

Aviation Technology- Maintenance  
Standard Course Outline

AVTG 1091 - GROUND OPERATION AND SERVICING

Catalog Description: Students learn safe ground procedures including moving, fueling, and securing aircraft, and shop safety. Clock hours: 16 lecture, 8 shop

Prerequisite: AVTG 1001

Credit hours/ Contact hours/ Load hours: 1/24/6 hours per day for 4 days

Target Audience & Transferability:

This course is designed for students seeking a Certificate of Proficiency, Technical Certificates in Airframe 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/ Course Topics:

REFERENCES: ABS; AMT-G; JSGT.

FAA Standard: *FAA-S-8081-26* 1-6, Changes 2 (9/24/03) & 3 (6/21/04)

**By the end of the course, students will:**

1. Exhibit knowledge of at least two of the following—
  - a. general procedures for towing aircraft.
  - b. Air Traffic Control (ATC) considerations/requirements for towing aircraft on or across active runways.
  - c. general procedures for starting, ground operating, and/or taxiing a reciprocating engine powered aircraft.
  - d. general procedures for starting, ground operating, and/or taxiing a turbine engine powered aircraft.
  - e. the hazards associated with starting, ground operating, and/or taxiing aircraft and procedures for preventing, minimizing or otherwise managing any of them.
  - f. procedures for refueling and/or defueling aircraft.
  - g. oxygen system safety practices/precautions.
  - h. characteristics of aviation gasoline and/or turbine fuels, including basic types and means of identification.
  - i. fuel contamination hazards.
  - j. fuel additives commonly used in the field.
  - k. use of automobile fuel in aircraft engines.
  - l. types/classes of fires, using proper fire extinguishers/methods.
2. N/A
3. Demonstrate the ability to perform at least one of the following—
  - a. service an aircraft with compressed air or nitrogen. (Level 3)
  - b. set-up an aircraft and cockpit controls for engine start. (Level 2)
  - c. start and ground operate an aircraft engine\* (taxiing optional), and use or respond to standard hand or light wand signals. (Level 3)
  - d. determine the engine oil for a specific engine. (Level 2)

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- e. secure an aircraft for outside storage. (Level 3)
- f. fuel and/or defuel an aircraft (may be simulated). (Level 3)
- g. sample fuel and inspect for proper fuel and contaminants. (Level 3)
- h. set-up and connect an aircraft to an external power source. (Level 2)
- i. connect a towbar to an aircraft and prepare for towing. (Level 3)
- j. direct the movement (may be simulated) of aircraft. (Level 3)
- k. locate and clear a liquid lock (actual or simulated) in an aircraft engine. (Level 3)
- l. identify the types/classes of fires that local shop and/or flight line fire extinguishers may be used on. (Level 2)

\*If an operable engine is available.

Required Text(s):

General Textbook (ASA)	ISBN # 1-56027-550-3
General Test Study Guide (ASA)	ISBN # 1-56027-570-7
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 General Textbook (Jeppesen)	ISBN # 0-88487-203-3
Technician General Workbook (Jeppesen)	ISBN # 0-88487-212-2
AC65-9A Aircraft Mechanics Handbook General (FAA)	ISBN # 1-56027-064-0

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 issued depending upon availability.

Required Methods of Instruction:

Classes are taught off-campus 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 General Section.