

Cape Cod Community College AMTS

Curriculum Subject Guide for AMT 271 Powerplant Curriculum, Subject Item 26-28

Part 147, Appendix D, Part 2, Subject H – Induction and Engine Airflow Systems

Subject: Induction and Engine Airflow Systems

Item 26. Inspect, check, troubleshoot, service, and repair engine ice and rain control systems. (Level 2)

T – 3.0 Hrs / L – 4.5 Hrs

Item 27. Inspect, check, service, troubleshoot and repair heat exchangers, superchargers, and turbine engine airflow and temperature control systems. (Level 1)

T – 2.0 Hrs / L – 0.0 Hrs

Item 28. Inspect, check, service, and repair carburetor air intake and induction manifolds. (Level 3)

T – 3.0 Hrs / L – 7.0 Hrs

Classroom time: 8.0 hours

Lab or shop time: 11.5 hours

Test time: 0.5 hours

Total Time: 20 hours

Teaching Level 1, 2, 3

Project 1

Item 26 – 2.5 Hrs

Item 28 – 3.0 Hrs

Project 2

Item 26 – 2.0 Hrs

Item 28 – 4.0 Hrs

Theory Test

0.25 Hrs

Practical Test

0.25 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 26 & 28:

Student Performance Goal(s)

Given: Piper Colt (PA-22) and Piper Colt Service and Parts Manuals and Lycoming Direct Drive Overhaul Manual; Piper Comanche (PA-24) and Piper Comanche Service and Parts Manuals and Lycoming O-540 Engine Service Manual; AeroTrain AE-30-320 O-320 Operational Training Aid, AeroTrain AE-30-320 O-320 Operational Training Aid, and O320 Illustrated Parts Manual.

Performance: The student will perform the inspection, checking, servicing, and repair of the Induction and Engine Airflow systems on the assigned aircraft or test cell. The student will also complete a Troubleshooting Chart on common Induction System problems and solutions.

Standard: The systems inspection, checking, servicing, and repair procedures will as per the manufacturer's manuals and the troubleshooting solutions will be as per available information and the student must pass Theory and Practical Tests with at least a 70% grade.

Item 27:

Student Performance Goal(s)

Given: Classroom discussion and demonstration.

Performance: The student will learn the basics of inspecting, checking, servicing, troubleshooting and repairing heat exchangers, superchargers, and turbine engine airflow and temperature control systems.

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

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