Digital Instruction Modules

Educational Training Equipment for the 21st Century

Bulletin 193-114D

H-DGHS-CSI

Gas Heating System

Purpose

The Hampden **Model H-DGHS-CSI** Gas Heating System demonstrates a complete and dynamic aid for adjustment, analysis and troubleshooting of gas fired hot water heating systems. Normal operation and 21 different malfunctions may be simulated.

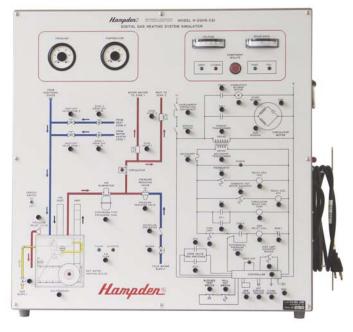
The Hampden Computer Simulated Instruction Modules are designed to demonstrate the principles of operation and troubleshooting of various types of systems. These "modules" provide a complete aid for the teacher who desires to teach appliance analysis and troubleshooting.

Description

The module's front panel displays both a complete schematic and pictorial of the system. All functions operate as on the actual equipment and present the student with realistic problem situations that would be very difficult for the instructor to create. Both mechanical and electrical problems are simulated. Pushbuttons are used to "replace" suspected defective parts. Simulator includes H-LTCS Laptop Computer.

Standard Features:

- Schematic and pictorial test points
- · Specification chart
- Improper equipment use warning
- Component isolate switch
- · Line cord disconnect/connect switch
- · Malfunction indication
- Windows Digital control system



Additional Features:

- Draft Meter
- · Spark Indicator (flame sensor)
- · Hot Surface Ignitor
- · Combustion Blower
- · Air Proving Switch
- Two Zones (circulators)
- Boiler Temperature/Pressure
- Test Meter CO2, O2, CO Stack Temperature
- Gas Valve

Typical Malfunctions:

- · Defective Switching Relay
- Zone 2 circulating pump motor defective (mechanical)
- Improper flue gas temperature indication
- · Unjustified customer complaint
- Defective Switch

Typical Faults:

- No 24 volt ground to gas valve
- · Defective hot surface ignitor
- · Defective air proving switch
- · Defective gas valve
- · Carbon monoxide in flue gas
- · Defective flame sensor
- Defective module
- Inefficient operation
- Wiring to module
- · Wiring to 24 volt gas valve
- · Supply voltage
- · Rollout fuse

Options

MODEL H-CSI-CS

Pentium™ Desktop Computer System

MODEL H-CAI-PO

Printer to provide the instructor with a color hard copy of the students' progress.

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





081914