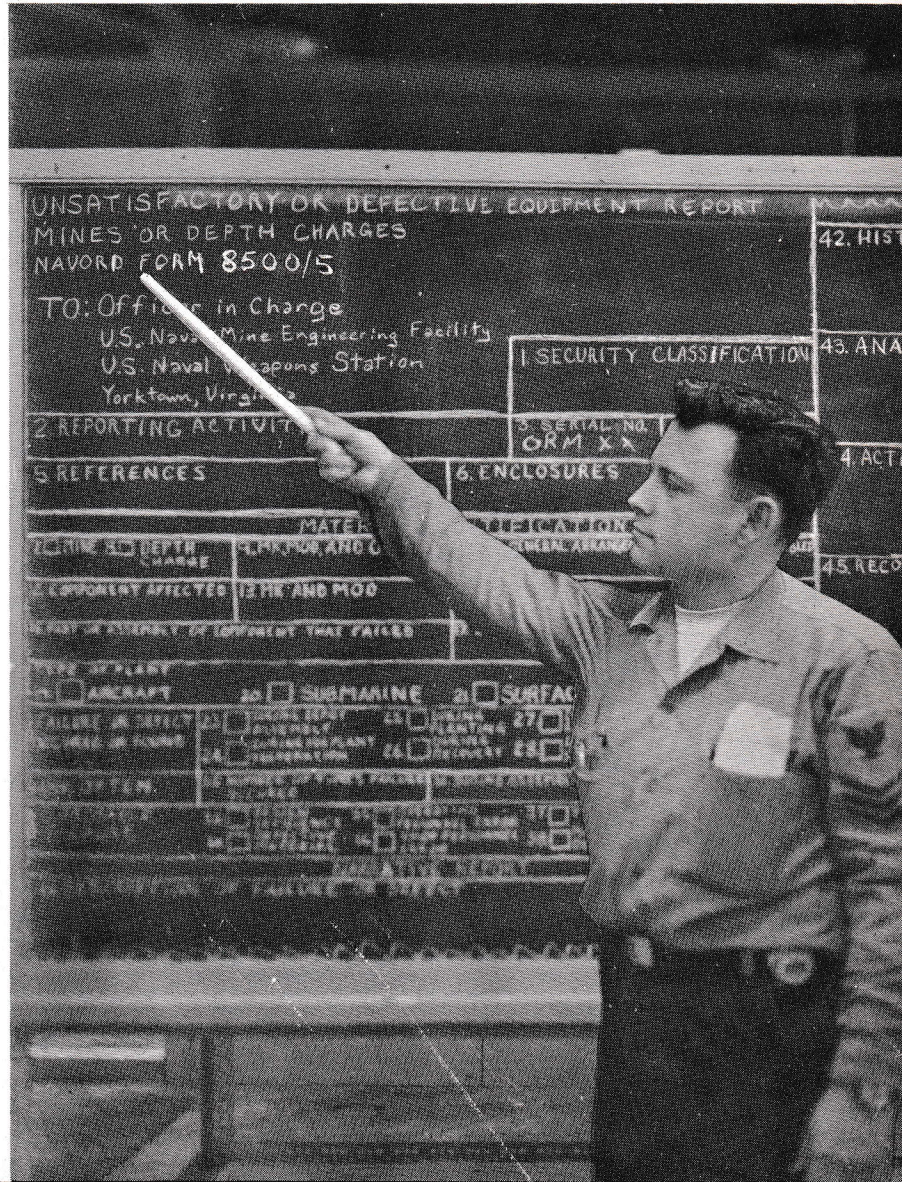


mine and depth charge

THE TROUBLESHOOTER

- ▶ Bibliography No.5
- ▶ First aid for parapack releases
- ▶ Ammo code change



AN OFFICIAL BUWEPS PUBLICATION

in this issue . . .

mine and depth - charge

THE TROUBLESHOOTER

Published by the Naval Mine Engineering Facility, Yorktown, Virginia

George A. Harper, CDR., USN Officer-in-Charge
Haines A. Miller Technical Director
Thomas R. Nevitt Editor
Roland R. Rollins Art Director

REGULAR FEATURES

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COVER PHOTO: Mineman R. W. Wilson not only believes in the importance of the Rudminde program but also believes that everybody should know how to fill out a Form 8500/5 correctly. He is pictured here pointing out the details for the benefit of civilian employees and fellow members of the Mine Shop Crew at NAD Earle, Colts Neck, N. J.

1 JANUARY 1966

The Troubleshooter, an official BUWEPS publication, contains technical information pertinent to the assembly, testing, and delivery of US naval depth charges and mines. It is both authoritative and directive in nature, and reference may be made to a particular issue as the authority for adoption of ideas promulgated therein.

Troubleshooter is also the official journal of the Rudminde Program a world-wide defect-reporting campaign designed to promote a high level of undersea warfare readiness in US naval depth charges and mines. The Program's basic instrument is NAVWEPS Form 8500/5 (1-63). Everyone who encounters problems with these weapons should report them via this form direct to the Naval Mine Engineering Facility as prescribed by BUWEPSINST 8500.8.

ALLEN M. SHINN
Rear Admiral U.S. Navy
Chief, Bureau of Naval Weapons

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THE OFFICIAL JOURNAL OF THE RUDMINDE PROGRAM

RUDMINDE REPORT TO THE FLEET

FOR THE BENEFIT of mine shops which do not receive T-Shooter's torpedo counterpart, Rudtorpe Digest, we shall paraphrase an item that recently appeared therein since it deals with a problem which is becoming just as common in the mine business: a growing mutual dissatisfaction between the outfits that use Class B and C mine test sets, and the laboratories which calibrate these sets for them.

From the mine-shop side we hear gripes to the effect that sets they send off for calibration take months to get back, or that they're often damaged when they do get back, or that parts or accessories are missing, or that the gear needs calibration as badly when it gets back as it did when it was sent.

