

Issue 201

PS

1969 Series

THE
PREVENTIVE
MAINTENANCE
M

... CHECK
MY VEHICLE!
with PFF



Carl E. Jones

TWO WHEELS ARE BETTER THAN ONE
TWO WHEELS ARE BETTER THAN ONE

LIFE INSURANCE

About the most that life insurance will do for a guy is give his family some money . . . after he's had the chance.

For a soldier, there's one thing far better than insurance—it's PM. . . Periodic Maintenance.

PM will make sure that your fighting equipment will fight when you've got to fight. Your own personal care and cleaning and the right kind of handling, operation and adjusting of your equipment is the kind of PM that's needed.

That only is PM near "fighting" insurance for you. It's real life insurance for your gear, too. It'll let your gear do its job better and let it last all a heckuva rip-roaring age.

You can't beat that . . . so by your best PM, it'll pay you . . . more.



PM IS BETTER



PS

For a complete listing of all the equipment and supplies available in this issue, see the "PS" section on page 100.

GENERAL & SUPPLY

ARMY	100	NAVY	100
AIR FORCE	100	ARMY	100
AIR FORCE	100	ARMY	100
AIR FORCE	100	ARMY	100
AIR FORCE	100	ARMY	100
AIR FORCE	100	ARMY	100



PERSONAL CARE

ARMY	100	NAVY	100
AIR FORCE	100	ARMY	100



ARMY EQUIPMENT

ARMY	100	NAVY	100
AIR FORCE	100	ARMY	100



PERSONAL CARE

ARMY	100	NAVY	100
AIR FORCE	100	ARMY	100



ARMY EQUIPMENT

ARMY	100	NAVY	100
AIR FORCE	100	ARMY	100



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**YOUR
MNO**

Qualifications
work under
... But what
Manufacturer
to show when
you complete
get Army
sp...
Starting
if your gear
of equipment
meets the MNO
buy for you —
it's all in
the MNO 310-7.
The MNO
Army
Equipment
Index of
Qualification
Work Orders.

SECTION I

ARE GENERAL
INFORMATION?
...LEAVE CENTER INDEX
RELATED TO MNO'S
...IT'S "CODE" WORKS
HOW RECEIVED THE PUB
IS... MNO PABA 48 (200-4)
ARMED FORMS USE
A SUPERSCRIPTION
NOTICE ONLY WITH
ONE AND REPLACES
ANOTHER.

SECTION II

WITH THE PART AND
PART NUMBER OF
THE EQUIPMENT
IDENTIFIED BY THE
MNO... (GROUP THE
CODE NUMBERED
MNO'S PARTS... END
IT LISTED)... (GROUP)
... (PART) ... (PART)
... (GROUP) ... (PART)

SECTION III

IS A SUCCESS STORY
OF CURRENT MNO'S...
... (PART) ... (PART)
... (GROUP) ... (PART)
... (GROUP) ... (PART)
CLASSIFIED MNO'S HAVE
A CODE NEXT TO THE
NUMBER GROUP AND
END (SECRET - RESTRICTED
(MNO MNO)
... (CONFIDENTIAL)
... (OFFICIAL USE ONLY)

SECTION IV

THIS SECTION OF
YOUR BOOK IS FOR
CURRENT MNO'S.

SECTION V

LISTS ALL THE ARMY
MNO'S... ALSO IT
GIVES YOU THE INFO
FOUNDED IN THE OTHER
SECTIONS OF THIS
INDEX THAT APPLIES
TO A PARTICULAR
PART OF
EQUIPMENT.



FOLLOW
ME AND
I'LL TAKE
YOU ON A
QUICK
THROUGH
IT.

FOR A
GOOD-LIP
TRY THIS

WHAT'S NEW? ONLY SECTION II



Table with 5 columns: Section II, Title, Type of Service, and others. Includes entries like 'Army Security Agency', 'Air Force Security Agency', etc.

AND HERE'S A CLOSE-UP OF SECTION III
THE INCLUDED BRAND IS NOT PREVIOUSLY LISTED!

Table with 5 columns: Section III, Title, Type of Service, and others. Includes entries like 'Army Security Agency', 'Air Force Security Agency', etc.



Table with 5 columns: Section II, Title, Type of Service, and others. Includes entries like 'Army Security Agency', 'Air Force Security Agency', etc.

ALL BRANDS IN SECTION III
ONLY TV
CHEAT-Y-GONE!



THIS BRAND IT'S A GEM-EMERALD!



Table with 5 columns: Section II, Title, Type of Service, and others. Includes entries like 'Army Security Agency', 'Air Force Security Agency', etc.

- A - ORGANIZATIONAL/ADMINISTRATIVE
- B - DIRECT SUPPORT
- C - GENERAL SUPPORT
- D - OTHER



ALL BRANDS IN SECTION III
INCLUDED IN THE NEW EDITION!



BE SURE TO READ THE GUIDE TO SEE IF THE BRAND APPEARS TO YOUR TYPE OF EQUIPMENT. The only way you'll be able to see the included brands... is give you the full number for more info. The only way you'll be able to see the included brands... is give you the full number for more info.

THE NEW EDITION OF SECTION II
Includes your old 1963 list of included brands... is give you the full number for more info. The only way you'll be able to see the included brands... is give you the full number for more info.



FOUND THE
WOODS, SO I'VE
A LITTLE CONVICTION.
WE'VE MADE A
REPLACEMENT
SET IN A
COUPLE DAYS!

... AND WE'LL
BE TWO MONTHS
LATE,
REPLACING
THE FRONT'S
DRIVE SHAFTS.

-BELT CARE CLINIC

Read that V in V-belt for V-tail.

It tells you the shape of the belt, but the shape the belt use to make the difference between DD and DD-400 power.

Because they've been working and out of sight, they're often ignored while the more glamorous parts of the equipment get all the PM attention. But if they slip or break, the equipment they're working on—the clear thing—just a piece of expensive junk.

NOTE THE LINEUP

Miller No. 1 is wrong alignment. Correct pulleys are only one belt in an line.

The best check-up tool is a straight-edge, like a yardstick.

Pulleys may be aligned (or lined) in chains beyond wrong are able for your work remains toward—the mechanic. Before you call, also check the clearance on both your drive pulley and idler pulley as the wear is the wrong places.



MILLER ALIGNMENT

NEED HELP?



ASKING
FOR HELP IS
SMART

Manual writers from Detroit Pat Turner
Lee and Bill Gordon is with him.
He can't see.

Wearing nice belts that, and it's as easy to see as a pile of pennies with one leg longer in the other.

An old belt may have as much as an inch stretch for every foot length. With stretchless you get 1,000% inch difference or less.

Don trust an old belt and a new one, and the new belt gets the whole load ... while most of the new belt and leaves the other one.

You can get the wrong belt from supply ... belts can get stretched in the shop ... pulleys get restricted or mis-placed ... or shock-absorbent pulleys and belts.

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
21	22	23	24
25	26	27	28
29	30	31	32
33	34	35	36
37	38	39	40
41	42	43	44
45	46	47	48
49	50	51	52
53	54	55	56
57	58	59	60
61	62	63	64
65	66	67	68
69	70	71	72
73	74	75	76
77	78	79	80
81	82	83	84
85	86	87	88
89	90	91	92
93	94	95	96
97	98	99	100

How to use
3 steps to safe
Use in safe

HERE — WE'VE GOT
GATE A NEW BELT
WITH OUR HELP!



THE NEW BELT
GETS STUCK WITH
ABOUT 10% OF THE LOAD.



A pulley wearing bright on the bottom and little or none on the sides either has a worn run belt—or one misplaced or too small. If one pulley gets a shiny bottom and the next pulley shows shiny sides, you have a pulley mismatch.



WORN
RUN
BELT



WORN
RUN
BELT

Unbalanced belts can overheat the frame they drive by as much as 100 per cent. Just remember: the slanted part, the sides, do the work on a V-belt. If it rubs the bottom or outside the groove top, something's wrong! (Often it's the grooved belt, not your pulley.)

DON'T DO THAT

How does water on pulleys . . . cracks, dents, and chips there make drives wear like workhorses. Grease or oil and mud spilling over drives face dish them out as badly as belt made will fit right.

