

Issue 192

PS

1968 Series

THE PREVENTIVE MAINTENANCE MONTHLY



BUT,
SARGE,
IT LOOKED
EXACTLY LIKE
THE FUSE I
REPLACED!

YA
GOTTA
MATCH THE
NUMBERS!

Will
EISNER

**SPECIAL
ELECTRICAL FUSES**
SEE PAGES 2-10

A SALUTE:

MINUTE-MAN

OF
PM

YOU'RE

ARMORER



Spell it any old way, it comes out friend in need—dead. You're the front-line support of every shootin' type there is—ankle, vehicle or chopper borne. We salute you!!

ALERT

To the needs of your "customers" and equipment... always keep your supplies of parts and materials equal to the demands of your unit.

RELIABLE

When inspecting, servicing, fixing or record-keeping, do the most thorough job!

MAINTENANCE MINDED

An ounce of sweat now saves a ton of trouble later.

ORDERLY

A place for everything, everything in its place—lubes, cleaners, tools, parts, pads, PM records, forms... everything!

RESPONSIVE

You react... quickly and surely! Have a sixth sense for trouble-shooting.

EXPERT

You know your stuff because... you're always learning—and always ready to learn.

EADY

This is your middle name stamped in big letters on every battle-bound weapon your outfit owns!

Add 'em all together and they spell ARMORER.

Without you, your outfit might scoot and communicate, but could flub when it's time to shoot.

PS

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PS wants your ideas and contributions, and if it's not to answer your question, these and others are right in front of them. Just write to:
Sgt. Alvin West,
PS Magazine,
Fort Knox, Ky.
40121



FUSES NEED



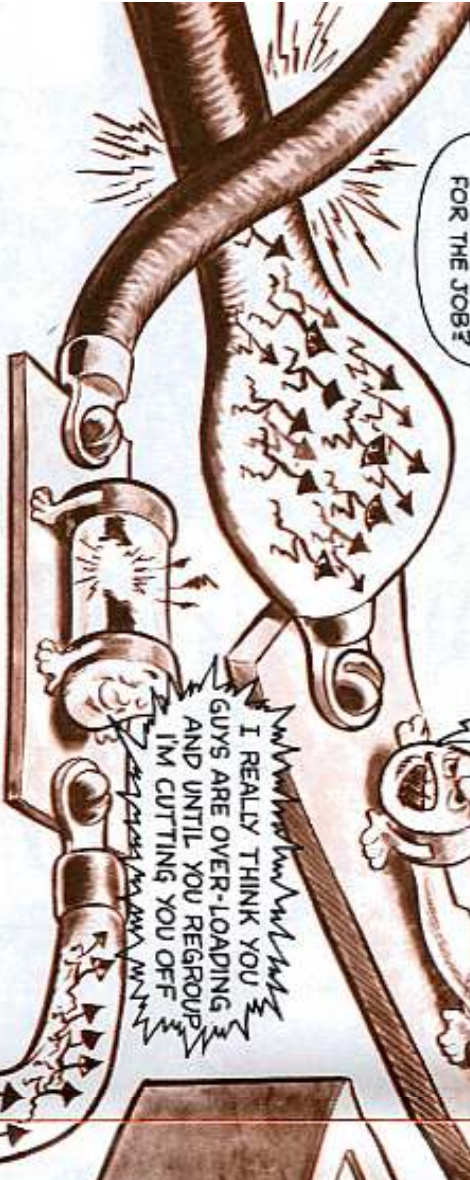
ARE YOU SURE YOUR FUSES ARE THE RIGHT AMPERAGE FOR THE JOB?

YOU'RE TOO BIG FOR THE JOB! YOU BEEN LETTIN' 'EM THRU.

AW...

OKAY OKAY... BACK-OFF THAT SURGE! YOU WANNA ZAP THAT EQUIPMENT!

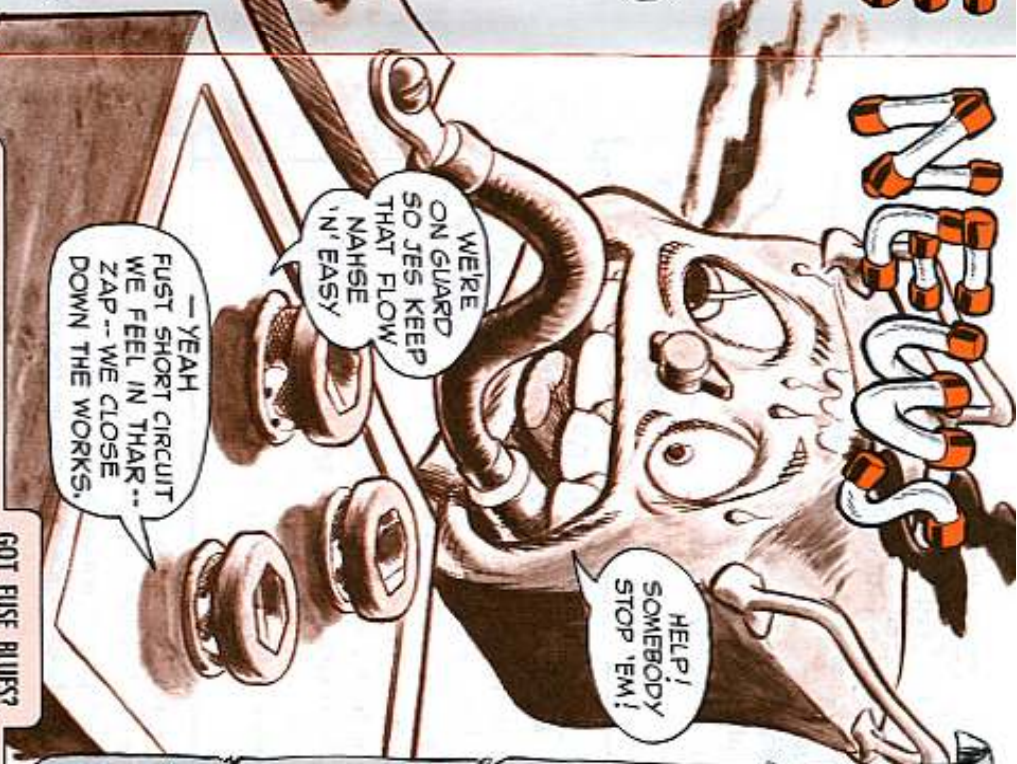
I REALLY THINK YOU GUYS ARE OVER-LOADING AND UNTIL YOU REGROUP I'M CUTTING YOU OFF



A fuse — the best friend your communication or electronic equipment has! That's right, 'cause a fuse sacrifices itself when a wayward electrical current attacks your equipment or electrical circuit. Thus a lot of expensive cables, tubes, circuits, wiring, transformers, resistors, and the like, are saved from massive damage by a little ol' fuse.

Coming in all shapes and sizes, it serves silently, guarding against electrical current surges or overloads, grounding and short circuits.

And, you take the fuse for granted until it's time to do its duty, then it fades out or kicks up a fuss in the form of a pow, a psst or an alarming noise.



HELP! SOMEBODY STOP 'EM!

WE'RE ON GUARD SO JES KEEP THAT FLOW NAHSE 'N' EASY

—YEAH FUST SHORT CIRCUIT WE FEEL IN THAR-- ZAP--WE CLOSE DOWN THE WORKS.

GOT FUSE BLUES?

Now . . . you say you know what a fuse is to do, but they come in so many sizes with a lot of gobbledgook lettering your problem's knowing which one to use as a replacement?

Well, back off and let the fairy tale be unfolded on the confusion of fuses. First off, there are 4 basic types or families of fuses:



LINK CARTRIDGE



PLUG



KNIFE-BLADE



The fuse not only guards the circuits but it also acts as a fault indicator.

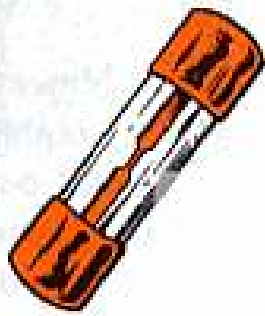
When the fuse blows or goes, you should replace 'er with an identical one. If she goes again, it means you have trouble along the line or within the circuit and this takes some looking into. Maybe higher level maintenance on the equipment is needed.

In the makeup of fuses, the most important rating is current flow or amperage since that's the reason for a fuse in the first place.

So, when your equipment calls for a specific amp fuse, that's the one to use.

Never use a fuse with an amperage rate higher than the equipment calls for.

THE CARTRIDGE FUSE



The cartridge is probably the most discussed and cussed because of its multiple uses and sizes and variations in shape.

Basically, the cartridge is tubular in shape, made of glass, plastic, wood, ceramic or the like, with an inclosed fuse link core attached to 2 ferrule or cap ends.

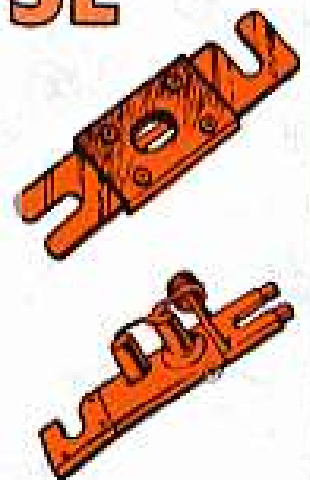
It measures 1 to 10 inches long and has an ampere rating of .001 to 60 amps.

OFTEN THE INDICATOR-ALARM TYPE FUSE IS USED TO ANNOUNCE A SPLIT CIRCUIT.

THE LINK FUSE

The link-type, which includes the indicator-alarm, is a simple wire, ribbon or flat sections with connecting necks making up the fuse metal.

The indicator-alarm-type is usually found in telephone circuitry systems where a buzzer, noisemaker or signal lights lets you know the fuse has gone kaput.



THE PLUG FUSE



The most common is the plain old house fuse, or plug-type, which is used in 110-volt AC branch circuit. The threaded plug, often called the Edison-base type, has a mica or glass window to let you see the condition of the fuse.

The metal thread-type has a buddy, the ceramic-threaded Fustat fuse that requires an adapter to round out its fuse duties.

You may find the plug-type in circuits of from 0.3 to 30 amps and 125-volt ratings.

GRR

THE KNIFE-BLADE FUSE



Last, but not least is the knife-blade fuse which likes to play the role of tough guy 'cause it can take currents ranging from 60 to 600 amperes. That's why it's usually found in main fuse boxes and electrical power plants or installations.

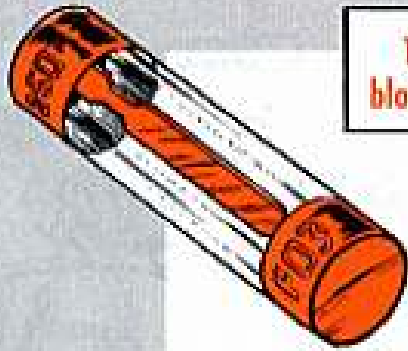
FUSE TYPE TALK

To help cut confusion on fuses, a type designation is being stamped on 'em as required by Military Spec MIL-F-15160D. Heavy emphasis is on the cartridge fuse, because of its multiple uses, sizes, etc.

Of course, the stamping looks like a lotta Greek, like, f'instance:

F03A250V2-1/2AS...

... But, when you separate the whole by its parts ... then it makes sense.



The letter A gives the fuse's blowing time characteristic.

The 250V (volts) is merely the voltage rating.

F03 A 250V 2-1/2A S

S stands for silver-plated contacts. Not all fuses have silver so when the S doesn't appear there is no silver. Even though silver-plated fuses are sometimes called for, non-silver-plated are preferred since silver tends to tarnish and corrode.

The first 3 letter and numbers combination ... F03 ... tells you the style or kind of fuse and its size.

The 2-1/2A (amperes) is the amount of constant current the fuse will carry without blowing.

Fuse blowing characteristics are noted by the letters A, B, or C. These symbols mean:

A

Normal (normal interrupting capacity)

B

Time lag (delay or slow)

C

Normal (very high interrupting capacity)

OLD C TYPE FUSES

To tie in the C-type with the new D-type of military standard for fuses, MIL-F-15160 specification, just follow this conversion.

Like, for the C-type it'll be identified as F01AR001A.

The F01 is the same as for the D-type fuse; the first A is 32 volts; R001 is 0.001 amps with the R as a decimal point, and the last A is blowing time characteristic, which is also the same as the D-type.

Here're a coupla tables that'll show the C-type setup.

Voltage Rating

A = 32 volts	H = 500
B = 52	J = 1,000
C = 90	L = 2,500
D = 125	N = 5,000
G = 250	P = 10,000

Current Rating (Amperage)

R001 to R009 = 0.001 to 0.009
R010 to R099 = .010 to .099
R100 to R999 = .100 to .999
1R00 to 9R99 = 1.00 to 9.99
10R0 to 99R9 = 10.0 to 99.9
100R to 999R = 100. to 999.



With the many, many fuses used by the armed forces, the Army has brought the number of stock-numbered circuits savers for electronic equipment down to a minimum that covers most of this type of equipment.

All cartridge fuses are designated by style sizes F01, F02, F03, F07, F09, F11, F15, F16, F27, F29, F30, F60.

Plug types are covered by F14.

Knife-blade types carry styles F19, F20, F21, F22.



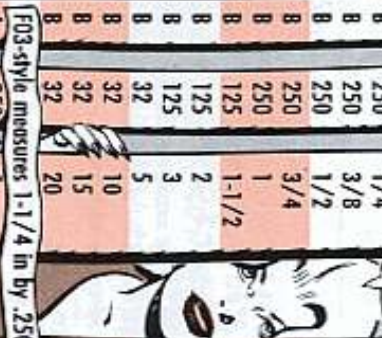
The link-type, including F51 for indicator-alarms, is covered by F36, F37, F38, F39, F40, F50, F52.

To help get the fuse you need for your communication, or electronic equipment or electrical circuit, here are styles, specifications and dimensions:

(Note: Many of these can be duplicated with similar, commercial fuses which may use a different identification system.)

Blow Type	Voltage	Current	FSN 5920	Blow Type	Voltage	Current	FSN 5920	Blow Type	Voltage	Current	FSN 5920	Blow Type	Voltage	Current	FSN 5920
A	250	1/500	-280-5046	A	250	6	-548-3126	A	125	20	-557-6057	A	32	30	-050-4962
A	250	1/200	-976-5740	A	32	15	-011-7142	B	250	30	-539-6920	B	125	1	-142-4816
A	250	1/100	-951-3824	A	32	20	-012-0151	B	250	1/100	-655-3806	B	125	2	-142-4802
A	250	1/32	-232-3703	B	250	1/100	-131-9915	B	250	1/32	-504-8375	B	125	3	-686-9546
A	250	1/16	-232-3675	B	250	1/100	-837-2633	B	250	1/16	-538-3719	B	32	5	-581-6125
A	250	1/8	-050-4965	B	250	1/32	-681-5722	B	250	1/8	-503-2203	B	32	10	-280-3157
A	250	1/4	-235-8358	B	250	1/16	-229-1312	B	250	15/100	-661-0530	B	32	15	-503-2880
A	250	3/8	-240-7957	B	250	1/8	-284-9455	B	250	3/16	-754-8895	B	32	20	-686-9547
A	250	1/2	-581-6504	B	250	1/4	-504-8634	B	250	1/4	-683-6567	B	32	30	-280-3177
A	250	3/4	-280-5024	B	250	3/8	-229-1317	B	250	3/8	-687-1812	A	250	1	-280-9326
A	125	3/4	-050-0598	B	250	1/2	-199-9498	B	250	1/2	-808-8342	A	250	2	-243-9331
A	125	1	-050-0599	B	250	3/4	-755-3235	B	250	3/4	-688-4086	A	250	3	-263-0626
A	125	1-1/2	-681-4396	B	250	1-1/2	-284-9220	B	125	1	-583-8486	A	250	3-1/2	-280-4444
F01-style measures 1 in by .250 in				B	250	1-1/2	-228-7882	B	32	5	-284-0964	A	250	5	-549-0032
A	250	1/100	-519-9722	B	125	2	-681-0918	B	32	8	-727-1452	A	250	6	-878-7178
A	250	1/32	-280-5029	B	125	3	-851-9476	B	32	10	-142-7374	A	250	6-1/4	-280-4439
A	250	1/16	-221-4528	B	32	5	-284-6795	B	32	12	-892-9341	A	250	7	-548-9143
A	250	1/8	-142-4838	B	32	10	-581-6504	B	32	15	-284-9219	A	250	8	-838-0302
A	250	1/4	-043-2641	B	32	15	-142-7380	B	32	20	-755-3656	A	250	10	-666-9548
A	250	3/8	-518-1790	B	32	20	-665-2881	B	32	30	-686-9514	A	250	15	-686-9549
A	250	1/2	-280-8344	B	250	1	-296-1517	B	250	1	-686-9513	A	250	20	-686-9514
A	250	3/4	-296-0446	B	250	3	-296-0679	B	250	2	-686-9545	A	250	25	-280-9325
A	250	1	-280-8342	B	250	5	-284-7732	B	250	3	-636-3046	A	250	30	-230-9097
A	250	1-1/2	-050-4953	B	250	8	-280-5002	B	32	5	-280-3469	B	250	1/10	-199-3997
A	250	2	-280-4960	B	250	10	-254-7724	B	32	10	-280-4464	B	250	15/100	-199-3998
A	250	3	-010-6652	B	250	12	-199-9502	B	32	15	-280-3168	B	250	2/10 (1/5)	-199-3999
A	250	4	-557-2647	B	250	15		B	32	20	-280-4444	B	250	3/10	-280-3176
F02-style measures 1-1/4 in by .250 in				B	250	20		B	32	30	-280-4444	B	250	4/10 (2/5)	-199-4001

CON-FUSED? THIS CHART SHOULD HELP!



Blow Type	Voltage	Current	FSN 5920
B	250	1/2	-199-4002
B	250	6/10 (3/5)	-199-4003
B	250	8/10 (4/5)	-199-4004
B	250	1	-557-9119
B	250	1-1/4	-199-4007
B	250	1-6/10	-280-3175
B	250	2	-686-9515
B	250	2-1/2	-188-7373
B	250	3-2/10	-571-3242
B	250	4	-199-4016
B	250	5	-841-2337
B	250	6-1/4	-199-4019
B	250	8	-199-4022
B	250	10	-688-4085
B	125	15	-078-8659
B	32	20	-078-8660
B	32	25	-142-4808
B	32	30	-281-0203

F11-style measures 1-1/2 in by .406 in

A	250	1	-519-8118
A	250	2	-243-9331
A	250	3	-071-2764
A	250	5	-284-4131
A	32	10	-071-2765
A	32	15	-142-7396
A	32	20	-071-2766
A	32	25	-296-1112
A	32	30	-686-9517

F15-style measures 2 in by .562 in

A	250	1	-252-2013
A	250	3	-050-0544
A	250	6	-252-2018
A	250	10	-548-3125
A	250	15	-543-0673
A	250	20	-050-4968
A	250	25	-280-3550
A	250	30	-050-4970
B	250	1	-057-3152
B	250	1-6/10	-280-3160
B	250	2	-057-2955
B	250	2-1/2	-240-3874
B	250	3-2/10	-281-0221
B	250	4	-636-3756
B	250	5	-280-4013

Blow Type	Voltage	Current	FSN 5920
B	250	6-1/4	-538-3102
B	250	8	-538-2990
B	250	10	-577-8735
B	250	12	-646-4584
B	250	15	-280-5003
B	250	20	-057-2963
B	250	25	-199-4038
B	250	30	-518-3208

F16-style measures 3 in by .812 in

A	250	35	-252-2022
A	250	40	-050-0541
A	250	45	-252-2027
A	250	50	-050-4961
A	250	60	-050-4972
B	250	35	-686-2664
B	250	40	-281-0161
B	250	45	-281-0158
B	250	50	-281-0159
B	250	60	-280-3181

F27-style measures 3 in by .406 in

A	1000	3/8	-280-4005
A	1000	1/2	-131-9910
A	1000	3/4	-280-4006
A	1000	1	-686-2665
A	1000	1-1/2	-284-4128
A	1000	2	-284-4154

F28-style measures 4-1/2 in by .406 in

A	2500	1/2	-229-1243
A	2500	3/4	-229-1244
A	2500	1	-852-2401
A	2500	1-1/2	-229-1246
A	2500	2	-280-3544

F29-style measures 5 in by .812 in

A	5000	1/16	-188-7313
A	5000	1/8	-188-7314
A	5000	1/4	-190-3215
A	5000	3/8	-243-3779
A	5000	1/2	-131-9908
A	5000	3/4	-231-3574
A	5000	1	-687-1928
A	5000	1-1/2	-190-3216
A	5000	2	-543-3734
A	5000	3	-686-2666

Blow Type Voltage Current FSN 5920

F30-style measures 10 in by .812 in

A	10000	2	-243-5085
A	10000	3	-892-9561

F60-style measures 1-1/2 in by .406 in

C	500	1/8	-681-4998
C	500	1/4	-725-6710
C	500	1/2	-924-3937
C	500	3/4	-945-9912
C	500	1	-636-0957
C	500	3	-548-9956
C	500	6	-553-6957
C	500	10	-296-0454
C	500	15	-686-0301
C	500	20	-686-0025
C	500	25	-538-5472
C	500	30	-825-2572

PLUG FUSES



F14-style measures 1-9/32 in by 1-9/32 in

A	125	1	-280-3179
A	125	3	-228-4463
A	125	5	-284-7126
A	125	6	-228-4465
A	125	8	-519-9049
A	125	10	-240-4114
A	125	15	-296-4884
A	125	20	-296-4885
A	125	25	-228-4482
A	125	30	-296-4886
B	125	3/10	-564-3530
B	125	4/10	-228-4498
B	125	1/2	-295-9680
B	125	6/10	-228-4505
B	125	8/10	-228-4506
B	125	1	-838-9997
B	125	1-1/8	-564-3534