The labs' gripes are seldom less well stated. Mine shops send them non-operable sets, they say, often with no statement as to the presence of defects. Often the shops express the belief that the labs should repair, calibrate, and return such sets right now, yet just as often the defectives are sets which are nowhere to be found in the labs' calibration schedules.

Two sides per coin

Now we at NMEF will be the first to admit that a workable calibration program for mine test sets has been a long time coming indeed, and we're not ready yet to call the present state of affairs the rainbow's end. Yet the present situation, at most sites, is a darned sight better than it's ever been before. And it's improving almost monthly, and we want to keep it going that way. So let's take ten right now, put away the slings and arrows, and see if we can see where the diffugely lies.

Calibration labs calibrate

Perhaps the most persistent misunderstanding we encounter among MN and TM rates is an illusion that repairs are part of a cal lab's function. This is simply not true. If a test set or item of workshop equipment requires repair or the replacement of a component, your cal lab is the last place you should send it. So where then? The first thing you should try is local repair. Yes, we said it and we mean it. The time will not be long, in fact, before you begin to receive MRCs for your Class B and C sets which, together with a forthcoming OP 3388, are going to give you some troubleshooting and repair procedures for use at the organizational level . . . backed up by actual allowances of repair parts.

You say that's too rosy a picture to believe? Well, even if you should turn out to be right it wouldn't make any difference in our basic premise of the moment: namely that calibration laboratories are not repair shops. They don't have the time, the people, the supplies, or the mission. You send your set to a cal lab when it's still working but has reached the end of its calibration cycle, or when it still functions but appears to give phoney results. But not when it quits working. Whether it's time for calibration or not, when a test set will no longer

function you repair it locally if you can, or else requisition a serviceable set and send the one which is not to your repair depot (Yorktown, Hawthorne, Oahu).

How to help your lab help you

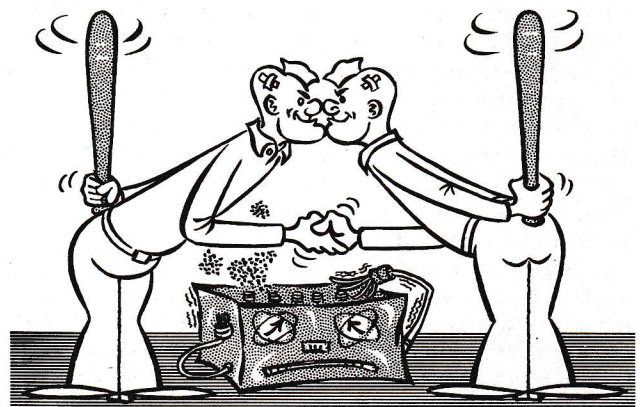
So much for what the labs do not do. What they do do is calibrate workshop equipment on a regularly scheduled basis.

You say that's just what you want? First, then, you've got to get together an up-to-date inventory of all your test sets, power supplies, accessory sets, etc. that require regular calibration. Now, if you already have a calibration schedule check it against your list to see if they agree. If you don't have a calibration schedule, you should get one before you send sets to be calibrated. Simply send a copy of your inventory to your BUWEPS Fleet Readiness Representative and he'll take it from there. The point is that calibration services to your shop, just like those to all the other outfits your lab services, of necessity have to be performed on a scheduled basis. The moral: after you get a cal schedule, see that it's kept up-to-date with your changing requirements.

Handle with care

There's only one more step, and it should be SOP: before you send any equipment to a calibration laboratory, or to a depot, or anywhere else, make sure it is properly packaged to prevent damage during shipment, and includes all the plugs, cables, adapters, etc. which are supplied with the set. For now, if possible, use the container and packing material in which the equipment was received. Soon we will be providing all hands with info on special packaging available in standard stock which NMEF tests have shown to be first class for this purpose. In any case always stencil applicable caution notes on the outside of the container, and if possible have only men who are familiar with the equipment package, load, and unload it.

Take these precautions and you will minimize the chances of having damaged test equipment returned to you from a calibration laboratory. If you have any more trouble, though, Rudminde us please.



NEW FILLING KITS FOR OLD

A THORN IN THE side of holders of equipment for replenishing the nitrogen gas in the Mark 23 containers for Pressure Detectors Mk 1 Mod 0 has been the refill kit which, with a vacuum pump and nitrogen cylinder, make up a complete assembly. Surveys of samples from depot stocks, in response to some excellent Rudmines, have shown that the kits currently in stock, like those in use, just don't work. Among the reasons:

- ▶ Threads of regulator and gas cylinder frequently are incompatible.
- ▶ Magnets in the wrenches on the kits' evacuating-and-filling fixtures are too weak to hold the screw away from the Mk 23 container's filling hole.
- ▶ The laboratory type pressure-vacuum gage is not rugged enough for the job.
- ▶ Batteries BA-205/U, packed with the kits for use in positive-pressure test equipment, are mostly deteriorated from the effects of poor storage conditions.

The remedy is a redesigned kit which, when stocked, will include:

- ▶ A new regulator with left-hand threads, to take the place of the present oxygen-type pressure regulator with right-hand threads (nitrogen cylinders require left-hand).
- ▶ An evacuation-and-filling fixture designed to accommodate a stronger magnet, one that can be brought in positive contact with the filling-hole screw heads, which an offset in the present wrench-socket types does not permit.
- ▶ A bourdon-type pressure-vacuum gage, replacing the present Stokes-McLeod types.
- ▶ Hose clamps, to insure leakless assembly of tubing and connectors.

These new kits will require new operating procedures, which have already been incorporated in the second revision to OP 2567 Part 1, now at the printers. Chances are, then, that you'll have the instructions long before the kits. So what do you do in the meantime?