Look for cracked buildings or loose shafts. They make drives wobble and thus can wreck the accuracy being driven as well as ruin belts.



CRACKS

LOOSE
SHAFT

WORN
SHAFT

WORN
BELT



GOOD BELTDRIVE



Check every few days
to see if your belt is riding in
a good neighborhood. Oil

dripping on faces, coughing, lost goods, or flat belts: feeding your belts
being on wheels, run, and saving gas.



HEAT

HEAT,
WORN
WHEELS



New belts need special care—you can't just install 'em and forget 'em. They
have to get sized and adjusted.

Make sure you adjust at the end of the first hour's run. The next checkup is
made by running hours later. Then you check and adjust again every 200 hours—
or as much often, in rough service, as your SOP calls for.



Mostly you have to watch tension. Take a good hard push with your thumb
halfway between the pulleys. You ought to get 1/4 in. or a bit more of deflection
for each foot of span. This works on vehicle accessory belts, small pumps, and
such, but for heavier engine drives—such as tractors, conveyors, and stuff on
power takeoffs more's 40 HP—use your T80 recipe.





FOR THE M90

AND BATTLE USE

GENTLE ON YOUR MIND

POOR

HEY, BATTLE'S A DOWN. IT'S FOR A BATTERED MAGAZINE, RIGHT?



What's the answer for battered magazine loaded guides on your M90 chamber?

Simple. Don't let 'em get beat in the first place.

These guides will not like rubber-eraser and bend away if you're not careful. When they bend, the magazine won't seat right. Bad. Worse yet, when you try to withdraw 'em out, they're likely to break off . . . and there goes the ball game.



LEAVE
THE M90
SAFE!

To take it real gently when handling your M90, don't pile one on top of another—lay 'em down side by side. Don't use 'em in a vehicle or on the ground—lay 'em gently.



If they do get beat, don't yank or over-rotate try to straighten 'em out. Chances are you'll just beat 'em off.

If they ever get beat off, don't either yank or force anymore heat with it a-tall. Bam — or beat — turn the weapon to its DR right off.

M&O DOUBLE-TAKE



Your M&O machine gun is a double-barreled design — which is a fact that could save your hide.

You've found 2 barrels for each M&O — one on the gun, one spare.

You put on the spare barrel when the other wears out — which it'll do fast — every time you fire 300, or get off 200 rounds a minute for 10 minutes — Or even when you have 100 rounds a minute for 10 minutes.

In short, have that one and barrel at hand, or swapped but right in your palm —

You need a steel barrel the same way you do steel men.

Be keep it handy, along with the extras you'll need to change a hot barrel.

NO, IT'S NOT 2-HANDED



They your M&O M&O stopped firing after only 3 rounds? Quick, hit the area and see if maybe you've got the ejector and extractor positioned wrong for the way your weapon's feeding. For right-hand feeding, the ejector's gotta be to the left of the magazine. For left-hand feed, the ejector must be to the right of the magazine. Para 20 of TM 21-11 (Inf 60) has all the scoop.

RESISTOR SAVERS...WATCH IT!



When the resistor types pull a diplexer from your MTR/TTE antenna, be sure they also pull the R15 resistor in the radio-frequency section down.

An R15 is mounted on L7108 of an sheet with the diodes; it's not used on the basic MTR/TTE diplexer, and with the patch used on the improved TTE diplexer, it'll work only with a matched component in any diplexer.

As implemented—an R15 is usually

a part of the diodes in the patch, it's not a separate item, it doesn't have an EPC—and, it must remain with its matched component in the M... and, that includes going to change together.

Leaving an R15 behind when the rebuild shop leaves the interchangeable components can't be repaired without a matched resistor... and, a replacement was something like 100 bucks. An old R15 can also mean you gain, if it should be included in the radio-frequency section by mistake.

NO RUSH



As you read what it says in TR 740-01-1 (7 Dec 68) about painting and you figure you'd better do something about the water-saturating stain for your MTR/TTE units.

Good thinking, but there's one other kind of rush. Writing until you have the word-for-worded for other maintenance is time enough.

DISCARD THE FELT O-RINGS



Dear Mr. H.,

I say the felt O-rings on the rear of the upper MTR/TTE diplexer are for shipping purposes only. Some units have long felt O-rings in place and are here for a patch, as stated, when the word is long "no or should you".

Mr. C. J. H.

Dear Mr. C. J. H.,

You're right. The 8 1/2" x 1" O-rings, on the rear of the casing of the diplexer are for shipping purposes only and should be discarded when the bench is installed.

Half-Off



PUBS ELEVEN

YOU SAY IT'S WORRIED ABOUT WHAT PUBS YOU NEED TO GO WITH YOUR NEW RESISTOR. GO, WEE—'S' COMPASSION, STATION T' JERRY? HERE'S A LIST OF WHAT YOU NEED.



- TR 7-100-04-011 Day 44
- TR 7-100-04-012 Day 45
- TR 7-100-04-013 Day 46
- TR 7-100-04-014 Day 47
- TR 7-100-04-015 Day 48
- TR 7-100-04-016 Day 49
- TR 7-100-04-017 Day 50
- TR 7-100-04-018 Day 51
- TR 7-100-04-019 Day 52
- TR 7-100-04-020 Day 53
- TR 7-100-04-021 Day 54
- TR 7-100-04-022 Day 55
- TR 7-100-04-023 Day 56
- TR 7-100-04-024 Day 57
- TR 7-100-04-025 Day 58
- TR 7-100-04-026 Day 59
- TR 7-100-04-027 Day 60

SETTING PRETTY



FOR TEMPERATURE

WITH



SENSITIVE SET



HEATING SYSTEM

BY ADJUSTING AT 20%

Dear Nell-Mae,

On the 40-500 470 air conditioner for our Air-King Model AC and AC room there's a thermostat for controlling the humidity. What should it be set at?

Well, the air temperature control was supposed to be set so that the heater will sound when the humidity hits 100% point — like when the air conditioner goes on the fritz. That's kinda high, eh?

BOB C. A.

Dear Suzanne G. A.,

A temperature of about 74°F with a humidity reading in the neighborhood of 50 percent is close to ideal. Guess . . . you also want to make sure you hold the relative temperature in the equipment monitoring section the way the instruction plate in the cabinet tells you.

You're right . . . 100°F is high. But as long as you file off TSM 9-0480-240-00 (24 Dec 78), "Under these conditions with the damper and blower fixed set to the open position only emergency operation of the equipment should be sustained."

Half-Mast

SAY AH-H-H-H



JUST BECAUSE
GO IS HARD-TO-DO
DON'T TELL YOU
TO GOIN FOR
AHEAD IN THE
MIDDLE OF YOUR
APPROXIMATION
COURTSHIP BECAUSE IT'S
NOT A GOOD IDEA.

Measure and just plain write on these concrete that'll rule things like gears and bearings.

The time to look for the wall is when you pull the quantity service on the open gear . . . and the tools to use are a flashlight and the smooth-sounding surface in your electronic counter and file. If you open your counter, get rid of it . . . and then take care that at least one cover gasket is done.

When you're so in, look to see if any gear has been slipped around by the gears . . . or maybe it's cold and dry. If so, it's cleaning time.

EITHER WAY OK

Over 100-1000,
Cable and struts should be holding down
on the outside just in case on the spot
needed to the 4 struts, or hold to place
with a screw cap? I've seen it both ways.
100 10 10



Dear Suzanne W. W.,

The other holding brace (and struts) should be pins open welded, but outer legs
the used on the later braces. Either way of holding the gts is OK. *Half-Mast*



STENCIL IT



HOW'S THAT
SOUND?

Dear Mr. I. A.,

The Organization does it, using a 1/4-inch stencil. The right point is black lacquer enamel. A 1-gal can is found under ESN 8050-280-3122 on page 42 of TSM 9-1450-208-10P/1/1 (Jan 68).

Half-Mast

Dear Nell-Mae,

The "OPEN SERVICE DOOR" identification tag was all some of our Air-King models, a check that you to some short readings during a recent DMM. What's important to you the starting on the other . . . and what is used — a stencil or rubber stamp?

