**

**Initials—Agency responsible for item.**

■ **Document Number**—An identification number assigned to each document, from the document register (DA Form 286-1). Document numbers will be assigned by the FBO, numerically beginning with No. 1 for the first document in each fiscal year.



■ **Document File**—A file folder for all documents that back up property book entries. The documents will be filed in sequence by document serial number. The files are all supporting papers, including reports of survey, statements of changes, inventory adjustments, records of sales property, etc.

■ **DA Form 286-2 "Hand Receipt/Source No."**—This hand-receipt form remains in use. The FBO assigns a hand-receipt number to each property user, and sets up duplicate file folders for each hand-receipt number (one file is for the FBO, and the duplicate goes to the hand-receipt holder). And it's up to the FBO to see that both files overlap up neatly.

Also, a hand-receipt and its source get cross-referenced for easier checking.

■ **DA Form 18-212 "Hand Receipt for Expendable and Non-Expendable Items"**—When authorized by the commander for whom the property book is maintained you can use this form as an interim hand-receipt. It's meant to help FBO's cut down on frequent postings to hand-receipt and hand-receipt source files.

The form can be used between FBO's and their hand-receipt holders, and also to record property on temporary loan to an organization or an individual.

When it's used to make an issue, the FBO will fill out the form in duplicate. The original is signed by the user, and the FBO keeps it in the user's hand-receipt file. The duplicate copy is for the user's records.

And, hand-receipt issues covering shortages or overages (coins, lire, chets and notes) will show the user item's applicable — 4 supply status in the form's "closing" block.

Hand-receipts for real items which have back issue list items will show the Appendix III, Part 2, of the item's multiple part TPL (Supply part included in back issue item list, however, don't get recalled as hand-receipt amount).



On a receipt, the procedure is reversed. The user fills out the form in duplicate. He keeps the original copy, which is signed by the FBO, and the duplicate copy is the user's hand-receipt file.

The form's "date of issue" block is changed to read "date of receipt", the "issued by" block shows the user's hand-receipt number, and the "issued to" block names the FBO.

The signature and date lines are on the bottom of the form.



When DA Form 10-53 is used, the hand-recipe file gets updated every six months. Also, before a job inventory, when the POC's involved, there's no fee change in hand-recipe folders. After you close the hand-recipe file to copy the items on inactive hand-recipes, you use one of the old 10-53's.

DA FORM 10-53 (REV. 1-78)	1 Jul 83
4-4 Supply Support Blvd	17 Jul 83
I. Health Care	
DA FORM 10-53	

DA Form 10-53, Hand Recipe for Inventory and Job Inventory, uses the date, every 60 days may be established on inactive hand-recipe files by writing both one and two in.

■ DA Form 1120-1 - Request for Items or Features - (and DA Form 1100, its continuation sheet) - You can use the multiple-line item supply for expendable housekeeping items, materials and office supplies, when there's no military-supply source. Also for individual and organizational clothing and equipment. For POC and TA equipment of newly activated units, and for previous products and medical material.

The multiple-line item form was OIG'd for use by organizations and activities by 48 711-10 (21 May 83), "Transmission Block Control and Supply Procedures".

**DA FORM 1120-1 hand supply transactions.**

They record, for example, the "Item" block address the accountable officer, or other supply support activity, and the "To" block is the year appearing organization or activity. The items, if items, are under the name of those who issue.



Block 1 takes "Inventory and Issuing Date" when unit info's finished and when that item identifier is required. I gave in Block 4, and in a, b, c, and d entries.

And the unit address takes DA, then description and amount.

Then there are the unit of issue, priority and supply source options.

The unit price and total cost of items provide space for DA's figures when unit cost is passed.

Are there any additional 10 requests in the first column.

DA FORM 1120-1	1 Jul 83
4-4 Supply Support Blvd	17 Jul 83
I. Health Care	
DA FORM 1120-1	

It's given a document number and gets recorded in the document register.

The form's made up in four copies. Three copies get forwarded, and the POC keeps copy number four in his recipient file.

Supply'll attach a shipping copy to the organization POC. He records copy number into the document register and property book, so needed, change the recipient copy. The shipping copy initialed and marked "passed", and closed, goes in the document file.

A copy belongs to the finance and accounting section whenever financial property is involved, so any other time the transaction will be one code or work order info.

How are linked books to mark the kind of unit issue or use but the form is working on. DA books for item number, lot number of stock, unit's location or needed.

Block 1 is the issue or use info.

Block 1 and 2 name "Priority" and "Year" as needed. Use a number for issue date for example, 4-83 1 and "Number", and the priority POC gets his document number in that 6.

Then request the items "Code" where there's "1" if the items are listed as used, and "2" if it's replacement request. In alternate the unit address gets in "3" for unit address, or "4" for unit number. The codes for the form is POC, report of source statement of change, issue, and it's required in the description column.



## The new 1546

449 2nd St. S.C.	449 2nd St. S.C.	25	24
Phone, 449 2nd St.	449 2nd St.	24	24
449 2nd St. S.C.	449 2nd St. S.C.	24	24

Write on the bottom of the form under the line and the registered the reporting office.

Attention! Supply agents... you must provide full name of the reporting office...

*449 2nd St. S.C.*

*449 2nd St. S.C.*

Indicate from a COB certificate that it is required to report and the supply date is indicated across the top of each sheet.

A line of 7's, or other 7's, in the top of the form is used to indicate the date that the form is used.

### 1546 Form 1546—Take a look at how it's changed.

The new 1546 Form 1546 "Report the Issues of Your Firm" is a longer, more complete form with various features. Like the old form, the new 1546 will be indicated by the unit of supply by PBO for distribution issues reported on the form.

The new form has a cover sheet, which has five copies are white, and will be held in a folder like this.

- Page 1—Cover sheet (white)
- Page 2—Shipping list, various labels reporting units.
- Page 3—Unit list (white)
- Page 4—Unit list (white)
- Page 5—Unit list (white)
- Page 6—Unit list (white)
- Page 7—Unit list (white)

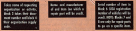
The form's 44 blocks will be filled in as follows through the supply channels. Blocks 1 through 19 (except 5 and 22) are for the reporting office. BLOCK 20 will be a new kind of supply date called "Elegance of Wood", which the unit supply reports into the more priority of issue procedures set up by 44 125-20, the 19 page 24.

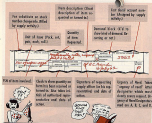
Blocks 5 and 20 and 26 through 44 are for use of the supply support unit. A line down the middle of the form's side on 27 is used to see which supply channel (Report or Transfer) a firm is working on.



*449 2nd St. S.C.*

*449 2nd St. S.C.*





#### DISCUSSION ■ MTR

1. Without the detailed reporting results is shipped, it's unable to do its assigned operational mission or tasks (or will be unable to do so in the immediate future. For example, for training missions, MTR, Minimum Quantity of Equipment Required for Training) must be maintained.

2. Emergency need for replacement of primary weapons, and equipment, or functional material needed to make emergency repairs to keep such equipment operational (like Blue Stock for operational readiness).

#### DISCUSSION ■ MTR

1. Immediate need. Without item(s) operating parts of outfit is being impaired. Assigned mission and tasks can be done, but with decreased effectiveness and efficiency (Blue Stock for late maintenance, and repair and repair to unit work).

2. Material needed for emergency replacement or repairs to auxiliary equipment systems. Unit can operate only temporarily, at its effective level. On, material urgently needed. Lack of it will cause serious personnel hazard.

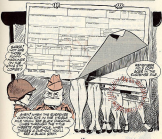
### DESIGNATOR [ PLANS

1. Items needed for support of assigned missions and tasks... but it's MORE urgent than a routine replacement—like for POM (Preparation for Overseas Movement).
2. Material needed for emergency repairs or replacement of administrative support equipment or systems, but not essential to effective operation or safety of the activity.
3. Designator C is not for use on routine replacement requests.

### DESIGNATOR [ MISG

1. Request for routine stock replacement, and for qualified initial allowances... not supported by a higher agency of need designator.

A 1944 will be recorded in the PIR's document register DA Form 2064. Its response copy (No. 5) will go into the suspense file, and all other copies will go to the supply activity.





## YOU ABOUT REPAIR PARTS

Organizations authorized to stock repair parts continue to assign their prescribed load like in past to their equipment: TM's, Part I Operators' Manual; and Part II (Organizational Maintenance Manual), or like they're sold in the T- or T and B DA supply manuals like their equipment which is not yet covered by the multiple part TM's.

(Note—Authorized stocks of repair parts can be revised, etc... "now you'll be keeping "usage" info on each part you stock.

You'll keep a running total of each part, including DC parts, on a single



part—DA Form 2417, "Record of Demands." Then from this info you're authorized to arrive your allowance every six weeks periods (180 days). See par 3c, AR 700-10. See more about this new tool on page 17.

## COMMON REPAIR PARTS

When figuring the allowance of repair parts used by one or more different kinds of equipments, the allowance is based on the total number (quantity) of such equipments in the organization. And, the DA manual for the kind of

equipment which an organization has the most of, will be used to figure the repair parts load.

TM 9-2000-211-20P (Maine Prescribed Load List for Tank-Automotive Manual) will be used for figuring the load when the greatest number of different types of vehicles are covered in the RPLL.



## PRESCRIBED LOAD WITH RPLL

DA Form 2003-B, the old PLL, isn't mentioned by the AR. It says that the format of prescribed loads will be as authorized by COMUSMACV/USMACV commanders. Done on how, when, etc., the RPL's will inform PLL's to their accountable officers. However, commanders will set-up PLL SOP for their organizations.



