

NC 630: BAR SPECIFIED DIAGNOSTIC AND REPAIR TRAINING: LEVEL 1 ALTERNATIVE

Citrus College Course Outline of Record

Heading	Value
Effective Term:	Fall 2022
Credits:	0
Total Contact Hours:	99
Lecture Hours :	72
Lab Hours:	27
Hours Arranged:	0
Outside of Class Hours:	144
Strongly Recommended:	Employment in the automotive repair industry in the engine performance area.
Transferable to CSU:	No
Transferable to UC:	No
Grading Method:	Non-Credit Course

Catalog Course Description

This training provides students with an alternate pathway to qualify to take the Bureau of Automotive Repair (BAR) Smog Check Repair Technician License Examination or fulfill the Smog Check Repair Technician Licensure Renewal requirement. This course is equivalent to the Test Specifications and Task Lists of the Automotive Service Excellence (ASE) A6 Electrical/Electronic Systems, A8 Engine Performance, and L1 Automobile Advanced Engine Performance certifications. Students who complete and pass this training in conjunction with the work experience requirement will meet the State's Bureau of Automotive Repair requirements to qualify to take the Smog Check Repair state licensing examination. 72 lecture hours and 27 laboratory hours.

Course Objectives

- Learn the operation and maintenance of the State of California smog inspection equipment.
- Learn the expectations and responsibilities of the Smog Inspection Technician.
- Perform a Smog inspection according to State laws and regulations.
- Identify and describe emission-related equipment.

Major Course Content

1. Vehicle safety guidelines related to emissions testing
2. Review of Bureau of Automotive Repair's rules and regulations pertaining to smog check repair.
3. Smog Check Repair station requirements
4. Vehicle applicability to Smog Check Inspections
5. Review role of state referee stations
6. Emissions system diagnosis and repair procedures

7. Interpreting Vehicle Inspection Report (VIR) information
8. Emissions testing equipment function and maintenance
9. Auxiliary emissions equipment uses and applicability
10. Description of major vehicle emissions systems
11. Pass/Fail criteria of emissions systems when performing vehicle inspection
12. Identify vehicle emissions applications using application guide
13. Aftermarket parts applicability
14. Diagnosing fuel leaks and visible smoke failures during smog check
15. Diesel engine component identification and operation
16. Visual inspection requirements
17. Dynamometer operation and use for exhaust stream diagnosis
18. On-board diagnostic system inspections and diagnosis
19. Datalink connector locations
20. Malfunction indicator light inspection and diagnosis
21. Ignition system timing inspection and adjustment
22. EGR system inspection and diagnosis
23. Fuel cap inspection and diagnosis
24. Low-pressure evaporative testing and diagnostic procedures

Lab Content

1. Perform vehicle safety assessment
2. Perform inspection equipment maintenance
3. Calibrate emissions inspection equipment as per program requirements
4. Perform a visual inspection of installed vehicle emission systems
5. Perform a visual inspection, diagnosis, and repair of sensors and fuel control components
6. Perform fuel leak inspection and best practices for repair
7. Perform visible smoke test and diagnose contributing component failures
8. Conduct vehicle emissions testing using BAR EIS
9. Conduct vehicle emissions testing using BAR OIS
10. Perform EGR functional test and diagnosis
11. Perform fuel cap pressure test
12. Perform low-pressure fuel evaporative test and diagnose related failures
13. Perform ignition timing functional test and adjustments as necessary

Suggested Reading Other Than Required Textbook

California Bureau of Automotive Repair Rules and Regulations manual and the Smog Inspection manual found on the state-run website.

Examples of Required Writing Assignments

None

Examples of Outside Assignments

Review Bureau's sample videos online. Use provided sample vehicle information packet and answer review multiple-choice questions. For example:

A vehicle is being inspected during a smog check and the technician finds that the exhaust manifold has been replaced with aftermarket headers. Which of the following should the technician do first?

a. Look for an E.O. number b. Fail the vehicle immediately c. Send the vehicle to a state referee station d. Continue with the test since exhaust headers do not constitute a failure

Use smog check manual and Rules and Regulations information to answer multiple-choice questions in the take-home packet.

Instruction Type(s)

Lab, Lecture, Online Education Lecture