Blow Type Voltage Current FSN 5920

B	125	1-4/10	-228-4498
B	125	1-6/10	-564-3537
B	125	1-8/10	-058-6938
B	125	2	-843-2285
B	125	2-1/4	-058-6939
B	125	2-1/2	-356-2196
B	125	2-8/10	-356-2197
B	125	3-2/10	-552-1556
B	125	3-1/2	-564-3540
B	125	4	-142-6862
B	125	4-1/2	-564-3541
B	125	5	-683-5515
B	125	6-1/4	-845-3389
B	125	7	-564-3544
B	125	8	-224-4331
B	125	9	-564-3545
B	125	10	-296-0482
B	125	12	-611-2323
B	125	14	-564-3547
B	125	15	-538-4951
B	125	20	-636-3052
B	125	25	-688-4084
B	125	30	-280-9315

KNIFE-BLADE FUSES



F19-style measures 5-7/8 in by 1.312 in

A	250	70	-281-0165
A	250	80	-252-2025
A	250	90	-243-3716
A	250	100	-263-0621
B	250	70	-254-7733
B	250	80	-281-0163
B	250	90	-281-0164
B	250	100	-281-0162

F20-style measures 7-1/8 in by 1.875 in

A	250	110	-243-3752
A	250	125	-263-0622
A	250	150	-280-9345
A	250	175	-280-4719

Blow Type Voltage Current FSN 5920

A	250	200	-252-2010
B	250	110	-199-4044
B	250	125	-581-6096
B	250	150	-581-3282
B	250	175	-199-4046
B	250	200	-686-0195

F21-style measures 8-5/8 in by 2.406 in

A	250	225	-243-3756
A	250	250	-243-3757
A	250	300	-243-3714
A	250	350	-721-0721
A	250	400	-190-7293
B	250	225	-281-0169
B	250	250	-281-0170
B	250	300	-281-0167
B	250	350	-281-0168
B	250	400	-281-0166

F22-style measures 10-3/8 in by 2.906 in

A	250	450	-243-5082
A	250	500	-243-3764
A	250	600	-243-3766
B	250	450	-889-9358
B	250	500	-190-7473
B	250	600	-583-8674

LINK FUSES



F36-style measures 2-1/2 in by 9/16 in

A	125	10	-881-9364
A	125	15	-221-4531
B	125	1	-131-9781
B	125	2	-131-9779
B	125	3	-142-7341
B	125	5	-583-2451
B	125	10	-131-9776
B	125	15	-131-9777

Blow Type Voltage Current FSN 5920

F37-style measures 2-1/2 in by 9/16 in

A	125	20	-853-2778
A	125	25	-853-2779
B	125	20	-142-7342
B	125	25	-686-0023
B	125	30	-900-8839

F38-style measures 3 in by 13/16 in

A	125	40	-843-2286
A	125	50	-883-8631
B	125	35	-131-9778
B	125	50	-131-9784
B	125	60	-131-9850

F39-style measures 3-1/2 in by 1-1/16 in

A	125	120	-131-9846
B	125	70	-131-9852
B	125	80	-686-9704
B	125	100	-131-9844
B	125	120	-686-2667

F40-style measures 1-3/4 in by 1-5/16 in

A	32	40	-686-2668
A	32	50	-686-2669
A	32	60	-131-9760
A	32	70	-686-2670
A	32	75	-683-5514
A	32	80	-845-1679
A	32	100	-686-2671
A	32	125	-131-9755
A	32	150	-131-9754
B	32	40	-552-1310
B	32	50	-280-9348
B	32	60	-583-7989
B	32	70	-131-9763
B	32	75	-686-2672
B	32	80	-131-9765
B	32	100	-581-3801
B	32	125	-131-9767
B	32	150	-131-9770

F50-style measures 1-13/32 in by 13/32 in

A	90	1/2	-280-8626
A	90	1-1/3	-280-8625
A	90	2	-842-9055

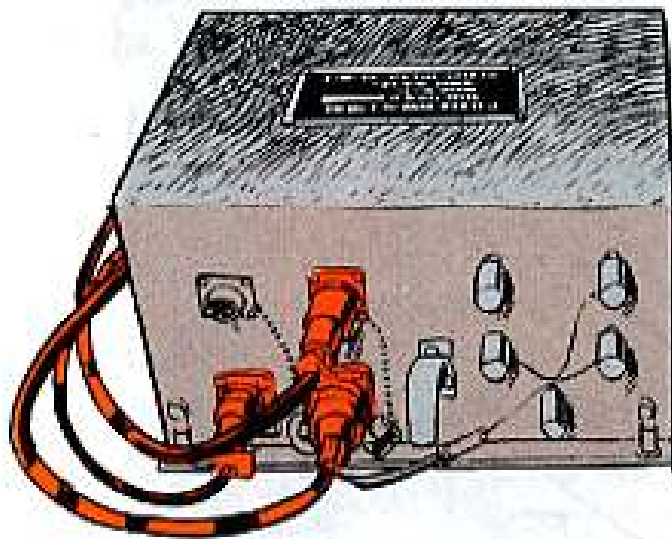
F51-style (indicator-alarm) measures 1-43/64 in by 13/32 in

A	90	1-1/3	-280-8582
A	90	2	-681-3738

KEEP OUT CABLE KINK

Waking up with your head screwed around can sure put a kink in your neck and can be mighty aggravatin'.

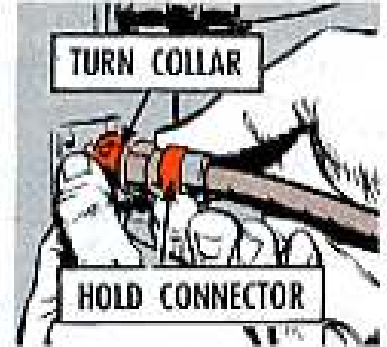
That's the kinda kink your cable can get into and put a twist on communications.



USE
BOTH
HANDS
WHEN YOU'RE
MAKING
CONNECTIONS!



Your best bet's to grab the connector by one hand, and with the other, gently



screw the connector collar when removing it or putting it on.

Otherwise, you'll wind up with the wires twisted loose from the connector and *FEET SKWEE...* your communications hurtin'.

DODGE THAT DOWNTIME

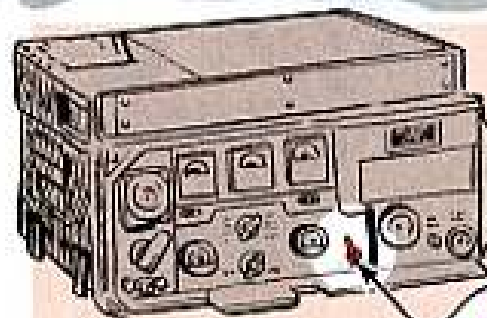


SUPPORT!
THE SHAFT'S
BUSTED!

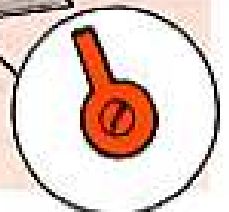
WE'RE OUT
OF BUSINESS
AGAIN!

When you cast a long, thoughtful eyeball toward your AN/GRC-106 radio set, you may spot a new long-handled primary power switch on your AM-3349 power amplifier.

Careful with it. If you push it down too hard you might break the plastic shaft and put the whole power amplifier on downtime.



NEW PRIMARY
POWER SWITCH



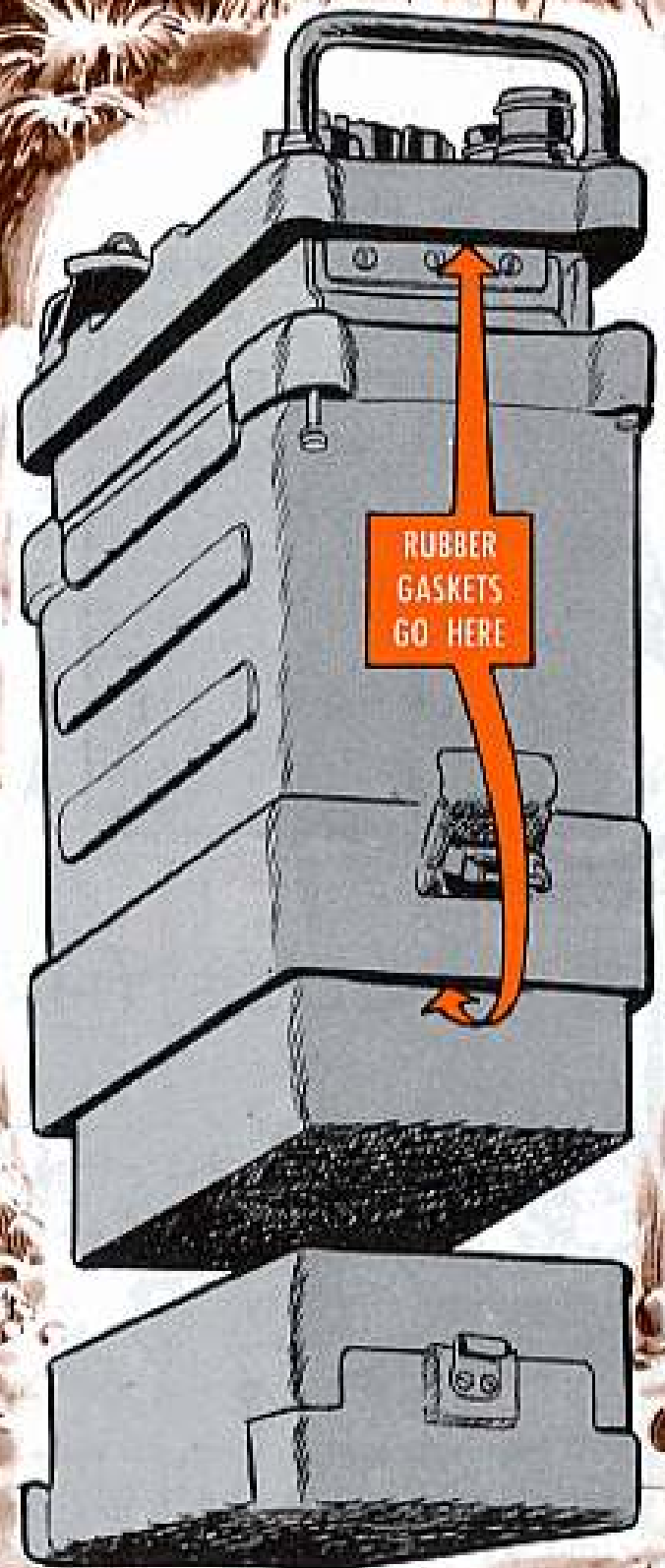
SEATED COZY ... AND DRY

Trying to keep your back-pack portable radio set dry in wet, wet weather is nigh on impossible.

Like with the AN/PRC-25 or AN/PRC-77 when you're on a boonie tour and haven't much time to take time out to wipe the set dry.

Any wetness inside the RT-505 or RT-841 receiver-transmitter or the CY-2562 battery box will tell you to get the rubber case gaskets (FSN 5820-973-3960) replaced.

HOPE YOU'RE KEEPIN' THAT PRC DRY.



When you've been trippin' through salt water and the radio set's had a dowsin', clean 'er good and see to it no seepage is inside.

Salt water not only corrodes the set fast, but will also short out the circuitry.

THEY NEED A LITTLE PULL

CANNOT UNDERSTAND —
I SEE GI DO IT YESTERDAY,
HE NEVER TOUCH WIRE!

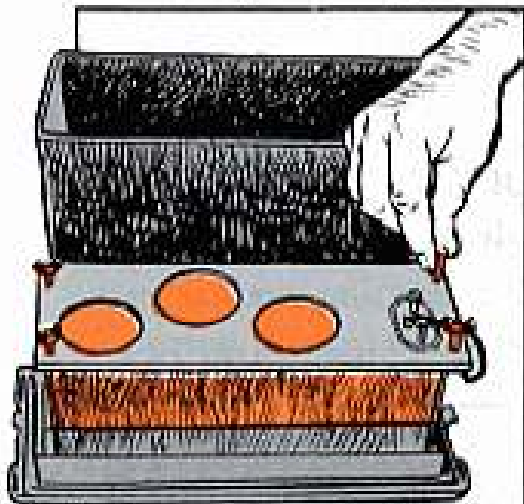


Ouch!

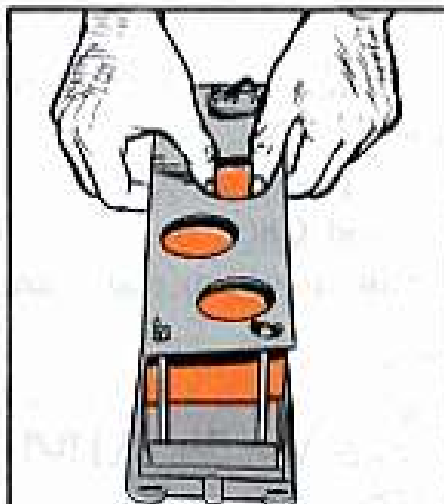
Tuggin' by the wiring to loosen the battery connector in that CY-6314 battery box (FSN 5820-935-0382) on your AN/PRC-74B radio set can poop the power in the pack.

Sure . . . it'll put a kink in your fingers grabbing the tight connector to free the BA-386/U or BA-4386/U battery . . . but don't lose your cool.

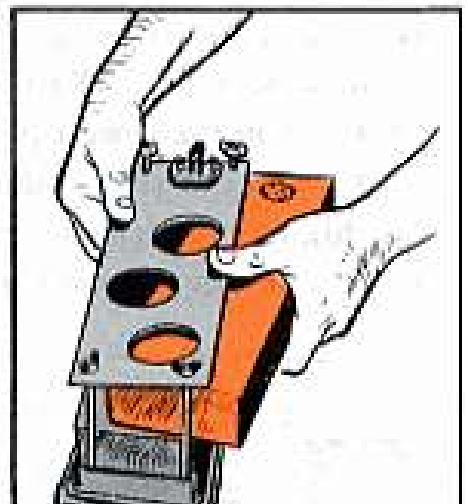
Pull up a stump, sit and read on . . .



To disconnect the connector release the battery retainer's 4 wing nuts to the stops or captive pins.



Place your thumbs through the retainer hole nearest the connector, and push down. At the same time pull up on the retainer with your fingers.

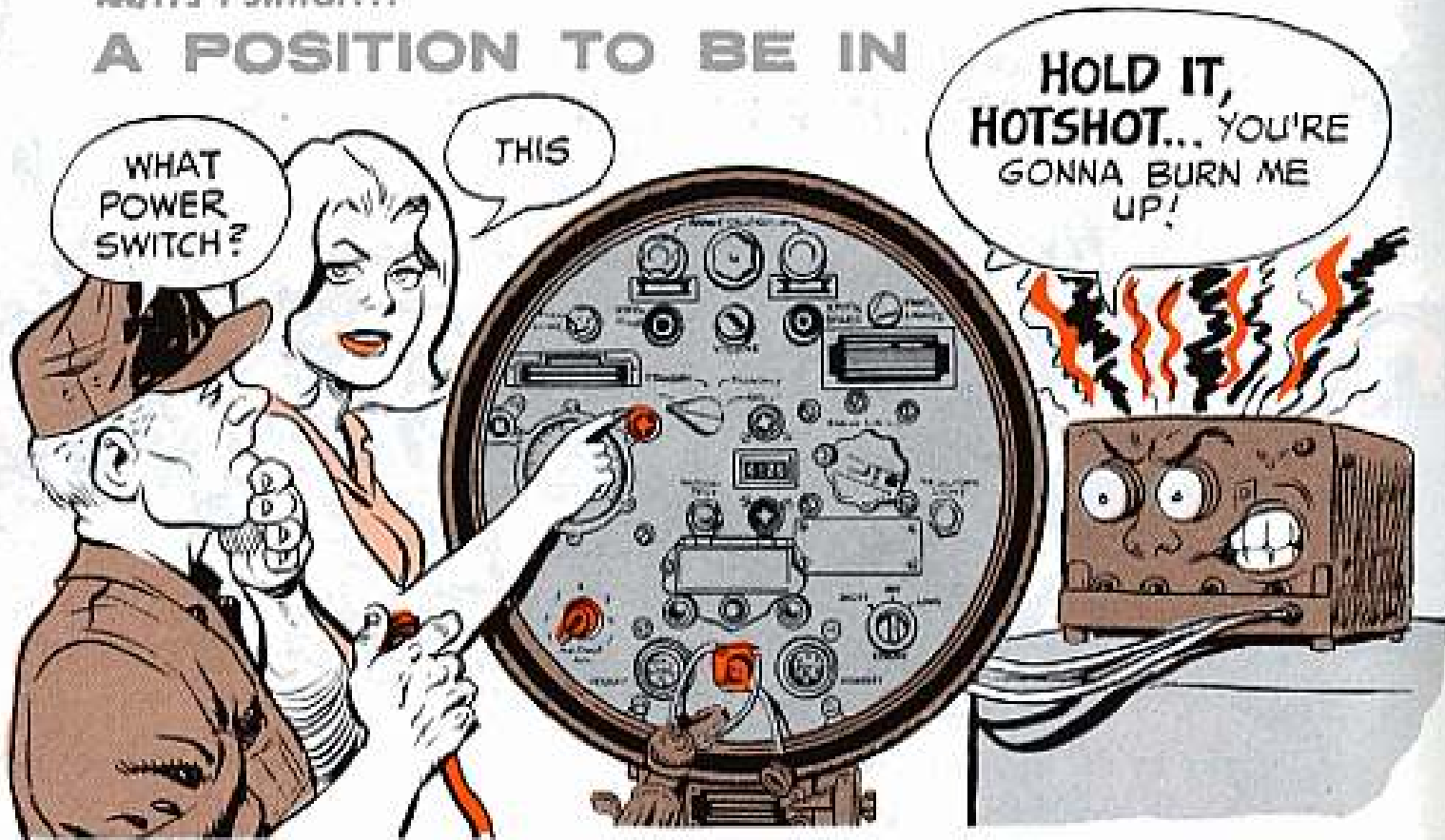


Then, push the retainer down, and the connector is left up high enough to get a grip on to free the battery.

Replace the dead batteries with good ones and you're back in business.

. . . And, remember to do a little patient jiggling to install the first battery to mate the battery box connector with the battery. Forcing it'll crack or damage the battery socket.

A POSITION TO BE IN



So you have a hot-to-track AN/PPS-4() radar set and all that's needed is a hookup with a power-packed BB-422 ()/U nickel-cadmium battery.

But, hold one, Hank.

Before you make that power cable connection, roll an eyeball around the control panel switches.

Make sure the POWER switch is in the OFF position and the VOLTAGE ADJ switch is in the lowest position . . . No. 1.

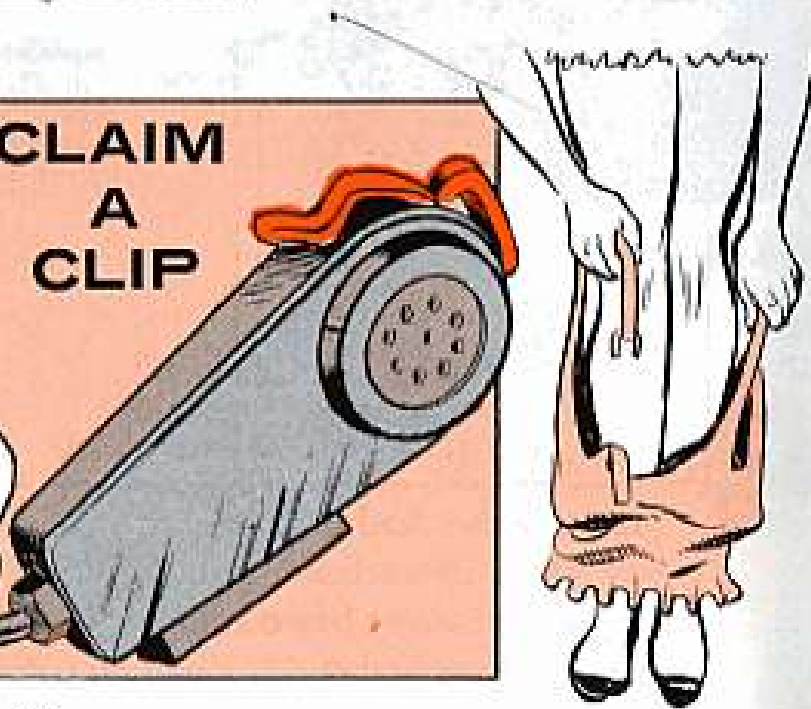
If you leave your radar set's power on and the VOLTAGE ADJ switch on the highest mark, the Q801 and Q802 transistors will be burned up. This'll leave that enemy movement locator limp and silent.

SO SHE HAULS OFF AN' BELTS ME — ALL I SAID WAS IF SHE'S SHORT A HANGER CLIP... FSN 5965-959-4910 ON PAGE 67 OF TB 750-911-1 (OCT 67) WOULD TAKE CARE OF HER PROBLEM.

CLAIM A CLIP



YOU WERE TALKIN' ABOUT A M-80/U MIKE CLIP, MAN!



AIR MOBILITY

AIRCRAFT
DATA
PLATES...

WHY'RE YOU
FOLLOWIN'
ME... I'M JUST
TAKIN' THIS IN
FOR REPAIR!

