

**Course:** DIES134 Multi-Cylinder Overhaul

**Department:** Diesel

**Course Description:**

This course develops the student's understanding of various diesel engines by working with one manufacturer at a time, enabling the student to gain a clear understanding of a diesel engine's construction, operation, maintenance, and repair. Also covered are the troubleshooting and engineering designs that are integrated in the diesel engines of various manufacturers. The course provides a sound procedure in understanding the importance of the serial number of the engine, so the technician can obtain the information needed to correct any deficiency with a diesel engine.

Lecture: 2 hours. Laboratory: 4 hours.

<b>COURSE OUTCOMES</b>	<b>SAMPLE OUTCOMES ACTIVITIES</b>	<b>SAMPLE ASSESSMENT TOOLS</b>
Upon successful completion of this course students should:	To achieve these outcomes students may engage in the following activities:	Student learning may be assessed by:
1. Be able to identify the techniques required to rebuild various types of Diesel engines; (WC, IL and CCT)	<ul style="list-style-type: none"><li>• Textbook readings</li><li>• On-line demonstration</li><li>• Video presentations</li><li>• Classroom discussions</li></ul>	<ul style="list-style-type: none"><li>• Tests, quizzes</li><li>• Mechanical drawings</li><li>• Homework assignments</li><li>• Laboratory work</li></ul>
2. Learn how to use service literature to properly test, adjust and assemble Diesel engines; (CCT)	<ul style="list-style-type: none"><li>• Textbook and on-line readings</li><li>• Video presentations</li><li>• Classroom discussions</li><li>• Laboratory demonstrations</li></ul>	<ul style="list-style-type: none"><li>• Tests &amp; Quizzes</li><li>• In-class conversations</li><li>• Laboratory evaluations</li><li>• Laboratory work</li></ul>
3. Learn how to overhaul a Diesel engine with and without cylinder liners; (WC, CCT, and IL)	<ul style="list-style-type: none"><li>• Textbook and on-line readings</li><li>• Video presentations</li><li>• Classroom demonstrations</li></ul>	<ul style="list-style-type: none"><li>• Tests, quizzes</li><li>• Classroom discussion</li><li>• Laboratory work</li></ul>

<p>4. Be proficient in using the appropriate tooling for testing, adjusting and diagnosing the systems previously mentioned; (WC, CCT and IL)</p>	<ul style="list-style-type: none"> <li>• Textbook readings</li> <li>• Video presentations</li> <li>• Classroom collaborative learning</li> <li>• Classroom discussions</li> </ul>	<ul style="list-style-type: none"> <li>• Test quizzes</li> <li>• Homework assignments</li> <li>• Laboratory evaluations</li> <li>• Laboratory work</li> </ul>

This course includes the following core competencies: Critical and Creative Thinking (CCT), Information Literacy (IL), and Written Communication (WC).