

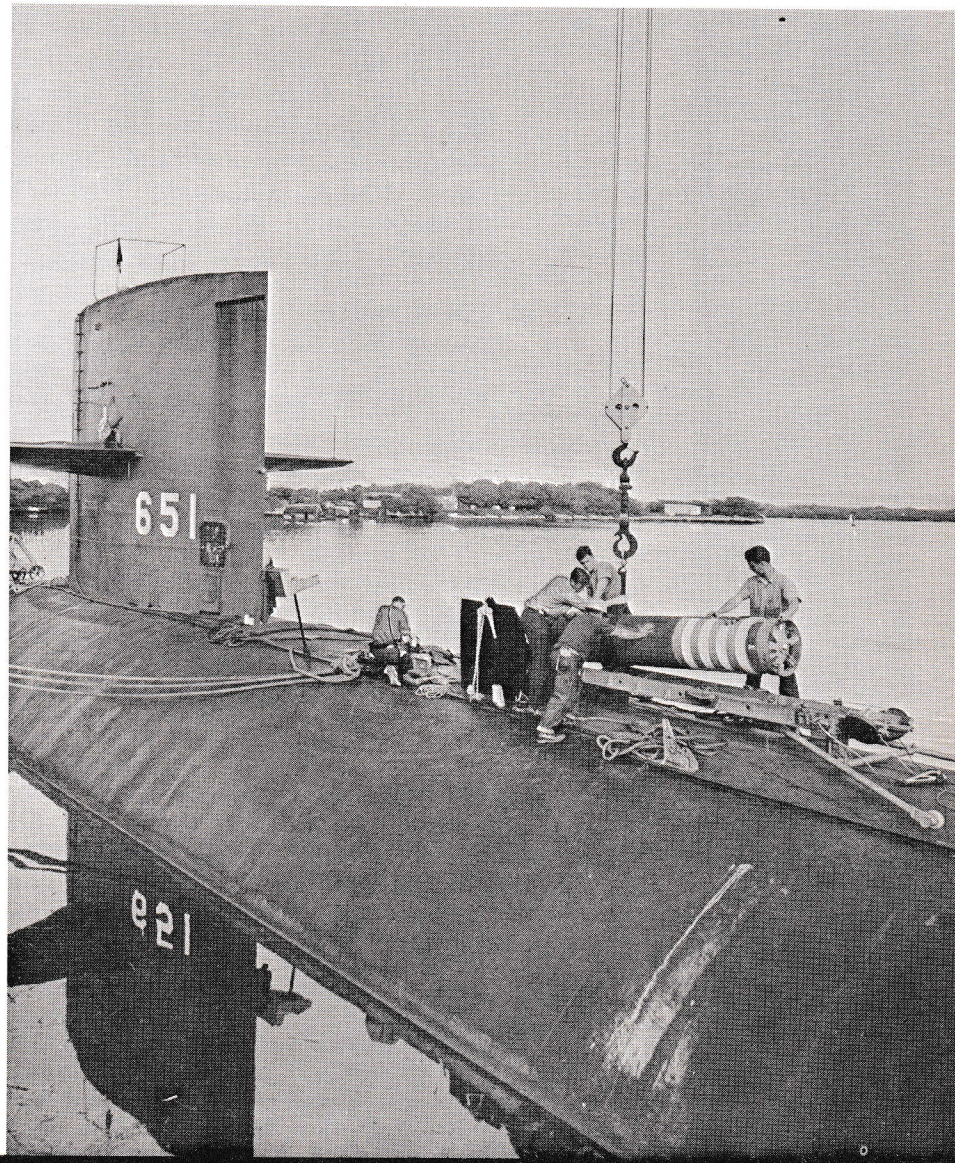
mine and depth - charge

THE TROUBLESHOOTER

▶ MINE SCHOOL NOTES

▶ NEW ADAPTERS FOR SET MK 250 TESTS

▶ NOW ITS ACNS



AN OFFICIAL NAVORD PUBLICATION

in this issue . . .

mine and depth charges

THE TROUBLESHOOTER

Published by the Naval Mine Engineering Facility, Yorktown, Virginia 23491

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REGULAR FEATURES

<i>FL Shoptalk</i>	1
<i>Hot Stuff</i>	6
<i>Job Right</i>	9

ARTICLES

<i>All Mines: Mine School Notes</i>	1
<i>Fleet Return . . . Identify It</i>	2
<i>The Errant Mine Caper</i>	3
<i>More on Filling Hole Covers</i>	6
<i>Reporting Safety Hazards</i>	7
<i>Interim Changes Become ACNS</i>	8
<i>Mk 25-1/36-2/49-1/52,55-1,3,4,5,6:</i>	
<i>Accessory Sets 24/25 for Mk 250</i>	4
<i>Mk 52/55: Keep Soluble Washers in the Dark</i>	7
<i>Mk 52/55-1,4,5,6: Use of Band Plug No. 4</i>	6
<i>Mk 52/55-3,4,6: Adapter for Test Set Mk 265</i>	9
<i>Mk 52/55/56/57: Nameless Cell Named</i>	8
<i>Mk 56-0: Look Out for Leaks</i>	8

COVER PHOTO: Now you see it....a Mark 57 being shipped aboard nuclear submarine USS QUEENFISH (SSN 651) at Oahu, Hawaii, for fleet test. Test mines were planted off Maui with excellent results. For story about the mine that got away see page 3.

1 APRIL 1969

The Troubleshooter, an official NAVORD 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 NAVORD Form 8500/1 (2-68) Everyone who encounters problems with these weapons should report them via this form direct to the Naval Mine Engineering Facility as prescribed by NAVORDINST 8500.3.