IT'S GOT A DATA
PLATE ON IT AND I
JUST WANNA BE
**SURE YOU
RETURN IT!**

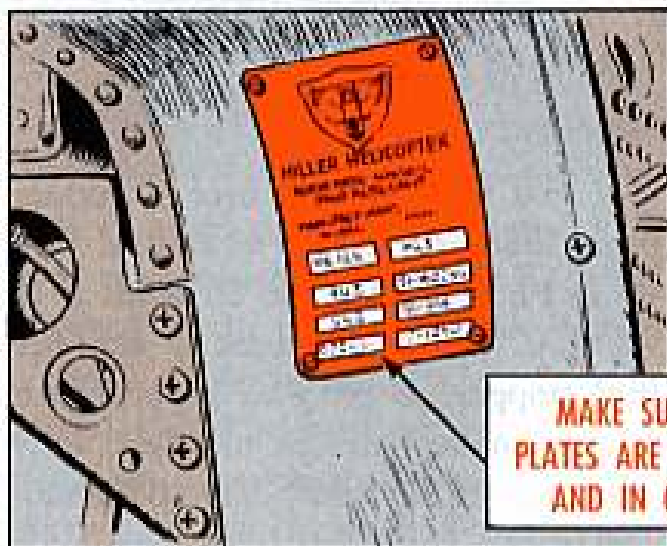
**PAMPER
... DON'T
TAMPER!**

The manufacturer's data plate on an Army aircraft is important and has got to be on the bird at all times. It carries the airframe serial number—the bird's identification—from assembly line to deep six time.

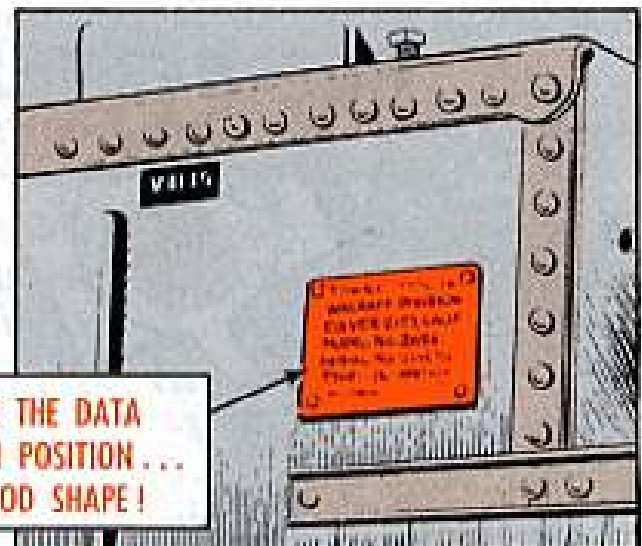
No matter where you find the plate attached you never tamper with it except at salvage time. O'course, you or your support unit may have to remove it during repairs, but make sure it gets put back on. Anytime you find the data

plate missing let your CO know . . . pronto.

If the data plate takes an enemy slug or is badly mutilated in an accident, turn in whatever is left to your maintenance officer. He'll send it by registered mail thru command channels to the U.S. Army Aviation Materiel Command, ATTN: AMSAV-F, St. Louis, Mo. 63166, with a letter request for a replacement plate.



**MAKE SURE THE DATA
PLATES ARE IN POSITION...
AND IN GOOD SHAPE!**





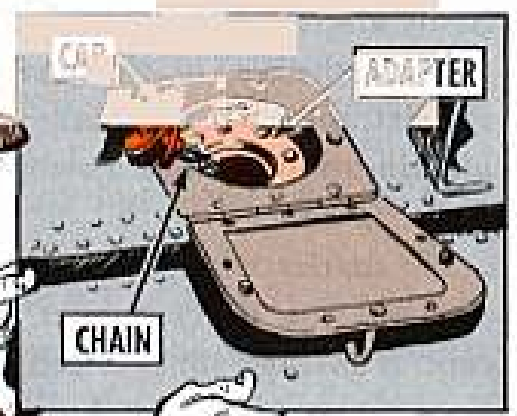
Dear Windy,
 We're losing our Raven (OH-23G) fuel tank caps. P-manuals list a filler unit but we can't order or put it together unless we have parts number of cap and adapter assemblies. Can you help?
 SP5 W. L. W.

Dear Specialist W. L. W.,

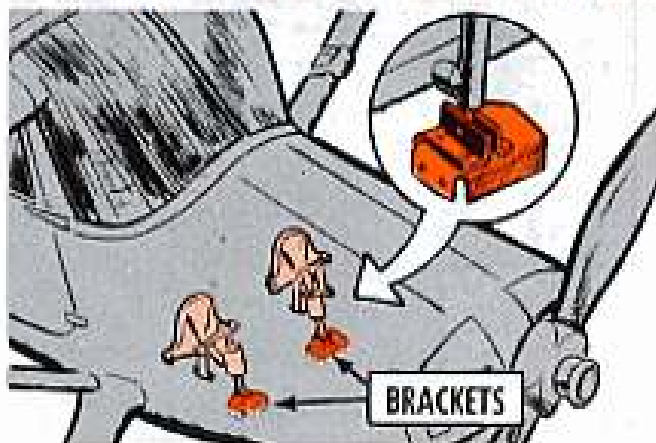
Here's what you're looking for:

- | | | |
|----------------|-------------------|--------------|
| Cap assembly | FSN 1560-076-6043 | P/N 436-2 |
| Chain assembly | FSN 1560-076-6044 | P/N 417-20-9 |
| Adapter, cap | FSN 1560-167-8264 | P/N 436-12 |

Windy



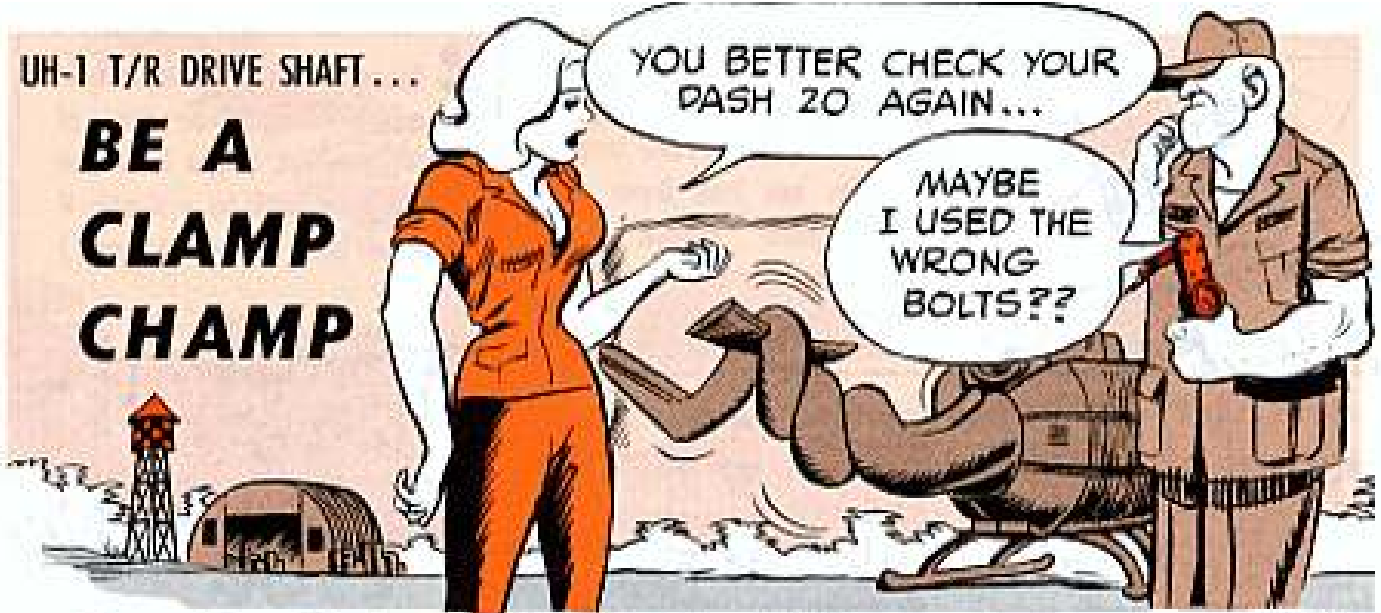
GET BETTER BRACKETS



If you find cracked, broken rudder pedal brackets on your next Bird Dog (O-1) PE, don't replace 'em with P/N O613007-102. You want a sure-fire bird stopper, so get your support unit to put on new design brackets, P/N 0600520-15LH and P/N 0600520-16RH.

UH-1 T/R DRIVE SHAFT ...

BE A CLAMP CHAMP



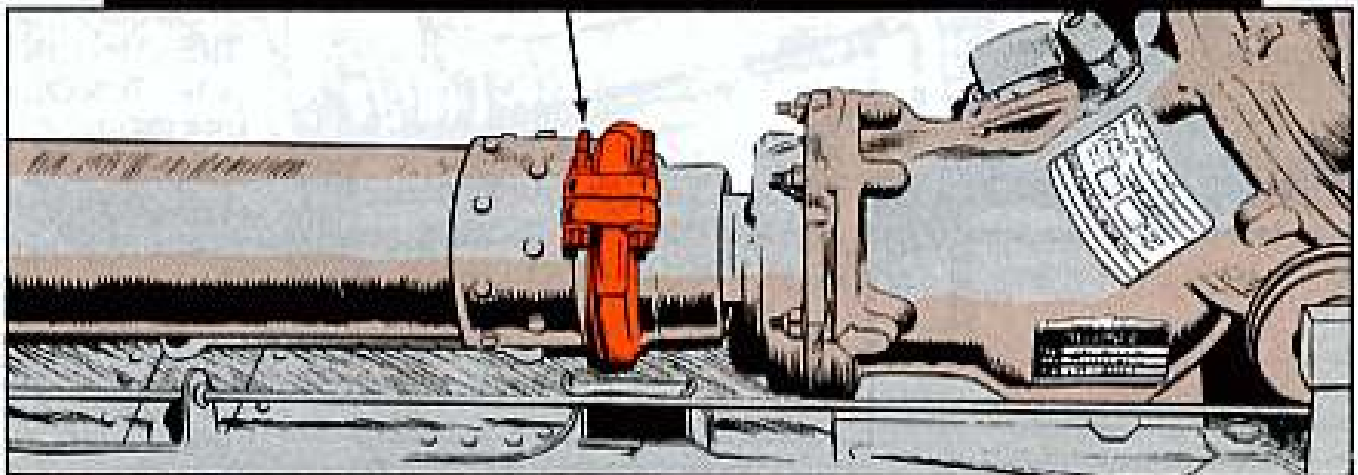
Every fling-wing knucklebuster has battled his temper boo-coo times while lining up and torquing down the clamp assemblies holding the Huey's tail rotor drive shaft.

A few PM tips will turn your sizzle to simmer and make you the champion clamp assembly man in your outfit. The pilot'll appreciate it, too!

Some clamps are steel, some aluminum, so start with metal-matching clamp assemblies. Now take a close look at the assembly. If one of the halves is busted, banged up, scarred, or cracked, get a complete clamp. Never use un-matched clamp halves.

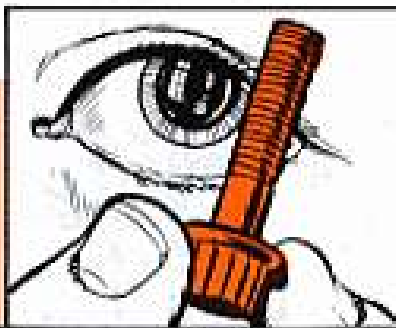
Use a matching bolt and nut combination. Self-locking nut, P/N 52Z1835-48 and machine bolt, P/N MS9089-24, match up great.

Be sure to use the same P/N nut on all clamp assembly bolts. Mixing different weight nuts can cause vibrations that'll rattle your bird something fierce.



You might get a substitute nut, P/N H22-4, from supply. If so, just don't use it on the same clamp with the 52Z1835-48 nut. No mocky-nicky nut/bolt deal allowed on any clamp, anytime, Podner.

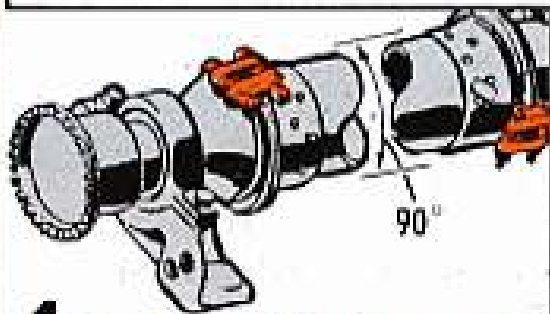
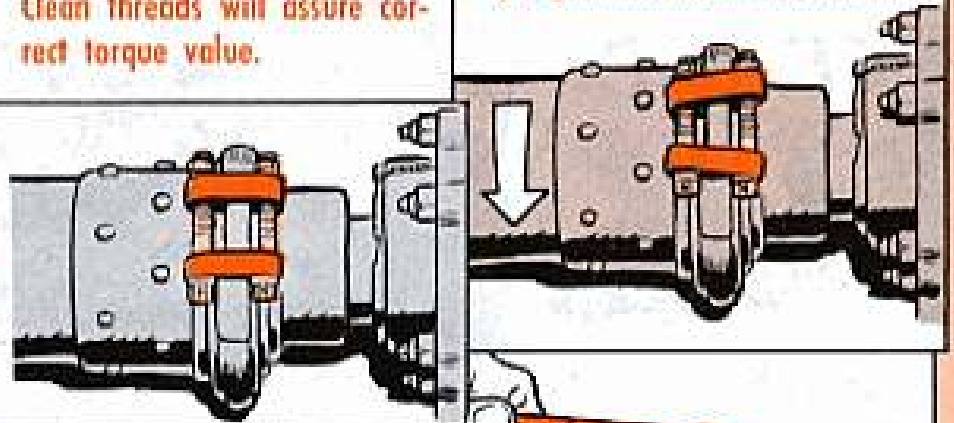
With a copy of the -20 in your mitts, start working at the 90° tail rotor gear box and work toward the transmission. Starting on the tail rotor end means that the main rotor blades don't turn every time you put torque on the clamps . . . or when you turn the shaft 90° to add another clamp assembly.



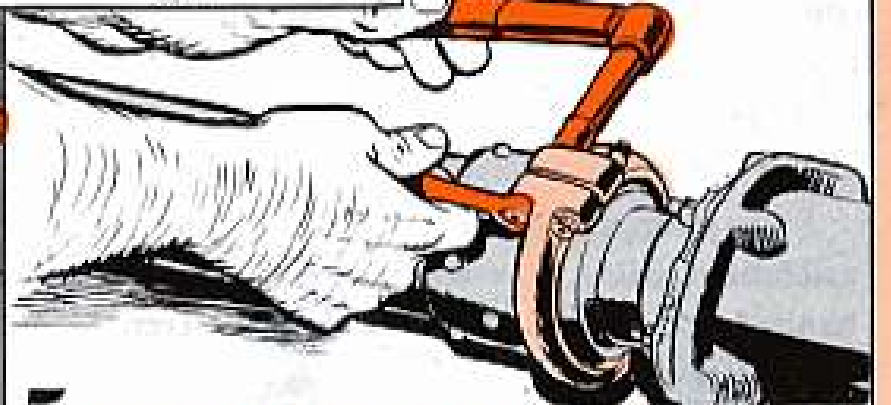
1 Before you install any new bolts and nuts, make sure the threads are free from nicks, burrs, paint, grease or oil. Clean threads will assure correct torque value.

2 Insert the 4 bolts with bolt heads pointing in direction of shaft rotation. (Right here you could give birth to a Murph if you put bolts in bassackwards.)

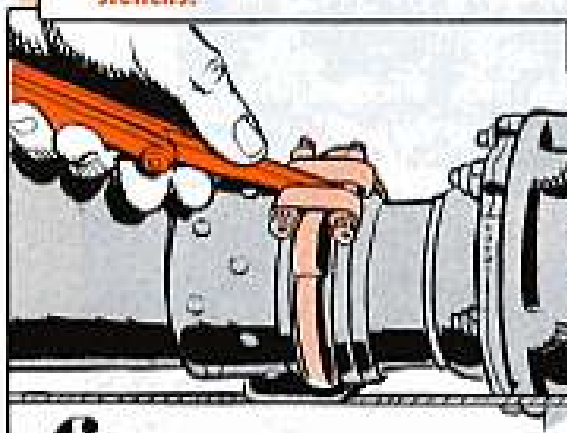
3 Adjust all nuts so that the clamp halves are kept spaced apart evenly.



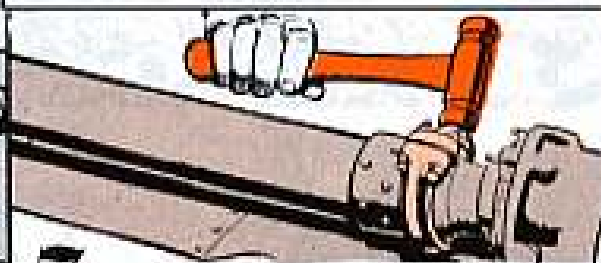
4 Space clamps 90 degrees apart — like it says on drive shaft cover stencils.



5 Now wrench tighten the nuts. All 4 get the same smooth, even-Stephen treatment with your torque wrench.



6 Keep your feeler gage handy to make sure the clamp gap stays the same.



7 Like as not, Tiger, you'll get some resistance before the nut/bolt is seated and/or mated. So-o-o-o, during the nut-tightening sequence, tap the clamp with a rubber mallet to keep the clamp halves even.

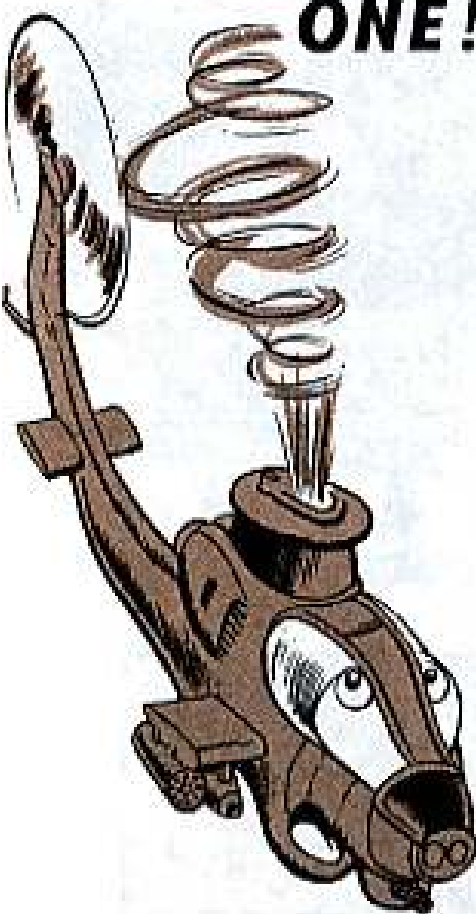
FRICION TORQUE IS THE AMOUNT OF TORQUE NEEDED TO THREAD THE FULL LENGTH OF SECURING NUTS ONTO ATTACHING BOLTS.

After tapping, set your torque wrench on 30 in-lbs plus friction torque, and turn the nut to the torque value. Use your feeler gage to keep the clamp halves spaced evenly apart as you draw the assembly halves closer together.

When minimum torque is reached — tap around outer edge of clamps for a good seal job and retorque bolt/nut.



**OOPS
—THERE
GOES
ANOTHER
ONE!**



That's right, HueyCobra wrenchbenders. Take a close look at the 4 main rotor trunnion housing retaining bolts. Some heads of these NAS bolts have sheared — and disappeared! 'Course a kaput bolt's not likely to come out while your bird's chasing Cong, but the trunnion housing tension will be gone!

So-o-o-o, on your next PMD, check the bolts. If they're P/N NAS1306-21 or 1306-23, replace 'em with internal wrenching, high-strength steel bolt, P/N MS20006-20, FSN 5306-639-7587.

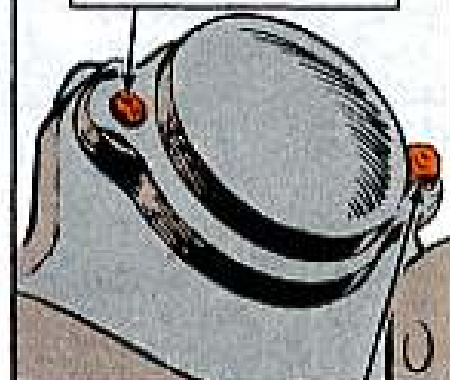


Don't forget that 8 washers and 4 nuts get changed, too. You want to add a new washer, P/N MS20002C6 or P/N 140-007-25-20C4, under each bolt head and under the nut, P/N MS21042L6.

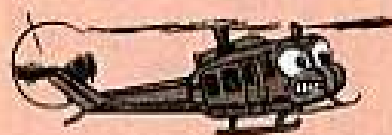
Hold one, tho, Podner.

Before you torque the new trunnion cap bolt to 160-190 in-lbs be sure you have the washer's countersunk side next to the bolt head. Now twist 'er, Mister!

**SHEARED BOLT HEAD.
REPLACE WITH BOLT
P/N MS20006-20
FSN 5306-639-7587**



**IF BOLT IS P/N NAS1306-21
OR NAS1306-2 REPLACE
WITH P/N MS20006-20
FSN 5306-639-7587**



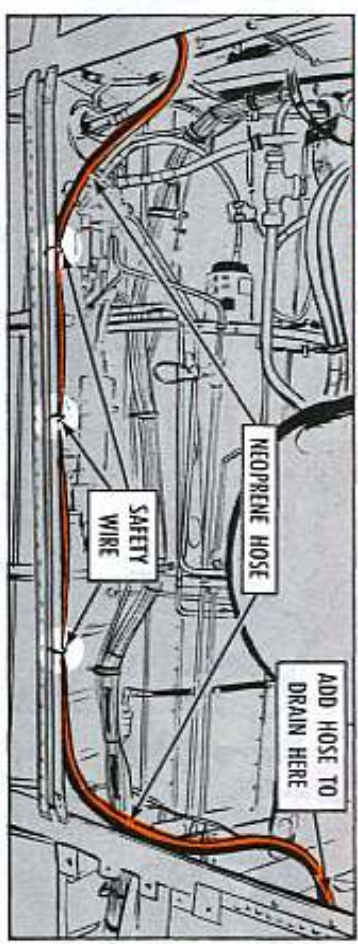
NO SLICING



The ARC-54 whip antenna on your Huey (UH-1C, D, H) has a habit of flexing into the tail rotor blades. So, make sure your bird has a wedge-type spacer between the antenna base and fin. The spacer tilts the antenna away from the blades — no baloney!! MWO 55-1500-200-20/6 (2 May 68) has the scoop.



