

Aviation Technology- Maintenance
Standard Course Outline

AVTA 1092 - CABIN ATMOSPHERE

Catalog Description: Theory of air conditioning, heating, oxygen and cabin pressurization systems. Placement of assemblies and interaction of systems will be detailed.

Clock hours: 28 lecture, 12 shop

Prerequisite: AVTG 1001

Credit hours/ Contact hours/ Load hours: 2/42/meets seven 6-hour days

Target Audience & Transferability:

This course is designed for students seeking a Technical Certificate in Airframe or, when combined with General and Powerplant, an AAS in Aviation Maintenance Technology, or an AS in Aviation Maintenance Management. Individual AVT courses or Certificates may be transferable to other FAA Certified Aviation Maintenance Technician schools under Federal Regulations

Student Outcomes/ Topics:

REFERENCES: AC 65-15A; AMT-A; JSAT.

FAA Standard *FAA-S-8081-27* 3-3, Changes 2 (9/24/03) & 3 (6/21/04)

Upon course completion, the student:

1. Exhibits knowledge of at least two of the following—
 - a. exhaust heat exchanger and/or system component(s) function, operation, and/or inspection procedures.
 - b. combustion heater and/or system component(s) function, operation, and/or inspection procedures.
 - c. vapor-cycle system and/or system component(s) operation, servicing and/or inspection procedures.
 - d. air-cycle system and/or system component(s) operation and/or inspection procedures.
 - e. cabin pressurization and/or system component(s) operation and/or inspection procedures.
 - f. types of oxygen systems and/or oxygen system component(s) operation.
 - g. oxygen system maintenance procedures.
2. N/A
3. Demonstrates the ability to perform at least one of the following—
 - a. inspect and/or troubleshoot an exhaust heat exchanger cabin heat system or system component(s). (Level 3)
 - b. inspect and/or troubleshoot a combustion air heater system and/or system component(s). (Level 3)
 - c. select proper solution and leak test oxygen system component(s). (Level 3)
 - d. inspect and/or troubleshoot an oxygen system and/or system component(s). (Level 3)

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- e. check the operation of an oxygen system. (Level 3)
- f. service an oxygen system. (Level 3)
- g. purge an oxygen system. (Level 3)
- h. inspect and/or troubleshoot a vapor cycle cooling system and/or system component(s). (Level 3)
- i. inspect and/or troubleshoot a cabin pressurization system and/or system component(s). (Level 3)
- j. inspect and/or troubleshoot an air cycle machine system and/or system component(s). (Level 3)
- k. locate procedures for protecting a vapor-cycle system from contamination during component replacement. (Level 1)
- l. locate procedures for servicing a vapor-cycle cooling system. (Level 1)
- m. locate procedures for inspecting a cabin outflow valve. (Level 1)

Required Text(s):

Airframe Structures Textbook (ASA)	ISBN # 1-56027-339-9
Airframe Systems Textbook (ASA)	ISBN # 1-56027-340-2
Airframe Test Study Guide (ASA)	ISBN # 1-56027-571-5
FAR Handbook for AMT (ASA)	ISBN # 1-56027-563-4
AC43.13-1B Acceptable Methods, Practices, & Techniques (ASA)	ISBN # 1-56027-488-3

Optional Text(s):

Technician Airframe Textbook (Jeppesen)	ISBN # 0-89100-395-9
Technician Airframe Workbook (Jeppesen)	ISBN # 0-89100-402-5
AC65-15A Aircraft Mechanics Handbook Airframe (FAA)	ISBN # 1-56027-023-3

Supporting Reference(s)

O&P Study Guide (ASA)	ISBN # 1-56027-406-9
Maintenance Handbook (ASA)	ISBN # 1-56027-518-9
Dictionary of Aeronautical Terms (ASA)	ISBN # 1-56027-587-2

The workbooks and test study guides may be used to aid the instructor and students to reinforce the textbook information. Other Textbooks may be used depending upon availability.

Required Methods of Instruction:

Classes are taught in a full time day or night format, requiring maximum attendance. Attendance is taken every hour. Missed time must be made up outside of regular scheduled class time before moving to the next subject.

Required Forms of Assessment:

Periodic exams will be performed by FAA approved instructors as required to insure progress. Students must pass this course with a 70% or better to qualify for an FAA approved Certificate of Completion in the Airframe Section.