

Course Outline
AUTO 151
Repairing Automotive Automatic Transmissions
4 Credit Hours
3 Lecture Hours
3 Lab Hours

The Community College of Baltimore County

Description

Repairing Automotive Automatic Transmissions

Introduces diagnosis and repair of automatic transmissions and transaxles; includes disassembly, component repair, adjustments, reassembly, and external adjustments. \$20.00 fee required. Prerequisite: AUTO 111

Overall Course Objectives

Upon completion of this course the student will be able to:

1. Interpret and verify driver's complaint, verify proper engine operation, and determine needed repairs.
2. Perform pressure test, perform stall test, and determine needed repairs.
3. Inspect, adjust, or replace manual shift valve and throttle (TV) linkages or cables, and check gear select indicator (as applicable).
4. Service transmission, perform visual inspection, and replace fluids and filters.
5. Inspect, measure, clean, and replace valve body (includes surfaces and bores, springs, valves, sleeves, retainers, brackets, check-balls, screens, spacers, and gaskets) and check/adjust valve body bolt torque.
6. Inspect internal transmission parts and determine needed repairs.
7. Disassemble, clean, and inspect transmission/transaxle.
8. Assemble transmission/transaxle.
9. Check endplays or preload and determine needed service.
10. Inspect, measure, and replace thrust washers and bearings.
11. Inspect and measure planetary gear assembly (includes sun, ring gear, thrust washers, planetary gears, and carrier assembly) and replace as needed.
12. Inspect transaxle drive, link chains, sprockets, gears, bearings and bushings, and replace as needed.
13. Inspect, clutch drum, piston, check-balls, springs, retainers, seals, friction and pressure plates, and replace as needed.
14. Measure clutch packs clearance and adjust as needed.
15. Air test operation of clutch and servo assemblies.
16. All other NATAF Tasks from the master course list.

Major Topics

1. Torque cover operation
2. Hydraulic clutch operation
3. Control valve body

In AUTO 151 students are required to demonstrate an ability to solve problems related to automotive diagnosis of automatic transmissions.

Course Requirements

One Term Paper

1. Topic of the paper will be selected by the student and should relate to the subject material of the course.
2. The paper should be 6 to 8 pages in length, typewritten, and double-spaced. It should include in addition to the 6 to 8 pages of text, an author and title page and bibliography utilizing a minimum of three reference resources excluding classroom materials.
3. All papers are due when 80% of the class sessions are completed. Papers submitted late will be deducted one letter grade.

Grading/Exams:

Grading procedures will be determined by the individual faculty member and will be provided on the first day of class. A student can expect a minimum of eight grades from the following categories:

1. Quizzes
2. Lab projects
3. Written paper
4. Homework assignments
5. Midterm exam
6. Class participation
7. Comprehensive final (required)

Other Course Information

This course is an Automotive Technology core course.