For the combining transmission oil drip-out we add about 7 feet of 3/8-in ID neoprene hose, FSN 4720-278-1096, to the drain, and run it along the bulkhead—station 534—to the left side former — BL 25L — then off to station 594. Here we connect the hose to the APU / AGB motor pump drain tee line, P / N 114H3104. Safety wire holds it in place — and the oil stops off the ramp.



Our crews don't get an oil bath when pulling engine run-ups, and the Chinook's rear end and ramp stays clean and dry for our mechanics pulling maintenance and for troops getting on and off.

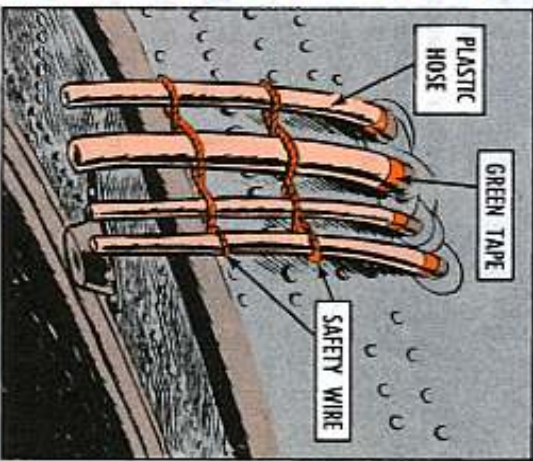
154th Avn Co
Fort Sill, Okla.

(Ed Note — Looks like you've saved a heap of clean-up and re-painting time plus a batch of busted backsides!)

Dear Editor,

Oil backup from our Chinook's engine overboard drains and the combining transmission oil drain used to keep the fuselages in a mess. It created a hazard to crew members and troops, too, because oil ran and dripped down onto the ramp area. A mis-step and somebody became a fall guy!

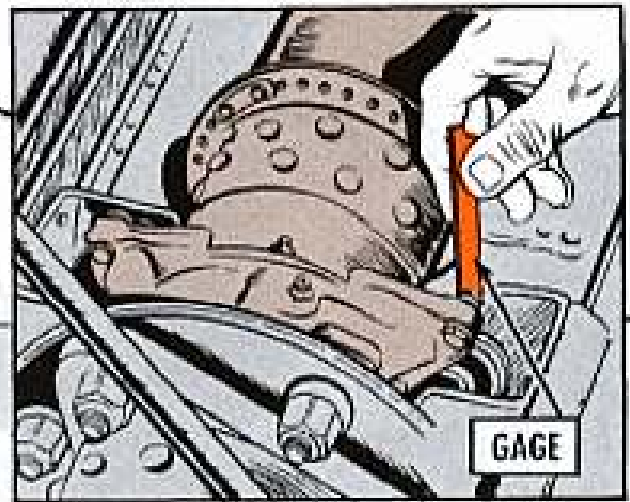
We've come up with a couple of ideas that keep the oil section clean and dry. We tape 6 to 8-in long scrap flex hose to each engine drain outlet with green tape. Fris-trance, a used 20-in oil sample tube, FSN 4710-933-4416, cut into 3 pieces, works fine on the 3/4-in drains. Takes 10 tubes— 6 for right hand engine, 4 for left. Tying each set of tubes together in a couple of places with .032-in double twist safety wire makes 'em stronger and easier to handle.



MAINTAIN THE FLOATS

Anytime you receive floats to take the place of aircraft tied up for extended DS or GS maintenance remember — those borrowed birds need regular preventive maintenance . . . the same PM you give your own.

TRY THIS MEASURING TOOL



BUT, WINDY,
I HAPPEN
TO HAVE A SET
OF NATURAL
GAGE TESTERS!



Dear Editor,

There's a bit of a measuring problem when installing the forward synchronizing drive shafts in the Chinook.

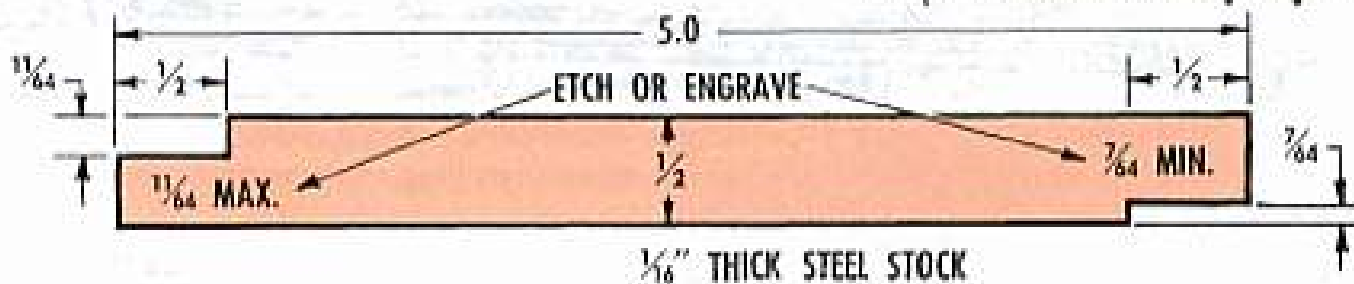
Installing and torquing bolt, P/N AN5H30, in resilient mount, P/N 107D3146-6, calls for 7/64 to 11/64 inch of the bolt to show thru the attaching nut.

It's almost impossible to fit a ruler or fine increment scale in there in order to come up with an accurate measurement.

So, here's a little measuring tool I had whipped up in the machine shop.

The tool works like a charm in determining how many washers should be added under the nut to get the right measurement.

Wallace B. Crawford
New Cumberland Army Depot



(Ed Note — Good going! Looks like a real handy tool for close quarters.)

NO CRACKS, PLEASE!



WHEN'D
WE LAST
CHECK OUR
ROTOR
BLADES?

Chinook tenders — be sure you make with the eddy current tester P/N 114GS226-1, on your CH-47 Able Model, P/N 114R1002-series rotor blades every intermediate and periodic. See the checklists for details . . . a cracked spar can really let you down!

EYE THIS BOOT FOR SIZE



Dear Editor,

Dust and sand thrown up by aircraft wheels on landing strips in the boonies is a real problem. The packing rings on our Beaver (U-6A) tail-wheel-strut piston really take it on the chin.

This stuff collects on the exposed piston on take-off. Upon landing the compressed piston pushes dirt into the packings. The result is damaged packings which will cause a leak or strut failure.

So, to save the packings we came up with this little boot. Support made it in a jiffy.

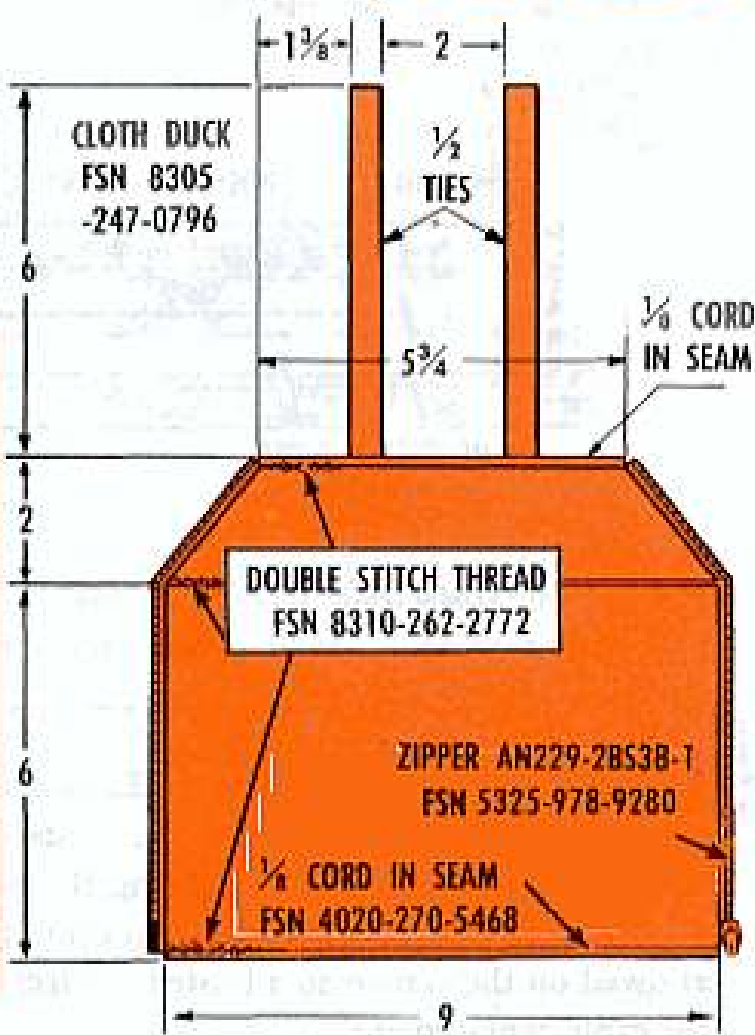
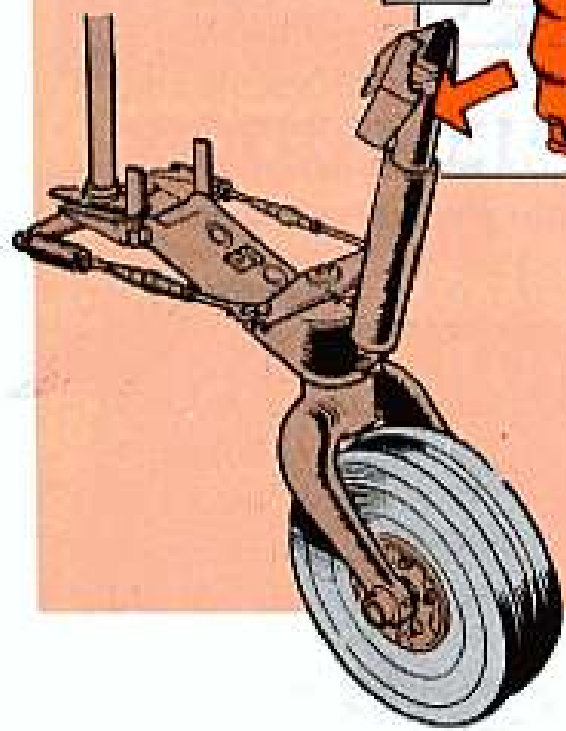
To install the boot we used a clamp at the lower part of the boot and tied the upper part of the boot around the top of the strut. It works wonders.

Floyd E. Caldwell
34th G. S. Group, USARV



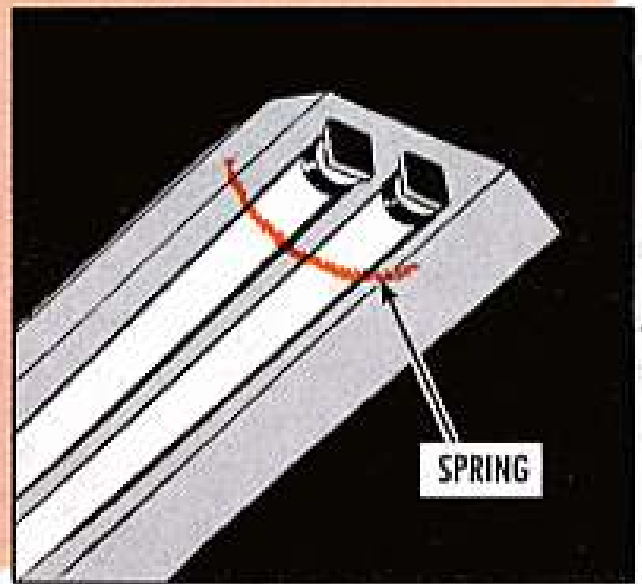
TIE BOOT AT
TOP OF STRUT...
USE CLAMP
P/N AN737W98,
FSN 4730-278-0416
AT BOTTOM.

BOOT
FITS
HERE



SPRING'S THE THING

ANYBODY GOT A FIX FOR THIS LIGHT FIXTURE?

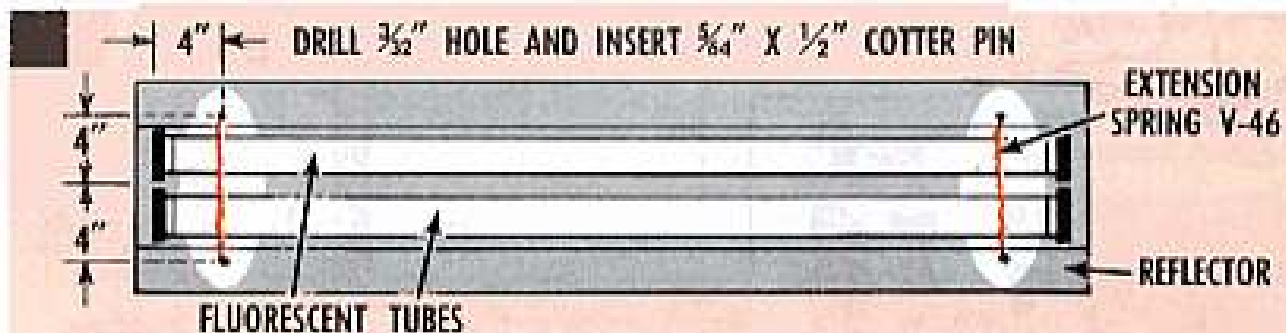


Dear Editor,

Your air mobile shelter, FSN 4920-900-8378 sure gets moved about in the field. Result: Busted fluorescent tubes that jar loose.

Here's a fix for keeping your tubes in place to save Uncle some moola and head off the broken glass hazard. Broken fluorescent tubes are real dangerous.

Just add two springs, P/N V-46, FSN 5340-682-1642, under tension, below the two tubes and you've got it made.



Joseph Franco
Granite City Army Depot, Ill.

(Ed Note—Outstanding! Newer shelters will have this problem solved but this fix can be used on all shelters now in the field.)

TO HOLD... NOT HOBBLE

That's right, bird wranglers. Never use the T-41B parking brake to hobble or stop a moving Mescalero. Hobbling the bird with the parking brake breaks or pulls the cable loose where it swages into the cable assembly. No adjustments are allowed on the system so a busted or stretched cable means a Mescalero red X'd for cable replacement.

GENERAL
& SUPPLY

FROZEN DECON

FOR THE M9, TRUCK-MOUNTED DECON COMPLETE DRAINING'S A MUST, ESPECIALLY IN COLD WEATHER... OTHERWISE THE PUMP HOUSING AND PIPES WILL CRACK!

And, without a pump, the rig is deadlined, natch. So, always open the pump drain valve, and then check under the truck to be sure all the water drains out of the pump.

The draining poop is spelled out in TM 3-4230-203-12 (Mar 65).

EQUIPMENT SCOOP

SO WHY NOT?

TM 9-500 (Sep 62), Ordnance Corps Equipment Data Sheets, makes a heavy package, but it's really worth lugging around. The book is loaded with info on equipment and components identification, specifications, capabilities, capacities, supply info, pubs references and pictures. It even tells you where to look for the equipment's BILL.

The fat, loose-leaf type TM has 4 changes.

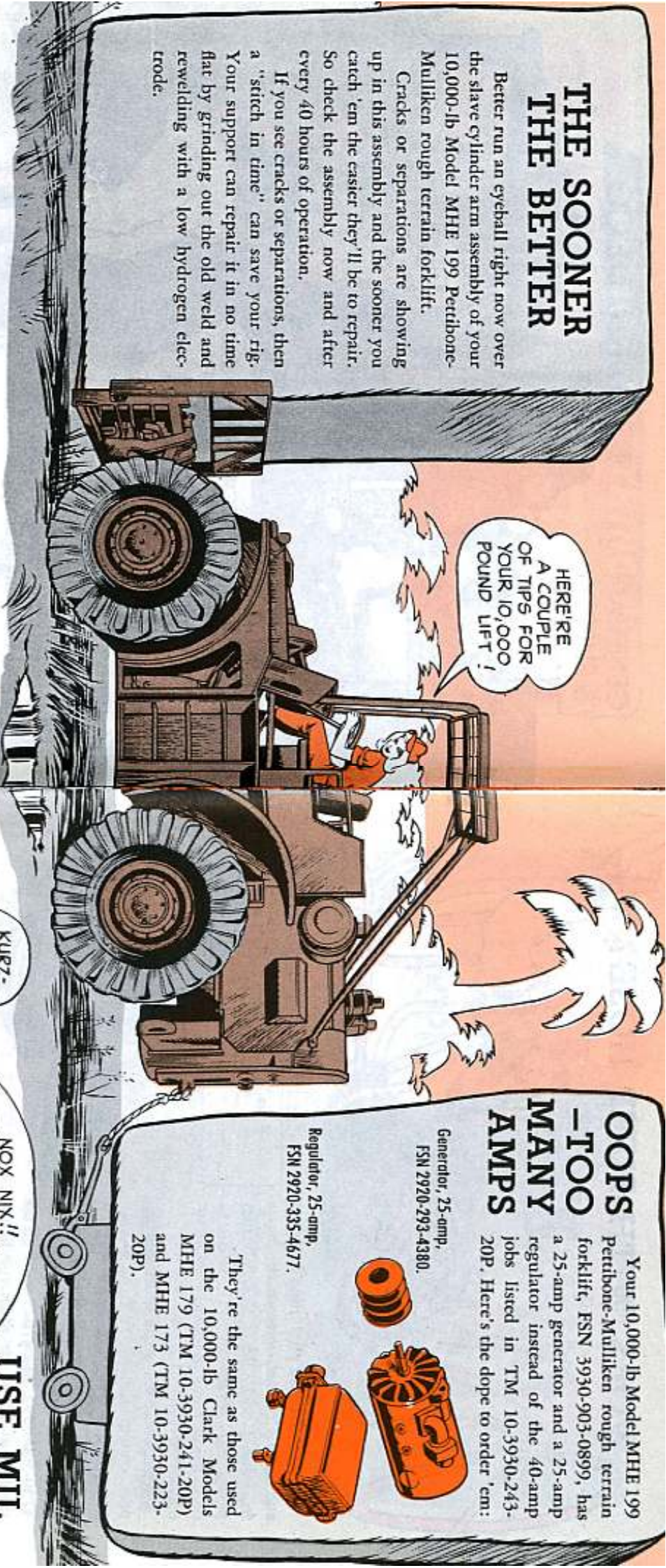
THE SOONER THE BETTER

Better run an eyeball right now over the slave cylinder arm assembly of your 10,000-lb Model MHE 199 Pertibone-Mulliken rough terrain forklift.

Cracks or separations are showing up in this assembly and the sooner you catch 'em the easier they'll be to repair. So check the assembly now and after every 40 hours of operation.

If you see cracks or separations, then a "stitch in time" can save your rig. Your support can repair it in no time flat by grinding out the old weld and rewelding with a low hydrogen electrode.

HERE'RE A COUPLE OF TIPS FOR YOUR 10,000 POUND LIFT!



OOPS -TOO MANY AMPS

Your 10,000-lb Model MHE 199 Pertibone-Mulliken rough terrain forklift, FSN 3930-903-0899, has a 25-amp generator and a 25-amp regulator instead of the 40-amp jobs listed in TM 10-3930-243-20P. Here's the dope to order 'em:

Generator, 25-amp,
FSN 2920-293-4380.

Regulator, 25-amp,
FSN 2920-335-4677.



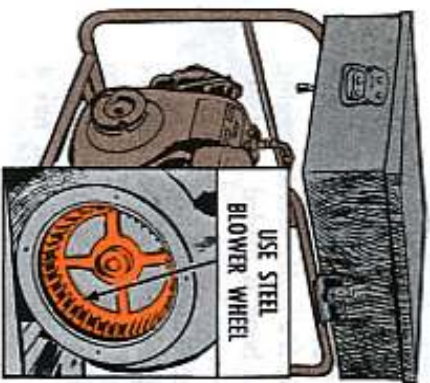
They're the same as those used on the 10,000-lb Clark Models MHE 179 (TM 10-3930-241-20P) and MHE 173 (TM 10-3930-223-20P).

DELOUSER WHEEL DEAL

To make sure your Model 252 QM Johnson de-lousing equipment, FSN 4230-889-2315, will do its job, replace the aluminum blower wheel with a new steel one. The aluminum wheel just won't hack it.

Your support unit can get the steel wheels under FSN 4230-014-0410 from: Commanding General, U.S. Army Mobility Equipment Command, ATTN: Mtl-Strip A12, 4300 Goodfellow Boulevard, St. Louis, Missouri 63120.

Para 3-57 of your TM 10-4230-202-15 (Jan 67) gives you the scoop on removing and replacing the wheel.



? FERMONT ?

? KURZ-ROOT! ?

