

## **Motor Bensin (OT.451)**

### I. Engine Basic:

1. History
2. Engine Types
3. Engine Components
4. Engine Systems
  - a. Cooling Systems
  - b. Lubricating Systems
  - c. Electrical Systems (ignition, charging, starting)
  - d. Fuel Systems
5. Tune-Up Procedure

### II. Working Cycle

1. The Four Stroke Working Process
2. The Two Stroke Working Process
3. Ideal Models of Engine Cycles
4. Real Engine Cycles

### III. Engine Characteristics

1. Compression Ratio
2. Break Torque, Power and Work
3. Piston Speed
4. Indicated Work
5. Mean Effective Pressure
6. Power and Torque
7. Efficiency
8. Performance Maps
9. Interaction Engine

### IV. Emissions

1. General Considerations
2. Formation of Pollutants
  - a. Emissions of SI Engines
  - b. Emissions of CI Engines
  - c. Comparison of SI and CI Engines Emissions

### V. Recent Developments

1. Variable Valve Timing
2. Lean Burn Concept
3. Gasoline Direct Injection
4. Denox Catalytic Converters

### VI. Over Houl Procedure

1. Disassembly Procedure
2. Measurement Procedure
3. Assembly Procedure