ConsuLab
TRAINING AIDS
4210 rue Jean-Marchand, Quebec, QC G2C 1Y6, Canada
Phone: 418 688 9067 / 800 567 0791 / 810 222 4525 (USA)
Fax: 418 843 3444 / Email: info@consulab.com

HV-950-QSB (35106)

DIESEL ENGINE BENCH

CUMMINS QSB6.7 TIER 4F

Educational Advantages :

- **Student Assignments**
- Demonstration of major engine systems to groups of students without the access limitations of a complete vehicle
- Engine systems respond to inserted faults with real world symptoms, OEM DTCs and MIL operation
- Functional DLC using SAE J1939 communication protocol
- Provides a platform to perform the following:
  - Diagnose and troubleshoot fuel system
  - Diagnose and troubleshoot engine management system
  - Diagnose and troubleshoot electrical/electronic system
  - Obtain electronic parameters using diagnostic equipment
  - Obtain technical data and information from the trainers through an electronic service tool connection
  - Perform testing procedures oaf all electrical and mechanical systems
  - Allow user to exercise test procedures as outlined in OEM service manuals

Application :

- Cummins' Tier 4F equipped with new QSB6.7 diesel engine and post-treatment system

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Standard Equipment and Features :

- New OEM In-line 6-cylinder, 4-stroke cycle diesel engine
- Interfaces with OEM diagnostic electronic service tools
- OEM Engine management system
- Air intake system with turbocharger and air filter
- Complete engine cooling system with fan, air-to-air, radiator, and fuel system
- OEM cold start system
- OEM ECM and wiring
- Master control panel with DLC (9-pin J1939 Deutsch connector) with:
  - Keyed ignition system with two (2) keys and testing points
  - Indicator lights
  - Enable/disable switches
  - PTO controls
  - ECM breakout box with OEM pinout identification
  - LOFA CANPlus display with J1939 parameters for installed components
- Complete intake and exhaust system with diesel particulate filter (DPF), maintenance indicators and muffler
- Engine lubrification system with filters
- Complete and operable fuse-protected electrical/electronic system (24 VDC)
- Fuel pedal
- 22L fuel tank with filters
- Heavy-duty batteries (2) with smart charger
- Battery cut-off switch
- Emergency stop buttons (2)
- Electronic programmable fault box with 12 faults with intermittent fault capability
- Safety guards on all rotating components in compliance with CSA regulation Z432-04 and on high temperature components
- DET frame:
  - Heavy duty 3” (76.2 mm) powder enamel coated square tubular steel frame
  - Four (2) removable heavy-duty casters, two (2) locking swivel, two (2) fixed

Functional Post-treatment Systems :

- DOC (Diesel Oxidation Catalyst)
- EGR (Exhaust Gas Recirculation)
- DPF (Diesel Particulate Filter)
- SCR (Selective Catalytic Reduction)

Physical Specifications:

- Dimensions : 81.5 x 58 x 89 in (207 x 147.3 x 226.1 cm) / 64 x 92 x 86 in (162.5 x 233.7 x 218.4 cm) (w/packaging)
- Weight: 3000 lb (1363.6 kg) / 3200 lb (1454.6 kg) (w/packaging)

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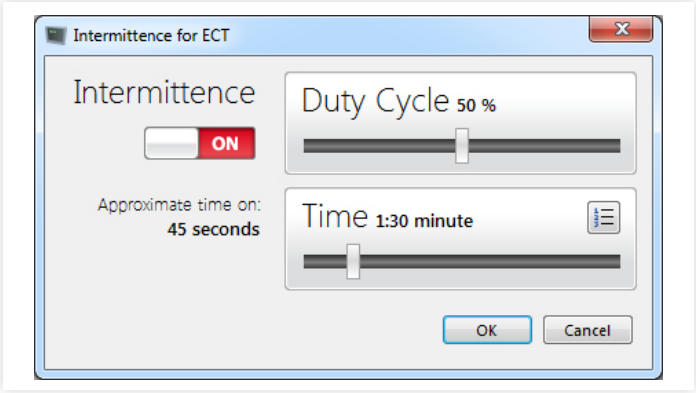
EM-250-2 ELECTRONIC PROGRAMMABLE FAULT BOX



REMOTE CONTROL SOFTWARE

- Easy to install Windows®-based software allows you to control the fault box remotely via a USB cable (included with software) to your Windows® computer.
- Allows you to program intermittent faults. Engine systems respond to created conditions and inserted faults with real world symptoms, OEM DTC's and check engine light operation.
- Allows insertion of single or multiple faults in the engine.
- Major engine sensor signals can be adjusted to produce a variety of engine operating conditions.

Educational Advantages:

- Allows insertion of faults for the diesel engine systems with real problems, codes and other indicators.

Features:

- Signals generated from most sensors that reproduce actual running conditions in the system.
- Remote control using a dedicated software interface connected to a PC running Windows™ through USB port.
- Fault selection, signal variation (if available), and set intermittence parameters either directly or by remote hook up.
- LED indicators allow identification of inserted faults.

Example Faults

ECT (Engine Coolant Temperature)

The engine coolant temperature sensor signal can be varied from minimum to maximum values. Multiple driveability symptoms can be created (hard start, no start, running rich or lean).

INJ (Fuel Injector)

One fuel injector control circuit can be opened, creating an engine misfire.

Note: Faults can be changed accordingly to engine model.