CHD L. A.



NEW AND OLD WITH
MARK GIMP BOLT ...

RIGHT-

THIS
NEW FELLOW
MIGHT BE
HANDLED WITH
A CERTAIN
CAUTION!

No matter if you've got the new or the old eye hand always wearing both on your M&M High Rate Gun, make sure you tighten it exactly right to prevent your or gunner's going to miss when he's aiming or and just might shoot himself down.

Exactly right—see our hand and see our right.

TIGHT ONLY



That's what if you tighten the bolt too much it'll bend up and expand and bend off when the barrel closes over it. Then the barrels will wobble around and could let loose the chopper. Yikes!

If you tighten the new bolt too much, it will also bend. It'll just take more torque and a little more time—but it could still bend.

If you get either the old or the new bolt too loose, it'll pop out and the most wobbly-dead-end find-up will happen.

Remember, no just that, you M&M's.

About those bolts. The new appearing on newly-issued weapons goes by M&M 1200-04-2000—M&M 1200-0070. It's much stronger and wears a "T" on its head. You can order it out of your maintenance's parts push where the old one gives you.

The old-eye bolt (M&M 1200-001-1400) is easy to spot by the serrated head due to its head.

Don't use any bolt that doesn't have one of these M&M's. They're not strong enough to take the beating.



Dear Woody,

What's the score on DA 2008-12?



We started on another daily inspection on a fresh copy of DA 2008-12, and entered "Daily Inspection Box" in block 17 with a red check in block 18.

Then on the previous day's DA 2008-12 we found an entry that said the engine life stop scheduled had been removed. This entry was transferred to block 17 of the current DA 2008-12 with a red X in block 18. There were no uncorrected faults on DA 2008-12.



While the crew continued the inspection, the vehicle previously returned was "Inspected OK" by the PI and released. The mechanic got his 2008 score the next 40 block 18.



Later—when the inspection was completed—the crew chief got the vehicle over the car deck for the inspection in block 18.

There left an uncorrected fault on the strength—either on DA 2008-12 or DA 2008-14. The way we see it, the fault was "fixed" as spelled out in para 4.10 (32) of DA 20-720. So our crew chief got the vehicle over the car deck for the inspection in block 18.



Our maintenance officer definitely is wrong, if it's not right, why not? What did we do wrong?

SP-6 M. E.



DATE	TIME	STATUS	REASON	REMARKS
10/15/08	14:30	OK		
10/16/08	14:30	OK		
10/17/08	14:30	OK		
10/18/08	14:30	OK		
10/19/08	14:30	OK		
10/20/08	14:30	OK		
10/21/08	14:30	OK		
10/22/08	14:30	OK		
10/23/08	14:30	OK		
10/24/08	14:30	OK		
10/25/08	14:30	OK		
10/26/08	14:30	OK		
10/27/08	14:30	OK		
10/28/08	14:30	OK		
10/29/08	14:30	OK		
10/30/08	14:30	OK		
10/31/08	14:30	OK		

WELL, SPEC. A.M.E., LET'S TAKE A GOOD LOOK AT THIS PROBLEM... FIRST OFF, IN DA-720 DOESN'T SAY JUST WHEN THE FIRST SERVICE ENTRY WILL BE MADE IN BLOCK 7 OF DA 2008-12.

But it's logical to make the first service entry to occur as you find that the aircraft has an uncorrected fault—or faults. When you've worked over an uncorrected fault from the previous day's DA 2008-12—or found one on DA 2008-14—this entry during the first copy of your daily inspection (DI) 05-1500-081-12 and requires item 1.1 of the 20-720 FIM to state the aircraft is to be returned to service. So the first entry in line 1 of block 7 should be the one for the most recent uncorrected aircraft fault carried over from the previous day on the car deck for the inspection day—if that's more serious than any carried-over fault.

If the status of the aircraft changes as a result of 10 fault corrections during the inspection in DA discovery of an additional fault or faults during the inspection then the new status symbol should go in line 3 of block 7 or the same line the status symbol in block 18 is changed as spelled out in para 4.10(2) (3) of DA 20-720.

And, during the day's operations, a new symbol would be entered any time another fault which changes aircraft status is found.



TO HAVE
THE CORRECT
RIGHT IN FRONT
OF YOU HAVE
TO ADDRESS
THESE TWO
QUESTIONS!

Both an altitude approval and a restriction or special use will be assigned to "Class" fields in Table 1.

CLASS	APPROVAL	RESTRICTION	SPECIAL USE
1	1000	1000	1000
2	1000	1000	1000
3	1000	1000	1000
4	1000	1000	1000
5	1000	1000	1000
6	1000	1000	1000
7	1000	1000	1000
8	1000	1000	1000
9	1000	1000	1000
10	1000	1000	1000
11	1000	1000	1000
12	1000	1000	1000
13	1000	1000	1000
14	1000	1000	1000
15	1000	1000	1000
16	1000	1000	1000
17	1000	1000	1000
18	1000	1000	1000
19	1000	1000	1000
20	1000	1000	1000
21	1000	1000	1000
22	1000	1000	1000
23	1000	1000	1000
24	1000	1000	1000
25	1000	1000	1000
26	1000	1000	1000
27	1000	1000	1000
28	1000	1000	1000
29	1000	1000	1000
30	1000	1000	1000
31	1000	1000	1000
32	1000	1000	1000
33	1000	1000	1000
34	1000	1000	1000
35	1000	1000	1000
36	1000	1000	1000
37	1000	1000	1000
38	1000	1000	1000
39	1000	1000	1000
40	1000	1000	1000
41	1000	1000	1000
42	1000	1000	1000
43	1000	1000	1000
44	1000	1000	1000
45	1000	1000	1000
46	1000	1000	1000
47	1000	1000	1000
48	1000	1000	1000
49	1000	1000	1000
50	1000	1000	1000

1. What symbol represents a condition or fault that affects aircraft state (ability to fly)?

2. Among the symbols which represent conditions or faults that affect aircraft state, which represents the most serious condition or fault?

The fault on either aircraft (condition) approval — and if serious enough to not be able to fly in that I only state "Category" — Approval or "Class" — (condition) associated fault or fault from state to state (state "Class" is that I only if the fault that flight safety is very easy.)

The degree of seriousness of the condition or fault represented by the 4-letter symbols is:

1000 Malfunction that causes flight control on 10 200-14.

1000-1 Malfunction that could be more serious. This symbol is used only for non-critical malfunctions that are restricted operation. Never entered on 10 200-14.

1000-2 PB or inspection don't know. Though this symbol is listed last in para 4-2(b) of 10 200-14, with a red 10 or a black 10 is more serious. Normally used on 10 200-14, but with corrected approval may be restricted to 10 200-14 when it represents a component malfunctions for approval or when application of a normal 1000 is defined beyond its specified application date.

1000-3 Approved on 200-14. Formerly called a "detracting" (approval) less serious fault or condition than any of the other 4 letter symbols. Used on 10 200-14 and, with corrected approval, on 10 200-14.





Now, look at the specifics of the problems you described. Your first one was spelled every letter "incorrect" in box 1 of block 7. Should have been a red X for the uncorrected deficiency carried over from the previous day's DA. DA-1400-02.

When this symbol was initiated over in block 12 before the part was inspected and corrected, the next symbol entered below 1 of block 7 should have been a red X for the still uncorrected daily inspection.

Once the red X's were initiated over in block 12 upon completion of the inspection, and assuming that correction parts were used, the first symbol below 1 of the next shift should have been entered there to the next spot for under "correctly" in block 7.

1. Defect description and part number	2. Date and time of defect	3. Shift	4. If correct, shift date
1. Defect description and part number	2. Date and time of defect	3. Shift	4. If correct, shift date

Note that an initial correct check in block 7 is used only to indicate that no faults exist on the aircraft — as spelled out in para 4-1.6.2.3.4.1. Sentence 3 of the same paragraph tells you that a status symbol, once entered in block 7, "will not be initiated over, erased, changed, or duplicated over if entered in error."

That's the block 7 box over on 11 below from here.