## OTHER PRESCRIBED LOADS

Major commanders give the tool to how many PL's the organization in their command must stock. And when the tool includes load or packaged prescribed loads, they'll be composed apart from the PL's set-up for operating stocks.

And keeping load or packaged PL's calls for a quarterly inspection. That's what it takes to keep those special loads free of damaged and obsolete items, to keep quantities and stock numbers current, and to ready to replace items with specific "start to" dates.

## REPAIR PARTS RECORDS

When an organization commander says your record reflects maintenance work in one week repair parts, you can make out your own supply forms. And you'll be required to set-up a document register using a separate series of document numbers.

You can use a visible file for your records (like visible file book, FM 7-13, 674 2624, a Quartermaster item).

(Note: The AR says you can visible file equipment for units who are assigned or attached to an organization for repair parts support).

On the title leaves (DA Form 1140), for the visible file, you tell the whole story on each part, mechanical FM, name, short description, and location of part. Also, the quantity authorized, which is used in part.

The form's remarks space should tell no less than a part's use, if it's interchangeable, unit of issue, and the TM or SM used to compare the allowance.

And, you file the title leaves in such number of alphabetical sequence ... are grouped by each service.

## REPAIR CARD

All 713-11 adds something new to the visible file records kept by your record reference units. It's DA Form 3117, "Record Of Demands".

The unit used goes to the position of the visible file to keep a running record on all requests (by TM or SM) for each part. The idea being that the card

will show which repair parts are needed the most, and how often (and it'll also show up the ones that are slow moving).

Then, from this record of demands, you can write your load of authorized parts according to actual usage experience.

Are there any other requirements for this card?

The Record Of Demands is filed by file.

1. The card number listed on a title sheet goes into the upper right-hand corner of the record of demands card.

2. The document form 1140, or the date of a DA Form 1140 and the unit "SM" goes in the first column.

3. The document number used on the TM goes in the second column.



Document No.	Quantity	Unit	Remarks	By	Date
1140-1	1	1st Bn, 1st Regt	1000	1	1/1/50
1140-2	1	1st Bn, 1st Regt	1000	1	1/1/50
1140-3	1	1st Bn, 1st Regt	1000	1	1/1/50
1140-4	1	1st Bn, 1st Regt	1000	1	1/1/50
1140-5	1	1st Bn, 1st Regt	1000	1	1/1/50
1140-6	1	1st Bn, 1st Regt	1000	1	1/1/50
1140-7	1	1st Bn, 1st Regt	1000	1	1/1/50
1140-8	1	1st Bn, 1st Regt	1000	1	1/1/50
1140-9	1	1st Bn, 1st Regt	1000	1	1/1/50
1140-10	1	1st Bn, 1st Regt	1000	1	1/1/50
1140-11	1	1st Bn, 1st Regt	1000	1	1/1/50
1140-12	1	1st Bn, 1st Regt	1000	1	1/1/50
1140-13	1	1st Bn, 1st Regt	1000	1	1/1/50
1140-14	1	1st Bn, 1st Regt	1000	1	1/1/50
1140-15	1	1st Bn, 1st Regt	1000	1	1/1/50
1140-16	1	1st Bn, 1st Regt	1000	1	1/1/50
1140-17	1	1st Bn, 1st Regt	1000	1	1/1/50
1140-18	1	1st Bn, 1st Regt	1000	1	1/1/50
1140-19	1	1st Bn, 1st Regt	1000	1	1/1/50
1140-20	1	1st Bn, 1st Regt	1000	1	1/1/50
1140-21	1	1st Bn, 1st Regt	1000	1	1/1/50
1140-22	1	1st Bn, 1st Regt	1000	1	1/1/50
1140-23	1	1st Bn, 1st Regt	1000	1	1/1/50
1140-24	1	1st Bn, 1st Regt	1000	1	1/1/50
1140-25	1	1st Bn, 1st Regt	1000	1	1/1/50
1140-26	1	1st Bn, 1st Regt	1000	1	1/1/50
1140-27	1	1st Bn, 1st Regt	1000	1	1/1/50
1140-28	1	1st Bn, 1st Regt	1000	1	1/1/50
1140-29	1	1st Bn, 1st Regt	1000	1	1/1/50
1140-30	1	1st Bn, 1st Regt	1000	1	1/1/50

4. The amount requested by TM is entered in the third column.

5. A running total of quantity demanded is listed in the lower left-hand column.

## MEASURING THE GAPS

You review the record of demand cards monthly, and draw a line under the last entry checked.

When you've got three or more demands within the last six review periods (180 days), the cumulative counts for these periods will be added up, and the total divided like this—

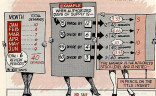
Divide the total by:  
 12 for last 12 days of supply  
 18 for last 18 days of supply  
 24 for last 24 days of supply  
 36 for last 36 days of supply

The figure this formula turns up is the new revised stock level, and goes in pencil in the "revised stock level" space on the risk lines.

If a fraction of .5 or higher, get rounded off to the next highest whole number. And below .5, the fraction is rounded off to the next lowest whole number.

When the formula figuring turns up a guess-egg . . . the revised allowance is automatically 1.

Of course, any time your stock level changes, whatever stocks of an item are on hand (plus any demands) get adjusted to fit the revised stock level.



On items which gather less than three demands during the last six review periods (180 days) it reads this way:

1. Items which gather less than three demands during the last six review periods (180 days) will be kept in stock by TSC organization in the amounts shown in the publications. These items will not be tracked from then on quarterly shown in the publications.

- Items from the 200-20's schedule published before the revised essential code was used will be handled in a variety of ways: 200 schedules, however, will keep a minimum of 7,000 items... regardless of demand level.
- Items listed in a contract before "is required" items. First the needs and demand code are cited in the requisition file, however, and then when those or more demands are recorded within the last six weeks, perhaps a new stock level can be figured instead the particular code stock.
- As always, of course, when supply paths become obsolete, or the end items change with an increase in demand, they get moved to an excess inventory.

## WHAT IS NEW...?

### Priority

AR 725-10 (July 82) "Department of the Army Requisitioning, Receipt, and Issue System", covers a brand new supply priority system.

You'll not likely have much to do with the AR, itself, but it'll be doing plenty for you. Maybe you've heard of the system. It's called:

**RLRSP**, which stands for "Receiving Standard Requisitioning and Issue Priority System"; and

**RPS**, which stands for "Receiving Issue Priority System".

In a nutshell, Requisitions and issues will be assigned priority codes depending on a unit's mission, or combat support mission, or urgency of need, at a particular time.

You'll be using other new supply words and codes on 1940's and other supply documents. For example:

**U**...which means: **Unit Priority Designator**  
**PS**... which means: **Issue Priority Designator**  
**SR**... which means: **Supply Effect Designator**

What's  
 this  
 all  
 about?

The Agency of Issue Designator (AID)—see para 12B11-10, AR 725-10, which will be assigned at unit or organization level, will be a major factor in establishing just how important that item's arrival is to you. So, you can bet the old man will introduce the use of AID codes on all supply requests.

Priority codes (which describe a

unit's job or specific need) will be added to these designator symbols, and presto, a 1940's will become sort of a wrapped-up Blue Book requisition.

The answer is in the formula... which works like this—supply part part (PAD) and your AID together and comes up with your IPI.

# THIS COULD SEND YOU



The engine and transmission label prevents sending waste on your MSO tank, look like yours. You're in for trouble if you think they are alike, though.

The only way you can tell the exact fit for the part number stamped on them. The part number is E24702 0942 for the engine oil tube you are sending out . . .

**ENGINE OIL  
PRESSURE  
WARNING LABEL**

The number labels for fit also apply to the transmission label. The engine warning label prevents sending waste collected to 100% maximum pressure. The engine warning label is collected to 100% maximum pressure.

**TRANSMISSION  
OIL PRESSURE  
WARNING LABEL**

. . . and only  
E24702 0942 for  
the transmission  
warning label.

Any time an engine or transmission label prevents sending waste get replaced. In case you've got the right one in the right place.

With the wrong type you naturally get wrong readings. This might make you think that an engine and transmission that are perfectly good should be replaced.

Don't trust the readings completely. If they seem wrong, check 'em out with the gage listed on PIV 6026-795-0108, Item 7 page 174 of TMS-2140-111-00P (Oct 04). The gage is more accurate. Don't ever replace an engine or transmission just on the basis of a tube pressure warning label. Always use the gage cover-up with the same information.

If you're not sure you have the right pressure warning tank, use it with an oilman. The resistance of the engine and transmission warning units are the same but the operational pressures are different. Check against a known good tank.



**TRANSMISSION**

Pressure PSI - GPM



**ENGINE**

Pressure PSI - GPM



To be sure your transmission oil pressure warning unit is on the ball make these sure:

**1** Get the transmission oil warm but not hot (125° to 150°F is about right). Put the vehicle in motion. Move out in 4th high speed. Under these conditions the pressure should be 38-45 PSI.



**3** Stop the vehicle and let the transmission oil temperature go 200° to 250°F speed up to 4000 rpm and your tach reading is steady at 1800. Now your gauge should read between 48 and 60 PSI.

If your transmission oil pressure reading with pump all these tests it should be OK.

**2** Now get the transmission oil hot (175° to 215°F) and run your vehicle in low range. Your gauge should now read between 50 and 60 PSI.



