Aviation Technology- Maintenance
Standard Course Outline

AVTA 1062 - ICE AND RAIN CONTROL FIRE PROTECTION

Catalog Description: Aircraft warning systems, ice and rain control systems, detection systems, and fire extinguishing systems. Clock hours: 20 lecture, 16 shop

Prerequisite: AVTG 1001

Credit hours/ Contact hours/ Load hours: 2/36/ meets six 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:

ICE AND RAIN CONTROL SYSTEMS REFERENCES: AC 65-15A; JSAT; AMT-A.
FAA Standard: *FAA-S-8081-27* 3-9, Change 2 (9/24/03)

Upon completion of the course, the student:

1. Exhibits knowledge of at least two of the following—
    a. aircraft icing causes/effects.
    b. ice detection systems.
    c. anti-ice and/or deice areas.
    d. anti-ice and/or deice methods commonly used.
    e. checking and/or troubleshooting a pitot-static anti-ice system.
    f. anti-icing and/or de-icing system components/operation.
    g. anti-icing and/or de-icing system maintenance.
    h. types of rain removal systems and/or operating characteristics.

2. N/A

3. Demonstrates the ability to perform at least one of the following—
    a. troubleshoot a pitot anti-ice system. (Level 3)
    b. check the operation of a pitot-static anti-ice system. (Level 3)
    c. inspect a deicer boot. (Level 3)
    d. check deicer boot operation. (Level 3)
    e. inspect windshield wiper blade(s) and check blade tension. (Level 3)
    f. adjust a windshield wiper blade tension to specification. (Level 3)
    g. inspect an electrically-heated windshield. (Level 3)
    h. check an electrically-heated windshield operation. (Level 3)
    i. troubleshoot a pneumatic deicer boot system. (Level 3)
    j. service or repair on a pneumatic deicer boot. (Level 3)

Aviation Technology- Maintenance
Standard Course Outline

FIRE PROTECTION SYSTEMS REFERENCES: AC 65-15A; AMT-A; JSAT.
FAA Standard *FAA-S-8081-27* 3-10, Change 2 (9/24/03)

Upon completion of the course, the student:

1. Exhibits knowledge of at least two of the following—
    a. fire and/or smoke detection system(s) or system components.
    b. fire extinguishing system(s) and/or system components.
    c. fire and/or smoke detection system operating characteristics.
    d. fire extinguishing system operating characteristics.
    e. determining proper container pressure for an installed fire extinguisher system.
    f. maintenance procedures for fire detection and/or extinguishing system(s) and/or system component(s).
    g. inspecting and/or checking a fire detection/overheat system.
    h. inspecting and/or checking a smoke and/or toxic gas detection system.
    i. troubleshooting a fire detection and/or extinguishing system.

2. N/A

3. Demonstrates the ability to perform at least one of the following—
    a. inspect a fire extinguisher container and determine if the pressure is within limits. (Level 3)
    b. determine the hydrostatic test date of a fire extinguisher container. (Level 2)
    c. troubleshoot a fire detection system. (Level 3)
    d. install/replace one or more smoke and/or fire detection and/or extinguishing system components. (Level 3)
    e. inspect a smoke and/or fire detection and/or extinguishing system, or system component(s). (Level 3)
    f. locate inspection procedures for carbon monoxide detectors. (Level 1)
    g. locate procedures for checking a smoke detection system. (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

Aviation Technology- Maintenance
Standard Course Outline

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