

**ENGINE, INTERNAL COMBUSTION, CUTAWAY TRAINING AID, DEVICE 6A2****TRAINING CATEGORY:**

BASIC SCIENCE (Mechanical)

**ORIGINATING AGENCY:**

CHNAVPERS

**SECURITY CLASSIFICATION:**

Device 6A2 is unclassified.

**INTENDED USE:**

Device 6A2 is to be used by instructor personnel of Automotive Maintenance Course or Power Equipment Course, to familiarize students with the theory and principles of operation, maintenance, and repair of a 6-cylinder internal combustion engine (gasoline).

**FUNCTIONAL DESCRIPTION:**

Device 6A2 is a cutaway, 6-cylinder internal combustion engine (gasoline) which has been sectionalized to visually present the mechanical

operation and interrelation of all parts and systems required for the operation of the engine.

The device is driven at approximately 10 rpm by an electric motor equipped with a safety clutch, and is illuminated so that all pertinent details may be seen by students under lighted classroom conditions.

Ignition is simulated by means of small light bulbs, mounted in the combustion chambers, which are illuminated individually in their proper firing order.

Color coding of the various systems is used as a further aid to teaching the function and operation of the engine.

The drive motor circuit in the device is independent of the illumination circuit, so that the engine can be stopped at any given point to permit study of the function of the mechanical operation of the engine.

The device may be operated by a trainee, by the simple operation of the ON and OFF switches

## DIRECTORY OF NAVAL TRAINING DEVICES

located on the control panel. The sequence of operation will continue as long as switches are in the ON position. The device may be stopped at any time by placing the drive motor switch in the OFF position.

The realism of the device, being an actual engine, attracts the trainee's interest. The animation and illumination of the device holds this interest during the various presentations. The simplicity of the operation of the device is conducive to utilization of the device by trainees.

**PHYSICAL INFORMATION:**

The device is 58" High, 38" Long, and 33" Wide over the display stand. The display stand is mounted on four (4) locking swivel casters to provide quick mobility in the classroom. The device weighs approximately 800 lbs.

**POWER REQUIREMENTS:**

115 VAC, 60 Hz.

**PUBLICATIONS FURNISHED:**

Instructor's Guide for Training Aid, Cutaway. Internal Combustion Engine, Device 6A2, NAVSO P-3104 (U).

**PERSONNEL:**

**Instructors:** One (1) instructor qualified to teach the theory of operation of internal combustion engines.

**Operators:** Instructor operated. Student operated (optional).

**Maintenance Men:** Device requires only occasional replacement of light bulbs and routine housekeeping.

**CONTRACT IDENTIFICATION:**

General Motors engine for use as training aid by L. E. O'Neil and Associates, Incorporated, Kettering, OH under NAVTRASYSCEN Contract No. N61339-66-C-0133.

**LOCAL STOCK NUMBER:**

6910-LL-C00-3549