

Aviation Technology- Maintenance
Standard Course Outline

AVTA 1111 - AIRCRAFT LANDING GEAR

Catalog Description: Theory, operation, service, and repair of landing gear, retraction systems, wheels, tires, brakes, struts, anti-skid systems, and shocks. Clock hours: 18 lecture, 18 shop

Prerequisite: AVTG 1001

Credit hours/ Contact hours/ Load hours:1/36/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:

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

FAA Standard *FAA-S-8081-27* 3-1, 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. landing gear strut servicing/lubrication.
 - b. landing gear steering systems.
 - c. landing gear retraction/extension systems.
 - d. landing gear inspection.
 - e. brake assembly inspection.
 - f. wheel and tire construction
 - g. tire mounting.
 - h. wheel and tire inspection.
 - i. wheel bearing inspection.
 - j. tire storage, care, and/or servicing.
 - k. landing gear and/or tire and wheel safety practices/precautions.

2. *Demonstrates the ability to:
 - a. Perform inspection of an installed brake for serviceability. (Level 3)*Core competency element.

3. Demonstrates the ability to perform at least one of the following—
 - a. determine the proper lubricant(s) for a landing gear. (Level 1)
 - b. inspect a landing gear or landing gear component(s). (Level 3)
 - c. service an oleo strut. (Level 3)
 - d. install a brake lining or brake assembly. (Level 3)
 - e. clean and inspect wheel bearings. (Level 3)
 - f. disassemble, clean as necessary, and inspect a wheel. (Level 3)
 - g. select lubricant, and lubricate wheel bearings. (Level 3)

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- h. remove and replace/install a wheel and tire assembly on a landing gear. (Level 3)
- i. inspect a wheel and tire assembly, check tire pressure, and service as necessary. (Level 3)
- j. service a nosewheel shimmy damper. (Level 3)
- k. accomplish a landing gear retraction/extension check. (Level 3)
- l. replace a tire or tube valve core and check for leaks. (Level 3)

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.