First of all, you've got to consider that any kits you may have on hand are not to be depended upon. Therefore, reflecting your needs and allowances per NAVMIN-ENGRFACINST 8011.1 (test equipment allowance list, see item 107), you should promptly forward a NAVSTRIP for whatever number of kits you need direct to NMEF (RE), even though it's a 2A-Cog (rather than a 6T-Cog) item. This will insure all hands getting new kits as soon as they become available. Until received, of course, the best you can do is hold onto the kit you've got.

Understand, this applies only to the kit which comprises allowance-list item 107, stock number 4925-920-3418. The nitrogen cylinders and vacuum pumps listed for use with it are completely satisfactory as currently stocked. So, in all probability, are Mk 23 containers now on hand, even when they fail current tests per Revision 1 to OP 2567 Part 1, Vol 1. The chances of this

are so good that all should be kept, and considered Code A, until such time as use of the new kit and testing instructions reveals otherwise.

So what about those Batteries BA-205/U now with the kit? Usually, even in new kits, they're in bad to unusable condition, but fortunately they're not needed anyhow. With the new kits and the new procedures, all requisite electrical tests will be accomplished with your trusty multimeter.

This eliminates not only the need for those batteries to be stocked in the kits, but also the need for the amp-horns, cables, and test light associated with them.

ABOUT SOLUBLE WASHERS

In the article One Soluble Washer for One Job, p2, Troubleshooter 3-65 add Mines 52 and 55 to the list of air-laid mines for which soluble washers are no longer approved. The first paragraph in the right-hand column should start "For Mines Mk 25, 36, 39, 52, and 55 soluble washers . . ." if you want to make a write-in correction.

MK 27 BALLASTING

Some of the figures given in the illustration and formulas for ballasting Mine Mk 27 on pages 4 and 5 Troubleshooter 3-65 should now be changed: Where the formula for overall CG of Mods 2 and 3 (Vehicle Mk 1 Mod 1) reads (1520 x d2) it should read (1520 x d3). In the illustration for Mods 4 and 5 (Vehicle Mk 1 Mod 2), d5 220.18 should read d3 220.18, and 1764# (negative buoyancy, exercise condition) should read 1754#.

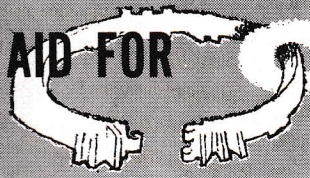
Also under Vehicle Mk 1 Mod 2, in the Overall CG formula, (105 x d2) should read (150 x d3).

TEST-SET SHOCK HAZARD

The possibility of a shock hazard exists when using Test Set Mark 269 Mod 1, due to a high resistance d-c path between the negative lead and the cases of the electrolytic filter capacitors. As an interim measure the set's chassis should be earth-grounded before plugging the line card into 110. This will eliminate the shock hazard but, with a solid earth ground there is some chance that the effects of existing ground currents may be detrimental to certain of the set's components.

For a permanent fix that eliminates the hazard, without damage to the 269, design documents have been revised to provide a 3-wire polarized plug and an insulated mount for capacitor C16 in new procurement lots of the set. Quite possibly a field fix for sets already in use will be the next step.

FIRST AID FOR



CORRODED PARAPAK RELEASES

FLEET ACTIVITIES are reminding us that they are finding parachute release mechanisms with corroded parts, especially after extended stowage. This condition can render the mechanisms inoperative. The following corrective action is recommended:

- ▶ Remove corrosion from hinge, alignment, and clevis pins using a brass wire brush. (Brass brush will remove corrosion without damage to whatever plating may still be on the pins.)
- ▶ Clean corrosion from hinge-pin holes using fine sandpaper.
- ▶ Clean any corrosion, chipped paint, etc. from the body of the release mechanism with fine sandpaper, then spot paint with OD paint 8010-848-9272. Do not let paint get inside the hinge-pin holes or on alignment, clevis, or hinge pins; if you do, remove it.
- ▶ If the release mechanisms are not going to be flown right away, or re-packaged, (i.e., if they will be stowed in an assembled condition without packaging) apply a very light coat of silicone grease 5970-159-1598 to the clevis pins, hinge pins, alignment pins, and in the hinge-pin holes.

To perform this operation it is necessary to remove E-Rings. When you do, discard them and replace with new ones. At the same time it would be well to check release mechanisms, even if otherwise in good condition, for defective or missing E-Rings, and make proper replacements.

In the past, release-mech E-Rings have been supplied at times with cadmium plating and other times zinc-plated, and those having the cadmium plating usually will be found to be in better condition. Corroded E-Rings should be considered defective, and in making replacements the cadmium-plated rings should be your first choice. The table at the bottom of this page should provide all the data you'll need.

For those who need to know more . . .

Ring Size	Federal Specification	Crosses to (Zinc Plate)	But preferred (Cad Plate) is
.375"	12-Z-5022-201	MS-16633-2037	MS-16633-1037
.250"	12-Z-5035-105	MS-16633-2025	MS-16633-1025
.438"	12-Z-5035-111	MS-16633-2043	MS-16633-1043
.500"	12-Z-5035-115	MS-16633-2050	MS-16633-1050

