Cape Cod Community College AMTS

Curriculum Subject Guide for AMT 267 Powerplant Curriculum, Subject Item 20-23

Part 147, Appendix D, Part 2, Subject F – Fuel Metering Systems

Subject: Fuel Metering Systems

Item 20. Troubleshoot and adjust turbine engine fuel metering systems and electronic engine fuel controls. (Level 1)
T – 4.0 Hrs / L – 0.0 Hrs
Item 21. Overhaul carburetor. (Level 2)
T – 4.0 Hrs / L – 6.0 Hrs
Item 22. Repair engine fuel metering system components. (Level 2)
T – 10.0 Hrs / L – 13.0 Hrs
Item 23. Inspect, check, service, troubleshoot, and repair reciprocating and turbine engine fuel metering systems. (Level 3)
T – 9.5 Hrs / L – 11 Hrs

Classroom time: 27.5 hours

Lab or shop time: 30 hours

Test time: 2.5 hours

Total Time: 60 hours

Teaching Level 1, 2, 3

Project 1
Item 22 – 1.5 Hrs
Item 23 – 1.5 Hrs

Project 2
Item 21 – 6.0 Hrs
Item 22 – 4.0 Hrs

Project 3
Item 22 – 1.0 Hrs
Item 23 – 1.0 Hrs

Project 4
Item 22 – 3.0 Hrs
Item 23 – 2.5 Hrs

Project 5
Item 22 – 2.0 Hrs
Item 23 – 1.5 Hrs

Project 6
Item 22 – 2. 0 Hrs
Item 23 – 2.0 Hrs

Project 7
Item 23 – 2.0 Hrs

Theory Test 1
0.25 Hrs

Theory Test 2
0.25 Hrs

Practical Test
2.0 Hrs

Prerequisite(s)

(1) All General curriculum subjects (Part 147 Appendix B)
(2) Powerplant Theory and Maintenance (Part 147 Appendix D, I)

Course Interruptions: All interruptions or changes in course sequence will be in accordance with the Order of Instruction policy, located in Cape Cod Community College's Operations Manual, page 51.

Item 20:

Student Performance Goal(s)

Given: Classroom discussion and demonstration.

Performance: The student will learn the basics of turbine engine fuel metering systems and electronic engine fuel controls.

Standard: The student must pass a Theory Test with at least a 70% grade.

Item 21:

Student Performance Goal(s)

Given: Piper Comanche 250 (PA 24) and Piper Comanche 250 (PA-24) Service and Parts Manual and Lycoming O-540 Engine Service Manual; Piper Colt (PA 22) and Piper Colt Service and Parts Manuals and Lycoming Direct Drive Overhaul Manual; AeroTrain AE-30-320 O-320 Operational Training Aid, AeroTrain AE-30-320 Operation Manual, and O-320 Illustrated Parts Manual; Toolbox and Computer with Internet access.

Performance: The student will remove from the assigned aircraft or test cell and overhaul the assigned carburetor, and reinstall the carburetor, run the engine and adjust the carburetor as necessary.

Standard: All actions will be completed as per the manufacturer's manuals and checklists and the student must also pass the Theory and Practical Tests with at least a 70% grade.

Item 22 & 23:

Student Performance Goal(s)

Given: Piper Comanche 250 (PA 24) and Piper Comanche 250 (PA-24) Service and Parts Manual and Lycoming O-540 Engine Service Manual; Piper Colt (PA 22) and Piper Colt Service and Parts Manuals and Lycoming Direct Drive Overhaul Manual; AeroTrain AE-30-320 O-320 Operational Training Aid, AeroTrain AE-30-320 Operation Manual, and O-320 Illustrated Parts Manual; Pratt & Whitney PT6A, PT6A Maintenance Manual; International Aero Engines V-2500 and International Aero Engines V-2500 Installation and Operations Manual; Toolbox and Computer with Internet access

Performance: The student will repair engine fuel metering components and inspect, check, service, troubleshoot, and repair reciprocating and turbine engine fuel metering systems.

Standard: The student will accomplish all action items as per the manufacturer's manuals and must also pass the Theory and Practical Tests with at least a 70% grade.

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