

ATEC 200: ENGINE PERFORMANCE I, BASIC FUEL SYSTEMS

An ASE/NATEF Engine Performance course with a brief overview of carburetion and carburetor circuits. The main emphasis of the class will be an introductory overview of fuel injection systems including fuel pump testing and inspection. Also covered will be an introduction to computer controls that relate to fuel delivery and emission control.

Course Student Learning Outcomes

1. List and describe the major components in the fuel system.
2. Describe the basic operation of an internal combustion engine.
3. Explain the development, types of octane ratings, and uses of gasoline.
4. Explain the different types of alternative automotive fuels.
5. Describe the basic operation of mechanical and electric fuel pumps.
6. Demonstrate proper diagnostic techniques of electric fuel pump controls and circuits.
7. Demonstrate proper safety in working with low and high pressure fuel injection systems.
8. Demonstrate proper diagnosis of electric fuel pump operation.
9. Describe the operation of throttle body and port injection.
10. Demonstrate proper diagnosis of electronic fuel injectors.
11. Demonstrate proper use of fuel injector cleaning equipment.
12. Demonstrate an introductory level knowledge of automotive scan tools.
13. Demonstrate an introductory level knowledge of automotive exhaust emission testers.
14. Explain how an automotive computer uses various inputs to calculate fuel trim.
15. Read with understanding in order to perform competently as an Automotive Technician.
16. Convey ideas in writing in order to perform competently as an Automotive Technician.
17. Communicate effectively to perform competently as an Automotive Technician.
18. Use math to solve problems and communicate to fulfill responsibilities of an Automotive Technician.
19. Understand the expectations of the workplace, the responsibilities of an Automotive Technician and the methods of securing employment within the field.
20. Demonstrate the ability to use technology effectively in the workplace.

Credits: 6

Prerequisites: 2.0 or higher in ATEC 100 and ATEC 201.

Program: [Automotive Technology](#)