## M60 TANK CABLE

You're money saved if you stop trouble before it starts—right?

To keep the power steering on your M60 tank from getting heated, you do this by checking out Circuit 104 (Lead Assembly 18665214) which runs from the servo pump motor to the power relay box.



It's easy to find this circuit because "104" is stamped on a metal band around the cable. There is also a diagram of it in Fig 134 during page 140 of your TM 9-2590-219-2B (Fig 60).

Here's the wrap . . . In some tanks Circuit 104 is shown as solder to its two terminals—the male terminal which connects to the power relay box and the female terminal which connects to the servo pump motor.



To find out if the cable is OK, turn off the master switch. Then, at the back of the cable, remove the grounding wrapping and pry back the rubber grommet. This is more difficult to do if the grommet is already in place.

**WIRE STRIPPING KIT**



**TERMINAL BLOCK**

**GROMMET**

**CONDUCTOR**

**INSULATION**

**WIRE STRIPPING KIT**

Now look over the cable post. The insulation should be stripped back far enough to leave about 1/2 inch of the conductor exposed. If you get an uneven, fraying, filigree-like edge of solder between the end of the conductor and the exposed conductor and you can't pull the conductor and the insulator apart with a easy pull, your cable is probably OK. Otherwise, better give up and replace it.

These terminals have to be stuck in the ends of the cable with lengths of solder . . . good and solid.

If you're a fast learner with a soldering iron and you've got the will and the skill, you can do the job yourself. Otherwise, have your support men do it. Just be sure to give them right.



Remove the sleeve from the tank. Then remove the nut from both ends of the cable and screw off the terminals. (A nut cap or some substance will keep the rubber from burning.) It'll be a lot easier and you'll do a better job if you strip the insulation back 1/2 inch before you start.

Trim the cable and connector with



make sure solder then connect the two parts together. Make sure all of the naked cable ends are soldered in the terminals . . . not just a small portion. You need a firm and solid connection. After it cools put everything back in place.

Now you've got a good up policy for any more burning—which means life insurance for the whole tank crew.

# Comic Rodd's

"SHORT 'N' SWEET DEPT"

Don't waste time  
and money by not  
checking your assembly!

## Differential difficulties?

Having trouble with the controlled differential overhauling in your 2011 PC?

Could be the quick-disconnect coupling at your oil flow adapter is the issue. If this is installed wrong the oil flow from the differential oil pump will be partly cut off. What this happens the differential overhauls—but won't!

Check the clearance between the cone piece and the unlabeled marked part of the coupling body. They have to be within  $\frac{1}{16}$  inch of each other.



TO GET THE BEST OIL, THIS IS WHAT YOU DO.

1. First disconnect the coupling assembly from the cone piece.



2. Put the pin and the groove of the coupling lined up and push the coupling over the cone piece.



3. Press the coupling far enough in that when you bring it to the knurled part of the body, it will allow to rotate  $\frac{1}{2}$  inch of the cone piece far out.

4. Without changing that  $\frac{1}{2}$ -inch clearance, turn the knurled part counterclockwise on the groove and the pin don't line up any more.



If your differential still overhauls, check it out according to the troubleshooting chart in your TM 5-200-234-28 (Rev. 6/1).



## It's just the grind

You've noticed that the interrupted threads on the handlebars and seat bindings in some of your HMO series HD models often look like a bunch of metal has been chomping on 'em for a month of Sundays?



Well... upon the HD. The new "bite out" look is a result of grinding metal from the cutting edges of the handlebars and seat bindings to call a halt to threadless interruptions.

How, however, the grinding operation

is surely a third solution job.

So, if you've got a handlebar that takes two men and a mule to place, ask your supplier only to take a look—should be your HD made a little shorter.

## Going, going, gone

Three accessories for the 45-cd model are about to join the ranks of the Duke bike-line, too, they're on the way out. The items show as bid farewell to the supply system are the beam cap, P/N 1300-014-0014, the hand mirror, P/N 0758-500-0018 and the

HD12 pistol cleaning kit, P/N 1001-715-0000. They've been placed on the "stock release" list—which means when the stock on hand goes, that's it... there ain't no more. And nothing will replace the three items.



Before you even get close to squaring the rigging on your machine, take a long look at the locking lugs on the bar.



If you think a crack is making its way between the lugs and the body of the bar, hand to your armory pronto. It'll send the machine, bolt and all, back to your supplier only if he spots a crack, or you think you're starting to show up.

## Light switch confusion

There has been a switch in the naval and military light switch. Headlight switch P/N 5030-267-8856 is a new case of brass that is replacing Headlight switch P/N 1280-108-1047.

The new switch is used equipment on many of the latest tanks and trucks.

Now here is the part that's different . . . the new switch comes in two varieties, both of which go by P/N 5030-267-8856.

The two varieties look alike and both have to be switched to go to STOP LIGHT.

But there's one difference . . . One variety has a locking glass between STOP LIGHT and SERVICE DRIVE so you can't get from one to 'other without first lifting up on the mechanical lock. The other variety doesn't have this feature, and you go between STOP LIGHT and SERVICE DRIVE in either direction by just moving the top lever.

That is the only way the two varieties differ. Either will do the job as long as you know how to work it.

TO GO FROM ON OFF . . .



ON OFF, BUT NOT ON ALL FOR STOP LIGHTS . . .



## M40 Head mounting

Do you go through a lot of extra work to turn on the water blower in your M40 tank before you fire the main gun or the machine gun? Well, cut it out. Take necessary. In fact,

M40 5-1506-213-2846 (Feb-62) says to remove the warning plate that tells you to do so. This plate is in the right-hand gun of the cupola above the vision block, near the cupola canopy.



Like LO 54008 (17 Aug 51) says, you keep your power-steering hydraulic controls on Q744-series 5-cm vehicles only three-fourths full.

That's right, just  $\frac{3}{4}$  full. But how do you measure to make sure you've got the tank only  $\frac{3}{4}$  full?

First, for capacity, like it says in Para 2416c(1) in TM 5-8028 (Jan 51), is 85% space, but here's a better guide.

The oil level is right when it just  $\frac{1}{2}$  inch above the bottom of the filter screen. And a shade less is better's too much. Below oil marks this level when you're pouring, a hole finally will tell you when to stop.



But when you're checking oil already up to this level, you may need to poke the thin end of a ruler inside the filter screen to measure it.

One thing sure—with too much oil in that tank, you and your working apparatus are in for a mess of trouble.

### Get "buffetted" troubles?

Wood has drilled in that word goes to having more than their share of problems getting the oil buffer assembly back into the oil buffer body on the M101 M1 machine gun.

Mixed body buffers and tubes just might be the trouble.



Could he draw that last time the wrench was checked out by supplier some body pulled a rock and joined a new type tube with an old type buffer.



It can happen.

And getting this mixed up mixed back into the buffer body group is enough to make Lincoln hit his own rear-end in making the change this mistake can do to the buffer guides and rollers.

The new type tube has no locking mechanism, so the bolt won't fully seat in the old type buffer body. When this

happens, the spring action of the bolt forces the buffer body against the guide legs that's line up with the mounting slots on the rollers-making reasonably a rough job and paving the way for real headaches.

Now, if "buffstick" is giving you



too, stop the machine just back to supplier and ask 'em to check out this possible trouble spot.



Get your share too!

Because our daily-daily is asking for your like to make your purchase the deaconer (See Engineering Firm Model G-1), IBM 4514-485-5542.

You only have one year from the date 1970 5-48 45-487-1271 was published (15 Dec 44) to get your like. After the year's up the 1970 will be cancelled.

The purpose of the 1970 is to give you a more desirable head breaking show for your Model-G-1 the deaconer as they won't break under severe use.

All you have to do is to remove the four old head breaking show (marked G-1) from the deaconer and install the four new head breaking show (marked G-2-2000). It's not a big job to do, in fact, you should be able to do it in 20 minutes.



Don't forget to get the following on your requisition: "PARTS TO BE SUPPLIED ON A NO CHARGE BASIS." This no charge rule doesn't apply to replacing non-reversible G-2-2000 show.

## SHINE ON

Dear Windy Woodcock,

IM 23-4-128-800 (29 Oct 63) lists all the parts for our Mark II test life processor—except one! It's been jumping through supply channels, without success, trying to figure out what type lamp (bulb) you use in the downer light. PNY 6280-211-8-160, and which bulb size is that? Can you help?

Dear Sergeant E. W. ...

Get your eyeballs over a short boy. The lamp is a 1.5 volt, 0.18 ampere, G-145 miniature screw base type with a tungsten filament in k. It's a General Electric number 150 and it costs about 17 cents apiece... usually comes in boxes of 18 with a net price tag of \$1.00.

The Bulb's an Engineer responsibility and—you've probably guessed it by now—you get it through local purchase.

Concern for battery replacement in your lights you use Signal's standard flash light BA 95, PNY 64-71-120-1000—listed in the same SM.

That's right—the bulb is 1.5 volts and the battery is 1.5 volts—but don't get stuck. The combo works fine after calibration and voltage drop come into play.

*Windy Woodcock*

## SPARE THE BRUSH



Has your painting crew saved you a brush? For the paint brush a little too short?

If so, it's probably because the paint you're using isn't reacting up to Duane Dixon's apper for k.

But there's a real interesting paint compound around that'll stand up to our worst conditions... one down on your paint maintenance for real! It's authorized in Transportation Corps maintenance letter "Assembly Painting for Vessels in Storage," 118 Mar 59. But don't let the word "Storage" throw you—this paint's OK to use on active vessels too.