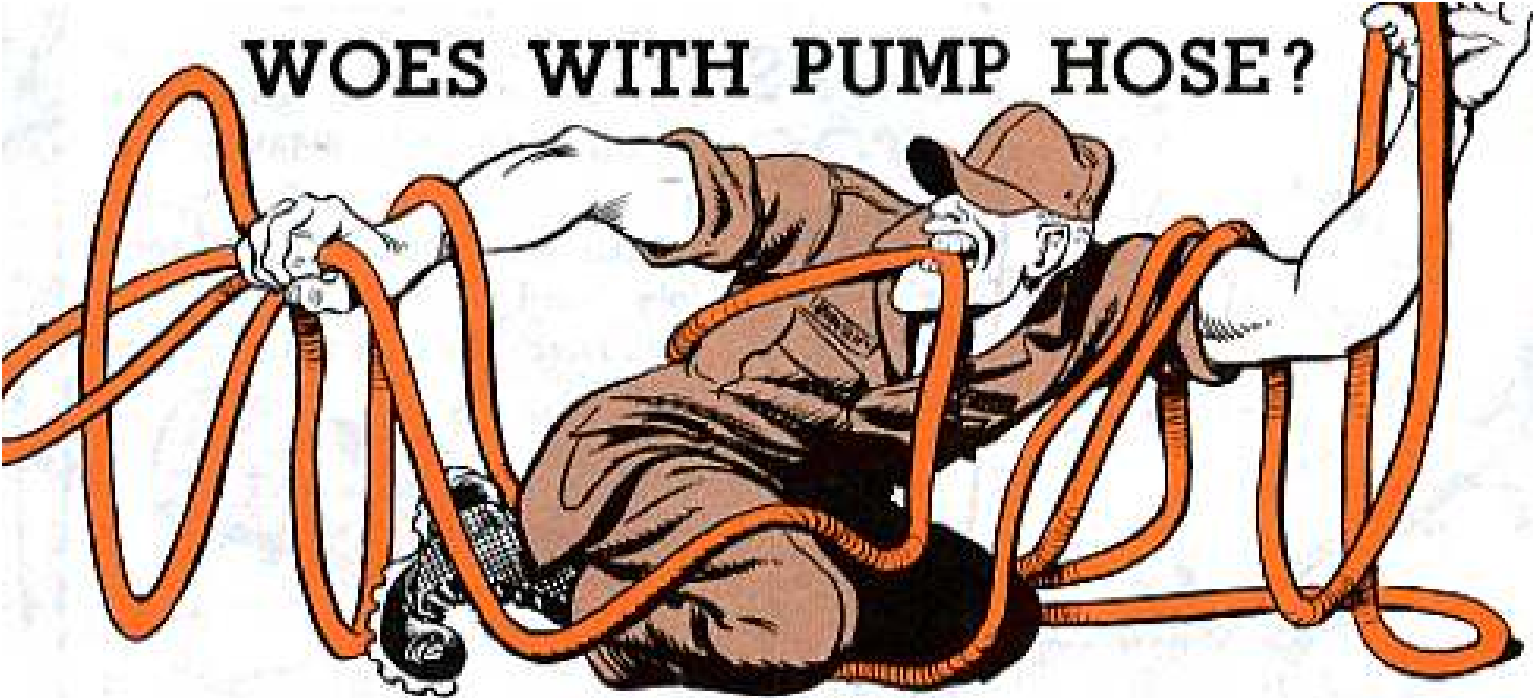
? BOGUE! ?

NOX NIX!! DON'T LET THEM GENERATOR SETS FOOL YOU...USE SF-10-O-MD IN BLOCK 5 OF YOUR DA 2407 AND IN ANY LOGS CALLING FOR "MODEL". DON'T USE THE MANUFACTURER'S MODEL NUMBER!

USE MIL DESIGN NUMBER



WOES WITH PUMP HOSE?

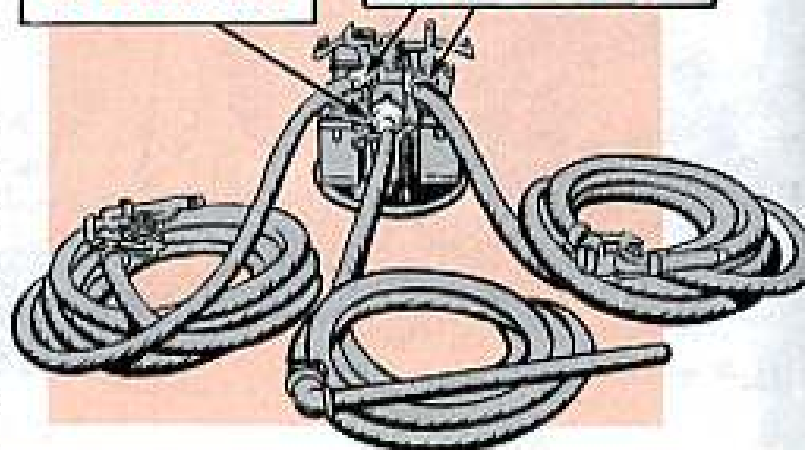


You say you can't get those fuel cans and drums cleaned because the hoses for your Model QM 2-28002 Barnes pump, FSN 4320-913-7131, won't fit on to the cleaning machine, FSN 4940-658-2889?

Well, order one male quick disconnect coupling half, FSN 4730-360-0592, MS 27021-9, to go on the pump end of the suction hose, and two female quick disconnect coupling halves, FSN 4730-360-0591, MS 27025-9, to go on the pump end of the discharge hoses.

MALE QUICK
DISCONNECT
ON SUCTION HOSE

FEMALE QUICK
DISCONNECTS ON
EACH DISCHARGE HOSE



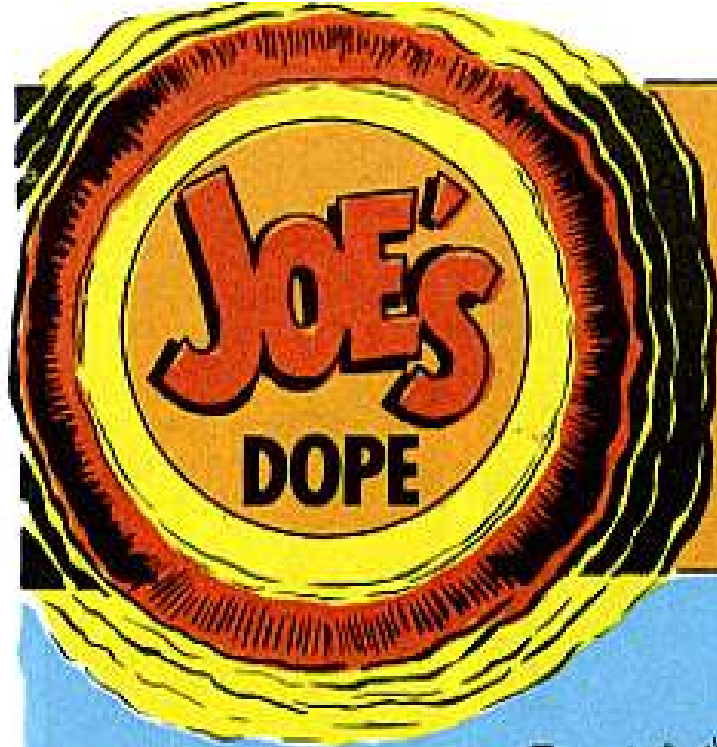
ATROPINE INJECTORS

Don't let the color arrangement throw you.

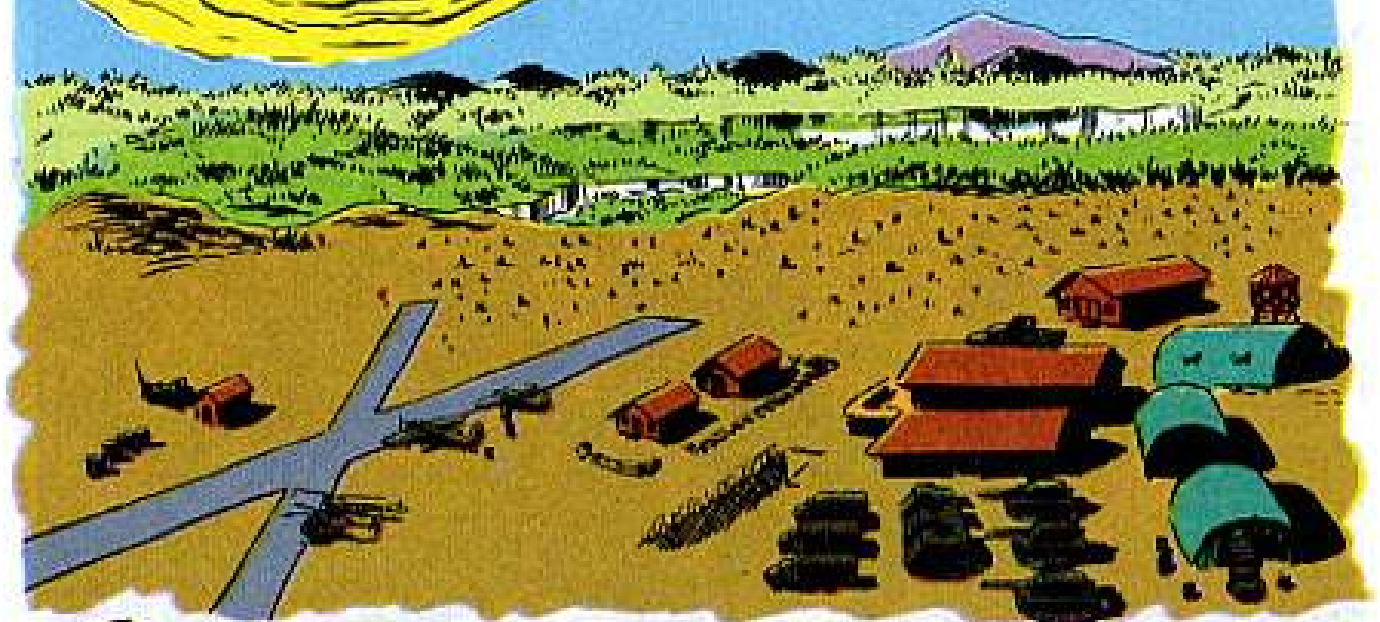
All FSN 6505-823-8041 and FSN 6505-926-9083, atropine injectors, regardless of color — white tube with red safety cap and blue trigger cap, or green tube with yellow safety cap and green trigger cap — have the same amount of atropine. And, they all work like it says in para 14d.1, Ch 2 (Apr 63) to FM 21-11 and para 20, TM 8-285, (Jan 68).

PROTECT YOUR ATROPINE

Are you losing or damaging your atropine injectors every time you drag the shoulder strap out of the pocket in your M17 mask carrier? You can save 'em easy like! Just attach the strap for good to its D-ring. That'll keep the strap handy for you and the injectors safe in a roomy pocket.



MWO
GO-GO



THE OUTFIT LAY READY TO SPRING... POISED LIKE SOME SLEEK JUNGLE ANIMAL... THE AIR WAS STILL... AND THE JUNGLE OUT BEYOND THE CLEARED FIELDS-OF-FIRE WAITED - SULLEN UNDER THE DELTA SUN... IT WAS HIGH NOON AT BOKU!

YEAH... LIKE IT'S BEEN HIGH NOON FOR THREE WEEKS NOW! WHEN'RE WE GONNA JUMP OFF??

DUNNO - DEPENDS ON THE ENEMY, I GUESS.





IF YOU'RE SO HOT-TO-TROT -- WHAT'S YER READINESS STATUS?

WELL, WE GOT A COUPLA VEHICLES DOWN... SOME MWO'S NOT APPLIED... NO SWEAT, MOSTLY OPERABLE STUFF!



MWO'S NOT APPLIED?! WHICH ONE'S? SPEAK UP MAN! Y'COULD BE TALKIN' ABOUT LIFE 'N' DEATH!

WHO KNOWS... 'N' EVEN WUZ I TO TRY-- GETTIN' KITS IS SOMETHIN' ELSE, MAN!!



DID I SAY SOMETHIN' WRONG?

WHY ARE YOU LOOKIN' AT ME THAT WAY?

GOOD GRIEF...

...YOU AIN'T...

...UP TO DATE...

...ON YOUR MWO'S?



TAKE HIM TO THE BRAIN BARN!

HELLO, CONNIE? WE'VE GOT AN EMERGENCY!

A NUMBER ONE OUTFIT WITH NUMBER 10 EQUIPMENT!

SHAME! SHAME!



JOE'S

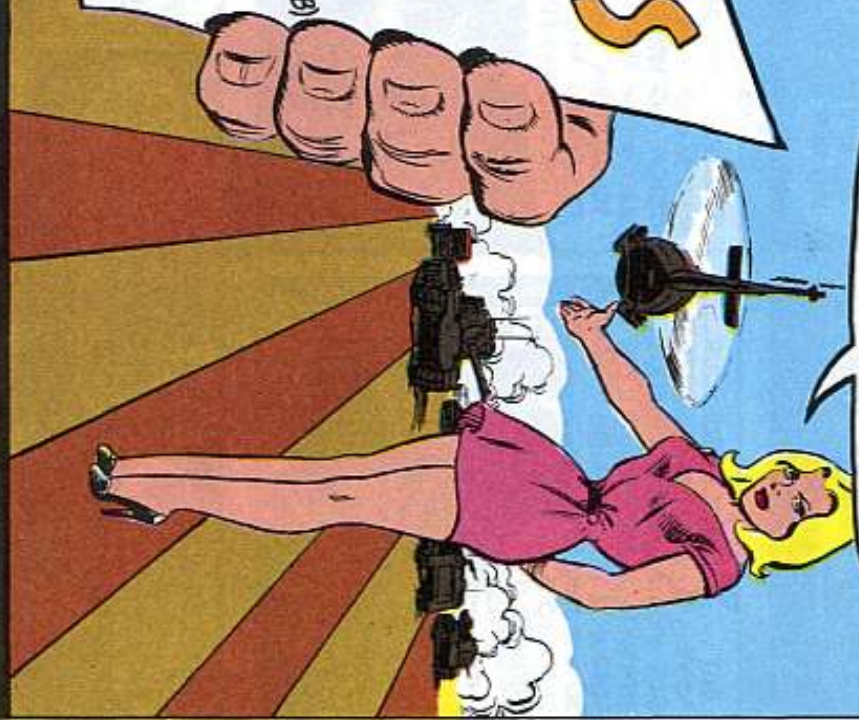
Dope S...

-JUST ONE SILLY MILLIMETER LONGER BUT...



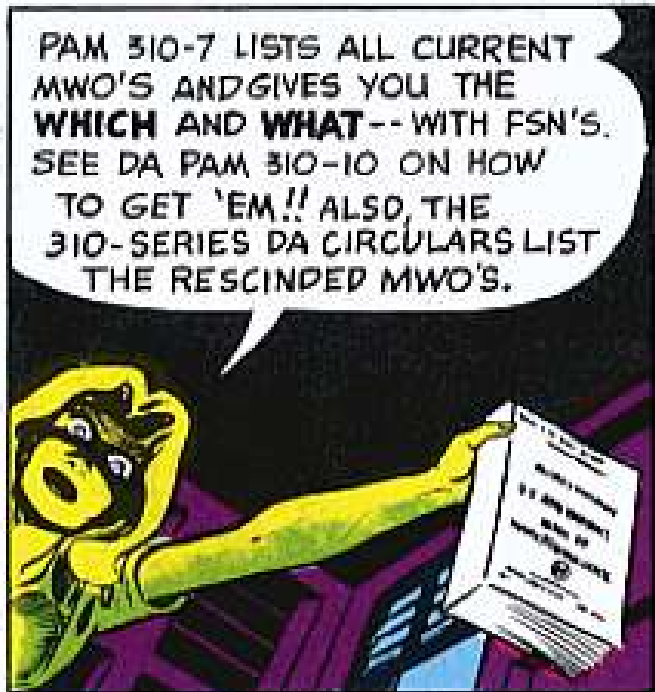
No matter how small or how big. An improvement on your fighting rig Will keep your stuff right- Save your neck in a fight- MWO's are ORDERS -you dig!!

MWO'S
'EM! 'EM! 'EM!
* GET RECORD OR DA 2409
* RECORD 'EM ON DA 2408-5
* APPLY 'EM ON DA 2407- AND RECORD THE
* ASAP OR ASK SUPPORT (WHEN IT'S THEIR JOB)
* REPORT 'EM ON DA 2401- AND RECORD THE
* ACTION ON DA 2409.



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

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



SET UP A **NEW** DA 2408-5 FOR THE END ITEM OR COMPONENT THAT THE MWO APPLIES TO!!

HOW MUCH TIME HAVE I GOT TO APPLY THE MWO?



THE **MWO** WILL **TELL** YOU... LIKE IF IT SAYS, **'URGENT'**

ON TOP, IT MEANS THAT ITEM IS **RED**, OR **DEADLINED** ... INOPERABLE ...

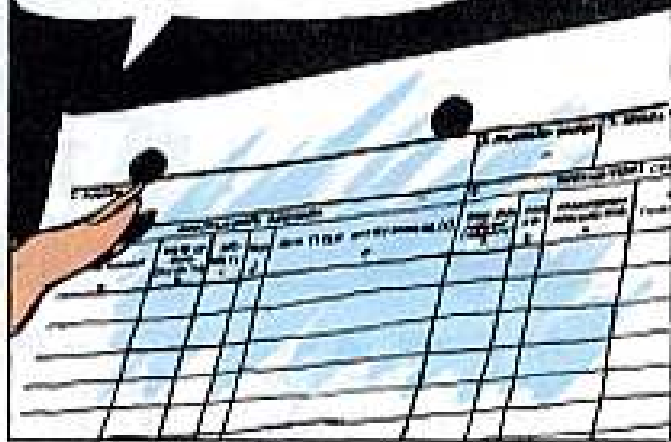
URGENT MWO'S ARE AIMED AT FIXING THOSE THINGS THAT COULD KILL YOU OR YOUR EQUIPMENT IF THEY'RE NOT FIXED. EVEN IF IT'S NOT URGENT GET IT APPLIED AS SOON AS POSSIBLE.



IF THE MWO IS FOR ORGANIZATIONAL MECHANICS TO APPLY... IT'LL HAVE A -20 (OR SOMETHING **LESS** THAN 30) AT THE END OF THE NUMBER... IN THIS CASE YOUR OUTFIT GETS THE KIT AND APPLIES IT!!



NOW, WHEN YOU'VE CLEANED UP THE BACKLOG AND YOUR EQUIPMENT IS NO. 1 AGAIN, YOU FINISH OFF THE 2408-5 OR 2409 YOU STARTED BY FILLING IN THE "MODIFICATION COMPLETED" BLOCK!



NOW **YOU REPORT** THE BIT ON A DA FORM 2407!



SUPPOSE THE MWO ACTION RESULTS IN AN END ITEM'S **CHANGE OF FSN**, WHAT DO I DO?



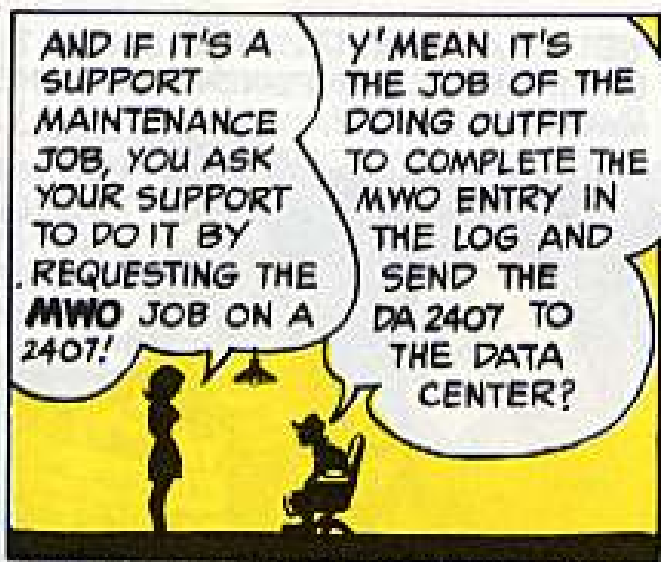
SUBMIT **2408-7** TO REPORT THE CHANGE IN ADDITION TO THE DA 2407.

SUPPOSE IT'S AN **MWO** THAT **SUPPORT** OR **DEPOT** DOES?





THEN, THE NUMBER ON THE UPPER RIGHT WILL BE - 30 OR HIGHER... BUT YOU STILL RECORD THE NEED FOR IT ON THE MODIFICATION SIDE OF THE 2408-5 OR 2409!



AND IF IT'S A SUPPORT MAINTENANCE JOB, YOU ASK YOUR SUPPORT TO DO IT BY REQUESTING THE MWO JOB ON A 2407!

Y'MEAN IT'S THE JOB OF THE DOING OUTFIT TO COMPLETE THE MWO ENTRY IN THE LOG AND SEND THE DA 2407 TO THE DATA CENTER?

IF IT'S A DEPOT-LEVEL MWO (-50), YOU ONLY RECORD IT ON THE 2408-5 OR 2409



RIGHT! AND EVEN IF THE MWO IS LABELED "NORMAL" YOU STILL CAN'T SIT ON YOUR DEAD PAST AND COAST!



GET IT DONE AS FAST AS YOU CAN!

RIGHT... AND I'M FIRST GONNA BONE UP ON THE DETAILS!

AT DAWN, A WEEK LATER - THE WHISTLE BLEW AND THE OUTFIT MOVED OUT... SNAKING ACROSS THE PADDIES AND INTO THE BOONIES BEYOND.



WELL, CONNIE, Y'SURE DID IT... EVERYTHING WE HAVE THAT FLYS, ROLLS, SHOOTS OR COMMUNICATES IS IN THE GREEN. WE'LL DO OKAY ON THIS OPERATION.



This is a selected list of recent pubs of interest to organizational maintenance personnel. The list is compiled from recent AG Distribution Centers Bulletins. For complete details see DA Pam 310-4, Ch 5 (Feb 68), TM's, TB's, etc.; DA Pam 310-6, Ch 3 (Apr 68), SC's and SM's; DA Pam 310-7 (Apr 68), MWO's.

TECHNICAL MANUALS

TM 3-1040-256-20P, Jul, XM45E1 Trkd Veh Mid Flame/thrower Service Unit.
 TM 3-4240-202-20P, Jul, CBR Mask, ABC-M17 Field.
 TM 5-3431-202-10 C1, Jul, Welding Equip.