7		7
1	B	1
1		



Coated cable pulleys are your best bet. They hold up under a lot of abuse. If

Buy pulleys from. Take these models to us your Kevlar (334-111) for example. There's no real need for coated cables will protect the pulleys.

When are grooves bad enough to warrant a pulley change? Come there, read!

Inspect the pulley channel. Then make the full cut.



Sometimes you can spot a groove worn into the pulley. If not, rotate the pulley slowly for 360 degrees.



If the cable rubs, rotates or jumps up and down like a jumping bean the grooves are too deep and the pulley needs changing.

Take a walk you can do about a real groovy pulley swap change it.

When you feel yourself changing



pulleys often, this, you can do something about it. Distributing the wear pattern by rotating the pulleys 90-degree during inspection.

Also, make sure you use a maintenance plan every rigging done to make sure the cables are not too loose or too tight. Better condition will wear down faster quite like.

To check the pulley bearing, hold the cable off the pulley and rotate the pulley again. If you feel any bumps, rough-



ness or binding, some of the balls are shot—and so is the bearing.

Let loose of the cable and make with strap and then a real nice to the machine to make sure there is no play in the bearing. Any rust or lubricant leakage pro-



cedure means the bearing has changed. That's-o-o, these pulleys will stand up to stress. Just give 'em the same over and then.

HOW MUCH IS ENOUGH??

Dear Windy,

There's the low-down, will ya?

We get oil in the intake pipes of our C140-41 B14M-41 engine. How much oil leakage is too much, requiring an engine change?

OWB A. F. L.



Dear Mr. A. F. L.:

The engine will tell you when it starts acting up.

Some oil in the lower intake pipes and combustion chamber is not unusual for radial engines that have been idle for 5 hours or more.

The amount of oil leakage is excessive when engine oil consumption is high enough to limit the range of your bird or when oil in the induction system regularly fouls the spark plugs.

Oil in the induction system can give you an improper fuel mixture which increases the chances of detonation. You know what detonation can do to an engine — overhaul, scrap, . . . the long haul!

Oil leakage can be caused by worn valve guides in which too oil flows into the lower intake pipes when the engine's not running.

Next time stop will the flow of oil flow into the combustion chamber.



Get the most common cause of oil leakage into the induction system to blame is the impeller bearing seal. Its flaring end can let leakage of packing, oil particles, coverage and retained high speed spins.

IT'S EASY TO FIND IT!



To find out if the seal is the culprit, ground run the engine for 10 minutes at high power settings. Remove the engine and eye the intake pipes on cylinders number 1 and 7 for oil.

The K140-41 engine overhaul work spec have been revised to close tolerances and more exacting clearances in the area of the impeller seal. So, looking together work should give you less trouble in the future.

Windy

YES INDEED

Dear Whoddy,

I came across an entry on the 8th Floor 3488.88 for our Lembolex that has me baffled!

It seems that every third period we're supposed to remove the engine generator and replace the drive shaft system for excessive wear which was laid on before.

Is 330-888-177, Ch 7 (2) New 480 is referenced as the form. A list of the Lembolex AMP standards will be in each book.

Do we pull the generator for inspection?
SPEL, D. S.



Dear Specialist B. D. B.,

Number-4, see the old 100-amp generator, PYN 30228-002, which is found in the technical bulletin.

The new 200-amp generator, PYN 30228-118, also gets the big look.

Whoddy

CYLINDERS A-OK



Dear Whoddy,

There's a difference of opinion—and that's putting it mildly—about cylinder wearage on our Red Dog C-470-178 engine.

We get what appears to be oil sludge when the cylinder barrel is drawn into the cylinder head.

This wearage—does it or doesn't it call for a cylinder change?

SPEL, D. S.

Dear Specialist B. D. B.,

Believe! No cylinder change is needed unless there is a loss of compression or some other serious fault.

The main is usually lubricated applied in the factory when the cylinder barrel is drawn into the head.

Very slight gas wearage forms the lubricant mix. It usually stops when the threads are plugged with carbon during engine operation.

The condition is not hazardous. Engine operation and performance are not affected.

Whoddy

PASS THE DOUGHNUTS, PLEASE!



It's over—downside (2.10) regular on loose nuts are flat so that they seat back with the cylinder . . . no gaskets needed.

But, don't get stressed-up when a nut loosening things becomes wrapped and starts to bind!

It's doughnuts—2-4-1-2 gaskets, in the second!

Cover the weak things near the 200 lb maximum, for the gaskets to make a complete seal.

The 2 gaskets, P/N 78130, BSN 1150-000-0947.

Add gaskets to the other 2 exhaust nuts on the main bank of cylinders. The 6 gaskets will give you the right nut alignment.

No need to use gaskets on the other side of the engine unless there's a leak there also. Then you'll need gaskets on all cylinders.



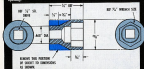
THE FLAT SIDE GOES TOWARD THE CYLINDER HEAD AND THE RAISED BEAD SIDE TOWARD THE BEAD FLANGE... EASIER BEARD UNLOCKED!

TIME-SAVING TAPERED TOOL



How It Works:
Tightening and loosening the nuts holding the AE gaskets in a 204 HP helicopter can be a lengthy procedure. Lengthening and shortening the nut wastes a lot of the time and is a headache from top to bottom.

There's a better way up with a modified tapered nut. It fits against the nut with a 1/16" clearance, and will be removed by the nut. It fits in between the nut and the nut around the nut.



This taper allows the opening for 1/16" to be cut down on the thickness of the nut and on the opening end. This tool opening will allow for easy movement along the tapered walls of the 204 gaskets.

Author: J. Schaefer
New Combined Army Report

101st Airborne Division, 101st Airborne Division, 101st Airborne Division



Advert
And
Office

PUBS

YOU NEED
MARKET
(1987)

AND
YOU CAN
DO THE
PUB CHOICES
NOW, 10-11

The advertisement is a list of names and addresses, organized in a grid-like fashion. The text is small and dense, typical of a directory or index. It includes names like 'The... of...' and addresses in various locations.

The advertisement continues with more names and addresses, maintaining the same layout. Some names are in all caps, while others are in title case. The text is arranged in vertical columns.

The advertisement lists further names and addresses, following the established pattern. The text is consistent in style and format throughout the page.

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JOE'S
DOPE

P.M.
THE RIGHT
WAY!

AT LAST! THE P.M.
NIGHTS-JUNKIE
HIT THE BACK AND
DREAM HIS
LARGEST DREAM.



BOY - THIS JOINT WAS
PERFECT....



WHO ARE YOU?



P.M.

HOLD
UP!



WELL, IT
WAS!



I'M THE RED BARON.

AH, YOU HAVF
SKEWERED
UP THE DEAL
AGAIN,
JUNKIE!





COME, I KNOW YOU...

THIS IS NOT WORKING ON AN AIRCRAFT... FOR INSTANCE, WHAT?



WELL... WELL... A LOCK KEY AND WIRE... I BETTER GET THE POIN AND FIX UP SOME AT SUPPLY?

WELL... THAT'S A HARDY LOT!



HERE'S A BOLT AND I GOT A PIECE OF BRASS WIRE... THEY'LL DO...

BUT, NOTHING DOES THE BUT MY EXACTLY... AND IS THE WAY, THE RIGHT MIGHT NOT BE A DIFFERENT MIND!



WHAT ARE YOU... SOME OTHER APPROACH FOR THE STAIR WARDEN?

WELL, NO, I'VE GOT BACK AT SCHOOL, THEY WANT US TO FOLLOW THE PAINTING MAINTENANCE PROCEDURE!



BUT, THIS IS THE FIELD, MAN! THIS IS HOW IT ALL IS!

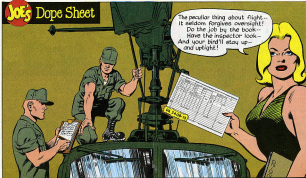


JUST THINK DO YOU THINK THE SCHOOL GETS IN FROM IN THE BEST PLACE?

WHERE CAN I GET THE PLUMB?

YOU GOT A BRASS CUP ON THE...

Joe's Dope Sheet



The peculiar thing about flight...
It seldom forgives oversight!
Do the job by the book--
Have the inspector look--
And your bird'll stay up--
and upright!