You can requisition it by listing your papers over Federal Supply Catalog C3-148, 11 May 63, for Item Acquiring Catalog Spec MIL-6-10006.

Here's what you can order:

PNY	Unit of Issue	Cost
6280-211-8-160	12 gal. drum	\$21.00
6280-211-8-160	1 gal. drum	1.75
6280-211-8-160	1 qt. can	1.25

One thing though—this paint is just for touch-up or spouting above the water line of your vessel. So you don't want to get overboarded by ordering more than you need.

**JOE'S**  
DOPE

**THE  
LITTLE  
EXTRA**

WHAT A MAN  
IS  
MY HARRY.



AS AN AIRCRAFT  
MECHANIC, HE'S  
THE BEST!



...Knows his aircraft like the back of his hand!



...Harry a pilot owes his life to Harry's diligent maintenance.

AAA, JES' ABSOLUT, I DON'T LIKE THE SOUND OF THAT KITTLE!



Pilots consider themselves lucky to share Harry  
for their crew chief.

LOOKER!  
PLEASE TRY PULL  
BACK AGAIN, I  
WANT A  
PECULIAR  
NOISE.

RIGHT!

Then...the other day.

Y'KNOW, AL, I REALLY KNOW AN  
ELECTRIC BUCKING PLANE... BUT  
I CAN'T GET USED TO THESE  
FRANCY ELECTRONIC SHRETTA.  
YOU AMERICAN INFANTRY BOYS  
WORK WORKERS WITH 'EM...  
AND I BREAK OUT IN A  
SWEAT JUST BEIN' AROUND  
'EM.

YEAH,  
SOME OF  
'EM GIVE AN EYE  
YOU WILL COME! ON  
YOUR BONE TO LOCK  
'EM OVER... JUST AS  
LONG AS YOU KNOW  
WHERE TO STOP!

WIDDYAH ABEN!  
I TELL YA, WE STOOD  
CLEAR OF THEM  
THINGS!

YEAH,  
SOMEBODY  
OVER THERE'S  
BEEN THINKING  
LOOKER-DEE!  
AND CALL US  
BUT TELL 'EM  
TO KEEP  
THEIR  
COTTON-  
PICKIN'  
PANTS  
OUTTA MY  
BLACK  
BOXES!



**Joe's**

# Dope Sheet



These fly block boxes got him in their spell;  
He saw loose connectors—but he would not tell—  
So it's round and round they go,  
Down and down they go...

**WE HAVE THE WORLD'S BEST EQUIPMENT ...**

*Take care of it*

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

IM TELLING YOU, WE  
COUNT ON YOU FOR A  
LOOK-SEE, AND INTERNAL  
WORK BUT... THE INSIDES  
OF ELECTRONIC STUFF IS  
MY RESPONSIBILITY!

**Oh Kay!**

OKAY... OF  
THATS THE WAY  
ITS SOUNDING...  
DUDE...

...my Harry  
ain't seem to be  
pushy... why  
fight with his  
hobbies...  
"From now on,"  
he says, "I'm  
gonna mind my  
own business...  
You want I should  
lay off? Oh Kay! I'll  
lay off, but good!"

YOU ALL DONE,  
HARRY??

YEAH, ALL  
THE THINGS I  
CAN DO ARE  
FINISHED!

Well, perhaps poor Harry gets the worst boys' cut he ever got...



... IT WAS PITCHBLACK DARK AND A LOW OVERCAST—AND IN WITH DARKNESS—AND MY RADIO FAILED!

SO WHAT DO YOU WANT FROM ME?



I WANT FROM YOU— YOU SHOULD INCLUDE A VISUAL INSPECTION OF OUR ELECTRICAL EQUIPMENT ON THIS AIRCRAFT EVERYDAY!

**VISUALLY INSPECT FOR...**

-  **BUSS**  
CONTROL PANEL FOR  
LARGE CIRCUITS AND SWITCHES
-  **TERMINAL**  
OF ELECTRICAL  
CONNECTION
-  **WIRE LOOP-WRING ON WIRE**  
CHECK THOSE ADDRESSING QUALITY OF WIRE
-  **FRAYED CABLES AND WIRING**  
LOOK TERMINALS
-  **OIL BURNING IN INDICATOR**



...AAA— THAT DOESN'T SOUND SO UNDESIRABLE... SEEMS TO ME THAT IN THE MAINTENANCE BUSINESS AN EXTRA DOSE OF "GAS" COMES IN REAL HANDY.

WOW!!! THAT'S ALL BLIND TO YOUR OWN RESPONSIBILITY. HE TOLD ME A HELDUPP TRUCK TO KEEP AWAY... SO YOU KEEPIN' AWAY!

HEY MA... THAT OL' BLUNDER LOOKS BRO... MAYBE WE SHOULD CALL THE REPAIR MAN NOW!



...WHERE WIL I... OH, YES YOU GOTTA UNDERSTAND LILLY HARRY HAS HIS PROBL... BESSIE WHY STICK YR NECK OUT...

WELL, I SUPPOSE YOU'VE RIGHT... IT'S SAFER... BUT IT'S NOT VERY GOOD WHEN YOU NEED TRAWKOR.



HEY MA... Y'KNOW THAT REPAIRS MAKING DOWN YOU SAID WE SHOULD KNOW BECAUSE ITS DADS REPAIR...

## PO LIFE PRESERVERS

### QUESTION AND ANSWER DEPARTMENT

"Why can't we..."

"They come in handy..."



Dear Half-Mast,

Our craft does come with PC's but there were no life jackets in the equipment material. We were robbed!

SFC J. B. B.

Dear Sergeant J. B. B.,

No, you wanted life jackets don't come with the COM... but you can purchase them from your craft's transportation office.

If you're in an Infantry division your TOE number is 2,111 Life Preservers; the Armored division has 1,001.

They're intended for crew members and passengers in PC's.

Your craft's transportation office

relates them for use with the PC's that go into operations when your CO decides life preservers are needed.

You get Life Preservers, Yoke In-Battle, under FMN 4220-542-5717 and all personal stocks are exhausted. Also the Life Preservers, Dual Inflation, trapped-in-water, 30" inches high will be issued. Its FMN is 4220-102-6001.

If you have the M19 or M24, the same thing applies.

FMN 4220-542-5717



M202



M201

## GUN TUBE INSPECTION DUES



Dear Half-Moose:

Last week I was received, hand and armed by an M1 inspection device the gun tubes of our M16s are inspected after each 50-day inspection by Ordnance within 90 days before our annual firing.

After climbing up one side of me and down the other—by hand it was in my own words—before the next time he did me just he wanted to see the inspection done in my weapon's records.

You can be sure the weapons will be inspected and the dates will be entered in record the next time—even if I have to haul the M16 to Ordnance by truck train. But what I'd like to know is, where's this inspection program spelled out and does it apply only to the M16 or to all gun tubes?

Ep T. G. S.

Dear Sergeant T. G. S.

TM 9-1080-281-03, *Procedure of Cannon Tubes*, May 591 is the bible on the inspection of gun tubes.

It spells out that Ordnance personnel will inspect gun tubes in the hands of using units—like us.

Within 90 days prior to initial firing and within each 90-day period when the guns are used the conductors in carrying this.

Or within 90 days prior to initial firing when used for non-annual, annual or irregular periods.

Another thing, and it's mighty important, is pass the word along—all cannon tubes in the hands of using units—including the M1 and M1-ans and 4.2-in mortar tubes—come under this inspection program.

And as you found out the hard way—if a record has to be kept for the weapon, the inspection has to be noted in it.

So, the next time your unit's got a fire mission coming up... make sure you get the message to your Ordnance support units in time for it to send an inspection team around to give your weapons a final check-up.



## M14 MASK CARE

Dear Mail/Man,

I'd like some information about the M14 eye mask used in tanks and combat vehicles. How do I clean the lens? How do I clean the lip seal? And where is it stored when not in use?

E. M. C.

Dear Lieutenant M. C.,

The lens of the M14 eye mask should be cleaned by brushing with a soft bristle brush. Liquid cleaner in any form should not be used.

Clean the lip seals by wiping that part of the seals with a cloth from the storage pocket with a soft damp cloth (not wet) or with a soft dry cloth. Do not remove the seals from the storage pocket, and do not get the seals wet.

TM 3-1195-123-15 gives info on fitting and care of your M14 eye mask.

Never store your mask in the sun. When the mask is not in use, it should



be stored in a cool, dry place and hung by the shoulder strap of the carrier or the D-ring to which the shoulder strap is snapped.

*Happy - Happy*

## AVGAS, ALAS!



Dear Casals,

The manual on my B17C semitrailer ship set, TM 3-2030-235-14, says we're to use JP-4, DF-1 or DF-2 fuel in our Hercules UH-46 Helos. Would it do any damage to the dealer if we used 80 octane Avgas, or higher, if we temporarily run out of the recommended fuel?

DF/2 E. A. M.



Dear Specialist E. A. M.,

Gasoline is OK, but keep in your TM (per 21c), but any gas that runs over 91 octane is considered too rich a fuel for the Hercules UH-46 Helos. You're on the safe side with your 80 and 86, or 88-87 Avgas in this instance, but any higher grade of Avgas could damage the tank.

*Casals*

## THE EASY WAY

Another  
thing I  
like about  
this bag

It's  
perfect  
for me!