E-RING APPLICATIONS

Release Mech		E-Rings			Applicators*	
Mk	Mod	No. Req'd [†]	Specification	Stock Number	Designation	Stock Number
15	0	4 ^c	MS-16633-1037	5340-256-2465	E-37 (1)	1350-790-0049
		2 ^h	MS-16633-1025	5340-721-7680	E-25 (2)	1350-790-0051
17	0,1	8 ^c	MS-16633-1037	5340-256-2465	E-37	1350-790-0049
		2 ^h	MS-16633-1025	5340-721-7680	E-25	1350-790-0051
18	0	8 ^c	MS-16633-1043	5340-801-3006	E-43 (3)	1350-790-0050
		4 ^h	MS-16633-1025	5340-721-7680	E-25	1350-790-0051
20	0	16 ^c	MS-16633-1050	5340-442-5845	E-50 (4)	1350-790-0048
		4 ^h	MS-16633-1025	5340-721-7680	E-25	1350-790-0051
21	0	8 ^c	MS-16633-1043	5340-801-3006	E-43	1350-790-0050
		4 ^h	MS-16633-1025	5340-721-7680	E-25	1350-790-0051
22	0	8 ^c	MS-16633-1050	5340-442-5845	E-50	1350-790-0048
		4 ^h	MS-16633-1025	5340-721-7680	E-25	1350-790-0051
23	0	16 ^c	MS-16633-1050	5340-442-5845	E-50	1350-790-0048
		4 ^h	MS-16633-1025	5340-721-7680	E-25	1350-790-0051
31	0	4 ^c	MS-16633-1050	5340-442-5845	E-50	1350-790-0048
		2 ^h	MS-16633-1025	5340-721-7680	E-25	1350-790-0051
33	0	8 ^c	MS-16633-1043	5340-801-3006	E-43	1350-790-0050
		4 ^h	MS-16633-1025	5340-721-7680	E-25	1350-790-0051
34	0	8 ^c	MS-16633-1043	5340-801-3006	E-43	1350-790-0050
		4 ^h	MS-16633-1025	5340-721-7680	E-25	1350-790-0051

* Correct size applicators must be used to install E-Ring.

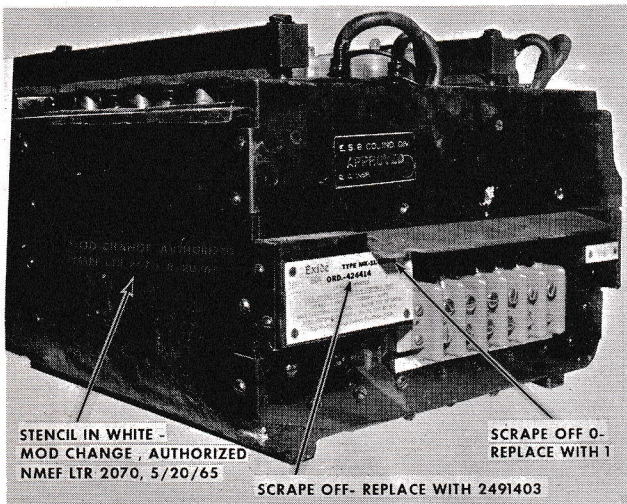
† Does not include spares.

^c Used on clevis pins.

^h Used on hinge pins.

BETTER BATTERY FOR MARK 27 MINERS

INTRODUCTION of new calcium-lead-type Mark 33 batteries to power Mk 27 mines marks a definite improvement. Like the older lead-acid batteries, though, these new Mk 33s were accepted into stock designated as Mod 0. Such a practice is fine for items that are interchangeable in every way, so can share the same stock number. But in the present instance it is important that the identities of the old and new batteries not become merged, if only to insure full benefit being derived from the much-prolonged period that the new types can be stored without maintenance: up to 90 days!



The newer Mk 33 batteries can be identified by their contract designation: NOW-63-0468f (Exide Battery Co.). But that's not enough. To preclude logistic problems and clearly identify the characteristics of each type battery NMEF has now had the new type re-designated Mark 33 Mod 1, LD 538066, DWG 2491403, FSN 6T 6140-906-2150, DOD Code X670. There will not, however, be an Ordalt for reidentifying these batteries. Instead, activities which have any of the new ones on hand have been asked to reidentify them promptly, as follows:

- ▶ On shipping container paint out the zero in Mod 0 wherever it appears and stencil a half-inch 1 in its place.
- ▶ Stencil in half-inch black letters, on two sides: MOD CHANGE AUTHORIZED—NMEF LTR 2070, 8/20/65.
- ▶ Advise NMEF (RE) of all such reidentifications.

Change to nomenclature printed on the batteries' identification plates may be accomplished when a battery is removed from its shipping container for issue or use, like this:

- ▶ Scrape off the zero in MOD 0 and the number 422414, after ORD on battery nameplate.
- ▶ Using permanent black ink put a 1 where the zero was (after MOD) and print the number 2491403 after ORD.

- ▶ On one side of the battery stencil in white half-inch letters: MOD CHANGE AUTHORIZED—NMEF LTR 2070, 8/20/65.

There is also a fit problem that 27 miners should know about, evidenced by the fact that, when you try to install it, the new battery will strike the forward brace and hold-down inside the war-battery section of Mine Vehicle Mk 1 Mod 2. (There is no fit problem when the battery is used with the Mk 1-1 vehicle.) To correct this, a field fix is authorized as follows:

- ▶ Position the battery in the battery section and push battery forward until it strikes the battery brace.
- ▶ Scribe the battery's wooden bumper along the line of interference, where it presses against the brace.
- ▶ Withdraw the battery, remove its wooden bumper, and saw along the scribed line. Then put the bumper back on the battery. It will now clear the brace.

In part, this article reiterates information released to some activities via the above-referenced NMEF letter 2070. Naturally there is no need to report again, in response to this article, the performance of reidentifications which have already been reported in response to the letter.