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

IF YOU WANT TO DISPLAY THIS CENTERPAGE ON YOUR MULLIN BOARD, OPEN SCISSORS, CUT IT OUT AND PIN IT UP.



WHAT TORQUE
YOU GOT
GOTTED?

I DONNO IT FEELS
ABOUT RIGHT... TALK
TO GOOD ENGINEER!

QUIT WITH THE
PUR SPECIFICALLY
NAME 'BUTTALL
NUTS' IT MEANS
SOME NUTS
TO A GIVEN TORQUE
VALUE IN THE
STANDARD TORQUE
TABLE!

THEYD
DOESNT
HAVE ANY
THAT
TABLE!

SO,
HOW ABOUT
THE MANUAL
COVERED U GOT
TM 55-408-1
AND THE 1000
CLAMP FITTING
NUTS IN
TM 55-408-2?

AND
HOW
DO YOU
TO LOOK
IT UP?

...GUESS
ENGINEER!

WE'D BETTER GET
A TECH INSPECTOR
TO GO OVER IT AND
CHECK OVER THE JOB
THAT'S A BIG IF YOU THINK
YOU'VE CONNECTED TO...
WE'D BETTER GET HIM TO
LOOK OVER YOUR WORK
AND SIGN THE DA FORM
3886-15... THAT'S
QUALITY CONTROL...

WELL
DARE
THINK
OVER
ALL DAY!

WHO NEEDS
ANYONE TO LOOK
OVER WHAT I
DID... THIS IS
A MATTER OF
PRIDE WITH
ME!!

HEHEHEHE...

WELL,
YOU
GOT
THE
MONEY
TODAY
GUY?

WELL, YOU
GUY... BUT...
IT'S THE MESS
THAT YOU GUY
ATTRACT

BUT GUY,
IT LOOKS
CRAY... DON'T
GET SO
MIL POKY!

IT MAY
LOOK GOOD—
BUT THE FIRST
—JUMP AND SHOOT
MIDDLE LOSS!

AND THE
LOOK MAY
LOOK A COUPLE
OF BIRD-HEAD

DID YOU FORGIVE
THESE PEOPLE??
THEY LOOK TIGHT
TIGHT... THE PLAY
SHOULD HAVE A
LITTLE PLAY...

HAVE?

A BIT OF BIRDING
IS TIGHTER... AND
THE BIRD'S WILL SPEAK
OUT ON ME!

YOU'RE GUY TO FOLLOW THE FIRST TWO
ON YOUR BIRDING TO THE AND
PROPER FORGIVE THEM.



HEY, BARGE...
WILL YA DROP
OFF ONE MY
JACK-IT... HERE
IN BLOCK 45!

YOU'LL GET AN
DROP... AFTER
YOU'VE DONE THE
JOB RIGHT!



NO LONG, AFTER
SEE YOU LATER.



THIS IS A KIND OF A TRICK
TO GET ME TO INSPECT A
JOB... WHEN YOU CAN
GET SO GOOD NOW!

LISTEN,
BARGE, YOU
CAN'T BE TOO
CAREFUL AROUND
NIGHT... THERE
IS... YOU'D BETTER
ON THE MAIN TOWN
I DO... SA, BEHIND
I GOTTA GET
BACK TO
SLEEP!

YOUR PRR-9 QUIT PURRING?



Next time your AN/PRC-9 squad radio receiver stops purring at you it may be the time to check out your earphone hose as well as the battery.



... BATTERY SOUL IS WITH
THE BATTERY MAN (SMILE)

The idea is to use common sense, SAA, or whatever. What results the plug in the receiver hose causes. When the plug works, it reduces sound or gives you... coughing.

So, when you're low, the plug's high, and a good battery fails to give you that

friendly-of-rabbit's noise when you turn up the volume, try a new hose.

When no sound: When you connect the telephone, push the plug straight into the receiver jack. Wiggling it into



FOR PRC IN USE ONLY.

place bends the connector spring... which can get the top on your receiver.

An occasional check on the receiver of your volume control can keep you in business. The wires work loose, and the sound doesn't get with you. Keep 'em tight!



PRC
CONTROL
NOT WORK!

Your AN/GRC-107F receiver will lock the communications high-pass and give dependable service — but it'll make you even better if the AT-505FD antenna is properly aligned.

Normally, when you're after with antenna alignment is the best possible results. So—

Before starting the alignment, disconnect the antenna in the receiver, or arrange a switching system to single loops.

When you're using PCM multiplexers as extended equipment, turn off the multiplexers during antenna alignment.

When you've got the mast and antenna installed (directions in TM 11-5820-508-12, par 67) and your single-loop system is set up, then rotate the antenna toward the target station. For this, you can use info from a topographical map. Electrical communications are the easier with circuits.

Next, you extend the antenna wires via circuits from receiver R-1140FP/GRC or R-1100FP/GRC, to the outer wire binding posts on the outside of the outer coil, to the base of the antenna mast, using the TA-112 telephone set.

Connect your H-24 headset (if it's available) to the TA-112 so you can talk back for mast rotation while you're communicating.

Don't crank your TA-112 for signaling unless the TA-112 telephone connector is installed in the circuit.

You can use the following methods for pointing the signal level.

For a reading of 25 or under on the REC SIGNAL meter, rotate the mast in one direction until the wire level of the outer wire circuit increases sharply.

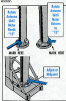


rotate the position of the antenna by marking the location of the yellow arrow on the base plate.

Rotate the mast back through the maximum signal level until the wire level increases sharply. You can record this position by marking the location of the yellow arrow on the base plate. Lock the mast in this position.

ALIGN THAT ANTENNA

For a reading of 25 or under on the REC SIGNAL meter, rotate the mast in one direction until you get a reading of 25 on the R-1140FP/GRC receiver or the R-1100FP/GRC multi-meter.



Record the position of the mast by marking the location of the yellow arrow on the base plate. Rotate the mast through the maximum signal level until you get a 25 reading on the meter.

Mark the position of the yellow arrow on the base plate, then rotate the mast to a point midway between the marks on the base plate.

When you've completed the antenna alignment, lock the mast in position, reconnect the receiver parties, and start your structural system alignment.

When you've got a REC SIGNAL meter reading of 25 and up, rotate the



LOCK THE MAST WITH THE YELLOW ARROWS

NIGHT VISION NOTES

Tonight, or any other night you plan to use your night vision sight AN/TVS-2 (Phase Models 2007 or 2007A), is the perfect time to apply a basic PM procedure on 2-which-32 keep in, and you, in writing.

Before the steps to get the vehicle power cables loose, that last rubber shield is intentionally only glued to the shield . . . for several very good reasons. Think about "in, and out, otherwise, you're calling your night up for a repair job.



The night's head cover gets to its place — and ready — but makes sure you have the right cover. The model 2007-214-2007. It sometimes might be too long . . . which means it could damage the objective lens.



Forget the heavy-handed techniques on the vehicle adjustment knobs. Keeping it just in step can save the trouble when time . . . and top your night.



TERMINAL STRIP DRIP

SET THE
SPRAY
CAN!

YOU WANT
MORE SPRAY? YOU
BET! WE'LL GET
YOU!

Moisture can make a drip of the terminal strip in your ME-10500 high-impedance kit (based on CVC balance with 4M²VBC-13 series radio set).

In heavy rains water can seep onto the terminals of the CX-10000/0 cord assembly and short 'em out. You can cover it, so hang in there while you get some clues.

If a drippy strip happens to you, you'll get a loud, crackling signal in all 4 switch positions of the ME-1050 while it's connected to the C-1000/VBC lineless control. Further, the radio set will stop being. You can't transmit, and you can't see incoming.

Your organization engineers can get the fix on it like so: Take the bracket off the bottom. Spray the 4-wire terminal strip that's giving you the trouble (see page 1 of TM 11-5900-282-10).



Dry the strip and spray the screw terminals and other exposed metal there with MTP variety FM 100-625-4307 or 1070-140-5028. That's quartzite ... and do what it says on the container.

When you connect the ME-1050, be sure you don't scratch the remote.

