
CAT DEALER SERVICE TECHNICIAN COURSE DESCRIPTIONS

DCAT 110 CATERPILLAR ENGINE FUNDAMENTALS

A theory and lab course covering engine operating principles, cylinder and piston service, valve service, crankshaft and bearing service, lubrication systems, rebuilding procedures and measurement fundamentals on Caterpillar Engines. Caterpillar engines are used for lab disassembly and assembly.

DCAT 111 INTRODUCTION TO CAT SERVICE

This course introduces the student to the Caterpillar organization history and the different parts of the company. Instruction and lab experiences in the shop include safety, shop operation and a major emphasis on how to obtain information using CAT Specific Software Systems.

DCAT 150 INTERNSHIP I

This supervised experience is required of students enrolled in the Caterpillar Dealer Service Technology curriculum. Placement experience is obtained through the cooperation of a CAT Dealer. Students needs and objectives determine major emphasis.

DCAT 112 FUNDAMENTALS OF HYDRAULICS

A theory and lab course designed to teach the basic hydraulic fundamentals. Identification and function of the various components used in Caterpillar Hydraulic Systems, will include: vane pumps, gear pumps and piston pumps. ISO hydraulic symbol identification and tracing oil flows used in Caterpillar Hydraulic Systems. Lab exercises include disassembly and assembly of Caterpillar Hydraulic Components.

DCAT 113 CATERPILLAR FUEL SYSTEMS

A lab lecture course introducing the student to fuel systems used on Caterpillar Engines. Combustion chamber design, injectors and injection pumps are covered in this class. Also covered are diagnosing faults in fuel injection and combustion systems. Lab exercises include disassembly and assembly of fuel components used in Caterpillar Fuel Systems.

DCAT 114 FUNDAMENTALS OF ELECTRICITY

A lecture/lab course that introduces the student to basic electrical and electronic fundamentals needed by a technician to properly diagnose and repair the complex electrical systems installed on Caterpillar Machines. Included is the study of Ohm's law, series and parallel circuits, test instruments and various components found on Caterpillar Equipment. The course does not teach specific machine systems.

DCAT 151 INTERNSHIP II

This supervised experience is required of students enrolled in the Caterpillar Dealer Service Technology curriculum. Placement experience is obtained through the cooperation of a CAT Dealer. Students needs and objectives determine major emphasis.

DCAT 115 AIR CONDITIONING

A lecture, discussion and lab-type course covering the basic theory and operating principles of air-conditioning systems as they relate to Caterpillar equipment. Lab exercises consist of leak detecting, evacuation, reclaiming, charging, component repair and use of test equipment to diagnose and repair malfunctions.

DCAT 116 FUNDAMENTALS OF TRANSMISSION & TORQUE CONVERTORS

A lecture/lab course that covers the various transmissions, torque converters and differentials used in Caterpillar Equipment. This course also covers: constant mesh, sliding gear, hydrostatic synchromesh, and power shift transmissions involving planetary. At the completion of this course, the student will have working knowledge of basic power train theory.

DCAT 117 MACHINE HYDRAULIC SYSTEMS

A lecture/lab course designed for inspecting, testing, servicing and diagnosing Caterpillar Hydraulic Systems and components. Students will conduct testing and adjusting procedures on Caterpillar Equipment, utilizing Caterpillar Service Procedures and Test Equipment.

DCAT 250 INTERNSHIP III

This supervised experience is required of students enrolled in the Caterpillar Dealer Service Technology curriculum. Placement experience is obtained through the cooperation of a CAT Dealer. Students needs and objectives determine major emphasis.

DCAT 200 UNDERCARRIAGE/FINAL DRIVES

A lecture/lab course that introduces the student to undercarriage and drive systems used on the many different types of Caterpillar track machines. Also covered are final drives and braking systems used in Caterpillar Track and Wheel Equipment. This course is a continuation of DCAT 116 Fundamentals of transmissions and torque converters.

DCAT 201 CAT MACHINE ELECTRONIC SYSTEMS

A lecture/lab course that covers the electronic systems used on Caterpillar Equipment. This course provides the background needed to diagnose and repair the electronics and computerized circuits found on Caterpillar Equipment and Engines. Basic electronic concepts, component function and system operation are covered. Caterpillar's procedures are taught to identify malfunctions and to test the system properly.

DCAT 251 INTERNSHIP IV

This supervised experience is required of students enrolled in the Caterpillar Dealer Service Technology curriculum. Placement experience is obtained through the cooperation of a CAT Dealer. Students needs and objectives determine major emphasis.

DCAT 202 ENGINE PERFORMANCE

A lecture/lab course that teaches the skills necessary to make CAT Engines run at peak performance. The student will be provided with a thorough understanding of the necessary diagnostic skills required for trouble shooting Caterpillar Engines and Fuel Systems. Emphasis will be placed upon knowledge and skills necessary to assure product reliability and performance.

DCAT 203 DIAGNOSTIC TESTING

A lecture/lab course that studies the practical use of diagnosing Caterpillar Products using the proper test equipment. System testing on the various Caterpillar Equipment will cover such areas as Engines, Hydraulics, Transmissions, Electro-Hydraulics and Implement System Control. The student will utilize ET and Data View systems for diagnostic testing.

DCAT 204 MACHINE SPECIFIC SYSTEMS

This course is designed to expose the student to different types of specialty equipment used for various operations, utilizing CAT equipment. Testing and adjustment of this equipment will also be covered as per Caterpillar Service procedures.