DOUBLE CHECK FLOODER CONNECTIONS IN MARK 57

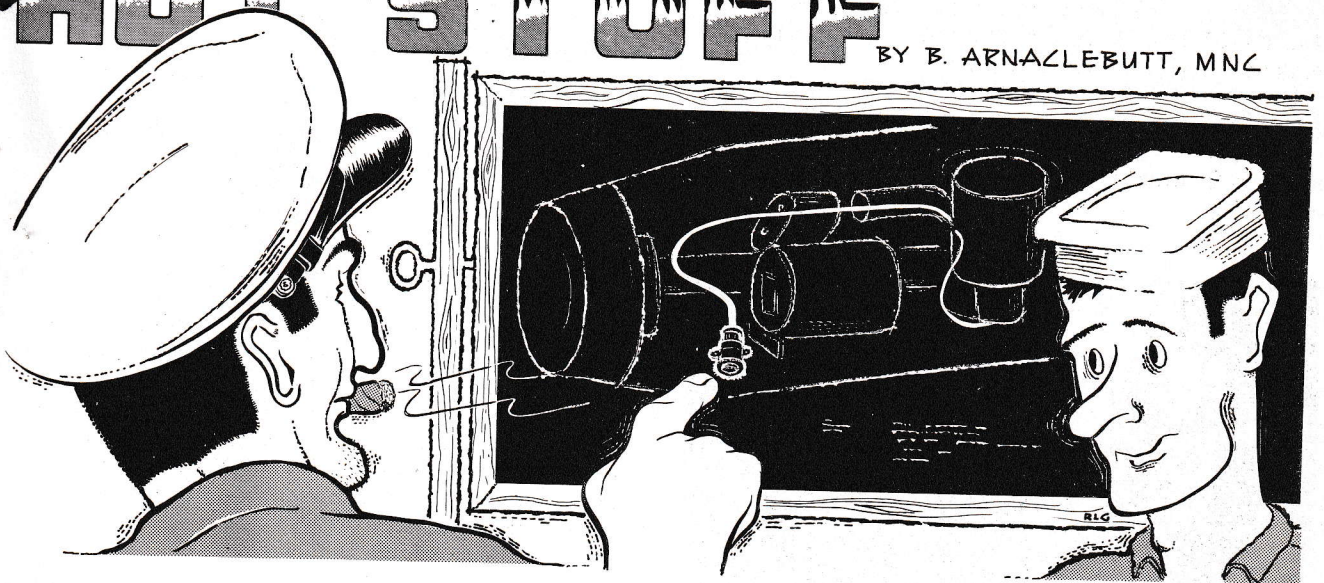
When installing flooder assemblies in Mk 57 mines, it is possible to connect either leg of Cable Assembly CA-71 to the Mk 3 radio filter physically, with keyway and key misaligned in such a way that there is no connection electrically. The problem lies in the design of the connectors: The fact that the threads of the locking rings can engage with the male threads of the radio filters and be turned hand tight, per OP 2718, without the four male pins of the connector becoming engaged. Of course the resultant opens will be revealed at the point where you turn the selector of Test Set 406 to position 17 in the mine operational test. But it will save skinned knuckles, fractured tempers, etc. if you catch up with it before that late stage in the game. To do so make a visual inspection of the connection right after you draw it hand tight per the book:

- ▶ The connection is faulty if most of the thread is exposed.
- ▶ The connection is good if all but one or two threads are covered.

Location of these CA-71 connections makes visual inspection difficult but not impossible, and it's also possible to determine the length of exposed threads by feel. Compared to the alternative of fixing after the mine is assembled, this effort will be well worth the while.

HOT STUFF

BY B. ARNACLEBUTT, MNC



Traffic jam

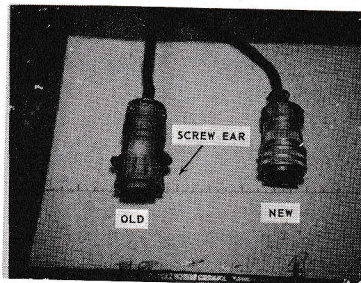
Dear Barnacles:

Lately some of our CA-524s (Sterilizer SD-4 cables) have come through with split amphenol connectors held together by screw ears. This makes them large enough in diameter to make it next to impossible to feed one through the conduit in a 36-2 case after already having passed through two other cables (clock and extender) per OP 1892. That's because the OP has the CA-524 going through the conduit last. Shouldn't we maybe change this around and install the SD-4/CA-524 lashup first?

PEM, MN3

Dear PEM

Anytime I got one of those amphenols on a CA-524 I sure would do exactly what you suggest. It appears, though, that not too many 524s still have those older type amphenols, and the new one-piece jobs pose no problems at all, as all hands can see from PEM's pix below. Therefore we do not plan to change the OP, feeling that this item in itself will be enough to alert assemblers of Mines Mk 36 Mod 3 (in 36-2 case) to watch out for split-type amphenols on CA-524s, and to install them first when they encounter one.



B. Arnaclebutt

Life expectancy of Y-159

Dear Chief Butt:

We find nothing in any pubs that tells us the allowable shelf life of Transmitter Battery Y-159. We keep records on each battery received and the amount of shelf life incurred while in our custody, but what does this mean in terms of remaining available life of this battery?

P.A.B., MN2

Dear P.A.B.

The life of Y-159 (Pinger) batteries, because of their limited and specialized use in FSMT mines, is not included in OP 1452. It goes without saying that you should keep them as cool as possible in storage, below 40°F if practicable, and you could - if you had histories on your stocks - consider them to be Group D.

In practice, though, we don't think this is necessary. Shelf life is a full year at 80°F or less and, for FSMT purposes, any Y-159 that passes the tests in OP 3233 will drive pingers at usable output levels for 30 to 45 days. Same is true for non-magnetic Y-159-4, designed for Mk 57 mine and sked to replace Y-159 later in 1966.

B. Arnaclebutt

Ream awhile

Dear Barney,

Back in Troubleshooter 4-64 you put your stamp of approval on enlarging holes to fix a mismatch between holes in a bracket and holes in the SR-6 relay's can. Well, now we've found another mismatch in assembling

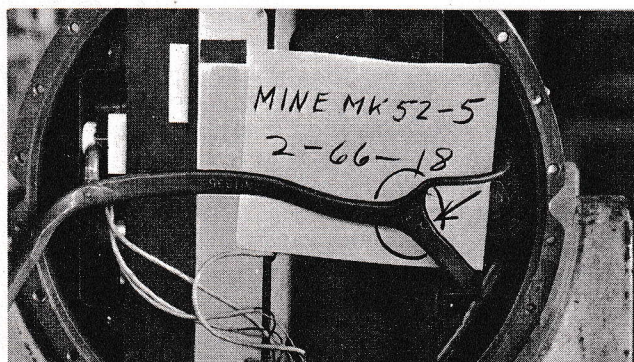
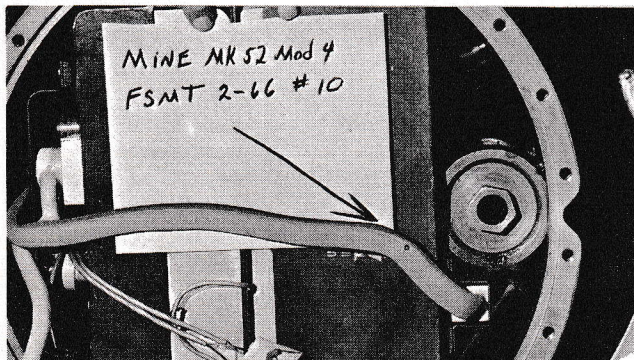
36-2s . . . between the mounting holes of the TB-27 Mod 1 and the bracket. So is it back to the rat-tail again?