MARK W. WOODS

Rear Admiral U.S. Navy

Commander, Naval Ordnance Systems Command

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FL SHOPTALK

NMEF FLEET LIAISON DESK • 703/887-2411 • AUTOVON 555-3480 • EXTENSIONS 492 & 695

FL Shoptalk is a column of observations general and specific, prepared by members of NMEF's Fleet Liaison (FL) Department. Head of the department is LCDR Lyal M. Stryker. Other members include LT M.D. Horn, Jr., LT R.L. Anderson, LTJG T.W. Mudd, LTJG D.C. Tuttle, and ENS J.C. Owens, Jr.

Most T-Shooter readers know by now that LCDR Ed Sprecher has been transferred from Naval Schools, Mine Warfare to the COMINELANT Staff. His replacement at the school (OIC, Mines Department) is LT K.R. Peterson, who has sent us the following article. Speaking for himself — and his assistant, CWO George W. Russell — Pete writes: "I assure you we will do all we can to maintain the high caliber of mine instruction established by Ed Sprecher. He left big shoes to fill.

MINE SCHOOL NOTES

Lately the school has had a considerable number of civilian students, some of whom have expressed disappointment because the course wasn't what they really wanted or needed. This is a situation we try to avoid, so we hope this explanation of what is offered by the two courses is appropriate.

The major courses available to civilians are the Mineman "A" and "B". Many have the erroneous idea that the Mineman "A" course is elementary and very basic, and that in order to get an advanced education in mines they must apply for a "B" course. This type of thinking could lead to a dissatisfied student.

The "A" course is designed to produce a mine assemblyman with a thorough understanding of how mines function (notice, mines), including an insight into principles of firing mechanism operation. If the student elects to omit the preparatory portion of this course he should realize that for the various mine portion of this course a good working knowledge of electricity, including proper use of ohmmeters, voltmeters, etc., will be a prerequisite. Students who elect to attend only that part of the course for a particular mine or mines must also have prior knowledge of basic mine components such as clock delays, sterilizers, extenders, etc. The reason: these devices will have been thoroughly covered in the accessories classes, so the instruction is not repeated in the classes for each mine.

WHAT TO EXPECT IN "B" COURSE

The "B" course, on the other hand, is designed to refresh the mine assemblyman and produce a well-rounded supervisor/troubleshooter-type senior petty officer. Civilians planning to attend this course should therefore expect to receive instruction in troubleshooting, repair, and supervision with a minimum of emphasis on mine assembly. The course deals with the mine and component circuitry at length to lay the groundwork for success in troubleshooting and authorized repairs. This means in-depth understanding of electricity and electronics will be necessary before starting into the components and mines at the "B" level. This can be accom-

plished in "B" preparatory. Repeated coverage of these components under each mine is undesirable and unnecessary. Therefore, no trainee who does not possess a thorough working knowledge of components and their circuitry should elect to omit the "B" accessories class and start with mines.

In summation, the "A" and "B" courses are high school and college. High school does not offer elementary or basic education but is nevertheless a necessary foundation for college in the same way that the "A" course is a necessary foundation for the "B". This means that any trainee who does not have the "A" school foundation should review his equivalent background thoroughly before plunging into the middle of "B" school.

So much for civilians. Speaking to the military, let me remind senior petty officers to consider "B" school and avoid getting caught without this qualification for Chief. BUPERS is disapproving waivers for "B" school as several POs I know can very unhappily verify. By contrast, of four men who took advancement exams in one of our recently graduated "B" classes, two made chief and one made 1st class. These are tough crows to come by, so why not give us a whirl?

HOW TO REQUEST CLASS "B" SCHOOLING

Let me also mention that Mineman Petty Officers seeking class "B" school upon transfer are not applying for it in the proper manner. If a man wants to inform BUPERS that he does not mind attending "B" school, he indicates the fact on the SEAVEY/SORVEY DATA CARD at the time of required submission for rotation purposes. It is important to note that this procedure is not a specific request for "B" school. To make a specific request a separate letter requesting the school must be submitted to BUPERS in accordance with chapter 12.22 of the TRANSFER MANUAL. This action is in addition to the notation on the SEAVEY/SORVEY DATA CARD. My recommendation is that a copy of the request letter be sent directly to PERS C-148, who has direct quota control for BUPERS of Mineman "B" school. This is also the recommendation of John Hinkel (PERS C-148).

In considering "B" school, be advised that the curriculum has recently been up-dated to enhance the value of the course. This was done by extending Preparatory (Electricity/Electronics) by nine instructional days (from five and one half weeks to seven and one half

Continued on page 2

FL SHOPTALK

Continued from page 1

weeks) to provide more extensive coverage of transistor circuits. The school has obtained new and very nice transistor training kits for students' use in this curriculum unit. Of course, in order to extend PREP we had to rob Peter to pay Paul so to speak. Since the vast majority of our incoming "B" students are very experienced in the World War II type non-modular mines and their components we have whittled instruction on these to the bone. We still teach them but the time spent in class is minimal and assembly training is conducted only on those most susceptible to assembly error such as the 36-1 and Drill 49-0.

NEW ENLISTED CLASSIFICATION

With the advent of the mine test-set maintenance program and Test-Set Checkout Group Mk 1, it is imperative that trained, qualified personnel be available to conduct the program. To this end, a new navy enlisted classification (NEC) has been established effective 1 July 1969. The Code Number And Title: MN-1201, Mine Test-Set Maintenance Technician. This code will be assigned to all "B" - school graduates that have successfully completed the curriculum units of Preparatory and Test-Set Repair subsequent to June 1967, and the School will send letters to the commands of qualified past graduates to authorize assignment of the new code. Students now in school and all future personnel will be assigned the NEC 1201 upon qualification.