TM 5-3805-209-15 C3, Jul, Earth Moving Equip Graders.
 TM 5-3805-224-25P C1, Jul, Earth Moving Equip Scrapers.
 TM 5-3895-230-20P C3, Jul, Bituminous Pavers.
 TM 5-3895-223-25P Jul, Aggregate Feeders.
 TM 5-4110-208-24P, Jul, 10,000 BTU Refrig Unit.
 TM 5-4120-210-15 C1, Jul, 50,000 BTU Air Conditioners.
 TM 5-4120-225-15 C1, Jul, 6,000 BTU Air Conditioners.
 TM 5-4120-228-15 C1, Jul, 9,000 BTU Air Conditioners.
 TM 5-4120-300-15, Jun, 36,000 BTU Skid Mt'd Air Conditioners.
 TM 5-4210-213-12, May, Fire Fighting Equip.
 TM 5-4310-300-15 C3, Jul, 15 CFM Compressors.
 TM 5-4310-220-20P C2, Jul, 210 CFM Compressors.
 TM 5-4310-227-15 C1, Jul, 15 CFM Compressors.
 TM 5-4310-252-15 C3, Jul, Under 5 CFM Air Compressors.
 TM 5-4310-277-15, Jan, 15 CFM Air Compressors.
 TM 5-4310-281-15, Jul, 5 CFM Air Compressors.
 TM 5-4520-200-12 C4, Jul, 400,000 BTU Space Heaters.
 TM 5-4520-200-25P, Jul, 400,000 BTU Gasoline Portable Duct Type Heater.
 TM 5-5420-207-ESC, May, M48A2 and M60A1 Launcher Tank Chassis Transporting.
 TM 5-6115-255-10 C4, Jul, 3 KW 60 Cyc Eng Drn Gen Sels.
 TM 5-6115-275-12 C1, Jul, 10 KW 60 Cyc Gen Sels.
 TM 5-6115-275-20P C2, Jul, 10 KW 60 Cyc Gen Sels.
 TM 5-6115-292-25P C1, Jul, 150 KW & Up Elec Gen Sels.
 TM 5-6115-319-15 C4, Jul, 150 KW & Up Eng Drn Gen Sels.
 TM 5-6115-329-15, Jun, 0.5 KW AC 0.5 KW 28V DC GED Gen Sels.
 TM 5-6115-332-25P, Jul, 5 KW 60 Cyc Gen Sel.
 TM 5-6115-351-15, May, GED Gen Sel Air Cooled 7.5 KW 28 V DC.
 TM 5-6115-440-15, Jun, 7.5 KW DC Gen Sels.
 TM 5-6665-203-12 C1, Jul, Load Mine Detecting.
 TM 5-6675-220-15P C2, Jul, Surveying Equip.
 TM 9-1005-224-25 C1, Jul, M60 7.62-MM MG and M122 Mount.
 TM 9-1010-205-24P, Jun, M79 40-MM Grenade Launcher.
 TM 9-1055-217-ESC, Jun, 2.75-Inch XM3 Rocket Launcher.
 TM 9-2320-218-ESC/1 C2, Jun, M151 1/2 Ton Utility Truck.
 TM 9-2330-251-14P C4, Jul, M569 M569B1 M416 M416B 1 1/2 Ton Trailers and M762 3/4 Ton Flatbed Trailer.
 TM 9-2350-224-20 C4, Jun, M48A3 Tank.
 TM 10-1670-219-23P C1, Jul, Personnel Parachute.
 TM 10-5410-222-23, Jun, Inflatable Shelter W/Airlock Aircorncraft Mfg Co.

Mdl S1 W2.
 TM 11-1520-211-20 C1, May, UH-1A-1B Electronic Equip Configuration.
 TM 11-5820-222-10 C9, Jul, AN/YRC-24 and AN/TRC-68 Radio Sels.
 TM 11-5895-267-15 C1, Jul, AN/TRC-108.
 TM 11-5895-206-25P, Jul, AN/GRA-95 Antenna Group.
 TM 11-5985-296-15, Jun, AN/TRC-91 and AN/TRC-146 Radio Sels, Antenna Group AN/GRA 105.
 TM 11-6730-237-15, Jun, Still Picture XL-75 Camera System.
 TM 55-1510-201-20PMI & -20PMP, Jun, U-8.
 TM 55-1510-202-20P C1, Aug, O-1.
 TM 55-1510-203-20, C7, Jul, U-6.
 TM 55-1510-204-20P, Jul, OY-1.
 TM 55-1510-204-20PMD & -20PMI, Jun, OY-1.
 TM 55-1510-205-20 C7, Jul, U-1.
 TM 55-1510-209-20 C3, Jul, U-21.
 TM 55-1510-209-20P, Jul, U-21A.
 TM 55-1520-201-20 C11, Jul, UH-19.
 TM 55-1520-204-20 C7, Jun, OH-13.
 TM 55-1520-204-20 C9, Aug, OH-13.
 TM 55-1520-204-20PMP, Jun, OH-13.
 TM 55-1520-205-20 C10, Jul, CH-21.
 TM 55-1520-206-20 C11, Jul, OH-23.
 TM 55-1520-209-20-1, May, CH-47.
 TM 55-1520-209-20-2 C1, Jul, CH-47.
 TM 55-1520-209-20P-1 C6, Jul, CH-47.
 TM 55-1520-209-20PMD -20PMI & -20PMP, Jun, CH-47.
 TM 55-1520-210-20PMP, Jun, UH-1D.
 TM 55-1520-217-20 C4, Jun, CH-54A.
 TM 55-1520-217-20 C6, Jul, CH-54A.
 TM 55-1520-218-20 C4, Aug, UH-1A-1B.
 TM 55-1520-219-20 C6, Aug, UH-1A-1B.
 TM 55-1520-220-20 C6, Aug, UH-1C.
 TM 55-1520-221-20 C1, Jun, AH-1G.
 TM 55-1520-221-20 C2, Jul, AH-1G.
 TM 55-1520-221-20P, Jun, AH-1G.
 TM 55-1520-227-20 C3, Jun, CH-47.

LUBRICATION ORDERS

LO 3-1040-256-12, Jul, XM45E1 Trkd Veh Mid Flame Thrower Service Unit.
 LO 5-2805-259-12, Jun, Gas Eng 20 HP Mil Std Mdts.
 LO 5-3610-229-12-1, May, Webb-Fed Motor Drn Offset Printing Press.
 LO 5-3895-221-12-2, Jun, Dust Collecting Machine Paving Material.
 LO 5-4210-213-12, Jun, Fire Fighting Equip.
 LO 5-4310-277-12, Jun, 15 CFM Air Recip Compressor.
 LO 10-3610-200-13, May, Offset Printing Press.
 LO 10-3610-228-12, Jun, Printing and Repr.

MISCELLANEOUS

MWO 5-6100-201-20/1, Jul, 10 KW 60 Cyc Gen Sels.
 MWO 9-1240-273-40/1 C1, Jul, M108 and M109 Howitzers.
 TB 750-992-2 C4, Aug, All Rotor Wing.

Vehicles AND BRIDGES

WHO TAKES THE RAP FOR THIS LOAD CLASSIFICATION BONER?

YOU MEAN YOU WERE GUESSING WHEN YOU PUT THE LOAD CLASSIFICATION ON THAT VEHICLE? ... MAAAN!

WELL, IT'S THE DRIVER'S RESPONSIBILITY!

HEY, CONNIE, HOW DO WE GET THE FULL STORY ON THIS MILITARY VEHICLE LOAD CLASSIFICATION SYSTEM?

YOU NEED THESE.

AR 746-5 w/Ch 1 (Jun 66)
TB 746-93-1 w/Ch 1
(Aug 65) and Ch 2 (Jul 66)
FM 5-36 w/Ch 1 (Apr 66)

The FM change gives you the load class number for your vehicle. It has tables for tracked vehicles, half-tracked vehicles, wheeled vehicles, towed vehicles, construction equipment and standard combination vehicles (prime mover and trailer).

If your vehicle or combination vehicle is not listed in these tables, Para IV-1 Appendix IV, of the FM change tells you how to get the right dope from

the Combat Development Command Engineer Agency. And there are data charts showing exactly what info CDCEA has to have to figure your vehicle's load classification number.

WHAT? WHERE? WHEN?

Even when their vehicles are listed in those tables, some guys have a little trouble figuring out which number goes where on the vehicle, especially when they've got a combination vehicle — like a truck and trailer.

So let's see how it's done — using an M35 2-1/2-ton cargo truck and an M104 1-1/2-ton cargo trailer for examples, first as separate vehicles and then as a combination vehicle.

TRUCK ALONE — The basic load classification number is painted on the right door of the truck. This's based on the normal design payload — 2-1/2-tons. You use the number in the Class C column of Table IV-3. This number is 8.



Then, on the chargeable-number sign on the front of your truck, you carry the same number.



(Highway operation allows a bigger payload, up to 5 tons for the M35 2 1/2-ton truck, as you see in Weight Column II in Table IV-3. But this doesn't change your load class number. You use the class H number only if there's no class C number listed. If no H number either, you use the Class E number.)



TRAILER ALONE — Go to Table IV-4, Class Column C. Paint the number 4 on the right side of your M104 trailer. That's all there is to it for the trailer.

COMBINATION VEHICLE — For your M35 truck towing an M104 trailer, check Table IV-7. Here again you use the number in the class C column. So you change your front number to 10. And, since this's for a combination vehicle, you show the red letter C above the number.



If you've got any kind of setup that's not listed in the tables in Ch 1 to FM 5-36, go to CDCEA with all the info they call for to pinpoint the load classification numbers for your single vehicle or combination vehicle.

FOR TACTICAL OPERATIONS

THIS SYSTEM IS FOR **TACTICAL OPERATIONS** MOSTLY... LIKE WHERE BRIDGES ARE POSTED WITH MILITARY LOAD CLASS NUMBERS! OTHERWISE YOU CAN LEAVE THE CHANGEABLE-NUMBER SIGN BLANK.

UNLESS LOCAL SOP SAYS DIFFERENT.



NUMBERS 'N' TRUCKS

Dear Half-Mast,

After going over info on military load classification for standard vehicles in FM 5-36 w/Ch 1 and TB 746-93-1 w/Ch 1 & 2, I'm still hazy on a couple of points:

1. Which of our trucks get the front-mounted changeable number sign kit?
2. Which trucks have the load classification painted on the right door?

SFC N. B. O.

Dear Sergeant N. B. O.,

All of your trucks with a gross weight (vehicle plus load) of 3 tons or more carry the load class on the front. But you use the changeable number kit only if that load class is likely to be changed, like for switching from a single vehicle to a prime mover in a "combination vehicle."

If your truck (gross weight 3 tons or more) normally pulls a trailer with a rated payload of more than 1-1/2 tons (or lighter, if trailer has load class listed), you paint the truck's basic load classification figure on the right door of the truck. This does not apply to a truck unless it has a trailer normally assigned to it, even though the truck has a towing pintle.

Half-Mast

G749-SERIES 2½-TON TRUCKS ...

BLOCK & CHAIN WITH WINCH

Dear Half-Mast,

The BILL in Ch 7 (Feb 65) to TM 9-8024 sounds like all G749-series 2½-ton trucks get Block, Snatch, FSN 4730-833-7019, and Chain, Tow, FSN 4010-047-3902. But I suspect these 2 items are meant only for the trucks with front-mounted winches. Am I right?

ISG J. W. M.



Dear Sergeant J. W. M.,

You suspect right—only trucks with front-mounted winches get the snatch block and tow chain.

But, that FSN for the snatch block should be FSN 3940-625-6289. Even with that FSN you may get Block, Snatch, FSN 3940-609-8026. This's the block for G742-series 2-1/2-ton trucks with front winches, but it's OK for your G749-series, too.

Block, Snatch, FSN 3940-625-6289, isn't in TM 9-8024 yet, but you'll find it in Fed Cat C3940-IL-A (Mar 68).

Half-Mast

GET TO KNOW

YOUR TURBO

AH SO, WHY THE FLAP? THEY'RE USUALLY QUIETLY WORKING AWAY UNDER THE HOOD--DON'T NEED MUCH TENDING!

TRUE, BUT THERE'S A LOT OF THINGS WORTH KNOWING AND DOING IN ORDER TO KEEP HER RUNNING THAT WAY!



The turbocharger is lubed by the engine's oil. When the engine stops, the oil flow halts. But — and here's the clincher — the turbo is free-spinning. So when you shut down the engine, the turbocharger is still going around — at 35,000 to 50,000 RPM — but not much oil is being fed to it. That's rough on the turbocharger bearings. And the turbine blades also get real hot. All that heat can work its way down the shaft to the seals and shorten their life. A sudden shutdown can also cool the blades so fast that they'll warp.

What you want to do is let the engine run idle a few minutes before you shut it down. This brings the speed of the turbine down enough so that when you stop the engine the blades won't cool off too fast and the bearings won't miss the oil.

Starting right is just as important as stopping right. So give the oil a chance

to reach the turbocharger and lube the bearings by running the engine at idle for 3 to 5 minutes before you roar down the pike.

Overspeeding the turbo can also mess up the bearings or maybe tear up the turbo. You get oversped by lugging the engine with little or no let-up — unless your turbo has a waste gate to hold down the RPM's. A dirty air cleaner can also cause overspeeding as the turbo fights for air.

WATCH THOSE OIL LINES AND THEIR CONNECTIONS FOR LEAKS... OIL COMING OUT OF THE EXHAUST CAN MEAN THE TURBO SEAL HAS FAILED—GET SUPPORT TO LOOK IT OVER!

A noisy engine — like maybe clanging metal — and a whole lot of black exhaust smoke may mean turbo troubles.



Some turbocharged vehicles have a rain cap on the end of the exhaust. If the cap's missing and the vehicle is being moved on a low-bed trailer, air



pressure across the exhaust can turn the turbine. But no oil will be moving through the turbo. So replace the cap — or cover the exhaust with a tin can.



WEST COAST MIRRORS

Dear Half-Mast,

We've got command authorization (under AR 385-55) to outfit our G744-series 5-ton trucks with those big West Coast-type mirrors like are standard equipment for 10-ton trucks.

Several years ago I got some of these as shown in PS 145:
Mirror w/mounting bracket, right side, FSN 2540-575-8391

Mirror w/mounting bracket, left side, FSN 2540-575-8392

Now we're getting only the mounting brackets under those FSN's.

SSG J. A. H.

HAS THERE BEEN A SWITCH?... IF SO, HOW DO WE GET THE MIRRORS WITH THE BRACKETS?



Dear Sergeant J. A. H.,

There were mirrors w/mounting brackets packaged under those FSN's at one time (and they're still cropping up from older stocks), but they should come separately, like so:



This mirror goes with either bracket so you'll need 2 of 'em . . . for both sides of the truck.

The mirror and brackets are listed in Fed Cat C2540-IL-A (Jan 68).

There is a special mirror-with-bracket being designed for 5-ton trucks. It'll be similar to that setup for 10-ton trucks.

Half-Mast

LUBE CHART NEEDLE



Those needle bearing U joints in your 1/4-ton M151 can rust out faster than you can say, "not lubed", Which is a pretty good reason why you want to give the lubrication chart the once-over when you make with the grease gun. You wouldn't want to miss any of those ump-teen fittings and without the LO in hand they're harder to find than a needle in a haystack.

THE CLUTCH KILLER

Look out for the clutch-rod butcher!

He's the guy who hacksaws a hunk off the clutch-control rod on a G742-series 2-1/2-ton truck. He's a well-meaning guy — he thinks he's saving Uncle a buck by getting just a little more mileage out of the clutch facing.

But he's wrong. Know why? You guessed it — when that last bit of facing gives out, the metal clutch plate comes smack dab against the metal flywheel. Talk about hot! It's curtains for a good part of the clutch assembly — and probably the flywheel, too.

It's a pretty expensive way to save a buck.

So if you see a guy holdin' a hacksaw and eyeballin' the clutch-control rod, here's what you tell him:

When the rod's been adjusted so far that the end touches the clutch throw-out shaft lever, it's time to replace the clutch disk assembly.

Trying to get more adjustment by cutting some off the rod will only make big trouble out of little trouble.



REPLACEMENT TIME

HAS THE BUTCHER STRUCK?? HERE'S HOW YOU TELL: IF THE THREADED END OF ROD IS RAGGED OR RUSTY — GET SUSPICIOUS!

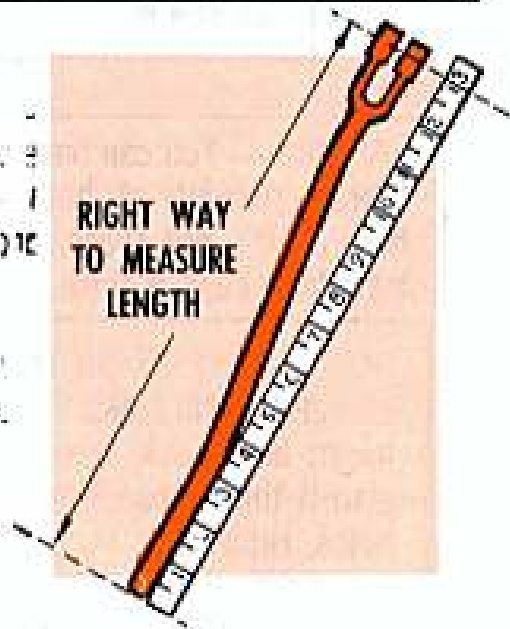


But, to be sure, measure the rod — not by following the curves, though. Measure in a straight line — from the threaded end to the center of the holes in the fixed yoke. Your rod must be 13 inches right on the button.

If your rod's shorter than 13 inches, get rid of it — get a new one: Rod, control, w/yoke, assy, FSN 2540-752-0977. It's in your TM 9-2320-209-20P (Jan 65).

And keep a sharp eye out for the clutch-rod butcher.

RIGHT WAY TO MEASURE LENGTH

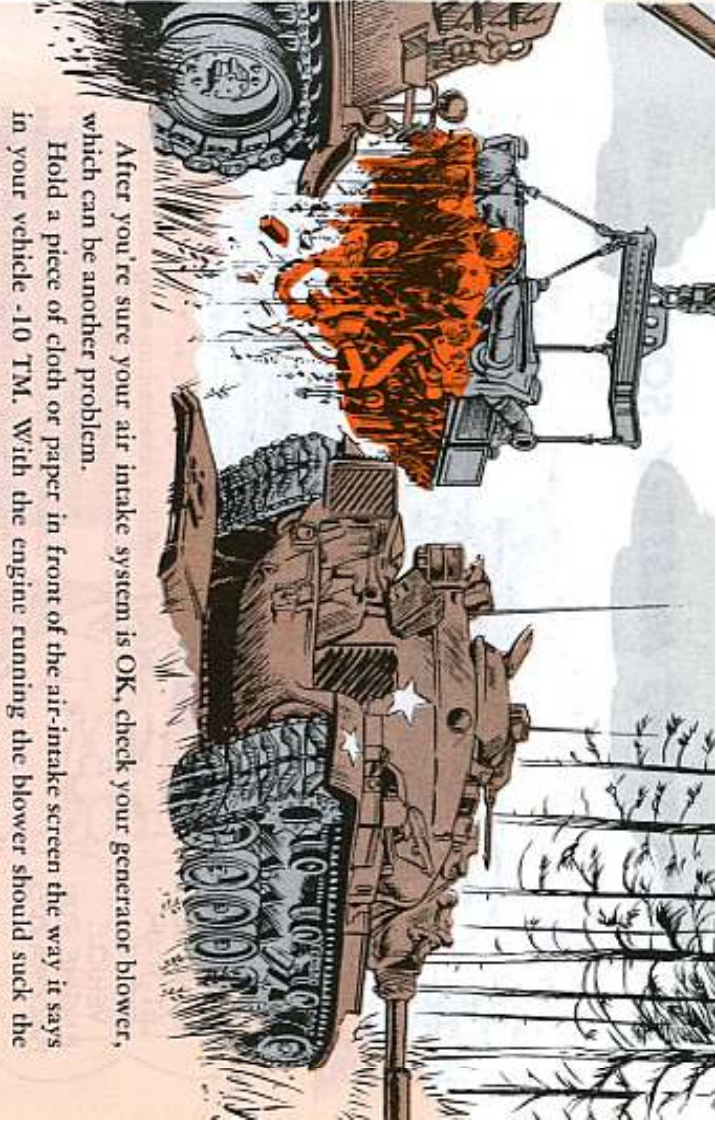


AT \$20,000 AN ENGINE...
THAT DIRT'S NOT CHEAP!

IT TAKES LESS THAN 8 OUNCES OF DIRT TO CHEW UP ONE OF THOSE EXPENSIVE AVDS-1790-2 OR AVDS-1790-2A TANK ENGINES. SO HERE'S HOW TO CHECK YOUR AIR INTAKE.

DIRT IN THE AIR INTAKE SYSTEM AGAIN!

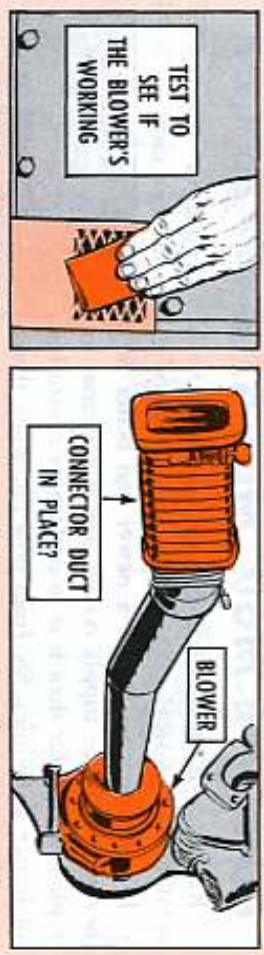
OOOHH!



After you're sure your air intake system is OK, check your generator blower, which can be another problem.

Hold a piece of cloth or paper in front of the air-intake screen the way it says in your vehicle -10 T.M. With the engine running the blower should suck the material against the screen. If not, stop your engine and call your mechanic. Make this test every time you start your engine.