RSF, MN2

Dear RSF

Same problem, same fix. Ream the TB, but keep hole enlargement to a minimum so you don't weaken the assembly.

B. Amalebutt



Instrument cable pinch

Dear B. Butt

When they put the depth compensator in the tail cover of Mines Mk 52/55 Mods 1, 3, 4, 5, and 6 they didn't leave enough room between compensator cover and instrument rack for the instrument cable . . . at least

not when it gets under a screw head. Here are some examples of cables with impressions of the screw heads that show what we mean and, as you can see, it sure could cause trouble.

What we do now is tape the cables so they're held clear of the depth compensators. It works if done right.

CHF, MN1

Dear CHF

Your tape method is OK as long as you map the route of the cable accurately enough. For new procurements, though, we've substituted truss-head screws for those fillister-head screws now used in the depth compensator cover. A better, though at times less convenient field fix can be had by replacing the two screws that interfere with the cable with 1/4-inch cadmium-plated steel truss-head machine screws No. 6-32-UNC, 5305-151-0691. Truss heads are thinner than fillister or round heads, yet are strong enough for this application, and at the same time will not pinch the cables.

B. Amalebutt

Mine crate shift

Dear Hot Stuff,

We have been receiving Mk 52 mines that have shifted in their crates during shipping and handling. In two instances this has resulted in broken ground straps, but it could do more. The reason as we see it was loose bolts securing the 52-0 crates. Shouldn't some torque be specified other than "tight" to end this dangerous situation?

LCB, MNC

Dear LCB:

No doubt about it. These were mines that have been inverted in their crates per Troubleshooter Bulletin 040, making it necessary to install the crate bolts upside down. This makes use of a speed wrench impossible. As a result bolts are being missed when it comes to making all secure.

So when accomplishing this crate inversion all hands should make doubly sure, when re-securing the crate bolts, that the bolts get pulled down until their lock washers are flattened. As we see it this will take care of the necessary torque. Depot personnel please note!

B. Amalebutt

Current drain test

Dear Barney,

During current drain tests on the Clock Delay CD-14 in the Mine Mark 25 Mod 0 difficulty was experienced in taking accurate

meter readings while, at the same instant, plugging the Mk 2 Mod 3 test set's cable CA-714 into the CD's cable CA-997. I found it easier and less confusing to start the test by setting the set's selector at 4, then . . .

1. See that the CD-14 is run down (not ticking).
2. Plug the CD-14 cable (CA-997) into the female connector of CA-714.
3. Rotate the test set selector switch to Position 5 and immediately note the reading on the 0-50 amp scale of the test set's meter.

This way you can direct all your attention on reading the meter without the distraction of juggling two amphenols into mating position. I have checked the Mk 2-3's schematic and there are no internal connections between Positions 4 and 5 so Position 4 (Battery Short Circuit Test) can be used as an OFF position for the current drain test without damage to the test set.

Correct?

A.D.W. MN2

Dear A.D.W.:

You can get your answer to the Current Drain Test of the CD-14 in the Mine Mk 25-0 by using your procedure. Whether it makes the test easier or reduces error in reading the meter is a matter of personal opinion. Personally, I find little advantage in one method over

the other so I see no need to change the OP, especially since an introduction of two purposes for the same selector position might confuse even more guys than it would help.

B. Armalet

Saving thaw time

Dear B.,

How about some provision to substitute balancing batteries in Firing Mechanism M11 and Circuit Break Mk 1 without repeating Class B tests. That way we could test groups of these mechanisms with a single "hot" BA-251/U, then install thawed Code A batteries later, as they become available. This would bypass a 48-hour wait for batteries to thaw. I think it's good.

P.N., MN1

Dear P.N.,

So does brother J. T. Kennedy at Navy 96670, who suggested it too, and tests in response to Kennedy's Rudminde indicate that switching batteries as you suggest would have negligible effect on the balance of either the firing mechanism or the circuit break. In the final analysis your Class C tests are going to tell you whether your balance situation is no-go or go with the actual balancing batteries installed anyhow, and my feeling is that OP 2567 embraces full recognition of this fact.

B. Armalet

How red can a face get?

Plenty red when you uncover an item stashed in the bottom of an obscure editorial drawer and find that it's a group photo that T-Shooter should have published back in 1964. Under such a circumstance there's always a temptation to bury the evidence, forget it, and hope anyone else who knows about it will long since have done likewise.

But that wouldn't be fair. In the case in point, somebody went to all the trouble of posing the mine crew out at Navy 3867. Not only that, but Brother M. H. Baird (back row, second to last on right) thereupon took the time to forward it with a real fine letter which we enjoyed very much. Besides, old pictures are often even more interesting than new ones.