And with that, I'll sign off and hope the info I've included will be of help. To round it out, I've included a list of convening dates for courses applicable to the mineman profession scheduled for the remainder of Fiscal Year 1970.

Lt. K. R. Peterson
U. S. Naval Schools, Mine Warfare
U. S. Naval Station
Charleston, South Carolina 29408

ALL MINES:

FLEET-RETURN... IDENTIFY IT!

DEPOTS receiving fleet-run mine material continue to have a real problem when it comes to determining the condition code to which the material should be assigned. How can they tell, for example, whether the returned components have been used in an FSMT, or drill or some other type of exercise? Certainly not by appearance.

Components which, after such use, are not authorized for assignment to Condition Code A (NAVORDINST 08550.6) cannot then be used in service or FSMT mines. The result: when neither material tags nor shipping papers tell whether the components have been subjected to such use, they can only be assigned to Code B. This means a considerable loss of expensive gear which would in fact be suitable for service use.

Activities returning mine components are therefore requested to help by tagging each component to show the proper condition code and by notes on shipping documents. Components which have been used in FSMT, Drill Mine Program, fleet exercise, etc., should be tagged Code B. If the component has not been so used and is serviceable to the knowledge of the shipping activity, tag it "Code A" or, if not so used and is not serviceable "as is," tag "Code F." Notes on shipping documents, such as "Drill Material," "FSMT Material," "Excess Service Mine Material," will be very helpful. If this is done, though Codes A and F may be changed by receiving activity quality assurance personnel, the basic problem will have been resolved.

One further aid in this matter is the need to include notes as above on documents requesting disposition of material. If this is done, it will allow NMEF's responses to include instructions as to the condition-code tagging to be applied each item to be shipped.

MINE WARFARE SCHOOL - CONVENING DATES

<u>TITLE</u>	<u>CONVENING DATES</u>	<u>CONTENT SUMMARY</u>
Mineman Class "A"	11 Aug; 2 Sep; 22 Sep; 13 Oct; 17 Nov; 8 Dec; 12 Jan; 16 Feb; 9 Mar; 30 Mar; 20 Apr; 25 May; 15 Jun.	Prepares untrained student to become a mine assemblyman.
Mineman Class "B"	6 Oct; 5 Jan; 13 Apr; 29 Jun.	Advanced technical training at the senior Petty Officer level.
Mine Mk 27	2 Oct; 23 Jan; 9 Apr.	Overhaul, assemble and test Mk 27 mobile mine.
New Mine Developments	5 Aug; 21 Oct; 10 Feb; 20 Apr.	Class "B" level instruction in modular component mines.
Mine Shop Administration	6 Oct; 12 Jan; 6 Apr.	Five week course for mineman E-7 thru E-9, Warrant, and limited duty officers; includes review/updating in technical aspects and related topics.
Mine Maintenance Officer	6 Oct; 5 Jan; 13 Apr; 29 Jun.	Instruction at Class "B" course level for officers.
Destructor Mk 36/40	18 Aug; 15 Sep; 20 Oct; 10 Nov; 8 Dec; 12 Jan; 9 Feb; 2 Mar; 30 Mar; 4 May; 8 Jun.	Instruction in all destructors utilized by the Mine Forces.



THE ERRANT MINE CAPER

A maverick FSMT Mine Mk 57 Mod 0 escaped the CSP 1-69 mine field and put up a tough fight against Coast Guard efforts to corral it off a Hawaiian beach. Not as noxious as an oil slick from a leaky oil well nor as terrifying as a misplaced nuclear bomb, nevertheless the innocent mine with its orange and white stripes caused excitement in the beach area and made headlines in local newspapers.

Forty mines were planted by the USS Queenfish (SSN 651) for the FSMT without incident but only 39 were recovered. What happened to Mine No. 26 was a mystery until it bobbed into view of an excited resident who reported a "live torpedo" off Kalama Park's beach, Kihei, Maui, Hawaii. What had happened was that No. 26 had broken loose from its mooring sometime during the night and drifted out of the field and hung up on a reef off the beach.

The Coast Guard station Maalea, Maui was notified and guardsmen notified the search and rescue coordinator and Naval authorities in Honolulu in turn. The Coast Guard cutter Cape Newagen stood offshore and dispatched a small boat in an attempt to tow the mine through the reef into deeper water where the USS Greenlet, a Navy Submarine Rescue Ship, stood by to receive it. The Coast Guard landing party lost the tug of war with the 1000-pound hunk of mine and their boat was swamped.



The next move was to beach the "torpedo" and post two guards until a pick-up truck could haul it to the Coast Guard station where it was identified as a harmless mine. Having no regard for a gallant foe the guardsmen worked well into the night putting their brand on the maverick mine. It was the Coast Guard racing stripes of red, white, and blue that usually graces the bows of cutters. These words were inscribed:

Located, rescued and salvaged compliments of the U. S. Coast Guard Maui, Hawaii. Please keep our beaches clean!"

Tamed and humiliated the mine was delivered to a Navy weapons retrieving boat for return to NAD Oahu.

ACCESSORY SETS 24/25 FOR SET MK 250

MINES MK 25-1/36-2/49-1/52,55-1,3,4,5,6:

INTRODUCTIONS to the Class-B tests in OP 1452, for Sensitivity Switch Mk 3 and Depth Compensator Mk 3, state that the procedures given are for use only until Test Set Mk 250 can be adapted to do the job better. The job sheet for the sensitivity switch also states that Test Set Mk 271, which is well on the way to being obsoleted, can be used for testing that switch if the set and instructions for using it are available. That has been the case since September 1966 but it will not remain so for long.