Dear Staff Man,

I'm the operations engineer of a combat engineer company with a PDB unit, doing six DZ in rubber boots. According to FM 21-27 even muds are carried by each rubber team.

This amounts to a lotta weight on top and it's a little on the clumsy side. Is there an ammo bag or something available to me before I wear my load down to a nub?

Sgt. E. C.

Dear Sergeant E. C.,

There are three ammo-carrying units in the system—and if you place your tin in the system—and if you place your tin in the system—and if you place your tin in the system—you might be able to save your load before they wear away to nothing.

The first — now a limited standard item — is the old faithful M1 ammo tin bag, PPN 8455-261-0130. It's made of cotton duck and goes over your head, something like a shoulder harness. Just in case your inventory needs a little joggling—here's what it looks like.



Next comes the M1A1 ammunition carrying bag, PPN 8455-261-0138, also a limited standard item. It's made of cot-

ton duck, comes with a carrying strap and looks like us.



However, this bag is on the way out and is not available for issue from supply depots.

Finally, there's the new standard item called the universal load-carrying sling, PPN 8455-731-0217. It's a web strap about six feet long that can be used to carry special loads—like your canteen.





Here's what it's going to look like and how you load and carry the modules on your back.



FM 21-11 "Care and Use of Individual Clothing and Equipment" (Aug 81) gives you the complete story on this baby.

All these are QM items. If they're not listed in your TOE or TA 21—and your CO gives along with your need to have



one—follow the setup method in AR 731-8 or your authority to draw it from supply.

Your local supply people will give you whatever you they have on hand.

### CV BOOT MOUNTING

*Half-Shell*

Dear Half-Shell,



There are several different opinions on the best way to mount the CV boots on our M15 110-ton cargo trucks.

Some of us think the word "TOP" on the boot does not apply to the right wheel because if you mount it that way, the upper wheel is under the boot's protection.

Another group is all for putting the TOP to the top on both the left and right sides.

What is the correct way to do it?

*TOP is not required and TOP is wrong.*

ADG/D. H. H.

Dear Sergeant D. H. H.,

Left or right, day or night, the TOP is always the top, barge.

When you put the CV boots on your G1/G2/G3/G4 vehicles, the part marked TOP goes to the top on both the left and right sides.

You put them on this way because the boots are made a little bigger at the top where you need the most room. The boot sits on the left wheel well face forward and on the right it will face toward the rear.



Regardless, the TOP is always at the top. This is spelled out in Change 8 (Nov 81) to TM 5-603 (Dec 54), in Para 200 page 4 of this Change is re-

“With word TOP as illustrated with mounting hardware upper shown...”

*Half-Shell*

THE MOST HIGH MOGEL MIGHTY TOOL, EVER!

# A LIGHTWEIGHT CHAMP READY FOR ACTION



Further proof that big things will come in small packages—is this tool kit for your Hammer John needs.

The tool box, loaded to the gunwales, weighs in at a little better than 50 pounds... but it's 50 pounds of mighty important tools to get and keep your Hammer John ready-ready.

Here it is:

Just like **MOE 5-8-3 148-404**, but with pleasure, yes, what your minute mechanic should have in:

**MOE 58, MOOSE, UNLACRATED, HARDWARE AND SUPPLY, 762-009, FOR 148-004-810 (MOE).**

MOE 58-001-010 40" x 10" x 10" (40" x 10" x 10")	
<b>FOR 148-004-810</b>	<input type="checkbox"/>

MOE 58-002-010 20" x 10" x 10" (20" x 10" x 10") 20" x 10" x 10" (20" x 10" x 10") 20" x 10" x 10" (20" x 10" x 10")	
<b>FOR 148-004-810</b>	<input type="checkbox"/>

MOE 58-003-010 20" x 10" x 10" (20" x 10" x 10") 20" x 10" x 10" (20" x 10" x 10") 20" x 10" x 10" (20" x 10" x 10")	
<b>FOR 148-004-810</b>	<input type="checkbox"/>

MOE 58-004-010 20" x 10" x 10" (20" x 10" x 10") 20" x 10" x 10" (20" x 10" x 10") 20" x 10" x 10" (20" x 10" x 10")	
<b>FOR 148-004-810</b>	<input type="checkbox"/>



**SOCKET WRENCH SET, SOCKET  
HEAD, 1/2 IN. 12 pc.** Part No.



**FIG. 200-200-1004** Part No.

FIG.	Description	Size	Drive
FIG. 200-200-1004	Socket	1/4	1/4
FIG. 200-200-1005	Socket	3/8	1/4
FIG. 200-200-1006	Socket	1/2	1/4
FIG. 200-200-1007	Socket	3/4	1/4
FIG. 200-200-1008	Socket	7/8	1/4
FIG. 200-200-1009	Socket	1	1/4
FIG. 200-200-1010	Socket	1 1/8	1/2
FIG. 200-200-1011	Socket	1 1/4	1/2
FIG. 200-200-1012	Socket	1 3/8	1/2

FIG. 200-200-1003 Handle, 1/4-in. long for head, 12-in. drive.



FIG. 200-200-1004 Handle, 1/4-in. long for head, 1/4-in. drive.



FIG. 200-200-1005 Handle, 1/4-in. long for head, 3/8-in. drive.



FIG. 200-200-1006 Handle, 1/4-in. long for head, 1/2-in. drive, 12-in. long for head, 12-in. drive.



**FIG. 200-200-1007** Part No.

FIG. 200-200-1007 Handle, 1/4-in. long for head, 12-in. long for head, 12-in. drive, 12-in. drive.



**FIG. 200-200-1008** Part No.

WRENCH, TORQUE, 12-in. long for head, 12-in. long for head, 12-in. drive, 12-in. drive.



**FIG. 200-200-1009** Part No.

WRENCH, TORQUE, 12-in. long for head, 12-in. long for head, 12-in. drive, 12-in. drive.



**FIG. 200-200-1010** Part No.

WRENCH, TORQUE, 12-in. long for head, 12-in. long for head, 12-in. drive, 12-in. drive.



**FIG. 200-200-1011** Part No.

WRENCH SET, SOCKET, 1/4-in. long for head, 12-in. long for head, 12-in. drive, 12-in. drive.



**FIG. 200-200-1012** Part No.

## SOCKET, GRAY WHEELS

PKB	Leg	Inches
1100-100-104	3/4	30
1100-100-105	3/4	30
1100-100-106	3/4	30
1100-100-107	7/8	30
1100-100-108	3/4	30
1100-100-109	7/8	30
1100-100-110	3/4	30
1100-100-111	7/8	30
1100-100-112	3/4	30
1100-100-113	7/8	30
1100-100-114	3/4	30
1100-100-115	7/8	30
1100-100-116	3/4	30

## GRAY WHEELS (Continued)

PKB	Leg	Inches
1100-100-117	3/4	30
1100-100-118	7/8	30

## SOCKET WHEELS (Cont.)

PKB	Type	Leg	Inches
1100-100-119	Steel	3/4	30
1100-100-120	Alloy	7/8	30
1100-100-121	Alloy	3/4	30

## GENERAL GRAY SOCKET WHEELS

PKB	Leg	Inches
1100-100-122	3/4	30

## FOLD THOSE LEGS

You know what those guys're doing? That's right... they're moving their Hawk around the command console—but the wrong way. You don't drag the console unless you're taking it from the driver's legs. Be kind to the console by folding the legs out of the way before you move it. And there are four guys—one at each corner—so move it.



## SNIP, SNIP, SNIP



Your legs are sure to mighty handy for lots of things.

So... when you go to move your Hawk CTR around, don't grab hold of the park frame. The frame could make like a pair of scissors.

Play it smart... use the handle.



## NO FITS—NO STARTS

These quick-disconnect clamp-type battery lugs that come with most kinds of engine equipment are handy, handy—but long as you keep 'em shaped up as a clean, discolored contact.

But for those connections get corroded, dirty, or loose and trouble hits up a full time.

The battery goes south, the engine goes nowhere and nobody's happy. The aircooled and water-cooled engines are the place. Your rig is going nowhere.

Now that's a shocking development nobody can really explain, so there's how to keep it from happening to you—



1. Lift up the small quarter-inch-wide metal "battery" cap on top of battery post and connect lug that will be fast to engine.

2. With the clamp-type lug, the insulator that holds it connected with the battery post and is tight as with the standard lug. So you test it more often.

**If you can budge it by hand, it needs tightening.**

But lift the lug handle, then loosen the nut to the lock nut.

Now take up on the nut to the locking nut and you get equal tension fit on the battery post.

Then tighten the inside locking nut, and check the connection by pulling down the lug handle.



And finally, lug it off with a coat of protective grease like you would with the standard lug.



## LINE UP A TAG LINE

Dear Sgt. Sarge,

Our TCM

15, 17 1/2 and 20 ton cranes usually  
for use 10, 20, and 40 ton cranes.  
But, there's no tagline listed and  
you can't operate without them.  
Why don't we rate the taglines and  
don't do we go about getting them?

RFC B. C.



Dear Sergeant B. C.,

Agree with you—  
you can't operate your clamshell  
without a tagline. They should  
have been included in the TCM.

However, you can  
equiptation done through your regular  
Engineers supply channels like a repair  
kit TCM-5 (with changes 1 through 11,  
parts 111, 112, 113, 114). You can justify  
your requisition on the basis  
that the TCM is inventory  
and that the taglines are  
required for training  
or mission purposes.