So here it is. Since it was taken we're sure that there have been plenty of transfers and we hope there has been at least the usual number of promotions. We also hope the present crew is getting enough to drink. Water, that is. When this pic was taken water was in mighty short supply and Mama (front row) was preparing to live up to her name. So has Mama since added to the canine population? Maybe the crew out there now will send us a line and a pic and let us know. Meantime here's the gang as it was back at the beginning of 1964. Front row, left to right, are:



J. H. Eisel, MNSN; E. M. Graham, MN1; R. E. Griffin, MN2, with "Nuga"; M. O. Bera, MNSN, with "Sandy"; M. E. Rollins, MN2, with "Mama"; G. L. Blizzard, MN1. Back row, left to right: ENS C. J. Wright, Mines Division Officer; L. M. Siluk, MN1; B. W. Lawson, MN2; C. D. Graham, MN2; D. H. Clark, MN1; D. W. Swain, MN3; J. E. Temple, MNSN; D. E. Yancey, MNSN; M. H. Baird, MN1; and C. M. Edwards, MNCS.

AMMUNITION CONDITION CODE CHANGES

THE ALPHA CODE for ammunition stock recording and reporting that replaced the numeric code in April 1963 is no longer with us. The Alpha system is still used but as of last July it has become necessary to learn the ABCs all over again.

The sole exceptions: A which still means serviceable, and U — now Purpose Code U — which designates items in use. The changes are not simple substitutions of meanings. New categories of classification are defined for some letter codes while in other cases two or more areas of classification, in whole or in part, have been combined under a newly-assigned code letter. For example part of old Code B and Code I will be found under new Code E, with the rest of old Code B combined with a part of old Code C now to be found under Code F. The rest of old Code C is now taken care of by Code G.

Here, then, is a list of the new designations, titled MILSTRAP Condition Codes, as opposed to the former Ammunition Codes published in Troubleshooter 4-63. MILSTRAP, in case you haven't been kept up-to-date, stands for Military Standard Transaction and Accounting Procedures. The definitions here are based on those in NAVSANDA Publication 437, interpolated for application to mine and depth-charge material:

MILSTRAP (New)	DEFINITION	AMMUNITION (Old)
A	SERVICEABLE. New, used, repaired, or reconditioned material which is serviceable and issuable to all customers without limitation or restriction.	A
B	COMBAT EMERGENCY/DRILL USE. Items originally procured as service type ammunition and later restricted to combat emergency use, or to issue and use for training or drill.	F/Y
C	Does not apply to mine or depth-charge material.	None
D	AWAITING INSPECTION. Presumably-serviceable items from new production runs, being held pending inspection or completion of acceptance tests.	None
E	RESTORABLE. Items requiring minor repair or exterior maintenance, which can be made fully serviceable with limited expense and effort.	B/I
F	REPAIRABLE. Items requiring alteration, modification, conversion, or parts replacement (e.g., ordalting or overhaul) before acceptable for issue.	B/C

MILSTRAP (New)	DEFINITION	AMMUNITION (Old)
G	INCOMPLETE. Material requiring additional parts or components before issue.	C
H	UNSERVICEABLE. Items beyond economical repair, awaiting disposition instructions.	X
J	RESTRICTED. Items suspended from issue by appropriate Notice of Reclassification, or items which have been suspended as a result of malfunction, age, or other reasons.	H/E
K	UNSEGREGATED. Items not completely identified by FSN, Navy Ammunition Logistic (NAL) code or condition code, or ammunition or component lot number. May also designate station stocks requiring screening for a specific defect or reason.	G
L	SUSPENDED. Items received from procurement exhibiting defect or condition requiring negotiation or litigation with procurement sources or common carriers to determine responsibility or liability for corrective action.	H
M	IN PRODUCTION. Items still on inventory control records, but transferred out of storage for repair, renovation, modification, or exterior maintenance. Does not include items transferred to production for new assembly or loading.	K/Z
Purpose Code W	DISPOSABLE. Designates items declared or determined by competent authority to be surplus and/or excess; uneconomical to repair; or unsafe for issue, use, storage, etc., and for <u>which end action disposal has been authorized.</u>	X
Purpose Code U	IN USE (installed). Designates items such as torpedoes, mines, underwater sound signals, or guided missiles, including components and ancillary equipments, which have been installed or issued for use on vessels, aircraft, or at shore activities. <u>To be used only when specifically directed by the inventory manager. Does not apply to cognizance symbol ØT or 2T material.</u>	U

Do You do this Job Right?

BACK IN T-Shooter 3-64 (Job Right) we gave instructions for re-fastening the suspension lugs in Mk 36-2 cases which called for 25-28 lbs torque on the screws and water-pump grease in unused tapped holes from which set screws had been removed. Now we find that some outfits have been performing the "grease step" before the "torque step" . . . putting lubricant in all the holes including those for the lugs' screws.

So what's wrong with that? Plenty. When you see a torque specification it almost always applies to dry bare threads and is calculated according to the dimensions and tensile strength of the metal, and size and type of threads, to provide maximum strength while inflicting minimum strain. Lubricate those threads first, though, and your application of the same specified torque can set up the screw twice as tight, leaving a considerable residual strain on the threads. It's as though you have threads designed to take 200 pounds direct pull, torqued so that 150 pounds pull is already placed on them. What's left as the working strength is a mere 50 pounds, and that's about all they'll actually hold without letting go!

Now the purpose of that earlier article was to get rid of old suspension-lug screws with half-shot threads before they started parting in flight letting the mines launch themselves surreptitiously from the airplanes' bomb racks. This was explained in some detail in the previous article, and is reason enough, we think, to tell you now to go back and do the job right if you know you put grease in the holes in which you installed the lugs' screws. Whether doing it over or starting from scratch, here's the procedure you should use:

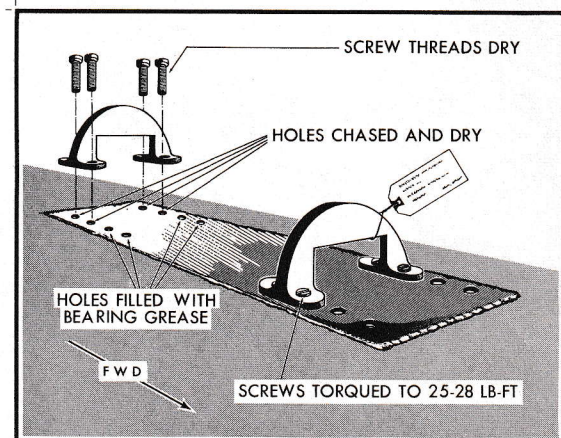
- ▶ Position case with lugs up.
- ▶ Scrape away paint and clean around screw heads with wire brush (use anti-spark tools on explosive-loaded cases!).
- ▶ Apply penetrating oil and let it soak in for at least 24 hours (a drop or two will do if you apply it where it can work down between screw shanks and hole threads).
- ▶ Using proper-size screwdriver, remove screws. (If you don't succeed at first, soak some more and try again.)
- ▶ Chase the threads of the screw holes.
- ▶ Pour solvent such as Varsol into the screw holes and let it soak for at least a minute.

