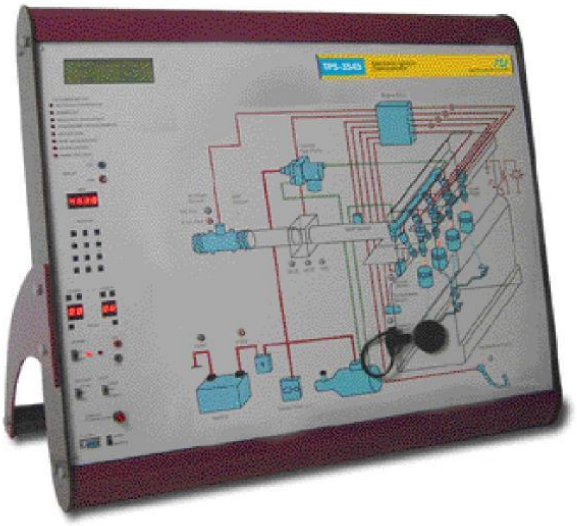
SERIE

TPS-3545 ELECTRONIC IGNITION DEMONSTRATOR



Objectives

The TPS-3545 Automotive Electronic Ignition Training Demonstrato is designed to provide students with automotive training program introducing various systems and real components in modern cars.

The demonstrator brings a comprehensive view of the entire system in the car, the system's actual components and their interconnection, functions, operation, signals, diagnosis and repair methods under hands-on safe activities.

Description

The demonstrator includes real and simulated components controlled by internal controller that produces the signals for measurement according to its internal simulating program or according to PC simulation programs.

The demonstrator's panel is with colored graphics clearly presenting the system components, connections and inter-relations with test points for real measurements and LEDs describing the component status.

AutoTech 3000
Autotronics Technology

S E R I E S

TPS-3545

Electronic Ignition Demonstrator

Technical Characteristics

The demonstrator is in a wide metal case with a colored printed circuit experiment panel (80 x 60 x 10 cm), which ensures easy handling and good visibility of the components and the simulation part.

The demonstrator includes real components and simulation components modules. The experimenting panel includes the system drawings with test points and banana sockets.

The demonstrator can be operated as a stand-alone system without a PC, guided by experimental book using built in oscilloscope or an external oscilloscope.

The demonstrator can be connected to a PC in serial communication (RS232 or USB) using SES-CBT courseware and SESCOPE software for signal display.

Student PC can be connected to the teacher PC for monitoring, course management and records by SESML software (optional).

The system includes

- A power switch with indicating light
- SESLAB 2 channel digital oscilloscope
- 7 segment display and control switches, one for fault insertion unit and one for selecting simulation mode
- Eight (8) LEDs to indicate troubleshooting state
- Status mode switches and display
- Warning indicating light
- Graphic and Alphanumeric LCD display 64X240 pixels
- Numeric keyboard
- CAN-BUS interface
- Serial or USB communication interface with the PC
- PC / MANUAL switch
- 12V Power adapter
- Digital multimeter
- Operating and simulation switches
- Simulation potentiometers
- Iron disk driven by DC motor
- Crankshaft position sensor
- Ignition coils
- Spark plug firing sequence indicators
- Knock and MAP sensors
- MAP simulator potentiometer
- Centralized injection system
- Coolant temperature sensor
- Air temperature sensor simulation
- Temperature idle unit
- Electronic Distributorless Ignition System (DIS)

Experiments

This system enables the student to perform several experiments and covers the following topics:

- Centralized injection system
- Electronic ignition system type E-DIS
- Sparks producing and sparks not producing ignition
- Secondary circuit waveforms
- Triggering pulse
- Current restriction in primary circuit and ignition angle
- Ignition timing
- Engine revolutions (speed) and ignition timing
- Engine load and ignition timing
- Engine temperature and ignition timing
- Knock control
- RPM measurements
- MAP sensor
- Sensors and valves system
- OBDII diagnosis connector
- CAN-BUS communication

An experiment manual for the student and instructor manual accompany the system.

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