

Eastern West Virginia Community and Technical College COURSE ASSESSMENT REPORT

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| Course Title and Number: ATT 126 Engine Performance I (4 credits) | Academic Term and Year of Assessment Activity (Ex: Fall, 2010) Fall 2013 |
| Report Submitted By: Doug Swick | Number of Students Assessed: 6 |
| Date Reported Submitted: April 30, 2014 | Number of Sections Included: 1 |
| Course Delivery Format (list all modalities used in sections assessed. Ex: web based, VDL, traditional section, hybrid course, etc.): lecture/lab course, traditional course delivery | |

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| Course Role in Curriculum |
| Provide a description of the role the course serves in the curriculum (i.e. general education requirement, program technical core, restricted elective, etc.) Note all as appropriate. |
| ATT 126 is a technical core requirement (4 credits) for automotive students in both the certificate and associate degree programs. This course introduces students to the fundamentals and technology necessary for the diagnosis and repair of systems that control engine performance. Course includes diagnosis of mechanical and electronic malfunctions and exhaust problems which impact engine performance. |

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| Assessment Methods |
| Provide a description of the assessment process used. Include description of instrument and performance standards in description. Note all methods. |
| <p>The ATT 126 course assessment report focuses specifically on engine performance principles, and the diagnostic and service skills. Lab based task sheets were used as the basic data collection instruments for this assessment. Fourteen learning outcomes were assessed by analyzing results of classroom/lab observation based task sheets. The task sheets were completed for each student by directly observing the student performing each designated task. All task sheets were NATEF based for adherence to national automotive repair standard. The 11 learning outcomes were assessed through the application of 12 task sheets. In total, 87 scoring items were incorporated into this assessment report. Each item was weighted equally with a score of one point. Students could attain a total composite score of 87, a minimum composite score of 70 was necessary to meet the established performance standard of 80%. Scores were further analyzed in two broad categories:</p> <ol style="list-style-type: none"> 1.) engine performance principles-minimum score 21 out of 26; and 2.) diagnostic and service skills- minimum score 49 out of 61 <p>The outcomes assessed are categorized into the 2 categories and are listed below:</p> <p>Engine performance principles</p> <ol style="list-style-type: none"> 4. Research applicable vehicle and service information, such as engine management system operation, vehicle service history and technical service bulletins. 5. Locate and interpret vehicle and major component identification numbers. 6. Inspect engine assembly for fuel, oil, coolant, and other leaks; determine necessary action. <p>Engine performance diagnosis and service</p> <ol style="list-style-type: none"> 7. Diagnose abnormal engine noise or vibration concerns; determine necessary action. 23. Inspect and test ignition primary circuit wiring; perform necessary action. 24. Inspect and test secondary ignition circuit wiring; perform necessary action. 43. Inspect throttle body for vacuum leaks; perform necessary action. 44. Inspect air induction system for vacuum leaks and/or unmetered air; perform necessary action. 45. Inspect intake manifold and gaskets for leaks; perform necessary action. 53. Adjust valves on engines with mechanical or hydraulic lifters. 61. Perform engine oil and filter change. |

| Assessment Results | | | |
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| Provide a summary of results including tables/charts. Incorporate information from previous assessments as appropriate. Append additional pages if necessary. If appending, include notation in box to "See Attached." | | | |
| See Attachment for Task Sheets | | | |
| Alignment Principles: 100% of the students completed 21-26 of the 26 tasks correctly, meeting the minimum standard of 80% as denoted through the Task Sheets. | | | |
| Alignment Diagnosis and Service: 100% of the students completed 49-61 of the 61 tasks correctly, meeting the minimum standard (i.e. 80% of the tasks). | | | |
| Distribution of Scores for Outcomes and Composite Score per Task Sheet Analysis N=6 | | | |
| Student ID # | Principle Score (Standard 21 out of 26) | Diagnosis Score (Standard 49 out of 61) | Composite Score (Standard 70 out of 87) |
| 1 | 26 | 61 | 87 |
| 2 | 25 | 61 | 86 |
| 3 | 25 | 60 | 85 |
| 4 | 24 | 55 | 79 |
| 5 | 26 | 59 | 85 |
| 6 | 23 | 49 | 72 |
| Total Sample for Points | 149 | 345 | 494 |
| % at Minimum Standard | 100% | 100% | 100% |

| Course Level Assessment Summary of Outcomes, Indicators and Results | | | | |
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| Course Title and Number ATT 126 Engine Performance I | | | | |
| Number of students in assessment sample = 6 | | | | |
| Number of Sections in Assessment = 1 | | | | |
| Add additional rows to table if necessary | | | | |
| Learning Outcomes (Insert learning outcomes assessed during this cycle) | Indicator (Insert indicators used for each outcome: exam question, scoring rubric, etc. Be specific) | Percent of Correct Responses | Percent of Incorrect Responses | Performance Standard Met (80%)* (yes or no) |
| Composite Score | Total composite score: minimum of 70 out of 87 points for completed task sheets (Total points for sample=522, 494 answered correctly) | 95% | 5% | Yes |
| Outcome 1: Engine Performance Principles | Task Sheets for: Research vehicle information Interpret vehicle component information Inspect engine assembly for leaks Performance Standard: minimum of 21 out of 26 points Total points for sample=156; 149 answered correctly. | 96% | 4% | Yes |
| Outcome 2: Engine Performance Diagnosis and Service | Task Sheets for: Diagnose engine noise/vibration Test ignition system Inspect throttle body Inspect air induction Inspect intake manifold Adjust valves Change engine oil Performance Standard: minimum of 49 out of 61 points. (Total points for sample=366; 345 answered correctly). | 94% | 6% | Yes |

*Please note if using a different minimum performance standard.

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| Conclusions and Action Plan |
| Provide a brief summary of conclusions derived based on analysis of data. Identify action plan for improvement or maintaining current performance levels. Append additional pages if necessary. If appending, include notation in box to "See Attached." |
| Based on an analysis of the task sheets for the designated learning outcomes, the results indicate that the learning outcomes have been met successfully. |

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| Effective Date for Changes or Curriculum Proposal Submission to LOT (if recommended) | Proposed Date for Reassessment |
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| Assessment Committee Approval (To be posted by Assessment Committee Chair) | LOT Review (To be posted by Assessment Committee Chair) |
| Date: 9-24-14 (SB-G) | Date: 10-20-14 Minutes |