The reason: Accessory Sets Mk 24 Mod 0 and Mk 25 Mod 0 have been coming off the production line. These are the gadgets you'll need to use your Mk 250 test set as promised, distribution of both to holders of that set will be automatic, and Set Mk 271 can be dispensed with.

Great? Yes, but with a hitch. With receipt of the accessory sets you're going to need new operating instructions in some five of your technical manuals (OPs). In one case they are already in a new edition which is already at the printer. In another they are in the draft manuscript for a new edition which is somewhat less close to release. At least one other is of such low priority, however, that it may be two years in the doing, and others will fall somewhere in between. In any case printing and distribution can take months so we've decided to give you all necessary instructions right here, for use until the real thing comes along. Here's how they go:

PREPARATION OF TEST SET MK 250

For any of the test procedures that follow, preparation of the test set for use with the new accessory sets should be just as is currently specified where it is used with other accessory sets to test hydrostatic switches, arming devices and extenders in OP 1452. The new sets, like the earlier ones, simply provide adaptation to connect the component to be tested to Test Set Mk 250. Accessory Set Mk 24, 4A00017, includes an adapter plate, test clamp, electrical cable (CA-1264), and packings (O-rings), all of which adapt Set 250 to Sensitivity Switch Mk 3. Accessory Set Mk 25, 4A00019, includes an adapter ring, electrical cable (CA-1265), and packings (O-rings) needed to adapt Set 250 to Depth Compensator Mk 3.

CLASS-B TESTS; SENSITIVITY SWITCH MK 3

Install a packing (O-ring) from Accessory Set Mk 24 in the pressure pot of Test Set Mk 250, and install air hose on the accessory set's adapter plate, then lock the adapter plate from Accessory Set Mk 24 onto the pressure pot and connect the free end of the hose to the sensitivity switch. Next, connect CA-1264 between the sensitivity switch and the Mk 250 test set's terminal board. Also install a jumper between the sensitivity-switch case and test-set case.

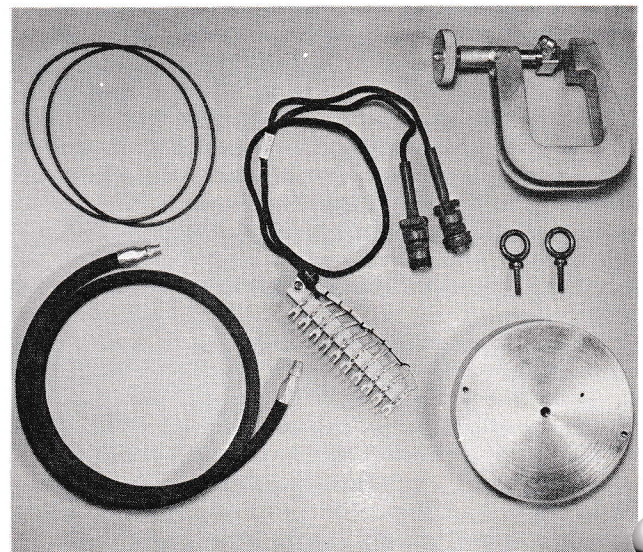
Insulation-Resistance Test. Turn Set 250's station-selector through positions 1, 2, 6, 8, 10 and 15, pressing meter switch in each position. Meter must read in the green area for each. Reject the sensitivity switch if meter reads in the red area remove the jumper and turn station selector to OFF when test is complete.

Contact-Resistance Test. Turn Set 250's test selector to CONTACT RESISTANCE and its station selector to positions 7, 13, and 17, pressing meter switch in each position. Meter must read in the green area for each. Reject the sensitivity switch if meter reads in the red area. Turn station selector OFF and test selector to INSULATION RESISTANCE when test is complete.

Pressure Test. With Set 250's station selector at OFF and test selector at INSULATION RESISTANCE, connect an ohmmeter (Rx10,000) between terminals 4 and 5 of the set's terminal board: The ohmmeter must indicate between 360,000 and 440,000 ohms. Next, connect ohmmeter between terminals 5 and 10: It must indicate between 730,000 and 900,000 ohms. Next, connect ohmmeter between terminals 4 and 5 and, turning the test set's pressure-control switch to SLOW INTAKE, increase pressure and read resistances as follows:

PRESSURE (psig)	RESISTANCE (ohms)
0.0	350 K to 440 K
15.2 - 21.2	670 K to 820 K
23.6 - 29.6	1.3 meg to 1.7 meg
36.0 - 42.0	Infinity
60.0	Infinity

When above is satisfactory turn pressure control to FAST EXHAUST: meter again must indicate 350,000



Accessory Set Mk 24

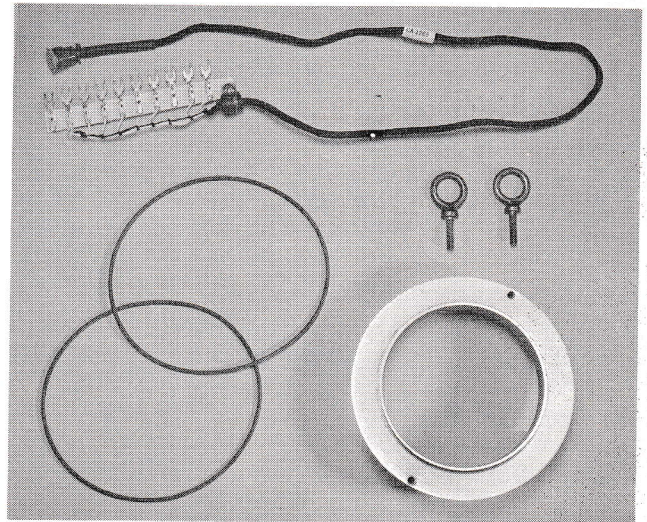
to 440,000 ohms when pressure drops to 0 psig. Testing is now complete. Reject any sensitivity switch that fails the above requirements.