This way you'll find out in time if the generator blower is not working and you can save your generator from overheating and burning out.



It might be that the blower motor is working even when there's no suction on the air-intake screen. This could happen if the mechanic forgot to reconnect the flexible connector of the generator duct after a power pack was replaced.

With the duct not connected the blower will draw in dirt and dust. Then it'll overheat and fail, and the generator will likely burn up too.

So, always test for suction on the generator air-intake screen and call for a mechanic if it's not there. This could save your generator.

The engine should not be operated with any defective or improperly mounted air intake parts.

The M60 tanks serial number 5 through 1249, should have the new generator air intake screen as outlined in MWO 9-2350-215-20/17.

BLOWER MOTORS—Hand feel. If they're not working, get your mechanic to repair or replace 'em.

AIR CLEANER OUTLET GASKET—No leaks. If necessary, order replacement.

AIR CLEANER DOOR GASKET—Not deformed. Rubber springs back after you press it.

AIR CLEANER ELEMENT—No rips, tears, or holes. Gasket not deformed or deteriorated.

PACKING—You can have a leak unless there's packing at both ends of the hose. If it's not there, order it. When installing, keep it flush.

HOSE ASSEMBLY (air cleaner to turbo-charger)—No leaks. If you think there might be a leak, have your mechanic give it the soapsuds test. If it has any holes, replace it.

CLAMPS—Present and tight. If you need one, order it.

BAFFLING MYSTERY SOLVED

Dear Half-Mast,

What causes the air filter baffles in our M60 tanks to sometimes get burned or warped?

MSG H. S. T.

THIS!

TO HEAD OFF DAMAGE, YOU NEVER WANT TO LET YOUR DIESEL VEHICLE ENGINE RUN BACKWARDS.



AIR WARMER —

FOR THE M60, M60A1 & M728 CEV

Repair parts support has changed a bit for the M3 electric air heater, FSN 4240-807-6856 used with the gas-particulate filter unit in your tank.

In a nutshell — there's a newer and better M3 heater now in the supply system, and it's cheaper to replace the heater than it is to replace its controller or heater assemblies. So, from now on, when those assemblies conk out, you ask for a new heater and turn in the old one to your support unit.

Also, the controller and heater assemblies for the old M3 heater won't work with those assemblies for the new heater. And, the only repair parts you're authorized at organizational level for the heater are attaching and minor parts like screws, washers, wire, indicator lamp and control knob.

TM 3-4240-240-25P is being changed, but for now the new supply scoop is in TB 750-942-2 (Nov 67).

Dear Sergeant H. S. T.,

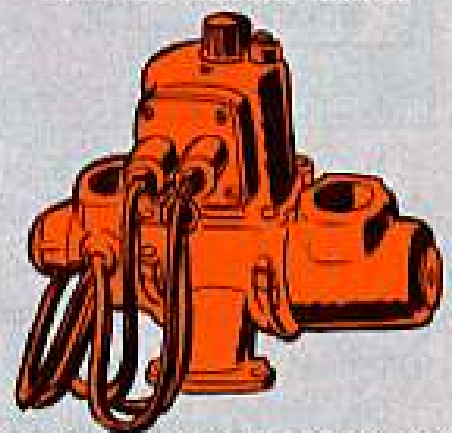
This can happen when a compression-ignition (diesel) engine runs backwards.

Air goes through the engine in a reverse direction — in at the exhausts and out through the air cleaners. The heat of the exhaust can warp and burn the baffles.

A diesel engine can start up and run backwards if you let the vehicle coast back down a hill in gear after the engine has conked out.

Half-Mast

ASK FOR THE NEW HEATER



REPLACE WITH FSN 4240-807-6856
WHEN NEEDED



M114A1 CARRIER...

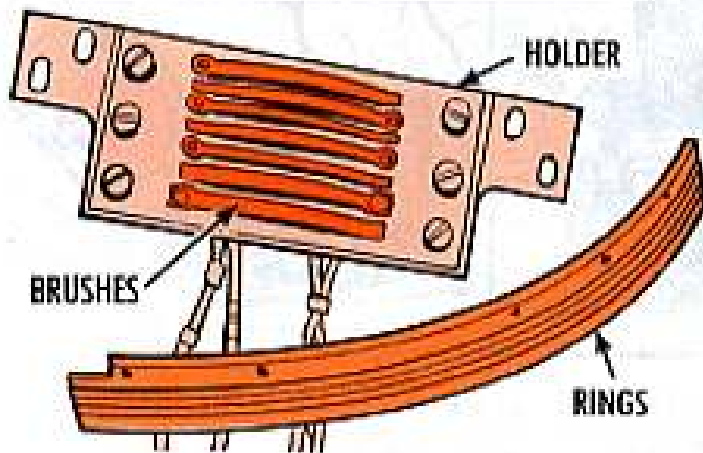


IF IT'S AN M114 YOU'RE JOCKEYING THRU THE BOONIES... HERE'S A **COUPOLA** (XM26) THINGS YOU SHOULD KNOW!



If you've got an M114A1 carrier (Serial 625 through 2519) with the XM26 cupola, burn spots on the brush holders and contact rings may be your hang-up.

To keep 'em healthy, clean holders and rings at each Q service and whenever else you get a build-up of dirt, oil or metal filings.



Use a fresh, dry (no oil) rag and clean the brushes real gentle — like you were dusting off a butterfly.



Move your rag the long way of the brushes. If you scrub up and down the little jokers will break for sure.

Check the circuit with a voltmeter like a real pro. Testing a circuit by any other means can cause burns either on you or on the rings.

Water on terminal boards and contact brushes can cause electrical shorts which can pit brushes, boards or both. Besides, water makes the wiring wear out quicker.

So-o-o-o, no water—even low pressure water—for cleaning the electrical gear.

Check on the alignment of board and brushes. If the brushes are not making contact right, have your support fix 'em.

The screws that hold the terminal board to the support assembly might get loose or slip. To make this less likely your support will apply sealant FSN 8030-081-2335 to the screws when they are assembled or adjusted.

FIRE EXTINGUISHER FIX

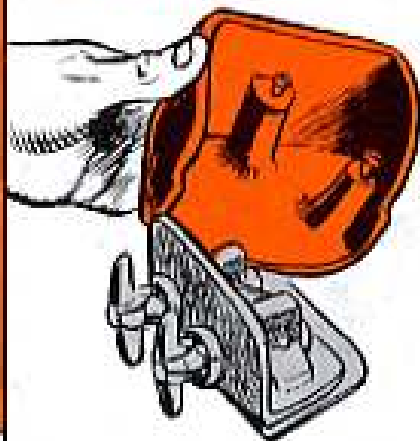


Listen up on this if you have an M60 or M60A1 tank or bridge launcher, an M48A3 or M103A2 tank or an M728 CEV with a serial number below 106.

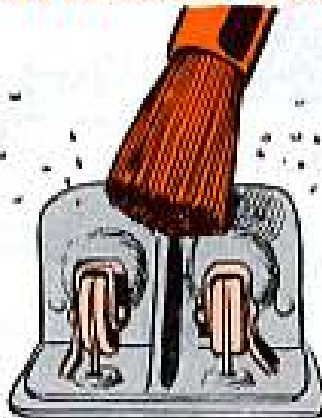
Mud and goop in the external fire extinguisher housing can rust the cables and pulleys so they won't work in an emergency.

To keep them in good shape get your cheerful company mechanic to do this every "Q" service:

1. Loosen the 3 screws and take off the cover.



2. Clean the pulleys, the cables and the inside of the cover.



3. Make sure the pulleys turn freely, and coat them and the cables with GAA.



4. Put waterproof sealer FSN 8030-234-9300 (or equivalent) on both the pulley cover and the pulley bracket on surfaces where they touch.



5. Replace cover and, if necessary, apply more sealer to make a continuous waterproof seal on all surfaces where the cover and bracket join. (NOTE: M728 CEV's with serial numbers above 106 do not need to be checked because they have no pulleys.)



YOU'D BETTER BELIEVE IT!

HMM
WADDYA
THINK,
BUD??



DON'T BE
A SUCKER...STAY
CLEAR... WE KNOW
AUTHORIZED
CLEANERS
GOT TO
BE GOOD!

If it's not authorized, you just can't be sure. Why risk your neck?

Right. When your TM says to use bore cleaner or P-C-111B carbon removing compound or SD dry cleaning solvent you can bet your bottom piaster it'll not only do the best job . . . it'll do it without hurting any part of your weapon. Uncle has a lot of sharp scientists working like ants to make sure of this.



On t'other hand, if you use some off-the-shelf unauthorized solutions, you might get what looks like a good clean-job, sure, but they might damage your rifle. Like . . . some of 'em contain ingredients that'll remove all lubricant from the springs and detents. And these springs and detents can't be lubed thoroughly without taking the rifle apart. If you don't have time or authority to do this . . . welcome trouble.

Some of the other unauthorized solutions contain chemicals that'd damage the aluminum and plastic parts of your weapon. Bad.

So, stick to the tried and true authorized stuff every time.

Here they are:

Cleaning Compound, Solvent, solution type, for cleaning bores of small arms and artillery, MIL-C-372—FSN 6850-224-6656 . . . 2-oz. plastic bottle; FSN 6850-224-6657 . . . 6-oz. can; FSN 6850-224-6663 . . . 1-gal. can.

BORE CLEANER'S
THE **ONLY** CLEANER
US ZAPMEN SHOULD
EVER USE FOR
GENERAL PURPOSE
CLEANING!

Carbon Removing Compound, P-C-111B—
FSN 6850-965-2332 . . . 5-gal. can.

You riflemen use this stuff for tough carbon cases only under the guidance of your armorer.

Dry Cleaning Solvent (SD) — FSN 6850-281-1985 . . . 1-gal. can.

This SD is strictly for you armorers. Use it as a rinse after P-C-111B to prepare metal surfaces prior to touch up. Normally you'd use it only when the M16A1's completely disassembled. But if you use it on an assembled rifle, be mighty careful to keep this solvent away from springs and detents.

M85 MACHINEGUN

CHAFTER

If you fire the M85 machinegun when its barrel is unlocked you could blow up the gun and maybe hurt yourself. Not much chance of this happening because it takes two separate goofs before there's any danger.

Still, it's something you want to know about if you make your living firing M85 machineguns.

JUST HOW MANY GOOFS ARE WE GUNNERS AUTHORIZED ?

1 GOOF

Operating the M85 with a missing or broken interlock.

Like you learned back in Basic, the interlock is a safety to keep the M85 from firing unless the barrel is in the locked position.



So, if that safety is missing or broken, you have no protection if you make the second goof.

2 GOOF

Firing the gun when the barrel is not securely locked.

Course you can't even do this unless you've already made the first goof. (There's no danger with a missing or broken interlock if you have the barrel securely locked during firing.)



TO HEAD OFF A DOUBLE GOOF CHECK YOUR INTERLOCK, YOUR BARREL LATCH AND YOUR BARREL LATCH LOCK.

To check the interlock, remove the barrel extension and pull the bolt back out of the way. Now you can finger the interlock.

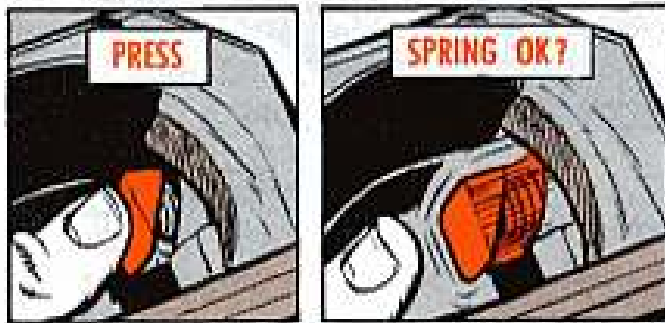
If the "hanging down part" is broken off you can tell right away what causes this damage to the interlock is letting the bolt slam into it.

CHECK THIS "HANGING DOWN" PART.

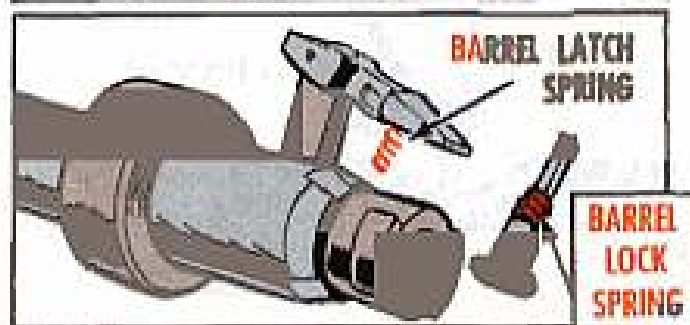


To prevent that all you have to do is make sure the barrel is fully locked in place before you ease the bolt forward. The interlock will then be tucked back out of the way and won't get broken off.

Check the interlock spring by pressing on the interlock and then letting go. If the spring won't make the interlock snap back into its "hanging down" position, have your armorer get a new spring.



Likewise with the springs on the barrel latch and the barrel latch lock — if they're missing or weak, tell your armorer. If the barrel latch is working right, you should hear a **CLICK** when the latch snaps into the barrel groove. (Don't be fooled by the bolt slamming noise, because it also makes a loud **CLICK**.)



If the barrel latch lock is working right its spring will shove it into the locked position when you let go of the latch and lock and the barrel latch snaps into the barrel groove.



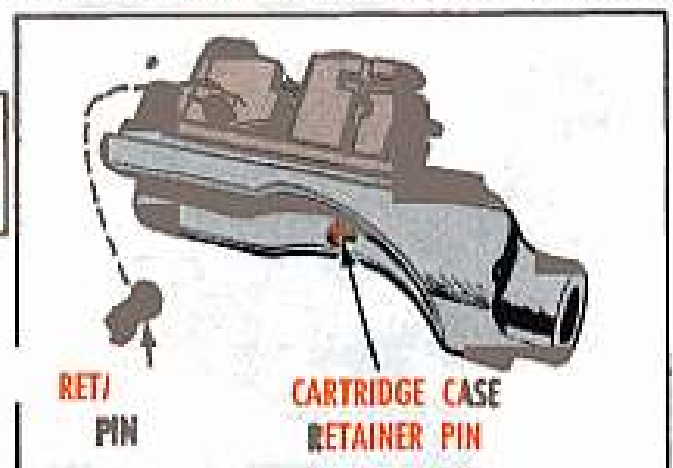
So check the springs on the interlock, the barrel latch and the barrel lock . . . and you'll have no worries about the barrel getting unlocked at the wrong time.

ANOTHER CAUTION

The retaining pin can drop out and get lost when you remove the barrel group from the barrel extension. Hold the bolt group upright and the pin won't slip out.

If you lose this pin and put the gun back together without it, the bolt block can move too far forward on the bolt slide. This will let the 2 cartridge case retainer pins line up with the holes in the bolt slide. One or both of these pins might slip through the holes and jam the gun so it'll stop firing.

If you've already lost your bolt retainer pin, use your spare bolt and get your armorer to order a retaining pin for your old bolt. It's FSN 5315-591-2082.





So you're having trouble with sighting equipment in your M60 or M60A1 tank.

Like busting the cable that connects the light control source to the lamp housing on the M34 or M36 periscope.

Seems the cable breaks when you remove the lamp housing. Not all the time, just enough to be downright annoying.

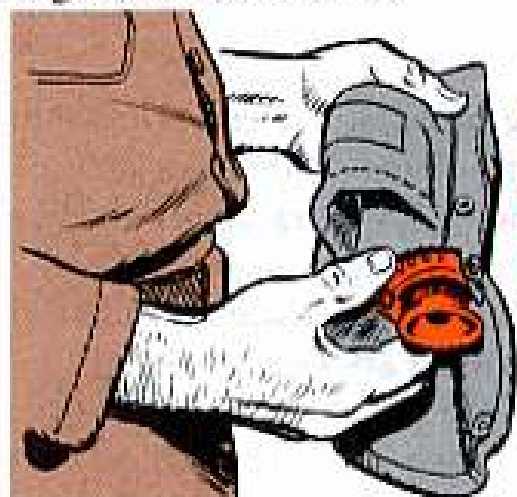
The answer's probably in your hands. Go easy when you use those mitts to take out the lamp housing. In other words, please not to yank on the cable.

SHAKE... BUT DON'T BREAK

A little shaking up might do a lot of good for your Polan or Varo model metascope assemblies . . . like when you're removin' the scope from its carrying case.

With the Polan model, first remove the light source from its pocket in the carrying case.

Then, with both models, hold the bottom of the carrying case, turn it upside down with one hand at the opening, and shake the case real easy like 'till the scope hangs down about an inch. Grip the scope between your fingers, and slide it out.



GIVE IT A GENTLE SHAKE, THEN GRIP IT FIRMLY AND SLIDE IT OUT.



Some troops have been known to grab the rubber eyeshield of the scope to pull it from the case. They usually end up with a piece of the eyeshield in one hand.

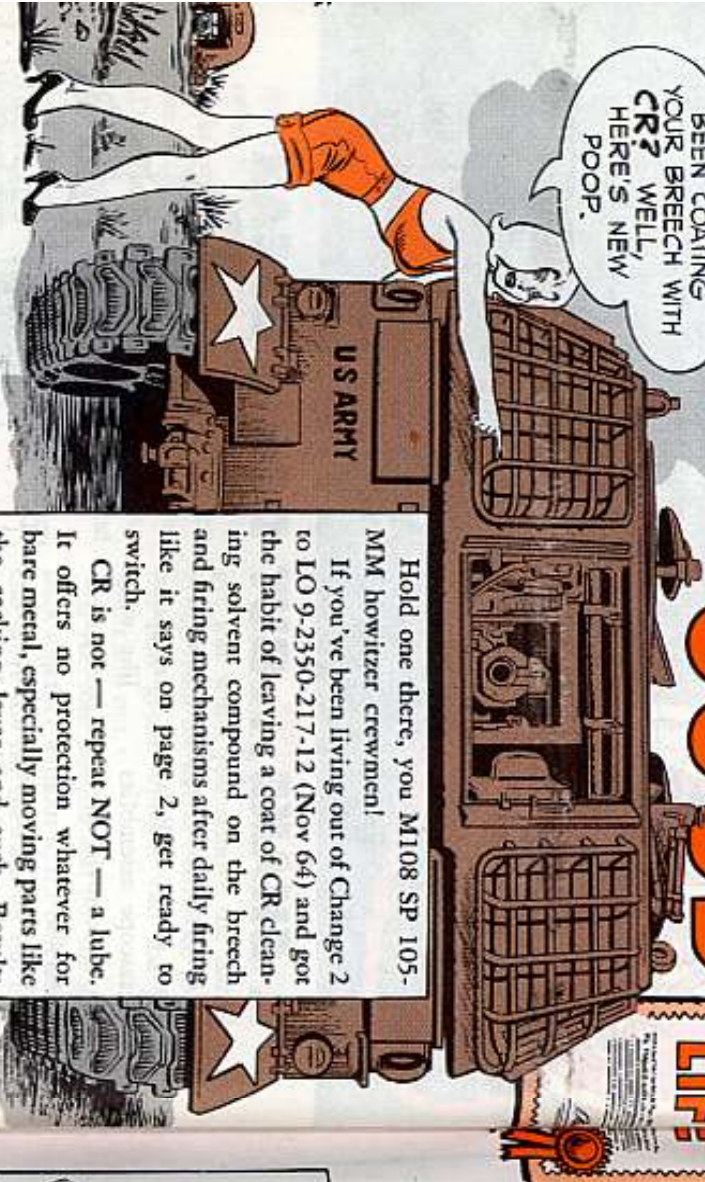
In cold weather, when the rubber's brittle, they end up with a piece of the shield about 95 out of 100 times.

There's a lot more profit in shakin' up the scope a little.

BEEN COATING
YOUR BREECH WITH
CR? WELL,
HERE'S NEW
POOP.

GOOD

THE MEDICAL
LIFE



Hold one there, you M108 SP 105-MM howitzer crewmen!

If you've been living out of Change 2 to LO 9-2350-217-12 (Nov 64) and got the habit of leaving a coat of CR cleaning solvent compound on the breech and firing mechanisms after daily firing like it says on page 2, get ready to switch.

CR is not — repeat NOT — a lube. It offers no protection whatever for bare metal, especially moving parts like the cocking lever and such. Result: Rust . . . corrosion . . . parts failure.

WHERE THE GG GOES

NOW
WHAT DO
I DO
WITH
IT?

Dear Half-Meat,
LO 9-2350-208-12 (May 63) lists graphite grease on the M48A2C tank for use over 32 degrees but doesn't show where. What's the scoop?

LT F. C. A.

Dear Lieutenant F. C. A.,

The graphite grease (GG) goes on the bore evacuator threads of your M48-series tank or other weapon with a bore evacuator — after firing, quarterly, or at inspection time.

A big thing, though, is that you now use GG when the temperature is above zero degrees and GAA when it's below zero. The very latest LO's tell about this.

56

Half-Meat

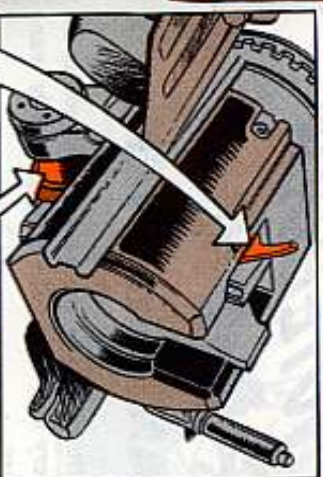
INSURANCE

So, from now on do it this way. After daily firing, remove the breech components and firing mechanisms, take 'em apart and clean every part that comes into contact with powder gases real good with CR. But don't stop there.

