

**PALLET ELEVATOR TRAINER, DEVICE 19E40****TRAINING CATEGORY:**

PROPULSION ENGINEERING (Equipment Maintenance)

ORIGINATING AGENCY:

CNET

SECURITY CLASSIFICATION:

Device 19E40 is unclassified.

PURPOSE:

To provide training and practice in operation and maintenance of Pallet Elevator Model 1211-1 used on FFG-7 class guided missile frigates.

INTENDED USE:

Classroom training of qualified personnel in the electrical troubleshooting and mechanical maintenance work required on a solid-state, logic-controlled elevator system. On occasion, Device 19E40 may also be used as an utility elevator to carry loads not exceeding 4,000 lbs. However, it is not to be used as a personnel carrier.

FUNCTIONAL DESCRIPTION:

The Pallet Elevator Trainer Device 19E40 consists of a free-standing elevator trunkway and a machinery/instruction room which accommodates eight to ten (8-10) students. The trunkway contains all components of the FFG-7 Elevator System except for two (2) access doors, a condition imposed by height limitations at the installation site. The trunk enclosure is constructed basically from sheet steel with formed edges to resist buckling. Clear Lexan panels on the machinery side of the trunkway permit student observation of elevator operation, both from the machinery room level and from the upper level. The overhead consists of perforated metal decking, which is also the upper observation level. The area is enclosed in expanded metal, accessed on one side through a folding, metal gate. The interior is completely visible from the outside.

In addition to the Motor Control Unit, Logic Unit, and the machinery assembly, the machinery instruction room contains an Instructor's Unit (IU) and control pushbutton stations for the two intermediate levels which are served but for which access doors are not provided. These two

DIRECTORY OF NAVAL TRAINING DEVICES

levels are identified by a pair of bright yellow plates affixed to the trunk interior at intermediate locations between the upper and lower travel limits of the elevator platform. The pushbutton stations permit students, without leaving the area, to repeatedly send the elevator platform between these two levels while observing vane/static switch operation, and other mechanical functions.

The Instructor's Unit incorporates a 5 vdc power supply, 115-v and 440-v circuit relays, a Size 1 contactor, and associated components required in fault simulation circuitry. It also contains forty-two (42) lighted, alternate-action, pushbutton switches and six (6) three-position, toggle switches which permit the instructor to select and introduce any one of fifty-four (54) electrical system faults. The switches are mounted on a separate panel behind the IU enclosure's front cover. Two (2) mechanical faults can also be simulated: a governor slack rope, and a broken door interlock rope.

Minor modifications in the Motor Control Unit, Logic Unit, and 2nd Deck pushbutton station support the fault insertion system. The trainer functions as a normal pallet elevator, unless a malfunction is inserted from the Instructor's Unit.

PHYSICAL INFORMATION:

Overall Dimensions: 15' x 12' x 22'6"

Type: Permanently installed

Weight: Unknown

POWER REQUIREMENTS:

Input Characteristics: Machinery - 400-v, 60 Hz, 3-Phase, 20 HP.

Instructor's Unit - 115-v, 60-Hz, 1-Phase, 1 amp.

PUBLICATIONS FURNISHED:

1. Technical Manual, NAVSEA 0916-LP-045-9010, Pallet Elevator Model 1211-1.
2. Technical Manual, NAVTRADEV P-4899, Device 19E40, Pallet Elevator Trainer.

PERSONNEL:

Instructor: One (1)

Operator: Instructor/trainee operated

Trainees: Eight to Ten (8-10)

Maintenance: One (1)

CONTRACT IDENTIFICATION:

Manufactured by Unidynamics/St. Louis, Inc., under NAVTRASYSCEN Contract No. N61339-81-C-0016.

LOCAL STOCK NUMBER:

6930-LL-C00-5989