



## BRAKE DIAGNOSIS AND SERVICE

### Course Length

2.0 to 4.0 hours

### Course Description

This course introduces troubleshooting procedures for various brake components, hydraulic system, drum brakes, and disc brakes. It also teaches learners how to perform brake bleeding procedures.

### Course Topics

#### ***Introduction to Brakes Troubleshooting***

- ◆ Performing a complete brake job
- ◆ The Logical Approach to brake system diagnosis
- ◆ Diagnosis and repair of various brakes subsystems

#### ***Troubleshooting Hydraulic Systems***

- ◆ Testing the operation of various hydraulic system components
- ◆ Service and repair of hydraulic systems

#### ***Troubleshooting Drum Brakes***

- ◆ Drum measurement techniques
- ◆ Detection of problems in drum brakes components
- ◆ Repair and service of drum brake systems

#### ***Troubleshooting Disc Brakes***

- ◆ Various measurement techniques
- ◆ Problem detection in the disc brakes system
- ◆ Repair and service of disc brakes system
- ◆ On vehicle service of disc brakes

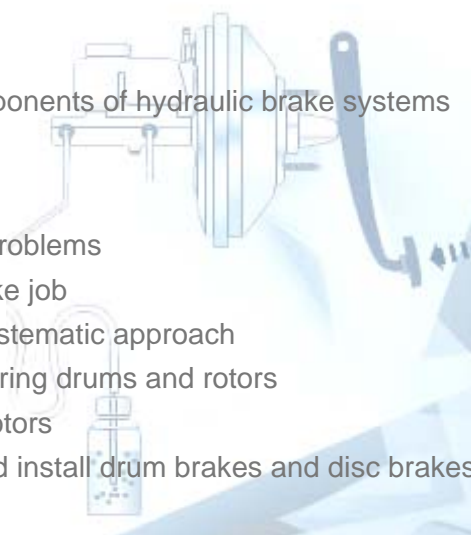
#### ***Brake System Bleeding***

- ◆ Various bleeding techniques
- ◆ Bleeding procedures for various components of hydraulic brake systems

### Course Objectives

#### ***In this course, users will learn to:***

- ◆ Identify conditions that cause brake problems
- ◆ Describe the steps in a complete brake job
- ◆ Perform brake diagnosis using the systematic approach
- ◆ Identify the proper methods of measuring drums and rotors
- ◆ Properly machine brake drums and rotors
- ◆ Remove, disassemble, assemble, and install drum brakes and disc brakes



- ◆ Identify proper brake bleeding procedures
- ◆ Bench bleed a master cylinder
- ◆ Test operation, service, and repair of hydraulic system

## Course Features

- ◆ Global navigation
- ◆ Practice pages with multiple choice, drag 'n drop, true/false
- ◆ Interactive and animated content pages
- ◆ Glossary and resource links
- ◆ Slide shows
- ◆ Final Assessment

## BRAKE DIAGNOSIS AND SERVICE

The image displays three overlapping screenshots from the 'Brake Diagnosis and Service' courseware. The top screenshot shows a diagnostic page titled 'Logical Approach Guide to Diagnosis | Uneven Braking Front to Rear'. It features a customer complaint: 'My rear brakes seem to lock up too often.' Below this, it explains 'Normal Vs. Uneven Braking' with a diagram of a red pickup truck. The diagram shows a normal brake rotor on the front wheel and an uneven brake rotor on the rear wheel. The bottom screenshot shows a 'Dial Indicator Reading' section with a list of steps (Step 1, Step 2, Step 3, Step 4) and an 'Example' section. The example states: 'The dial indicator needle initially reads zero. Maximum value read by the pointer = 0.05". The lateral runout of this rotor = 0.05".' The bottom-right screenshot shows a detailed diagram of a dial indicator measuring a brake rotor.

A selection of pages from CTI's *Brake Diagnosis and Service* courseware, featuring global navigation, instructional graphics, and glossary of terms