CLASS-B TESTS, DEPTH COMPENSATOR MK 3

Lubricate preformed packing (O-ring), 0P00042, with aircraft grease 7G00047 and install over top of depth compensator seating O-ring evenly and snugly against compensator case flange. Similarly grease the packing supplied with the accessory set Mk 25 and install it in the pressure pot of Test Set Mk 250. Place the depth compensator in the pressure pot, and place the accessory set's adapter ring around the depth compensator. Lock the adapter ring and compensator onto the pressure pot. Also level the manometer and check it for oil; if empty, add two drops of oil from manometer oil kit. Also grease the inner circumference of the pot's cover and, with cover valve open, place the cover over the compensator. The cover is held in place by its own weight but it should be pressed downward for a good seal.

Leak Test. After preparations as outlined above, perform a leak test as follows:

1. Turn Test Set Mk 250 power switch ON, turn pressure-control switch to SLOW INTAKE. When pressure gage reaches 2 psig turn the pressure-control switch to HOLD and wait 30 seconds for pressure stabilization.
2. Adjust the manometer's rod until its end aligns vertically with the right end of the oil slug, then close the leakage-cover valve.
3. Press the timer switch; timer indicator must light.
4. Measure the distance traveled by the oil slug in the manometer. Right end of the oil slug must not move further than the length of the manometer rod's smaller-diameter section. If it does, reject depth compensator.
5. Open the leakage-cover valve and turn the pressure-control switch to FAST EXHAUST. If the compensator is a reject remove it from the pressure pot, otherwise continue.
6. Turn pressure-control to FAST INTAKE until pressure gage indicates 60 psig, then turn the pressure-control to HOLD and wait 30 seconds for pressure stabilization.
7. Repeat steps 2, 3, and 4.
8. Open the leakage-cover valve and turn the pressure control to FAST EXHAUST. When gage reads zero pressure remove the leakage cover.



Accessory Set Mk 25

Insulation-Resistance Test. Connect CA-1265 between the depth compensator and Test Set Mk 250's terminal board. Install a jumper between depth compensator case and test set. Then turn the set's station-selector to positions 4, 15, and 20, pressing the meter switch in each position. In each case the meter must read in the green area only. Reject compensator if meter reads in the red area. Turn station-selector OFF.

Contact-Resistance Test. Turn Set 250's test selector to CONTACT RESISTANCE and station selector to positions 8 and 18, pressing the meter switch in each position; meter must read in the green area only. Reject the depth compensator if meter reads in the red area. Turn station selector OFF and test selector to ACTUATION.

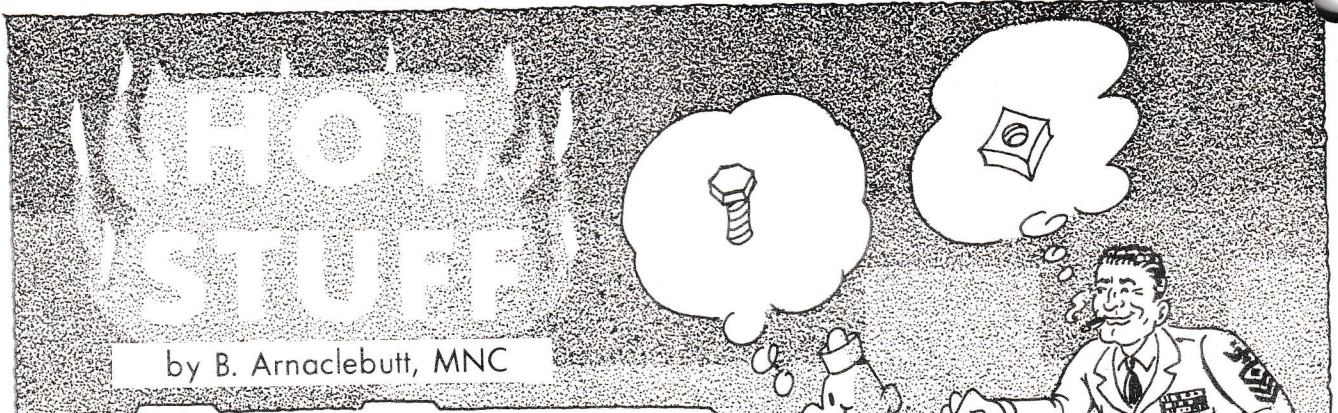
Pressure Test. With Set 250's station selector at OFF and test selector at ACTUATION connect an ohmmeter (R x 10,000) between terminals 2 and 7 of set's terminal board: The ohmmeter must indicate between 600,000 - 720,000 ohms. Connect ohmmeter between terminals 4 and 7: It must indicate between 1.35 - 1.65 megohms. Connect ohmmeter between terminals 6 and 9: It must indicate less than 0.5 ohm.

Next connect ohmmeter between terminals 6 and 9 and with set's pressure control at SLOW INTAKE let pressure guage rise to 16-20 psig: Indication should be infinity. Connect ohmmeter between terminals 2 and 7 and with pressure rising read resistance as follows:

PRESSURE (psig)	RESISTANCE (ohms)
0.0	600K to 720K
20.0 - 24.0	300K to 360K

When above is satisfactorily accomplished turn pressure control to FAST EXHAUST: Indication should again be 600,000 to 720,000 ohms at 0 psig. Testing is now complete.