*Soft Design*

## THE BEAM'S OFF

We need to be check if the new wheel, 110-ton, pole type  
walkers you've been issued for transporting personnel  
didn't come equipped with a special beam clamping  
beam.

Article back issue model walkers indicate  
the special beam to hold down the old-type  
personnel beam. But, since these personnel  
are no longer in use, there's no  
reason for needing the beam.



I GOT A FIX.

## CAP THE GUSHER



Draining the engine compartment on the Thomas-King refrigerator unit, Model K-18, K-108 can be a mighty messy job.



The drain plug is located about three inches back from the side of the control panel, flush with the floor of the compartment.

Once you pull the drain plug, you've got an oil gusher spilling into, over, and down the lines of the control panel—damaging both panel and instruments.

This'll keep a guy in keep putting off draining the crankcase until next PM time.

You can cap this gusher and keep it under control by putting a pipe extension on the drain with an arrow.

ARROW AND PIPE EXTENSION



- 1-N is plastic steel nipple, 2 1/2" in long, 1/8" WT external thread, FR 100-144-105 Plug.
- 1-N is plastic steel nipple for coupling, 1/8" WT external thread, CR 100-147-741 Plug.

Just screw the nipple into the drain hole and jam the coupling on the other end. Then, re-using the same drain plug, screw it into the coupling.

Break the surface by on the bottom of the unit door so it'll close the drain plug extension and you'll be able to lock the door.

If you need help, let your support people lend a hand.

Close drain door a guy can slide a cap or board in position... and the job's as good as done without a drip, drop, or definite stopping up the work panel, or instruments.

## A CONDITIONED MOVEMENT

There's a lot to be said for Day's movement—especially in your Elite and Warm Model 400 air conditioners.

The tube is mounted on rubber pads which allow normal vibration when it's operating.

However, since the capillary tube is clamped under frame to prevent any movement at all, the vibration of the compressor causes the tube to break at a point between the pressure switch and the high pressure line.

A hole planned movement is the answer.

By means of giving the capillary tube its freedom, just remove the hole and clamp holding it in check—for the tube moves with the rest of the unit.

PLUG ALONG BEHIND  
VIBRATION...  
TUBE BREAKS HERE

REMOVE THIS  
BOLT AND CLAMP.

REMOVING THIS  
BOLT STOPS  
DRIP

## THE BIG DRIP

It's not the heat... it's the humidity.

Don't make any more mistakes which make the unbalanced compressor suction line sweat as some of your Elite & Warm Model 400 air conditioners.

The fact of the matter is—the line sweats... and drips.

Since this line runs right over the compressor motor, the condensation drips through the open motor frame and every motor failure.

Now, there's no reason for this to happen.

You can keep this suction line from sweating by wrapping it with some 1/2 in. x 24-inches non-insulating tape. The tape comes in 25-ft rolls and you can requisition it through your regular supply distributor under PSM 1040-418-7044 (Fig 1), or you can get it through local purifiers.

The line is easy to wrap and you've got enough on each roll to insulate a couple of A/C units and still have some left over.



## TWO-POINT LANDING

When you let down the landing jacks of a Cambridge 247-50 low tank, this is one time to make haste slowly.

The landing rig on this tank has to support a big share of the 13-ton gross weight. So you can't be too careful about seeing it down solid and level, like they tell you in the TM.

Best time to fit and try the footing is before the tractor uncouples and when clear.



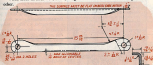
First, you check the wheels. Then if the footing is surface daylight down below, make jacks hold everything while you level up a foundation of good solid blocking.

Now you crank the jacks down. E-E-E don't do it!

Those gears and legs and re-lubricating rods are fixed to each other like the linkage on a swing-set. It takes careful handling to keep 'em lined up like that.

At Q service, too, it takes a cool eye to make sure as part of the landing linkage is losing its grip—especially the tie rods that run from the gear housing to the upper leg roller.

When these tie rods wear loose, the gears stand off and start chewing on each other.



Before that happens, better see your support people about lubricating an extra pair of tie rods. Fastened to the inside legs on the housing and rollers, they'll bring those gears back to work.



## WATER WAGON

Before you hit the road again with one of these big two-wheeler (two-Pro) water wagons, here's some problems you can slip in the hand-before they blow out into wheelbarrow in the field.

Miss the weather your two-Pro is Model 1000-1700, or Model 1500-2000. Check out your slip list one or more of these problems.

### FIX THE AIR SEWERING PULL

Does the two-Pro pull extra air with each delivery stroke on the opening of the dump valve like an exhaust valve?



The plate blocks air flow from the return valve—check it off as much you need to repeat the same job on the other.

### SHOULDER UP THE FLUIDS-A-DOOR

Has heavy flow on the left side of the container, like a platform—is not built for heavy traffic, the towing system, especially on the top Model 1000-1700, you can wear it in by building doors on that platform.

So you want to take along some blanking trailer, and close the door with a solid support when you're about to turn against a problem.



## SHAPE-UP

Remove "junk" valves from pump.



### INCH IT QUART

There's a lot of things before a couple of inches can make all the difference in the world.

Which opens on your two-Pro Model 1500-2000 units is a good Valentine.

Moving from one area to another in this town of plumbing is like going through an obstacle course. Even when a guy's careful, it's easy to bump the handle of a control valve—like the one that controls the flow of compressed water to the floor pump.

Now, the operator opens that quick-acting gate control valve during a flow run. This moves the handle in a straight up and down position. It also means that the handle can be accidentally kicked closed when a guy attempts to slip over it on his way through the run.



This is supposed especially if the valve stays closed while the floor pump's operating. Bumping dry will ruin the work, damage other parts of the pump, and leave you waiting a while.

To get the valve in your hand, move the valve closer to the frame of the sludge compressor tank—what'll keep the handle out of the way and all you'll have to handle is the pipe.



Before the power pipe slips with gate valve face below (see Fig. 1180, 1181, 1182, Coupling pipe, slip joint, 1 1/2" gate valve).

The steel pipe and nipple are available through regular Engineer parts supply channels.

Once reassembled, as shown, you'll have no leaks coming.

### SOFT WATER PUMP FOR SHAPE

In fact that the world, you'll find the best location for the face of the valve for holding the new water pump steady on the work. Unless you know these pumps. In the face, this can work in well around the old valve and like a part of the work.

Letter to the Editor looking for the best location to open a (1) valve. If they don't check with the opening picture face, you've got a lot of work to do for the valve.

INSTALLATION FOR 1500-1700 TYPE MODEL

PUMP INSTALLATION FOR 1500-2000 TYPE MODEL



FOR 1500-1700 P.A.S.



### WHAT NOW

Replace the pipe nipple between the valve and the floor pump with a length of pipe providing enough to complete the coupling, just not the right length from that pipe. FIG. 1181, 1182, 1183.

### WHAT NOW

Replace the power pipe slips with gate valve face below (see Fig. 1180, 1181, 1182, Coupling pipe, slip joint, 1 1/2" gate valve).

## RACK 'EM UP



On the Pro Model 608-2100 water pump, the four carrying handles of the waste-purification unit have a tendency to swing and whang into the Redline tank when the rig hits the road.



Reduce those handles whanging the way out of the Redline, why not strap 'em up on the roller racks while you're on travel?

First you get two straps, P/N 1048-004-1 (15' and eight vinyl handles, P/N 2048-002-2102, from your Redline supply source. Then you bolt the strap handles of the necessary angle on your handle ends.

COUPLING HANDLE  
(GROUP OTHER HANDLE  
ON L.S. END)



1/2" DIA.

1/2" DIA.  
1/2" DIA.  
1/2" DIA.  
1/2" DIA.  
1/2" DIA.  
1/2" DIA.



1/2" DIA.  
1/2" DIA.  
1/2" DIA.  
1/2" DIA.  
1/2" DIA.  
1/2" DIA.

I substituted my power (aka Redline) waste pump for the old 12-volt pump assembly.

Now you're all set to move those handles when they can't whang the Redline.

Meanwhile, over at the disconnect water filter on the same Pro Model, there's a fairly simple fix to replace any breakers that get loose off the base leg.

1/2" DIA.  
1/2" DIA.  
1/2" DIA.



The tank is now broken out of 1/2-in. thick aluminum angle 1/2- or 3/4-in. stock.

1/2" DIA.  
1/2" DIA.  
1/2" DIA.



1/2" DIA.  
1/2" DIA.  
1/2" DIA.

1/2" DIA.  
1/2" DIA.  
1/2" DIA.





# WHAT'S IN THE PACKAGE



These nickel-cadmium batteries starting up in the latest state-of-the-art cycle equipment are just from the best package of power for an electric system that's come along since the original lead-acid battery.

They run

Unchanged in a short time:

Keep a steady voltage even when being discharged at high rates.

Stay idle in any state of charge for an indefinite time—and keep a full charge when stored for a long time.

Be charged and discharged any number of times—and even be recharged without damage.

In short, they can very well stand the equipment they're used in.

And if a cell does go on you, it can be replaced all by its lonesome without disturbing the whole pack.



By now it should be mighty plain that these babies mean by themselves special—and plenty expensive. They are special and they are expensive—ranging from \$400 to \$1000 as compared to around \$110 to \$200 for the lead-acid type.

They're so special, in a manner of fact, that you shouldn't even speak of them and the lead-acid type in the same breath.

These nickel-cadmium batteries contain potassium hydroxide and distilled water. Chemically speaking, this is just about the exact opposite of an acid. And as you know, your lead-acid batteries are sulphuric acid. Which belongs

up the tree and more important point about these new batteries.

