

eAT-202 Diesel Engine Theory

Internet-Based Theory



Diesel Engine Theory is an e-Learning course design to teach the fundamental theory and diagnostic troubleshooting of diesel engines systems to students in high schools, technical schools and colleges. The theory learned in this course will prepare students for the diagnostic troubleshooting exercises with the Smart vehicle as well as troubleshooting real vehicles on the job.

The course can be easily integrated with specific school curricula for training motor vehicle technicians. The flexible e-Learning approach provides students who wish to learn about diesel engine components, the option of taking this course either in school or at home.

The student may learn in the standalone mode or under the Internet-based CLEMS (Computerized Learning and Evaluation Management System), which allows the instructor to monitor student and class progress and pertinent records in a database for future retrieval via the Internet or Intranet.

SPECIFICATIONS

DESCRIPTION

The eAT-202 course provides the student with an easy-to-learn course on diesel engine principles and troubleshooting.

Each lesson consists of easy-to-understand text with accompanying graphics. Simulations show how the various components work together in a real vehicle.

Troubleshooting exercises reinforce the theory learned and test the student's comprehension of the subject matter. Animated simulations allow the student to perform true-to-life, diagnostic tests and measurements with a simulated digital multi-meter.

TOPICS COVERED

- ☞ The history of diesel engine
- ☞ The basic engine
- ☞ Diesel engine construction
- ☞ Type of combustion chamber
- ☞ The cooling system
- ☞ Crankshaft
- ☞ Valve gear
- ☞ Lubrication system
- ☞ Fuel system
- ☞ Air system
- ☞ Turbo charging
- ☞ Inter-cooling

OPTIONAL ACCESSORIES

- ☞ CLEMS - Software for monitoring and recording student progress
- ☞ Distance Monitoring Software
- ☞ Web camera and microphone for each instructor and student station

NOTE: In order to work with CLEMS, an Internet server is required. (Please contact your dealer for more information and minimum configuration).



MINIMUM COMPUTER CONFIGURATION

Pentium II 350MHz with:

- ☞ 64 MB RAM
- ☞ 40 X CD
- ☞ COM1 or COM2 port
- ☞ SVGA card with 8 Mbytes
- ☞ Operating System: Windows 95/98/NT/2000/XP
- ☞ Microsoft Internet Explorer 5 or 6

INSTRUCTIONAL MATERIALS

The courseware and experiments were written by pedagogical experts who train technicians to diagnose malfunctions in modern automotive systems.