Continued on page 8



ALL MINES:
More on filling-hole covers

Dear Barnacles:
 Troubleshooter 1-64 told us not to budge filling-hole fastenings on service-mine cases, but to go ahead and remove filling-hole covers from inert-loaded cases that need to have some ocean drained or water-logged plaster removed to restore them to standard weight. Troubleshooter 2-68 spoke to loose filling-hole covers on service mines, stating they are OK to use if not very loose.

Could you please wrap this entire ball of wax in one statement.

MN1 FHW

Dear FHW:
 Let's have no doubt about this rule for mine shops. Do not, repeat do not, tighten, loosen, or adjust in any manner; for any reason, the cap screws or nuts of filling-hole covers on explosive-loaded mine cases or sections. These covers can be considered Code A as long as they do not move on their fastenings, even if they have one or two loose or missing nuts or cap screws. If the cover does move place the case in Code E and request disposition. In short, fastenings can be loose (torque relaxed) without the cover being considered loose. Leakage of sea water through the filling hole will have no adverse effect on the explosive filler.

So much for service mines. During assembly of inert-loaded drill and FSMT mines the same rule applies . . . to make absolutely sure we don't develop a habit in training that would be dangerous in combat. This need not preclude a needed restoration, at the discretion of your mines officer, where a quantity of drill or FSMT cases are being overhauled.

Even then, though, the best deal would probably be Code E and request disposition. Why live dangerously?

B. Arnaclebutt



MINES MK 52/55 - 1,4,5,6:
Use of Band Plug No. 4

Dear B.B.
 The use of Band Plug No. 4 is prohibited by OP 1816 Vol 7 in Operational Assembly 02A of Drill Mines Mk 52/55, but not mentioned in OP 2608 for OA2B. Is this an intentional omission in OP 2608? Can Band Plug No. 4 be used in assemblies that use Drill Float Mk 17?

MN3 SBP

Dear SBP:
 It is exactly as you read it...with the "A" assemblies (Float Mk 15) you cannot use Band Plug No. 4 but with the "B" assemblies you can. The reason is that wave action can cause the swaged spear of the recovery line used with Float Mk 15 to rub against the shield producing a signal that is accepted by the number 4 plug as a target. The mooring line used with the Drill Float Mk 17 does not produce such a signal.

What about that!

B. Arnaclebutt

MINES MK 52/55:

Keep soluble washers in dark

Dear Barney:

Our soluble washers OW00075 for Arming Device Mk 5 are turning brown and leaking a reddish brown substance. What is the meaning of this? What can we do?
WSW

Dear WSW:

Those washers are composed of ammonium chloride and ammonium iodide and the villain that makes 'em decompose is oxidation. The reddish substance is free iodine, which exudes from and stains the washer, the total effect is that it renders your supply of washers useless.

So what's to do? First, get new washers if you have a real need. (Remember, they're authorized only for use in surface plants.) Then give some thought to storage.

Decomposition such as you report cannot be stopped dead but it can be slowed to a snails pace by insuring that the washers are kept in the dark. It is light, whether sunlight or artificial, that speeds the chemical process. As long as the washers are in their original packaging and sealed in an outer container, then, you have no problem. Out of the containers is a different story. The plastic covering on the individual washers is no protection against light. The answer: always put the unused washers back in the outer container and seal with tape. It really works.

B. Armaclibutt

ALL MINES:

Reporting safety hazards

Dear Chief Butt:

We are a little hazy on the subject of reporting weapon malfunction, safety hazards, and accidents involving mines and depth charges. Shouldn't it be something more than a Rudminde?

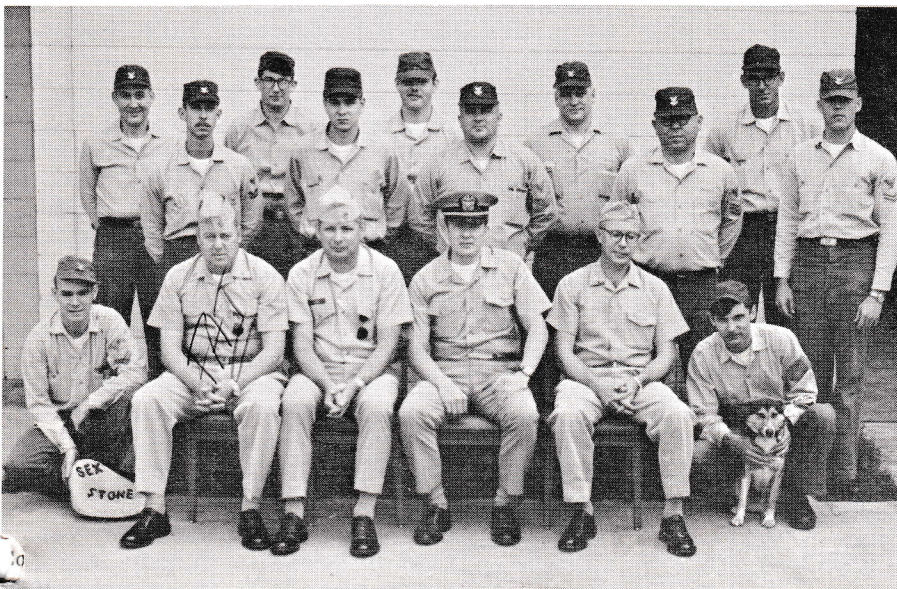
MN1 SHC

Dear SHC:

Your reference on the subject is NAVORDINST 8025.1, which defines terms; specifies action to be taken in accidents, malfunctions, and incidents involving non-nuclear explosive ordnance; and gives a message format to be used and instructions as to where reports should be sent. The important thing is that you should use a message, per this instruction, to get immediate attention when urgency dictates.