**THEY MEET THE PROBLEM OF SELF-DISCHARGE BEING CAUSED BY IMPURE ELECTROLYTE SUPPLY BY 100-100 PERCENT CONTAINED A.C.D.**

In other words, leads, seals, by design—in fact—that's combined a lead-acid battery mean never touch the nickel-cad, and this includes air, too. Given if even a trace of sulphuric acid comes from a lead battery gets into the electrolyte liquid for your nickel-cad, that's done for.



# OF POWER



## "HOSPITAL" CARE

Now, the ordinary battery they're anything but the cleanest place around. So, it's a good idea to do up a second battery shop, including separate work, just for these nickel-cads. Then, any traces of acid picked up by your hands or tools, or from the battery charging bench itself, contamination your work and any. If this means the going overhead is high, too, just remember one thing. The saving of just one expensive nickel-cad from acid contamination will get a long way toward paying for the extra precautions.



**IF IT'S POSSIBLY TO GET UP OFF OF GROUND BY SURVIVAL PLANS, THERE'S THE BEST PLAN.**



Let us operate bench facilities of separate work of the same. That work was clearly... and this everybody includes the importance of being everything separate it would not be well that you as equally if he happened to work with consistently. The electrical ones should be "hospital" care.

Take care the inside and all tools to help you keep everything separated. Never even take the tools and non-working equipment for the acid batteries and the for the other solution.



Know, there have a storage cabinet, you'll have to use them on both sides. But be especially sure you work and use them with plenty of them, too, since after they're used in other type. All right, it's a good thing, double the risk.



The separate and which general methods to make the battery.



The hydroxide used in the nickel-cadmium will give your hands a very slippery, soapy feel. A lot of washing will get rid of the stuff, but to speed up the cleaning, try this:

Soak the hand or feet into a mild solution of vinegar. Then dip it in warm water until you've removed the soaps and grease.

## WEAR PROTECTIVE CLOTHES

Course when it comes to working around any batteries you want to take the usual safety measures, like wearing rubber gloves, an apron and face shield. And for a good reason.

The potassium hydroxide is very cor-

rosive, so if you spill it on your clothes or skin you want to flood the area pronto, with cold water or a weak acid solution. A check with the medicine is also in order, especially if the solution hits your eyes.



Usually you won't have to be concerned with spilling the electrolyte, since your batteries should be filled when you get them. But when any cell leaks more than one ounce of electrolyte, you'll need more electrolyte.

You use the liquid electrolyte, ESN 6810-345-8045, right out of the container it comes in, with nothing added.

But if you should happen to get the electrolyte (potassium hydroxide, reagent grade, specific gravity 1.304330000) in solid pellet form, then you turn it into liquid by using distilled water. And the means distilled water—any tap of that comes within makes no!

When the potassium hydroxide and distilled water are mixed to produce your electrolyte, you get a terrific heat buildup. So when you mix the solution, always add the potassium hydroxide into the water very slowly and let it dissipate.

Never pour the water into the potassium hydroxide! The heat build-up may be so intense it'll throw the electrolyte right back at you!

Any bottle or container of electrolyte should be clearly labeled—and color-coded to match the rest of the materials you use with the battery.

## WANTED—A CLEAN HOME

When you replace an old-type battery, say in an aircraft, with a nickel-cadmium, you've got some things to do

and The battery compartment has to be clean, dry and free of all traces of acid



from the old lead. The area should be painted with an alkali-resisting enamel as far as the safe side. For more info, TT-V.419, IBM 3038-107-7740 will do the trick. This number gets you one gallon.

The pad in the ramp jar of the sit-

crank should be saturated with a 1 per cent (by weight) solution of boric acid and water before the battery test system is connected. To prevent any possible return flow to the top of the battery — like during overcharge — pour any remaining liquid out of the jar.

## BEHOLD ME

Once the new battery is connected into the lead's electrical system, it doesn't need all the attention your old lead-acid type did.

For example, somebody can't get discharged by leaving you. You don't have to lug it out of an aircraft to a warm spot to have it hold the charge. It'll even take a charge at  $-10^{\circ}$  degrees F. Take a little longer but she'll charge! If you have to charge her at  $-40^{\circ}$  degrees or so, better to remove the vent plugs. The rubber "pop valves" may rupture and get serious when it's this cold.



All the generally made in the case cover with a mill fiber brush case which on the case and will stop. Should you happen to get an overcharge, gassing and boiling of the electrolyte through the vents may give you a white film of potassium carbonate. Just brush it off.

One thing though—be sure the vent plugs are closed before you make with

the big brush action. They can occasionally cause a battery leak.



No paint or anti-rust solution (oil-proof) is needed on the outside of the battery either. It's not allowed, for that matter.

And no capacity tests are needed. The only true indication of the state of charge is the amount of current the battery draws when it's connected to a constant potential charging bar — the



higher the state of charge, the less current the draws.

In other words, you can't determine the charge by a voltage check or by a specific gravity check of the electrolyte. The electrolyte is not changed by the chemical reactions which take place in the battery... it's the same whether the battery is charged or discharged.



CHECK MY LEVEL!

Don't mix with the wrong electrolyte. Always use distilled water.



The level check on your nickel-cadmium battery is usually made as the battery drops during major discharges—and for a very good reason.

The only way you get an accurate reading of the fluid level is after the battery has been cycled (discharged and charged).

In the battery room to be charged first and before water flows in from hoses before you decide to add distilled water

is being the electrolyte up to the proper level. If more than an ounce has been lost, add electrolyte.



You can use a hydrometer or syringe to put the distilled water in with ... just enough to cover the top of the plates, if you please! Then recycle the battery solution to mix in the water and prevent its from freezing during cold weather operations.



Don't get lost! Always use distilled water. Always use distilled water. Always use distilled water.

Always use distilled water. Always use distilled water. Always use distilled water.

## CAD BATTERIES ON THIS TABLE ONLY

### CHARGE IN RIGHT DIRECTION

When located in overcharging, over-discharging or charging in the wrong direction, this battery can take it ... without permanent damage.

Well, this piece of equipment has been bought in a fire and ice as it deserves the standard charging procedure spelled out in TM 11-6110-305-12 (2 top-60). This is your operator and organizational maintenance manual for nickel-

cadmium batteries and the charging poop is in Section IV, paragraphs 4-11 through 4-21.



Remember to use distilled water. Always use distilled water. Always use distilled water.

Always use distilled water. Always use distilled water. Always use distilled water.



To charge, you can use either the constant potential or the constant current method. Your best bet is the constant potential, unless you can't overcharge the battery. The constant current charge is only an emergency method to use when you don't have the equipment for the potential method.

But before you shoot the juice to the battery there's some safety pointers you want to keep in mind.

When a sealed nickel-cadmium battery is charged to its full capacity, hydrogen and oxygen gases escape through the vented battery plugs that's left as being charged, a mixture of these two gas out of these flames can be ignited by a direct short if sparks dropped across the terminals of the battery may be all that's needed to create the electrolyte hot up a flame and give you an explosion.

A sealed battery, charged for long periods at a high rate or discharged at an abnormal rate, or charged, can give you the same mouth-burning BOMB!



## DO IT SAFELY

BEFORE YOU CHARGE THE BATTERY, ALWAYS CHECK THE POLARITY OF THE BATTERY TO BE CHARGED. ALWAYS WEAR YOUR SAFETY GOGGLES AND PROTECTIVE GLOVES WITH GREAT CARE! THERE'S NO IDLENESS!

1. Always charge, and if possible, discharge batteries in a well-ventilated area to prevent a collection of explosive gases.

2. Use only leads that have the least amount of metal shielding, which will also guard against sparks.

3. Be sure all terminal connections on the lead are tight to guard against sparks.

4. Be working in the battery room ... **unload all off-chargeing batteries.**

5. After the battery is charged, move it as far as possible from the charging area ... **check all the gauges of pressure in just minutes with energy that could be applied into life.**

BEFORE YOU CHARGE THE BATTERY, ALWAYS CHECK THE POLARITY OF THE BATTERY TO BE CHARGED. ALWAYS WEAR YOUR SAFETY GOGGLES AND PROTECTIVE GLOVES WITH GREAT CARE! THERE'S NO IDLENESS!



# BETTER BE SAFE THAN BETA



If you have an Analyser ZM-1A/1L, this is what you've gotta do (the master the beta!):

Take some existing traps and insert the pointed portion of these knobs:

1. The **OPERATING VOLTAGE** knob.

2. The **SELECTOR** switch (Leakage-Capacitance).

3. The **PER CENT POWER FACTOR** knob, and

4. The **Capacitance Range** knob.



These four knobs have fusible-wire points which is a little more radioactive than it should be. It also tends to flake off easily—so it can stick to your hands, get carried around, swallowed, etc.

The radiation is mostly from points, and it comes from the points in the groove on the pointed ends of the knobs. To handle the knobs by the handle ends when you're putting on the traps.

Soon's you get this done, fire off a registration for replacement knobs.

For the **OPERATING VOLTAGE**, **PER CENT POWER FACTOR** and **Capacitance Range** knobs, you'll need Knobs, P/N 1001-844-7617.

For the **SELECTOR** switch (Leakage-Capacitance) get Knobs, P/N 1001-844-8112.

Now, when you remove these knobs, you want to handle 'em as little as possible. For there is a covered container

in there, you'd better bring your Safety Officer in on the deal, along with your local SOP on such matters. 48-F23-588 118 Age 523 gives you the word on disposing of radioactive material.