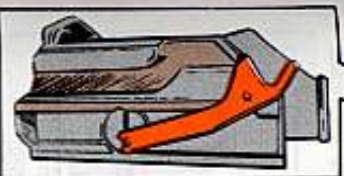
After the CR does its stuff, wipe the parts real dry and then — get this! — put a light coat of PL general purpose lube oil on all the surfaces, including the cocking lever and including the cam path in the breechblock and breechring. Light coat: Soak a clean rag with PL, wring it out good and then wipe the parts.

O'course, when you don't expect to fire daily, give your M108 the standard 3-day CR treatment, followed by coating with PL.

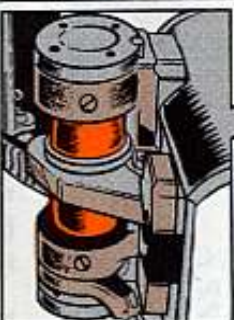
This poop is in the latest change to the LO.



A LIGHT COAT
OF PL ON
THESE SURFACES



COCKING LEVER



CAM PATH

PLASTIC STOCK HARDWARE

If your support guys say they're having trouble getting the hardware to go along with the plastic stock for your M14 rifle, tell 'em to try these: Screw, FSN 5305-999-1875; Nut, FSN 5310-999-1891; Nut, Retainer, FSN 5340-999-1864.

THE FORM'S THE THING

DA FORM 2407

When you find things that are wrong or bad or won't work, the form's the thing for you to fling. Fill out DA Form 2407 (EIR) on equipment or DA Form 2028 on publications and send it in. Now . . . today. Don't delay.

57

HERE ARE SOME
LATE ENTRIES IN YOUR
HAWK NOTEBOOK

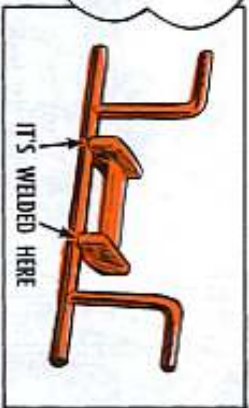
STOP, LOOK AND HASTEN

Take action . . . that's what you want to do if you're in a Hawk firing battery and all's not right with your warhead handling fixture.

The welding's needed to keep from dropping a warhead.



YOU HAVE AN
**UNWELDED
FIXTURE??**
TRADE IT IN ON
A NEW ONE!!



OUT THEY COME

Dear Half-Mast,
What do you think about using coloidal graphite on the different screws used in our Hawk missile? Some of them really put up a battle when you try to take them out.

SSG H. R.



a mixture of molybdenum disulfide and castor oil on the bolts.

Half-Mast

THE COVER
PULLS AWAY,
SARGE.

YOU CAN USE
GAA GREASE...

Dear Sergeant H. R.,
Forget the colloidal graphite. Seems the stuff can help bring on corrosion.

Hold one, though. The grease is not for using on the wing bolts. As it says on page 156 of TM 9-1410, 500-12 (Jul 62), you want to use



...BUT NOT
ON THE
WING
BOLTS!

FARING ANY BETTER?

IF THE FAIRINGS
ON YOUR HAWK
MISSILE WORK
LOOSE HERE'S
WHAT YOU
CAN DO!!



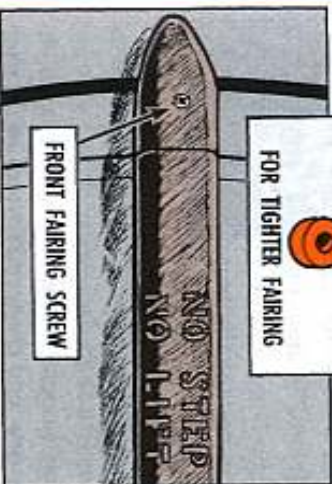
ADD PERFORMED PACKING

FOR TIGHTER FAIRING



FRONT FAIRING SCREW

NO STEP
NO HUMP



SEPARATION ALLOWANCE

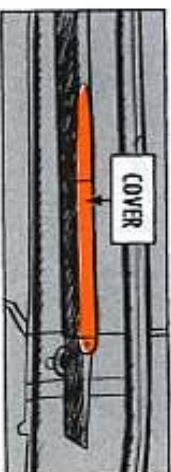
There's performed packing that you should use with the front fairings. It's listed under FSN 5330-684-3275 on page 6 of TM 9-1410-500-15P/2/1 (Apr 67).

And your support unit has the scoop on repairing the screw holes in the front and rear fairings when the holes get big. Your DSU will use epoxy and a washer to do a job on those holes.

At case . . . no sweat if the cover pulls away from the outboard edge of your Hawk missile wings. This kind of separation doesn't make the bird non-operational.

Keep using the wings in this shape . . . and think about getting them to your support unit for repair when the job won't put the kibosh on your tactical mission.

NO
SWEAT!



ODD AND EVEN



Dear Sergeant J. B.,

You can look through all the TM's you want to, but you won't track down the answer to that one — at least not in so many numbers. Here it is, tho: there're 43 on the right track and 44 on the left track. Page 195 of TM 9-1450-500-25P (Aug 66) gives you a clue by saying there are 87 connecting track links on the loader (43 + 44).

Vehicles with a torsion bar suspension system usually have more track pads on one side than on the other.

When you're no longer able to adjust tension on the tracks, you might get back some of the adjustment by reversing the sprockets. The driving face of the sprockets can wear enough to put lots of slack in the tracks.

Same thing with end connectors. New ones might be the answer.

If reversing the sprockets and getting new end connectors won't do it, then you want to get rid of all bum track blocks. Change 7 (Dec 67) to TM 9-2630-200-14 tells you about track block wear limits. And don't be surprised if you wind up needing enough blocks to give you a complete track — so you adjust for the tension you need.

Dear Half-Mast,

I've been with a Hawk unit for a long time and I've never been able to get an answer to what seems like a simple question. That is, how many track pads are there on each side of the loader-transporter?

SFC J. B.



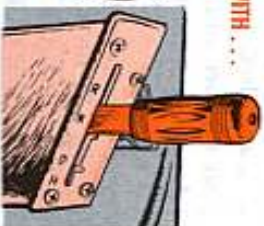
NO MORE ADJUSTMENTS AFTER THIS

ON THE LEVEL

If you hear or see anything different from what the LO's say about checking the transmission oil level for your Hawk XM501E2 or E3 loader-transporter, don't you believe it.



ENGINE IDLING ...

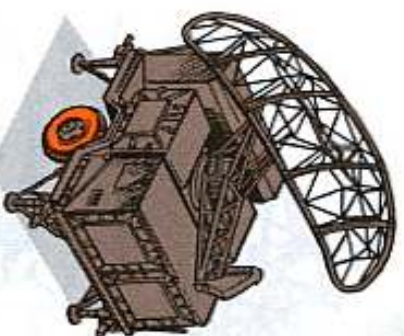


IN NEUTRAL

As both LO 9-1450-500-12/1 (Jun 68) for the E2 and LO 9-1450-500-12/2 (Jun 68) for the E3 spell out, you check the level with the engine idling and the drive selector in neutral. The same scoop's in TM 9-1450-500-10 (Jun 66) for the two vehicles.

Any other way of doing it is wrong.

Half-Mast



PLAY IT COOL

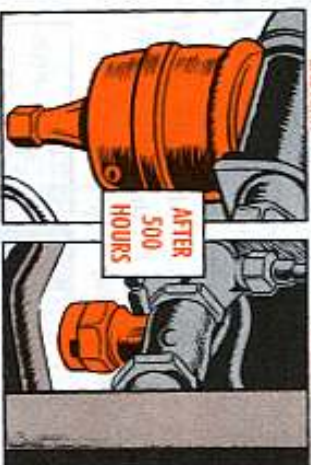


HOT STUFF!

You're right . . . the scoop that tells you about taking care of the filters in the liquid cooler for your Hawk AN/MPQ-35 is in TM 9-1430-502-12/3 (Mar 67).

It's powerful important to go along with what it says on page 3-4 about replacing the two filters in the Eastern Industries-made cooler every 500 hours of operation — or cleaning the filter housing and cartridge every 500 hours of operation if your cooler was made by Airesearch.

A clogged filter can give you the sort of cooling troubles that mean burned-out electron tubes and transformers.



EASTERN

AIRESEARCH

AFTER 500 HOURS

REPLACE THIS ONE ...

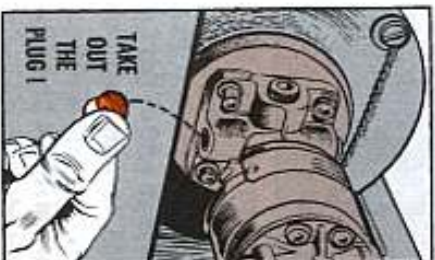
CLEAN THIS ONE!

DOWN THE DRAIN

Sure has been a heap of pump motor troubles with the Eastern Industries liquid cooler used in your Hawk AN/MPQ-35 pulse acquisition radar. And there's a good chance that it's a case of the OS-45 coolant getting by the pump seal and washing the grease from the motor bearing.

Try this: take the plug out of the bottom of the pump seal housing on both pumps. That'll give the coolant a way to get out. Hold on to the plug and put it back in if you're going to ford.

Remember — take out the bottom plug, not any of the other three.



TAKE OUT THE PLUG!

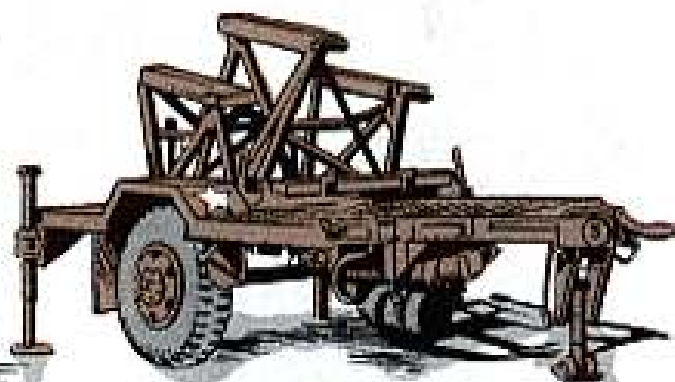
NO PAINT

Dear Half-Mast,

A question on the M390 and 390C trailers that are used in the Hawk missile system.

Are the inner tubes in the leveling support jacks and the retractable support assembly supposed to be painted?

SFC F. H.



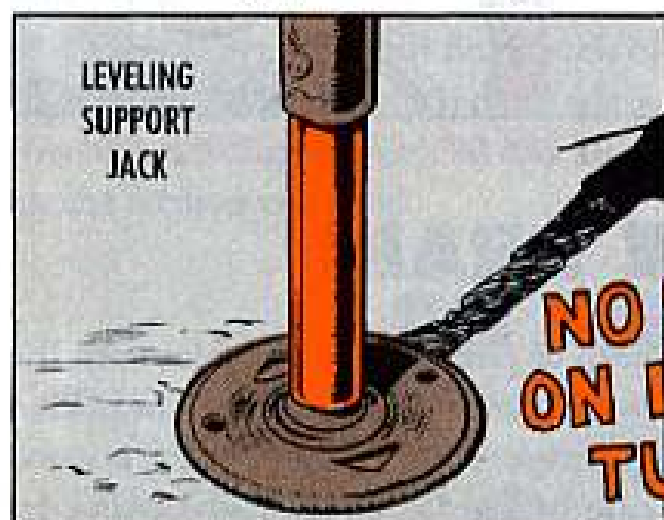
HALF MAST BUSY...

I'M TELEPHONING ANSWERING SERVICE.

Dear Sergeant F. H.,
Not on your life.

The inner tubes in the leveling support jacks are cadmium-plated. And while this plating is gray and looks a mite like the start of corrosion, you want to keep your distance with sandpaper or emery cloth.

The inner tube for the retractable support assembly is coated with phosphate, which is also gray. It doesn't get sanded off, either.



**NO PAINT!
ON INNER
TUBES**



If you have paint on any of the inner tubes, get it taken off with paint remover.

Then put a light coat of oil on the tubes. Use Lubricating Oil, General Purpose, Corrosion and Salt and Spray Resistant. It's listed on page 4.30 of Fed Cat C9100-IL (Sep 67). You'll find that FSN 9150-231-2361 is worth a quart and FSN 9150-231-2356 gets you 5 gallons.

If you want to put on a fresh coat of oil, first remove the old stuff with a solvent that has a petroleum base. Dry cleaning solvent (SD) works fine.

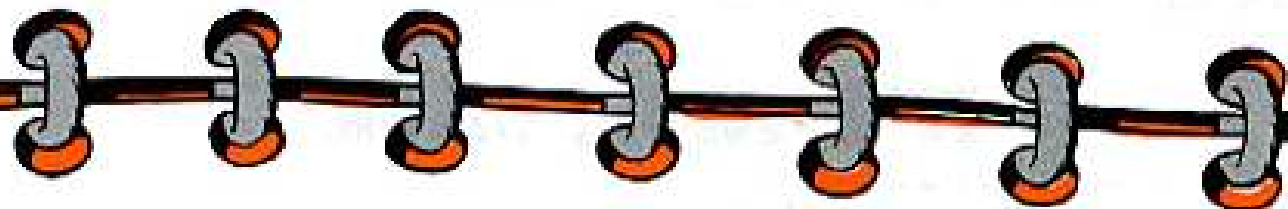
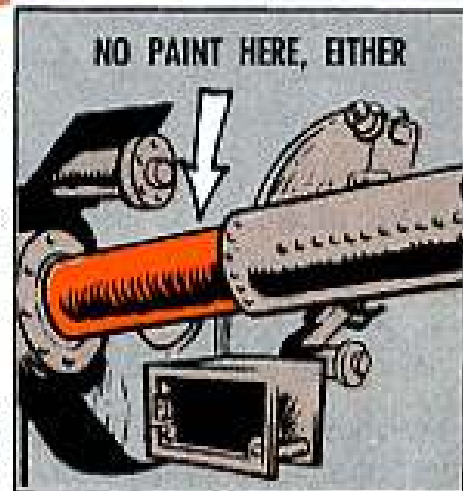
PAINT OFF DUCT'S BACK



Not on your life . . . there's not supposed to be any paint on the extension duct that's part of the missile-cooling duct on your Hawk launcher.

Instead of paint, which makes like insulation, you want the duct to be clean so you'll have a path for electrical grounding between it and the outer duct.

Things will be in good shape if nothing covers the chromating on the extension duct. In other words . . . just keep it clean.



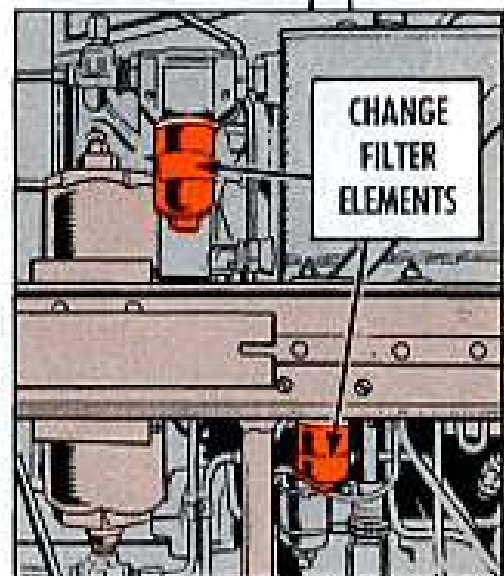
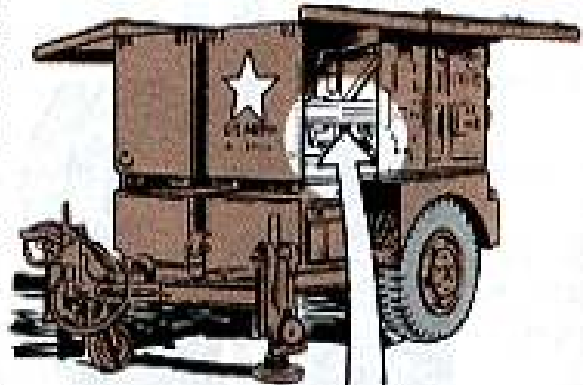
ELEMENT-ARY

Hold one . . . here's the latest scoop you want to use along with LO 9-4935-500-12 (Nov 67) on your Hawk AN/MSM-43 organizational maintenance shop equipment.

Note 2 to the LO talks about replacing the filters every so often. What you should do instead is change filter elements. That means low-pressure filter element, FSN 4935-959-1026, gets replaced after 36 missiles, or after 3 months. Missile pressure hose filter element, FSN 4935-066-1643, gets changed after you've tested 72 missiles, or after 6 months.

No sweat with the high-pressure filter element, FSN 4935-761-8892, seeing's how note 2 tells you to replace it — not the filter.

TM 9-4935-500-15P/1 (Oct 67) lists the elements on page 17. One thing, though, the high- and low-pressure elements are called filters in the -15P/1 and the missile pressure hose filter element is called element.



USE YOUR HEAD

Maybe it's happened to you when you put the 14KV power supply in the tactical control console for your Hawk battery control central. That is, the mounting terminal for the C5 capacitor gets clobbered by the head of one of the TCC floor mounting bolts.

It's a good way to come acropper of electrical troubles . . . and a busted mounting terminal.

So take it easy when you put in the power supply. Also . . . take the washer out from under the head of the bolt and cover the head with some electrical insulating tape. This moves the bolt head a little more out of the way and cuts down on the chances of arcing.

TAKE CARE



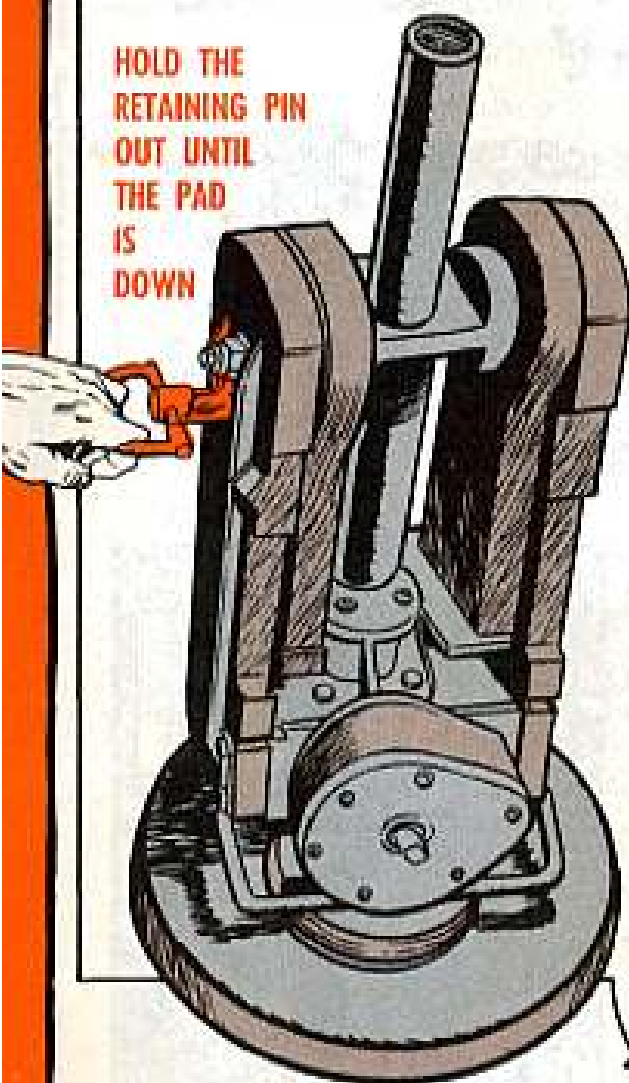
REMOVE WASHER



COVER WITH TAPE

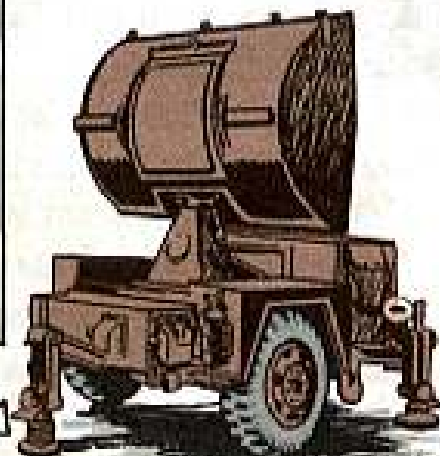
IT'S TRUE, JACK

HOLD THE
RETAINING PIN
OUT UNTIL
THE PAD
IS
DOWN



It's there in bold print — the caution about lowering the leveling jack pads on your Hawk AN/MPQ-34 CW acquisition radar and AN/MPQ-37 range-only radar.

Para 102a of TM 9-1400-500-12/1 (Aug 65) tells you to hold the spring-loaded retaining pin out until the pad is all the way down. If you don't, you can wind up with a busted jack arm. Just ask the man who has one.



AND
USE THAT
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New-20P For M151A1

Better'n aspirin for some of your supply parts headaches, it's the new TM 9-2320-218-20P (Apr 68) for your G838-series vehicles. There's some new dope in this revised -20P. And remind your support that there's a new -34P — also April 1968 — for the M151A1 and other ¼-tonners in this family.

M16... In Living Color

If you've got an interesting career with the M16A1 rifle, you ought to take a look at DA Pamphlet 750-30 (Jun 68), The M16A1 Rifle — Operation and Preventive Maintenance. It's in living color with Connie, some of you good guys and a few of those bad-uns. Order copies from the Baltimore, Md., pubs center on DA Form 17.

Stock By Which?

Which -20P do you use when stocking MS (minimum stockage) items for tank-automotive equipment? Good question. You use the TM 9-2300-223-20P, the consolidated parts list for tank-automotive equipment, unless you have received a new parts manual with the PLA (prescribed load allowance) list in it.

In that case, use that particular vehicle's -20P PLA list for your MS, not the consolidated 20P. TM 9-2320-218-20P has the PLA, so you use it for your M151's MS.

Zapper's Own M16 Pub

Hey, you M16A1 sharpshooters, be sure you latch on to TM 9-1005-249-12 (2 Aug 68). That's right — "-12." It replaces all the operator-organizational dope in the -14 TM with all of its changes.



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