As In-service Engineering Agent for mines, depth charges, and projector charges except the 7" 2, NMEF will receive information copies of such reports involving these weapons. And since NMEF has responsibility for investigation, we are interested in receiving reports that are explicit, complete, and supported by photographs whenever possible.

If you still have BUWEPSINST 8020.6B you should know it was cancelled by NAVORDINST 8025.1, which is stocked by Supply and Fiscal Department (Code 514.32) Naval Station, Washington D. C. 20390.

B. Armaclibutt

Here is mine crew at Atsugi posed complete with ubiquitous dog and a geological first. MNCS Ray Cobis writes: "Last year we sent a picture and you didn't use it. We admit we are ugly, but we have the only sex stone in the far east so maybe that will get us in!"

So here they are at last. Front row, left to right: MN2 M.R.Spencer, MNC B.F. McCoy, MNCS J.R. Cobis, LT JG L.A. Baylor, MNC A.B.Hinman, MN3 V.J.Murray with E-9. Back row: MN2 P.E.McCumber, MN2 L.W.Ivy, MN3 D.A.McMenimen, MNSN D.L.Myers, MN3 T.E.Whitley, MN1 R. Williams, MN2 F. Bergey, MN1 P.E.Crum, MN2 L.R.Forbes, MN2 W.L.Keith.

The dog's name? "E-9." That's another way of saying Top Dog.

ACCESSORY SETS

Continued from page 5

CLASS-C TESTS, TAIL COVERS

Mines Marks 25 Mod 1, 36-2, and 49-1 employ a Sensitivity Switch Mk 3 installed on the tail cover of the mine case together with a tube assembly and microphone. These tail-cover subassemblies are prepared for installation on the mine as a part of the mine assembly function, using instructions in the respective mine assembly manuals. Instructions for testing such tail-cover subassemblies for leakage will therefore also be included in the assembly ("Class-C") manuals even though it requires use of Test Set Mk 250 which is Class A/B set.

Accessory Set Mk 24 is used with the Mk 250 test set for these tests. Instructions are as follows:

1. Install a packing (O-ring) from Accessory Set Mk 24 in Test Set Mk 250's pressure pot, then lock the accessory set's adapter plate (hose attached) on the pot. Connect the free end of the hose to the accessory set's test clamp (C-clamp).
2. Wire brush around the tube opening on the outside (seaward side) of the tail cover and thoroughly clean the tube opening.
3. Orient the clamp so its slot fits around the tube fitting on the inside of the tail cover, and its gasket is squarely over the tube opening on the outside of the cover. Tighten clamp for an airtight seal.
4. Turn Test Set Mk 250 pressure-control switch to FAST INTAKE until gage reads 60 psig, then apply soap solution on both ends of the tail-cover tube. If it shows air bubbles, tighten fittings and test again. If leaks continue, release pressure, install a new tube and test again. If it still leaks reject tail cover.
5. Turn pressure control to FAST EXHAUST. When gage reads zero remove the test clamp from the tail cover.
6. On assemblies that pass test write leak test OK with a grease pencil.

MINES MK 52/55/56/57:

NAMELESS CELL NAMED

Don't be surprised if an electrolytic cell labeled Timing Element, Electrolytic, Mark 4 Mod 0 suddenly appears as a replacement for the heretofore undesignated cell in the Clock Delay Mk 21. It is the same old cell 0C11304, with the same drawing number and FSN. Only the marking on the package is changed.

The reason: to establish a separate identity to distinguish it from similar cells used in delay switches, sterilizers, and other clock delays.

ALL MINES:

INTERIM CHANGES BECOME ACNS

Those familiar yellow pages called Interim Publication Changes are being replaced by Advance Change Notices (ACNs). ACNs will serve the same purpose as the interims, but their designations will be different. Where formerly an interim numbered 21 indicated the first interim released before a permanent Change 2, now an ACN number includes a dash between digits and an ACN number 2-1 will be the first ACN released after Change 2. In short, the first ACN digit identifies the last, rather than the next, permanent change.

ACNs will comprise corrections printed on green supplementary pages, each with the same page number as the page they affect. Supplementary pages are to be inserted in affected manual facing the pages they correct.

Permanent changes - those which provide complete new pages as replacements for incorrect pages - will now be called formal changes. Each formal change will incorporate (i.e., cancel and supersede) the ACNs which preceded it. Thus a Change 1 would cancel ACNs 0-1, 0-2, 0-3, etc. Revisions will cancel all ACNs and changes, as before. This system of ACNs and changes will be applied by NAVORDSYSCOMHQ as standard for all NAVORD field - use technical manuals.

Like the former interims ACNs will receive automatic initial distribution but will not be stocked in Cog I for automatic issue in response to requisitions for manuals they affect. Extra copies of ACNs must therefore be requested separately, by letter, from NMEF. Incorporation of ACNs in affected mine manuals is mandatory.

MINE MK 56-0:

LOOK OUT FOR LEAKS

Some explosive, drill, and mechanism sections for Mine Mk 56, manufactured under Contract N-197-1536(X), are in stock as serviceable material, but serviceable material they are not.

The sections in question were of early design and manufactured primarily for the Mine Mk 56 OPEVAL. Results of the OPEVAL showed that an unacceptable high proportion leaked due to cracks where welds corroded in sea water. This led to design changes by NOL, White Oak which corrected this deficiency in later procurements.

Action was also taken to prevent those early sections being issued for service or drill use but now some may have been issued anyhow. To avoid using them keep a weather eye out for Explosive Sections Mk 1 Mod 1 serial numbers 1 through 62, Drill Sections Mk 1 Mod 1 serial numbers 1 through 147, and Mechanism Sections Mk 1 Mod 1 serial numbers 1 through 209. If you encounter one of these place it in Code J and request disposition from NMEF.