YOUR HAND DOESN'T NEED THIS SHAKER



Dear Editor,

To decrease personal working around the AN/TPQ-8 and -11 radar sets from mangleing a hand while the "cocktail shaker" vibration occurs and is operating, we came up with an 8 1/2 by 8 1/2 aluminum safety plate.

The plate attaches to the frame around the radar set and keeps the operator from using the frame as a hand rest. With a 1/2 in clearance between frame and arm, using the frame as a rest can result in a serious injury from the rotating cocktail shaker.

Any kind of guard or safety plate would be satisfactory, just as it doesn't involve the operation of the arm.

Thomas Farnas
Fort Monmouth, N. J.



IT WOULD
BE GREAT
PROTECTIVE
DEVICES
TO ME!



BURNED-OUT BABY



If a 5-minute replacement plugging the **RT-18** panel of your **RT-1588G** sets, please signal customer!

Reversed polarity of the tip and ring wires can burn up the **RT-5**... creating double trouble for the panel.

This can be caused by problems in your **RT-18** or **RT-19** installation.

which could be over done or under done the line.

Thing to do is Contact the operator of the installation and will him the tip and ring wires seem to be reversed.

The operator should then call his maintenance man to check into correct polarity of the tip and ring assembly.



HERE'S A GASSER FOR YOU



Nitrogen gas that's just a couple hair off required purity can put the \$12,000.00 compressor of your **APL 400-14A** Infrared Detector flat in the salvage yard. Naturally, that knocks out a Six-1 control device.

The gas must be 99.5% pure plus. **No less.** There are only 2 **ISN's** that'll get you the purity you need: **6850-650-1750** and **6850-781-2041.** When you see this number — 2041 — specify "no substitute." The only difference is in the size of the container. You can't see any color without tearing up the compressor. Substitute gas costs 99.5 per cent pure! Plug up the detector in the compressor-refrigerator in less than 100 hours operation.

ISN 6850-650-1750 gives you a 265-cubic-ft container. The only other one you should accept is **ISN 6850-781-2041**, which gets you a 184-cubic-ft container of the same purity nitrogen gas. Accept no substitute.

You should spell out the only acceptable substitute on your requisition form.

KEEP THAT KLYSTRON



Keep that V1501 (9KK-25) klystron tube in your AN/TQP-6A radar set, or lose until you check it out.

Even if it fails to oscillate, it may still be good.

First, the jumper connecting the heater outside DC ground circuit is missing from the plug on all klystrons covered on Contract DA-AM-61-67-C-1135.

Have your support shop measure the resistance between pins A and C on the plug. If the measurement indicates an open circuit, the klystron won't oscillate.

Be sure to install the klystron like it says in TM 11-5840-205-20. Set the klystron tuning screw and klystron drive assembly in the extreme clockwise position.

Adjust the klystron on per page 204 through 207 of TM 11-5840-205-20. If you run into any problems, call for help from support.

T-302 HOT HEADS



Are you burning out V1 HV rectifier tubes in the PP-653A of your T-302 transmitter?

Most likely, the bad guy is wrong screen voltage adjustment on the transmitter tuning head. That kinda trouble can put your AN/TRC-24 rifle out down.

To head off disaster and save a few V1 (Type 80) tubes, check and adjust the screen voltage during your periodic PM and whenever else you've got a few minutes to set up.

Para 3-11, page 3-28 of TM 11-5508-207-12 (Apr 67) tells you how to adjust voltage on the tuning head.



THE GUARD TAKES IT HARD



Hold on!

Your vehicular communication system gets a real workout when you're handling the ANVBC-12 series of radios on mobile or regular vehicle installation.

You could break the guards on the components.

Tipping the RT on concrete over on either of these guards can tear 'em out of the front panel.



GUARD FROM SHOCK

ENOUGH?

Hardly anybody gets enough.

We mean copies of *PS Magazine*.

If your unit does not get enough copies of *PS* to go around, just take a DA Form 124 and fill in the number of copies of *PS Magazine* your unit needs each month. Put your account number on it and shoot it off to the AC Publications Center, Baltimore, 21204.

Then *PS* will come to your unit via pinpoint delivery—every month.



LET 'EM BREATHE EASY



How'd you like to tackle a forest search with your gas mask, helmet fixed tight? You wouldn't get far—you'd be fighting for air, you'd get weak, your legs would buckle and you'd drop to your knees for good.

That's almost what happens to your mechanical engine truck when its air cleaner gets plugged with dirt....

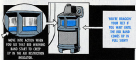
... like when you don't clean the filter element more often in damp operating conditions....

... or you don't do a good job of cleaning when you finally get around to the job.



Figure it this way: If you get all three sides up to the roof, your engine air cleaner is going to "work" in gobs of that dirty air, at about 110 CFM as a matter of fact.

Take a look at your air filter indicator over to the left. If it shows red, your filter's plugged up and your engine's fighting for air. So you keep out, just as soon as you can, and give your filter element the all-emergent treatment.



With correct work on your engine power usually means your air cleaner is a bad guy—even if your air warning indicator doesn't tell you—to keep its act "in" as you set for these signs to show you at the:



Under real damp conditions, you might have to go through this routine several times a day to keep your truck breathing easy.

BLOW IT OUT!

Back at the same post, before you worry about getting yourself clean, head out that air filter element for a better cleaning.



Dig out the air filter in your truck's OEM. You'd better look it up to somebody else's truck for an air supply—you don't want to run your engine with an filter.



Remember the placement your filter element—put them the back toward the outside.



Now give it a blow! Use an blower and blow with greater than force to make.



Before you get in back, look the filter element over and clean the holes or legs. Any sort of damage means you replace the element with a good one.

Again, make sure the filter carrier's door inside before install the element.



KEEP ELEMENT CLEAN!

Wash Time

At least every 1,000 miles, you change your filter elements.

But you don't throw your old one away. It may still be good and can be used again after it's washed and dried.

Before washing the filter element, you give it the complete air hose treatment. Then, if your inspection shows no sign of damage, you wash the element, like so:



1. Use detergent and cool, or lukewarm, water to clean the outside filter area quickly or after vacuum to clean the filter element.

2. Let the filter element cook for 2-4 minutes to loosen the dirt.

3. Then scrub it around to wash off the dirt.

4. Rinse the element in clean water.

5. Shake it good to get most of the water out—and maybe some more dirt at the same time.

6. Look the element over good for holes or other damage you might have missed before.

7. If the filter element's OK, it's good for another road.



DRY...DRY...DRY

A washed air filter element must be thoroughly dry before it's put back into service. Drying may take as much as 3 days in real damp weather. There's a terrific routine through your air filter, and your engine can pull water right out of it—maybe setting up a hydraulic lock condition in the cylinders.

HOW DIRTY IS DIRTY?



Dear-Ed-Ed:

We have oil bath air cleaners on some of our vehicles and also on some of our generators and work-moving and loadlifting engine equipment.

Oil in the air cleaner reservoir sometimes needs changing in between the intervals called for by the O&M.

Two-questions:

How dirty is dirty when deciding whether the oil needs changing?

Is used engine oil suitable for use in the reservoir (by some O&M's specify)?

COX E. A. R.

Dear Colonel E. A. R.,

There was a time when LFA levels of sludge in the bottom of the reservoir was the most allowable.

Now, though, any sludge or grit sitting on the bottom of the reservoir is too much. If a dagger, pulled across

the bottom, brings up sludge, it's time to change oil. Building more oil between the layers may show there's still "suspended," or floating, in the oil, but this by itself is not enough reason to change the oil.

Oil settles to the bottom of the reservoir when the oil becomes so loaded with filth, airborne dirt that it can't hold any more. Then the oil doesn't do the job it's supposed to. This causes an loss the engine runs its efficiency—and life.

Using an oil in the reservoir of an engine—or a motor—is a living game.

For the same reason, used engine oil in the air-cleaner reservoir is not. O&M LFA's that call for used-engine oil will be changed to specify new engine oil.



LOOK FOR SLUDGE ON THE BOTTOM.



3-PAIR
MULTIPL...

3 PAIRS WIN

1988-1990



No such thing? Not in poker, but 3 pairs is the winning combination when it comes to clamps for the air brake system on your 3-ton modified truck.