- ▶ Sop up solvent with rag or paper towel.
- ▶ Blow out excess solvent with air blast.
- ▶ Examine hole and threads for residue and repeat cleaning steps if necessary.

If threads in the holes from which you removed the lugs' fastenings now appear markedly damaged or weakened, so that their holding strength is doubtful, place the case in Code H, notify NMEF via Rudminde, and request disposition and replacements through your usual channels. If the threads in the holes are in good shape proceed:

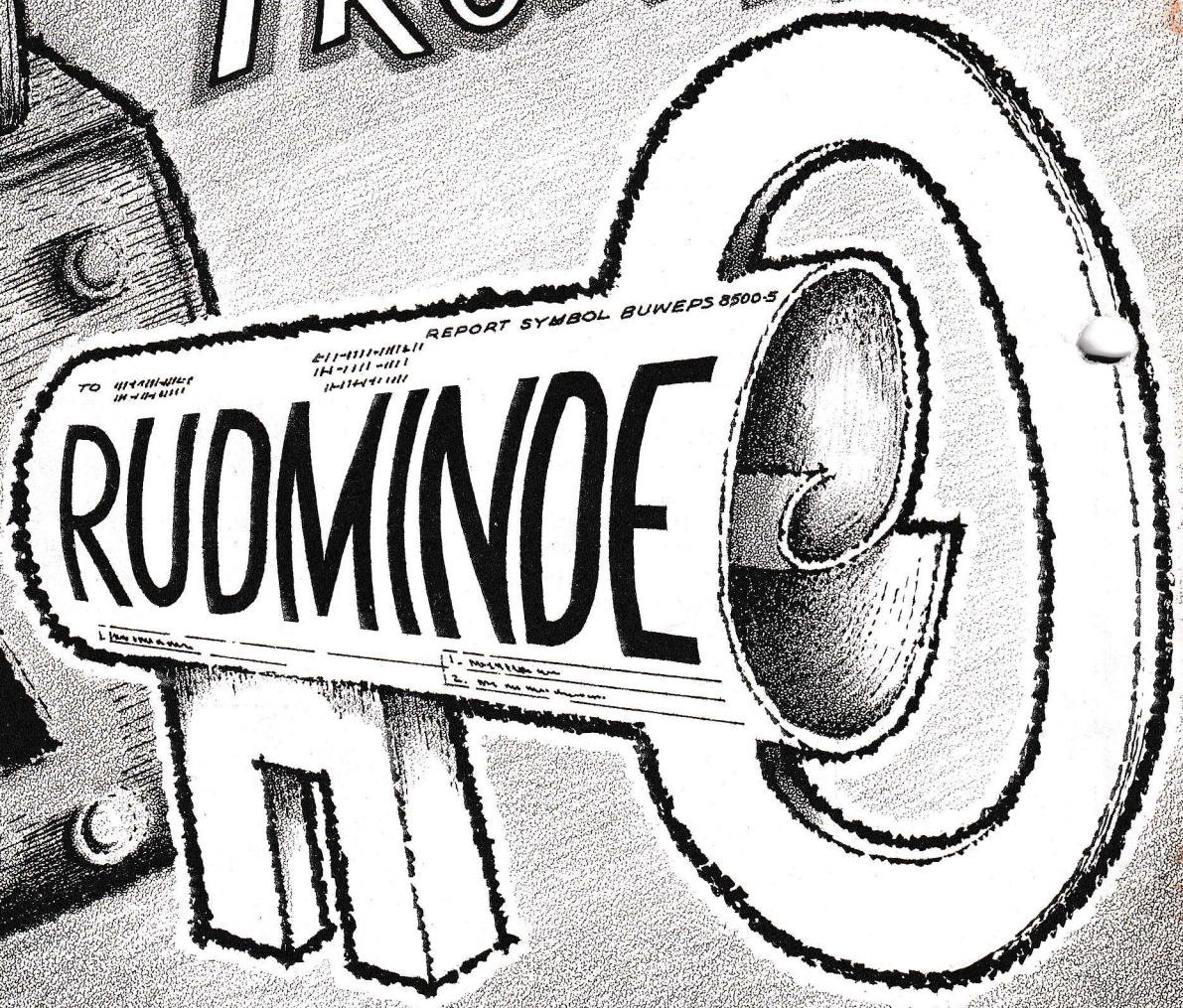
- ▶ Scrap the slotted suspension-lug screws and lockwashers you removed and get new ones. The numbers to order are 5305-800-5698 for the screws (socket-head, hex), and 5310-012-0214 for the washers.
- ▶ With threads of screws and holes dry, install the lugs back at their 14-inch spacing, using new screws and lockwashers, and torque all to 25-28 lb-ft. Then clean up and paint around lugs as necessary.
- ▶ Fill all suspension or hoisting-lug holes not used with bearing grease, 9150-235-5542, to put an end to continued corrosive action.
- ▶ Attach a tag to one of the lugs bearing info as follows: Lugs' screws replaced on (date), followed by your name and activity.

The Editor



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YOUR

PROBLEM!



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