Eventually, after procurement and installation of a special support and retainer, these unsatisfactory sections will become acceptable issue material for training.

Do You do this Job Right?

MINES MK 52/55—3,4,6:

ADAPTER FOR TEST SET MK 265

Some Firing Mechanisms Mk 22 Mod 1 may be incorrectly wired due to a manufacturing error, an error that until now could only be detected during the instrument rack test of mines Mk 52/55 Mods 3, 4 and 6, as reported in Troubleshooter Bulletin No. 177. Depot stocks are being screened and eventually the error will be corrected, but meanwhile "bad" mechanisms in field stocks can entail a lot of extra work when they aren't detected until Class C tests are run in the course of mine assembly, with Test Set Mk 263.

For those who will require it, then here is an adapter that makes it possible to discover the error with Test Set Mk 265 on the bench, before you get waist deep in mine assembly. The adapter will not be put in the supply system and its use is not mandatory since an ordalt will give Test Set Mk 265 the capability of testing the firing mechanism for the defect without it. Meanwhile, though, for those who undertake the local manufacture of the adapter for immediate use it will be necessary to obtain the parts that are listed here.

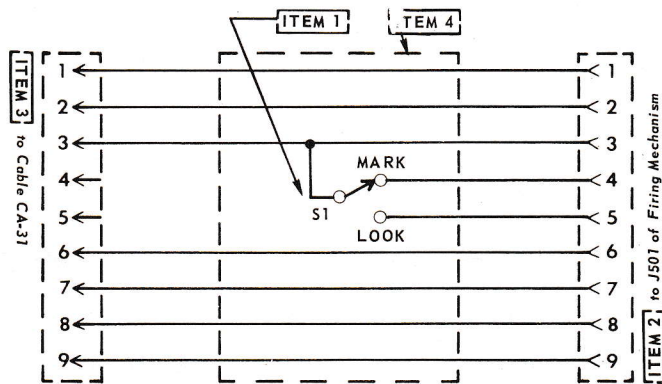
To use the adapter connect it between the 9-pin connector (J 501) of the firing mechanism and the 9-pin connector of Cable Assembly CA-31, then proceed with the Class B Firing Mechanism Test Procedure in OP 2567. The adapter switch (SI) should be in the MARK position for the tests of Table 11-2, and in the LOOK position for the tests of Table 11-3. Units which fail such tests should be placed in Code F replacements requested.

MATERIAL LIST

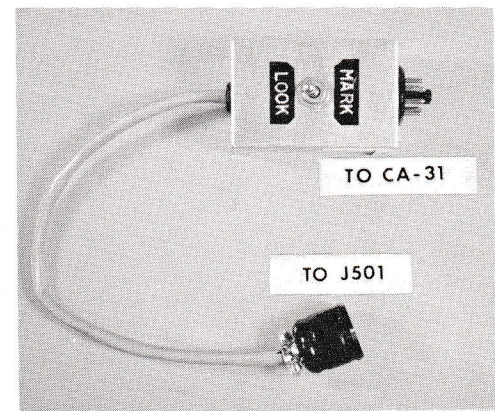
1	Switch, Toggle, SPDT	ITEM 1	5930-112-5105
1	Shield, Electrical Connector		5935-259-1008
1	Socket, Relay, Female,	ITEM 2	5935-244-5271 9 contact
1	Socket, Electron Tube, Male,	ITEM 3	5935-255-0964 9 contact
2 ft.	Cable, 9 conductor, No. 18 AWG Stranded		6145-753-1903
1	Grommet, Rubber, Style 1, 5/8 ID 1-1/8 OD		5325-281-1557
1	Mini-box, Combination Snap or Screw Type, 3-1/4 L x 2-1/8 W x 1-5/8 H, Bud Radio, Inc., Type CU-3001-A or equal	ITEM 4	Open purchase, or make your own of wood.

Thanks to MN2 Don Allgor, Iwakuni, who uncovered the problem, and MN1 Billy Gates, Naha, whose suggestion resulted in this Job Right.

The Editor



Schematic

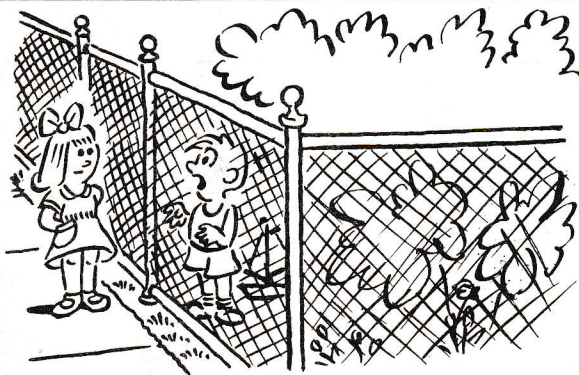


Manufactured

TEST SET MK 265 ADAPTER



"SO . . . OLD MARK SIX IS GOING TO SPLASHDOWN AGAIN!"



"IF I COULD CROSS THE STREET BY MYSELF, I'D RUN AWAY AND JOIN THE NAVY!"



**UNDERWATER MINE
SHOP N°10**



"DON'T WORRY CHIEF, THEY'D NEED US ON THE MOON LIKE A HOLE IN THE HEAD!"



"DO YOU HAVE ANY THAT SMELLS LIKE A MINE? THAT SEEMS TO BE ALL MY BOY-FRIEND IS INTERESTED IN!"

BUT *Real* PROBLEMS ARE NO JOKING MATTER....
USE RUDMINDE!