There's the clamp between your air cleaner and turbocharger. You've probably got only 4 clamps now, but you'll need 3 more of the 3 bonded lookups come home, like it says in Article 76, page 58, TR 778-004-3 (Jul 88). You'll be using new-production vehicles com- bin' out with all 4 clamps—2 each of the 3 types.

2 — CLAMP, PN 470-701810
BY 878 0018, 8808, 8809 BY 78,

8808
CONNECTION

1 — CLAMP, PN 470-701810
BY 78,



1 — CLAMP, PN 470-701810
BY 78

FSN FOR HOSE

FOR
FSN
2930-
800-
8008



Wanted? How to get your hands on the preferred hose running from the water pump to the chinchomeat housing on the 283 cubic inch engine in your M147M1144? Sure? Use FSN 2930-800-8008, marking identifier code 80C.

TRUCK, WHICH PEOPLE...

EXTRA PROTECTION

Dear Mr. Truck,

Highway wearing life and fire extinguishers are authorized for use while under certain conditions given in AF 200-22 (FCR 1 (Gen 84) para 200 and para 22).

Where do we get 'em?



Dear Mr. W.A.B.,

Usually, a vehicle's -10 TM lists fire extinguishers in the COM (SEL, DVE, etc.) when applicable to that vehicle.

But if you need more, or different, extinguishers to meet your needs under all circumstances, you'll find the full range in TM 5-4300-300-10 (Gen 84), Hand Portable Fire Extinguishers Approved for Army Users.

Of the several extinguishers offered, the one recommended for "general purpose vehicle" is the 2 M-45 job that comes under FSN 4210-300-0007 (also called the "Toss" or "TOSSE" extinguisher). It comes with a mounting bracket. And you can get replacement cylinders under FSN 4210-700-0011. These items are in Fed Car CMT 10-11-A (Gen 84).



A highway wearing kit, like's normally carried in the M45 Toss unit, comes under FSN 5001-300-0006 (with mounting bracket) or FSN 5001-300-1284 (without bracket), listed in Fed Car CMT 10-11-A (Gen 84).

Army-Warrior

SOGGY CYLINDERS



Dear Mr. E. E. E.,

Before a newly-installed air-hydraulic cylinder is reconditioned as a final test, and before you check to see that it was filled — per parts 1806404 and 1776 in TM 9-2320-221-00 w/cls 1, 2, 3 & 4 (P/N 68).



BEFORE YOU

Some "bad" cylinders have been found to be partially OK — just a case of the mechanic forgetting to go through the critical bleeding procedure during installation.

Since you're keeping your cylinders well lubed, their short life in service may come from water allowed to build up in the air reservoir tanks.

Be the boss here in:

Slide air tanks every other — even every couple hours if condensation is building up the fast.

Half-Hearted

Dear Half-Hearted:

Air-hydraulic brake cylinders are not MSB head breakers (and after 2748 and/or 2800 trucks are going on a lot of trouble over here in 224).

First, sometimes we have to try several — either one or several — before we get a cylinder that works.

Then, even though we keep 'em lubed with OMC — per Para 18 22 2-2000 (P/N 18 244 00) — the cylinders keep not working from our support air (rebuild 'em).

Any helpful items will be appreciated.
OCT 8 8 1



BEFORE THE CYLINDER BEGINS INSTALLATION IS CHECKED



BEFORE THE AIR RESERVOIR TANK

HINGE PIN HINT



Your sturdy 3-ton dump truck will leave you the money, if you don't take the hinge pin regularly.

When a hinge pin on an H31 or H31A1 runs, it forces on the sub-frame bearing, cracking the welds.

'Course' or 'could' won't help you then. What you'll need is a rewelding job on the sub-frame bearing—and it'll have to be according to TM 9-217 (Nov 87).

Save the labor. Keep the hinge pin well lubed, and you'll see everything will be just-dandy.



LUBE THE HINGE PIN

TOOL BOX TIP

When getting into the rear box of your H31A1C or other G790-series 12-ton combination? Don't waste time in case your tool box inside and damages your tarp and chains.

Drill a hole in the rear of the tool box, like it says in Article 97, TB 750-981-5 (Jul 88) and put in a drain tube.



DIESEL SLODDER

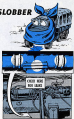
Like automatic systems, "diesel slodder" only looks bad.

So, maybe you've got trouble and maybe you don't when you spot what seems to be oil leaking out of the air-fuel manifold joints on your diesel-fired engine. Before you bother for help, find out if it's only a case of diesel slodder.

Give your vehicle a good road run. Get your engine up to normal operating temperature. Keep 'er there for a few minutes. Then stop and check your exhaust manifold again.

Still leaking? You may have a leak again—get help.

No more? It was diesel slodder—excess fuel and condensation, most likely to happen when humidity's high and temperature's low. No problem.



MAKE SURE IT BURNS ... FUEL CHANGES



Depending on what kind of fuel you've got to haul now, your MFC-series 2 L/2-ton truck needs an MFC-series 12-ton truck combination may need cleaning, flushing and a change of filter elements.

Or you may only have to drain out the old type and fuel up with the new type.

Get the straight dope in FM 10-87 (Oct 88), Petroleum Supply in Theaters of Operations. In Appendix H, you'll find 2 charts telling what you do when switching from one kind of fuel to another. Chart A is for uncoated tanks, Chart B is for coated tanks.

FIRST AID POUCH



Your life, or the life of your buddy, may depend upon your first aid kit, and that's why it's so important to know how to take care of it.

FIRST AID KIT is the idea you've been hearing for.

You have a first aid pouch in which you carry a first aid dressing and a packet of sodium chloride-saline (sterile) solution.

FIRST AID DRESSING

The first aid dressing is just a gauze pad and two gauze strips. It may be the clean type, P/N 6548-104-7001, or the plastic type (2 safety type), P/N 6548-104-7004. The pad's placed over the wound to stop the loss of blood and body fluids, and it also keeps the rest of the wound.

The dressing may be packaged in a plastic bag or it may be wrapped in aluminum foil, then it's put in a cardboard outer wrapper. Check that outer wrapper to see if it's in good condition. If it's been damaged, check the inner wrapper to make sure it's all right.

If you have the dressing stored in the plastic bag, just squeeze it gently to see if there is an air leak. The air should move to one end of the package (like



GET THE BURN

That's just plain old hot plus more, or if you want to get technical, you can call it sodium chloride-saline (sterile) solution.

when you're peering the end of a bullet that has come out in it. But any time it, so you won't even a look in the wrapper.



because solution, P/N 6548-104-7004. It's used for the injury caused by third degree burns. You get two packets.

You'll have to realize knowing whether these packets are good or not. Hold 'em up to your ear and shake. If they don't make like sand in the package, you'll know there's a leak in the package and it's not good. It should be replaced.

If you have the dressing that has the aluminum foil wrapper, squeeze it gently to make sure there are no leaks in it.

You won't let your buddy down if you eagle-eye down litter to make sure they'll do the job in case they're needed.

Here're the things you want to be on the lookout for:

YOUR LITTERS

WAY I GUESSED THAT YOUR PVA PROGRAM ON LITTERS SHOULD INCLUDE TESTING OF CHAIRS, REINFORCED FABRIC!



HANDLE—brakes, splintered.

CORNER—soft, dry rot.

LITTER SECURING STRAP—socks or other loop attaching, wearing, tapered ends.



SPREADER BAR AND STRAP—best.

As a field expedient you can use the corners by having the handles rest in your hands and the full weight on one foot on the corner. If it rips or tears it should be replaced.

You can repair small holes in the litter cover by patching it with the material you find in the nearest spare kit, FM 21-20-252-1157. If there's any doubt as to whether the corner is strong enough to hold a 200-lb load, don't take a chance, replace the corner.

UP TO SNUFF?

I GOT THIS SCORING TYPE THING!



SPUR PART

It doesn't matter whether you have the folding pole folding litter, FM 21-20-783-7305, or the rigid pole folding litter, FM 21-20-783-7307, you can get repair parts for both.

