

Eastern West Virginia Community and Technical College COURSE ASSESSMENT REPORT

Course Title and Number: ATT 105 Braking Systems (4 credits)	Academic Term and Year of Assessment Activity (Ex: Fall, 2010) Fall 2011
Report Submitted By: Doug Swick	Number of Students Assessed: 8 students completed assessment
Date Reported Submitted: February 3, 2012	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	

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 105 is a technical core requirement (4 credits) for automotive students in both the certificate and associate degree programs. This course introduces students to basic fundamental skills, technology, and service of automotive braking systems. Students learn to diagnose and repair hydraulic systems, disc and drum brakes, power assist units and electronic antilock brake systems.

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 105 course assessment report focuses specifically on braking system 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 10 learning outcomes were assessed through the application of 10 task sheets. In total, 65 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 65, a minimum composite score of 52 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.) brake system principles-minimum score 18 out of 23; and 2.) diagnostic and service skills- minimum score 34 out of 42 <p>The outcomes assessed are categorized into the 2 categories and are listed below:</p> <p>Brake system principles</p> <ol style="list-style-type: none"> 4. Research applicable vehicle and service information, such as brake system operation, vehicle service history, service precautions, and technical service bulletins. 8. Check master cylinder for internal/external leaks and proper operation; determine necessary action. 11. Inspect brake lines, flexible hoses, and fittings for leaks, dents, kinks, rust, cracks, bulging or wear; tighten loose fittings and supports; determine necessary action. 28. Clean and inspect caliper mounting and slides/pins for operation, wear and damage; replace seal, boot and damaged or worn parts. <p>Brake system diagnosis and service</p> <ol style="list-style-type: none"> 10. Diagnose poor stopping, pulling, or dragging concerns caused by malfunctions in the hydraulic system; determine necessary action. 12. Replace brake lines, hoses, fittings and supports. 13. Fabricate brake lines using proper material and flaring procedures (double flare and ISO types). 16. Inspect, test and/or replace components of brake warning light system. 22. Remove, clean, and inspect brake shoes, springs, pins, clips, levers, adjusters/self-adjusters, other related brake hardware, and backing support plates; lubricate and reassemble. 34. Refinish rotor on vehicle; measure final rotor thickness.

Assessment Results			
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			
Brake System Principles: 75% of the students completed 18-23 of the 23 tasks correctly, failing to meet the minimum standard of 18 as denoted through the Task Sheets.			
Brake System Diagnosis and Service: 71% of the students completed 34-42 of the 42 tasks correctly, failing to meet the minimum standard of 34 (i.e. 80% of the tasks).			
Distribution of Scores for Outcomes and Composite Score per Task Sheet Analysis			
N=8			
Student ID #	Principle Score (Standard: 18 out of 23)	Diagnosis Score (Standard 34 out of 42)	Composite Score (Standard 52 out of 65)
1	21	27	48
2	23	42	65
3	10	10	20
4	19	32	51
5	16	27	43
6	20	32	52
7	23	27	50
8	19	42	61
Total Sample for Points	151	239	390
% at Minimum Standard	75%	71%	38%

Course Level Assessment Summary of Outcomes, Indicators and Results				
Course Title and Number				
Number of students in assessment sample = 8				
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 52 out of 65 points for completed task sheets (Total points for sample=520, 390 answered correctly).	75%	25%	No
Outcome 1: Brake System Principles	Task Sheets for: Brake system research Check master cylinder operation Check brake lines and hoses Clean check caliper mountings and fittings Performance Standard: minimum of 18 out of 23 points (Total points for sample=185; 151 answered correctly).	82%	18%	Yes
Outcome 2: Brake System Diagnosis and Service	Task Sheets for: Diagnose poor stopping Replace brake lines, hoses, and fittings Fabricate brake lines Inspect, test and repair brake warning light components Remove, clean and replace brake shoes and components and reassemble Refinish rotor on vehicle Performance Standard: minimum of 34 out of 42 points.	71%	29%	No

	(Total points for sample=336; 239 answered correctly).			
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*Please note if using a different minimum performance standard.

<p>Conclusions and Action Plan</p> <p>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.”</p>
<p>Based on an analysis of the task sheets for the designated learning outcomes, the results indicate that overall the learning outcomes were not met successfully. However, the learning outcomes have been met successfully by those students actually completing the required tasks. A disproportionate number of students in this course chose not to complete activities required of them. They did not attend class and did not complete tasks when they did attend. They will not be successful in a working environment. Even the tasks completed were not done with any level of pride. They do not possess the necessary workplace skills nor do they demonstrate a commitment to “work” in general. Due to the small sample size, no changes will be made to the course. Outcomes will continue to be monitored.</p>

<p>Effective Date for Changes or Curriculum Proposal Submission to LOT (if recommended)</p>	<p>Proposed Date for Reassessment</p>

<p>Assessment Committee Approval (To be posted by Assessment Committee Chair)</p>	<p>LOT Review (To be posted by Assessment Committee Chair)</p>
<p>Date: 2-13-12 (SB-G)</p>	<p>Date: 2-20-12 (SB-G)</p>