



TORPEDO, MK 63, TUBE DOOR AND REAR SECTION MOCK-UP , DEVICE 12B1

TRAINING CATEGORY:

SUBMARINE (Torpedo Room Personnel)

ORIGINATING AGENCY:

CHNAVPERS

SECURITY CLASSIFICATION:

Device 12B1 is unclassified.

INTENDED USE:

In a classroom training program for training of submarine torpedo room personnel in the use and operation of the Mark 63 Torpedo Tube.

To instruct submarine torpedo room personnel in the proper techniques of loading, connecting and firing of the Mark 37 Mod 1, Mark 45 Mod O and Mark 48 torpedoes, and the SUBROC weapon from a Mark 63 Torpedo Tube.

FUNCTIONAL DESCRIPTION:

Device 12B1 is a training aid consisting of a

breech door and rear-barrel section facsimile of the Mark 63 Torpedo Tube. The device is designed to provide realistic simulation of the operational tube insofar as weapon loading, connection, and firing procedures are concerned.

The barrel is open on both sides to permit student viewing of connections made inside the breech door, and to enable a visual check of torpedo orientation inside the barrel section with respect to the type of torpedo being loaded. A simulated guide stud slot is provided in the barrel section so that students may witness insertion of the weapon guide and stud into the slot for correct orientation. A telescopic shaft assembly containing two (2) sliding levers is attached to the lower right side of the breech-barrel section. These levers are used for the purpose of locating and positioning the aft section of the weapon at the correct distance from the tube breech face; this distance varies according to the type of weapon being loaded. When not in use, the levers are stored against the side of the breech-barrel surface. A chain-leveling mechanism is provided to keep the barrel section in a level attitude.

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The breech door is operational except for the locking ring and sight glasses; the locking ring is fixed in the unlocked (latched) position and the sight glasses for checking water level in the tube are omitted. Through-holes in the breech door are provided for student viewing of connections and of the torpedo aft end. The door is equipped with the normal interlocks such as the door-latch handle, pullout catch and door-open catches. External cable penetrations through the breech door face are provided for connecting GFE cables when practicing simulated loading and firing of the SUBROC weapon. A guidance wire cutting assembly is also provided for simulated guidance wire separation during simulated firing procedures.

PHYSICAL INFORMATION:

The breech door and barrel section is mounted on a dolly platform and is capable of being raised or lowered by means of a handwheel and lead-screw arrangement attached to a scissor-type linkage. Minimum height to the center line or bore of the breech door is 25-1/2"; maximum adjustable height is 36-1/2". In practice, the device is positioned at the aft end of the fixed torpedo which extends 36" beyond the universal dolly. It is raised or lowered vertically to align the breech barrel section at torpedo height. The device is then positioned laterally so that the aft end of the torpedo enters the muzzle end of the breech barrel section until the device dolly platform engages the universal dolly that supports the torpedo. At this time the aft end of the torpedo will protrude through the breech end of the barrel so that appropriate connections on the torpedo can be made. The device is then withdrawn until the correct distance from tube breech face to the aft end of the torpedo is reached. After simulated loading is complete, the dolly platform is stabilized by actuating two (2) foot-pads which raise the dolly wheels off the ground. Device 12B1 is 56" wide x 36" deep x 53" high (maximum), and weighs approximately 525 lbs.

EQUIPMENT REQUIRED (NOT SUPPLIED):

Device 12B1 is designed to operate in conjunction with the following equipment:

Mark 37 Mod 1 Torpedo; Mark 45 Mod O Torpedo; Mark 48 Torpedo SUBROC weapon with required GFE cables

PUBLICATIONS FURNISHED:

Instructor's Guide for Training Aid, Operable Mock-up, Mark 63 Torpedo Tube Door and Rear Section, Device 12B1, NAVTRADEV P-3557 (U).

PERSONNEL:

Instructors: One (1) officer qualified to teach torpedo loading, connection, and firing procedures for the Mark 63 Torpedo Tube.

Operators: Trainee operated

Trainees: Class up to Thirty (30)

Maintenance Men: One (1) Tradesman approximately 1 hr per 480 hrs of device operation.

CONTRACT IDENTIFICATION:

Manufactured by Continental Enterprises, Inc., 200 Shames Drive, Westbury, NY under NAVTRASYSSEN Contract No. N61339-67-C-0205.

LOCAL STOCK NUMBER:

6920-LL-C00-0452