

AUTO 171

Repairing Automotive Suspension Systems

4 Credits: (2 hours lecture, 5 hours lab)

Community College of Baltimore County

Common Course Outline

Description

AUTO 171 – Repairing Automotive Suspension Systems: is a course in which students are introduced to the diagnosis and repair of automotive steering and suspension systems and their components. Topics include diagnosis, inspection and disassembly of steering and suspension systems.

Pre-requisites: AUTO 100 or permission of the program coordinator

Co-requisites: ACLT 052 or ACLT 053 or (ESOL 052 and ESOL 054) and MATH 081

Overall Course Objectives

Upon completion of this course, students will be able to:

1. diagnose power non-rack and pinion steering gear binding, uneven turning effort, looseness, hard steering, and fluid leakage problems to determine needed repairs;
2. diagnose power rack and pinion steering gear vibration, looseness, and hard steering problems to determine needed repairs;
3. flush, fill, and bleed power steering system;
4. remove, inspect, replace, and adjust strut rods and bushings;
5. remove, inspect, and replace MacPherson strut cartridge or assembly, strut coil spring, insulators, and upper strut bearing mount;
6. measure and adjust front and rear wheel camber to determine needed repair;
7. measure and adjust caster to determine needed repairs;
8. measure and adjust front wheel toe and adjust as needed;
9. measure and adjust rear wheel toe;
10. inspect rear wheel thrust angle to determine needed repairs;
11. diagnose tire wear patterns to determine needed repairs; and
12. perform all required Automotive Service Excellence (ASE) Education Foundation tasks from the ASE master course list.

Major Topics

- I. Repair of suspension and steering system
- II. Adjustment of suspension and steering system
- III. Diagnosis of the suspension and steering system
- IV. Inspection and measurement of suspension and steering system

Course Requirements

Grading will be determined by the individual faculty member, but shall include the following, at minimum:

The Common Course Outline (CCO) determines the essential nature of each course.

For more information, see your professor's syllabus.

- Three quizzes
- Weekly lab projects
- Research paper (6-8 pages typed) or obtain the ASE Professional Certification
- Three homework assignments
- Class participation
- Midterm exam
- Comprehensive final with a written component and a hands-on individual assessment

Written assignments and research projects: Students are required to use appropriate academic resources in their research and cite sources according to the style selected by their professor.

Other Course Information

This class combines lab with lecture and students apply knowledge learned in a hands-on environment.

Date Revised: 1/4/2022

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