Here's what you ask for:

Folding Pole Folding Litter, FM 21-20-783-7305

Case, 100, 783-825-78-082

Handle, 100, 783-825-78-090

Handle End, FM 21-20-783-7305, 100, 783-825-78-091
Dish-shaped metal handle — find a fit for FM 21-20-81

One bearing strap, FM 21-20-783-7305

Spreader bar and strap, FM 21-20-783-7305

Rigid Pole Folding Litter, FM 21-20-783-7307

Case, 100, 783-825-78-080

Handle, 100, 783-825-78-090

Handle end, FM 21-20-783-7307

Spreader bar and strap, FM 21-20-783-7305

290M TRACTOR BRACKET FIX

ONLY AN "ADJUST" TRANSMISSION!



Transmission support brackets crack up on your 290M? There's no need to get your anti-torque support mechanics to put on reinforcements.

Now do it with 7 strips of type 1088 hot rolled steel. Make the hole reinforcing plates like this:



WITH 1088 STEEL

Use the holes on the rear side of each bracket, welded with a good, cold chisel, like this:



HOUGH LOADER ANTI-HUFF DOPE

Buy, Operate—change hydraulic oil and filter on Hough 7004, 7004M, and 1400M Loaders every 250 hours now, not every 1,000 . . . and clean the oil tank and hydraulics rollers top when you do. If you have to repair or replace major hydraulic parts, like a cylinder or packing, and dirt or pieces of packing may have gotten into the system, drain out all the oil and replace the filter before you refill. The word is in the *EN Engine* from U.S. Military Equipment Commission for October 1968. See TB 750-071-4, page 28, chapter 3, para 40 for maintenance, as well as in operating changes to the 3 lubrication notes.



NEW ADAPTER FOR OLD DRILLS



Impossible to use over-boosted 1 1/2-in. rods on rope shank drill bits?

No more. These older Type 60 bits, roller bars, drill seats and such can work now.

Just order Adapter-Coupling, 1 1/2-in. rope shank to 1 1/2-in. screw bar-stock thread, with 50760, P/N JSA-33, P/N 500-129-1571. The new piece comes from U. S. Army Military Equipment Commission so fit all Army 200-lb class crawler rigs.



LUBE THE MITE RIGHT

WHEN DO YOU LUBE THAT THING?

When you use the MITE portable dispenser (Mite Mite), be sure to check the gear-box tube daily, or else you'll soon be using your handy dispenser. The gear-box-blower assembly will look out for you.



The Mite, in fact, is marked with a warning label, EOM 1000-000-0007 to help you remember the daily tube check. Order it using EIC 874.

CHECK OIL
IN GEAR BOX
DAILY



As soon as you've added it, the oil filler plug is on the side of the gear box, just under the weather flange, and you have to use the Mite's rubber key to remove the plug. The dispenser takes Lubrolux-ly-Oil, general purpose, maximum viscosity, specified MIL-PRC-15150, 20W-5741 and when it's timing up its carrier oil level it just under the filler plug.

To fill the gear box you have to tilt the dispenser on its side, but take care you don't overflow it, so you'll not have overflow problems. And be sure to wipe up any spilled oil before you spread the dispenser.



BE NOT OVER



MITY MITE FUEL



The correct fuel rate for the engine on the MITE (Mity Mite) dispenser is 1/2 pint of oil (28.5%) on 1 gallon of gas. But, some gasohol/gasohol caps will fill for only 1/4 pint of oil. This kind of rate will damage the Mite's Japete engine. So, check your dispenser's gas cap sensor and check to if it doesn't read right. Replace it with the spare cap, P/N 204-1004111, authorized in the dispenser's IRL. See page 16, TM 3-1048-104-11 (Apr 68).

M2 COMPASS CARRY-CLIP



There's a new hold-on for M2 Compasses now—looks like some loop or suspension or pistol belt. It's P/N 1148-701-1080, Kropac, WYState. Take your compass out of the case, pry up rear loop, slip hanger clip in with jaws open, snap the catch 'n' replace compass—and you'll drop three M's in the mud.



PACKAGE HEX



If you're bored by a part or component that was damaged because the shipping package wasn't put together right, try your hands on DA Form 700-1 (Feb 68). It tells you all about filling in DD Form C on faults in packaging for shipment.

LONG POCKETS



Dear Mr. C. I. E.,

What's the FRY for the fabric visible under pockets that'll take the new Oil from OIL, Board of Standards — this hour now?

CRG C. I. E.

Dear Mr. C. I. E.,

Now, the longer pockets are available only through local purchase (All FRY-10). Where local merchants aren't handy, though, some units get local OIL to trim the new and on in the fabric pockets.



The side insert is placed over the record of demands card when it's placed in the pocket.

If you can buy 'em locally, be sure to provide complete identification on your filing equipment so you'll get pockets with the proper attaching hardware.

WORN FLOCKING

—WHAT WARE YOU SUSPECT THAT, CONNOR?

?

!

IN THE TROPICS, AS WELL AS IN THE ARCTIC, M-17 FLOCKING PROBLEMS ARE OFTEN SURPRISINGLY MY DEAR, MATHSON.

Dear Mathson,

The L-2886-200128 (plus 28), in the 1942 check list for the M17 mask, says latex rubber cups with worn flocking are OK—except in the Arctic. But here in the tropics it's sunny and dusty, wear flocking into the wind and the gas under the rubber cup keeps the valve from seating right. That allows breath moisture to get trapped in the elements, which makes them unusable.

A full growth of flocking is needed here, too.

CWO J. B. U.

M17
PROTECTIVE
MASK

NEET
TIGHT UP



UNDER UNUSUAL OPERATING CONDITIONS, YOU CAN REPLACE CAPS—BUT HAVE MORE FLOCKING

Dear Mr. J. B. U.,

Despite the weather, sand or gas can damage the filter elements in any way, you can replace caps having worn flocking. The OK is right there in the TM's para 1-11(2). It says the latex rubber caps prevent the filter elements from rain, snow and coarse particles. The TM gives the CO the OK to do other organizational maintenance as needed, see para 1-11.

Harry Mathson



Cosmic Rodd's BRIEF



No More Lids

No more GAA for flat air-hydraulic lifters in your C110-series 2 1/2-ton truck. That's the word in US Army Tank-Automotive Command TMS 1-11874 (28 Jan 67) for *Logan/Note 28* in *DA Form 200-200-12 (20-66)*. The TMS gives instructions for direct support to clean and service your brake system if your air-hydraulic lifter has been fitted with GAA.

Hot On The Loose...

...and dangerous, too. This is the steering wheel shell on some M703 1 1/2-ton trucks and M705 ambulances. Some loose nuts have snapped up, so it's in the interest of your own life and limbs to have yours checked. This nut should be torqued to 42 to 60 lb-ft.

Rotating Lights

Have you a need—and authorization—for a rotating amber light on your wrecker truck? For *DA Form 200-200-120* is the 28-rot job for most military design wrecks. For 12-rot commercial design wrecks, get *FM 4 200-247-722*. Need that? *FM 4 200-247-767* is 24-rot, and *FM 4 200-247-792* is 12-rot. SAC is 280.



Wig Welding Wives

Welders note—Don't miss out on the new M9 welding training film, *W 9-2973*, titled *Just One Welding*. It's in black and white and 25 minutes long. Check with the nearest media-based communications center for a copy of the W.

How EMM? Guide


Next time your CMM team drops in M9 for using the new inspection guidelines in *DA Form 150-10 (Jan 67)*. Run through it first because you get real busy on top—instead of behind—the *EM 150-10-10*.

Calibration Change

You can keep up to date with the latest word on calibration if you get hold of *Change 1 (Feb 67)* to *EM 150-234 (Sep 66)*, *Calibration Requirements for the Maintenance of Army Materiel*.

Operator's Record

Better get hold of *Ch 1 (Oct 67)* to *FM 11-280 (Jul 67)*, *Driver Selection and Training (Off-Road Vehicles)*. If it's your job to fit and GAA Form 348, *Equipment Operator's Qualification Record*, it gives a sample of a 348 filled out, along with other info about the form.

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



When your equipment
needs an MWO...
how do you know?

DA Pamphlet 310-7 is your Index
to Modification Work Orders

READ IT AND REAP!