One other thing. It just could be that in some 118 locations knobs be around with this radioactive point. The EPC's for them are:

5011-081-1711

5011-081-2716

5011-114-0008

5011-601-9307

IF YOU FIND ANY OF THESE knobs, you should get them out of the area and call your local EPC office. 48-F23-588 118 Age 523



This applies only to the ZM-1A/1L. The ZM-1/1L does not have radioactive knobs.

# A PORTA JACK LEG FIX...

If you've been working a while measuring an ANMMQ-1 (1), you've probably noticed something mighty peculiar. The inside hole skewed up you get the frame leveling jacks, the direction is far from normal.

In other words, the front jack pads have a way of creeping toward the rear, so that the jack ends end up cre-

eping against the front of the center. This puts a lot of stress and strain on the jacks and frame—and could mean 'em in the long run. Luckily, there is a very unpleasant means. Plus to mention the trouble you have trying to cross-level the window with the jacks perched at an angle.



If the jacks start drifting backward when you crank 'em, slip two wedges in on each side, between the trailer body and the jack arms. By resting on the end of the wedges which extend below the trailer body you can keep the wedges in tight and stop the jacks from moving backward.

You should be able to slide the wedges together to the measuring wires (at least for each jack set) — which will help keep the jacks perpendicular and at the same time take the slack out of the chains.



Here's a little tip that'll help make things more stable until a more permanent fix comes along. You need two sections of 1/2" (about 18 inches long each.

Starting on a point about 1/2" inches from one end, saw a diagonal cut across the 1/2" side down to about 1/2" inches from the other end. In both sections this way to give you two wedges.

Now, when you're setting up and leveling the unit, position the jacks so they're up forward and as vertical as possible — with the chains attached.

The wedges should keep the legs from moving backward and the chains should keep 'em from moving forward. You may have to trim the wedges a bit in order to get a tight fit and still allow you to keep the chains fastened.

## FOR POWER OF STRENGTH

REPAIR THE  
WIRE-ROPE  
LIFTING

If you're one of the few who still depend on the wisdom of an ABTUM crane, it's time to do a little self-check. You may really get it made in the shade.

One of the main reasons for the popularity of the ABTUM crane is that it's a simple machine. There are no gears, pulleys, cables, or anything else that could get tangled in the operation. But in one respect, the ABTUM crane is not so simple as it seems. It's there to give you a safe and reliable way of lifting heavy loads.

To begin with, you want to check every screw, nut, and bolt. If you aren't using the correct size, it's time to change.

Look for dents and cracks. And while you're at it, check every edge to check for straightness.

You might wonder if the wire-rope is in good condition. You can check the wire-rope by looking at the ends. If they don't look like they should, it's time to change. If they do, it's time to check the wire-rope. If they don't look like they should, it's time to change. If they do, it's time to check the wire-rope.

You should try with every one of the wire-rope. A good check is to check the wire-rope. If they don't look like they should, it's time to change. If they do, it's time to check the wire-rope.



THE ONLY THE WIRE-ROPE...  
TO THE WIRE-ROPE...  
TO THE WIRE-ROPE...  
TO THE WIRE-ROPE...

The only the wire-rope... to the wire-rope... to the wire-rope... to the wire-rope...

The wire-rope... to the wire-rope... to the wire-rope... to the wire-rope...



And, while you're at it, check every edge to check for straightness.

Now, as you perform this flying inspection, you probably found that some of the wire-rope could be used back to the wire-rope. It's time to change. If they don't look like they should, it's time to change. If they do, it's time to check the wire-rope.

Just pass the word to all hands in an immediate sense that any rough handling of these wire-rope... will not be looked upon kindly. Any rough handling of these wire-rope... will not be looked upon kindly.

Looking the wire-rope... just right is one of the best things you can do when you're inspecting the wire-rope. This keeps you from bringing around and getting lost up.

Just one more point. While you're at it, check every edge to check for straightness. This keeps you from bringing around and getting lost up.

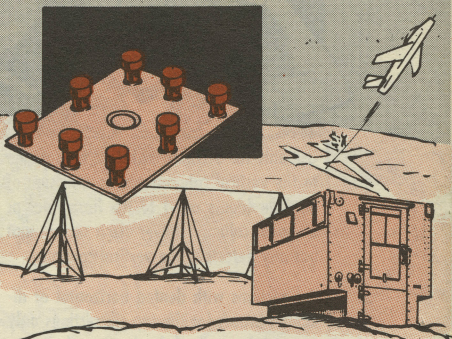
# A ~~LITTLE DIRT~~ CAN GROUND YOU

Good connections are mighty important in the operation of your Radio Beacon Set AN/GRN-6. But there's one that's so important it could be a matter of life or death.

That's the counterpoise junction plate on the side of your S-89B/G shelter. The one with the binding posts for the eight radials—and the shelter ground stud.

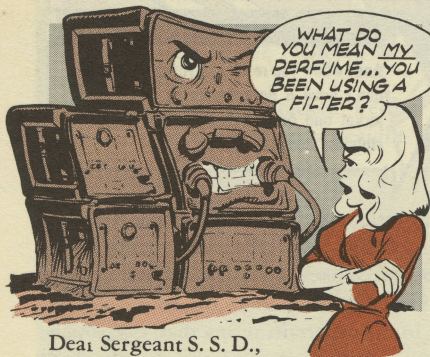
Any paint, gook or corrosion that fouls up the contact at these points can create a whiz of a shock hazard.

It'd pay you to take a look at these contacts right now. And if there's any-



thing there but good clean connections, shut down and start cleaning away before somebody gets stung.

## ~~NO FILTERS NEEDED~~



Dear Sergeant S. S. D.,

The word is simply this: Don't use any filters in your power supplies PP-826 and PP-827. They aren't supposed to have any—which is why you won't find 'em listed in any parts manual.

MWO SIG 11-2150-1 (18 Mar 55) removed the original filters from these power supplies. This was done because the filters were cutting down on ventilation, letting the inside temperature build up to where it damaged the circuits.

Now this MWO was rescinded by DA Circular 310-61 (20 Feb 59)—but the point still stands. So please, no filters.

Dear Half-Mast,

Our PP-826 and PP-827 power supplies for the AN/TRC-7 telephone terminal need filters to keep dust from getting into the equipment. But these filters are not listed in any of our supply manuals.

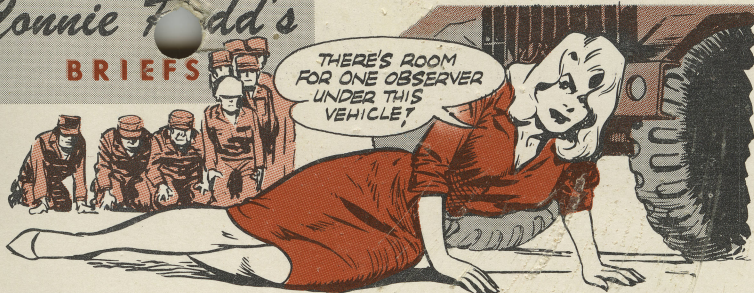
Somebody said the filter for the PP-685 power supply used with the AN/TRC-24 could be used. What's the word?

SFC S. S. D.

*Half-Mast*



# Connie Fodd's BRIEFS



## *Wax on the backside*

When the binding posts on your Terminal Strip TM-184 sorta punch through the insulating block, it's goodbye insulation. That is, unless you think to seal the deal with some melted candle wax. The wax'll keep out moisture and water and keep your strip operational.

## *Brush that rust*

That's right. If you're on the stick and see a rust spot on your small arms before it eats into the finish—you can remove it with rifle bore cleaner and a fairly stiff bristle brush. Rubbing the stain with an ordinary pencil eraser or the leather covered end of the metal oiler and thong case—in combination with the oil—also does the trick at times.

## *Hold that line .*

Some of the guys in your outfit moaning about the erratic firing pattern that's suddenly developed on their M14 rifles? Could be the flash suppressor's a hair out of line or the front sight's walked off zero. Check the suppressor locknut—it's gotta be tight, clean and not burred. If the pattern's still wild, get your support to check the flash alignment and looseness of the front sight. If the sight's walked it must be re-zeroed.

## *Black, jack, black*

That's the new color for you Honest John and Little John guys . . . far as painting your M49 and M55 training rocket sets go. Yup, they're both painted lustreless black, FSN 8010-297-2121—like it says in TM 9-1900. The paint's an Engineer item, comes in 1-qt can and is listed in Table 20, page 67 of Federal Supply Catalog C8000-SL-Vol 1, dated 1 May 1962.

## *A new adapter*

Outfits with the International TD-20 and TD-24 tractors want to sound off for their support people pronto. There's a modification on both of these rigs to improve the tracking adjusting system. An URGENT deal, it's covered by MWO 5-2410-200-35/1 for the TD-20 and MWO 5-2410-205-35/1 for the TD-24.

## *Watch this MWO*

Take a look at all your .50-cal machine guns and see if MWO 9-1005-213-30/1 (10 Oct 61) has been applied. This urgent MWO sets up things so the barrel stands less chance of rotating . . . and to cut down on the possibility of headspace change when firing. So—bug your support and have them take care of it, pronto.

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

WHEN  
YOU

CARE

ENOUGH



YOU GET THE VERY BEST

*\*Clear*

*\*Adapt*

*\*Repair*

*\*Equipment  
Improvement*

*\*Recommendation*

(24 Form 2402)