

# Digital Diesel Simulation Trainers

Educational Training Equipment for the 21st Century

Bulletin 191E

## Hampden Digital Diesel Simulation Trainer Engine Technology + Digital Analysis = Superior Training

### General

Hampden offers the broadest array of Digital Diesel Simulation Training Systems available today. Also, with new models introduced into service every year, Hampden continues to develop new training systems based on these state-of-the-art engines.

### Description

The trainers are housed in a rugged tabletop enclosure, with tri-colored graphics panel offering a pictorial detailed representation of the engine. The control panel has the engine controls and instrumentation common to the operator panel. A terminal permits the instructor to determine the operating mode of the simulator (automotive, industrial, generator/marine) and starting temperature (ambient, hot, cold). In addition, the terminal allows the instructor to insert malfunctions into the simulation process.

### Specifications

Eight engines are represented on this bulletin, encompassing two and four stroke engines from four to eight cylinders.

The simulator contains the following systems:

- Engine
- Fuel
- Air Intake
- Lubrication
- Cooling
- Exhaust
- Electrical

Component test switches and indicator lights monitor the status of various components and permit troubleshooting for faulty components by the operator.

### Cutaway Options

Cutaway engines, which are fully equipped manufacturer's stock engines, with exposed valves, cam, crankshaft, etc., are available for all models of Hampden Diesel Simulators. The cutaways are motorized and are color-coded for ease of instruction.

### Models Available

MODEL NO.	ENGINE	APPLICATION
H-DD-24	Detroit Diesel 471T	Marine - Generator - Industrial
H-DD-26	Detroit Diesel	Marine - Generator - Industrial
H-CD-46	Cummins NC-855	Automotive - Industrial - Generator - Marine
H-CD-46B	Cummins 6BT-5.9	Automotive (On and Off Road)
H-CD-46C	Cummins 6CTA-8.3	Automotive - Industrial - Generator - Marine
H-DD-48	Detroit Allison 8.2L	Automotive - Industrial - Generator - Marine
H-JD-44	John Deere 4-276T	Generator - Industrial
H-DD-50/60	Detroit Diesel 50/60	Automotive - Truck - Bus
H-CAT-3116	Caterpillar Diesel Engine	Marine - Generator - Industrial

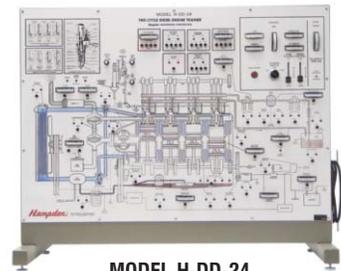
### Troubleshooting

The simulators have the capability of 40 malfunctions. They may be inserted before their "permissive" has been reached; that is, a battery or starter failure may be selected while the engine is running. However, it will not signal a problem until the engine is turned off and an attempt is made to restart.

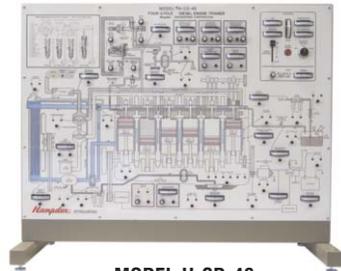
### Logging

Student Logging reports all operator actions and malfunctions, allowing the instructor to print a hard copy of the troubleshooting procedure that a student operator uses.

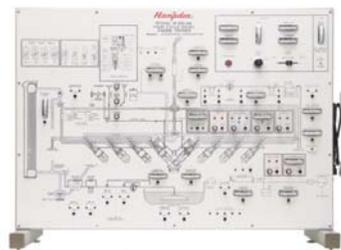
These trainers are controlled by a laptop running Hampden software. Instructor selected malfunctions are inserted into the operation of the trainer and the corrective actions are performed by the student.



MODEL H-DD-24



MODEL H-CD-46



MODEL H-DD-48

All Hampden units are available for operation at any voltage or frequency

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# Digital Diesel Simulation Trainers

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Bulletin 191-1D

## Hampden Tabletop Diesel Simulation

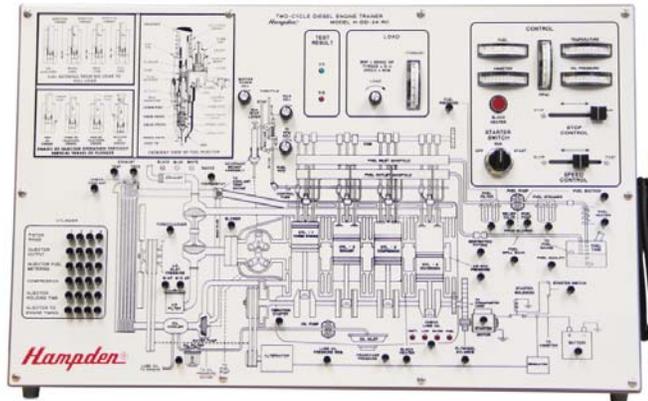
### General

The Hampden RC Series of Diesel Engine Simulators are based upon the Hampden full size series of Diesel Engine Simulators, shown on the reverse side, but are sized for classroom applications where portability and space are considerations. All models of the Hampden full-size Diesel Engine Simulators are available in the RC style.

### Description

Computer is used for the instructor to start procedures, introduce faults and malfunctions into the simulator, select engine type, test components, and monitor student performance.

All graphics representations of the engine, fuel, air and other systems are intended to denote the levels of operation possible in the actual use of this engine.



MODEL H-DD-24-RC

### Models Available

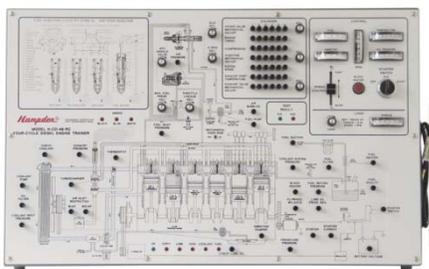
- H-DD-24-RC** Two-Cycle, Four-Cylinder Digital Diesel Engine Simulator
- H-GC-46-RC** Four-Stroke Internal Combustion Engine Simulator
- H-CD-46-RC** Four-Cycle, Six-Cylinder Digital Diesel Engine Simulator
- H-DSPS-RC** Diesel Standby Power Simulator

### Logging

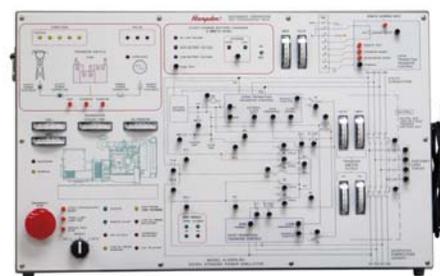
Logging records the actions of the student and malfunctions, (test etc.), which the instructor may optionally print to a printer. Logs can be printed of the time the actions were done, how many and what corrective actions were chosen by the student.

### Input Voltage

120/240V AC-1Ø-50/60Hz



MODEL H-CD-46-RC



MODEL H-DSPS-RC

All Hampden units are available for operation at any voltage or frequency

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