FLUID LINES AND FITTINGS
Course Syllabus

Course Number: TRGA-1109
OHLAP Credit: No
OCAS Code: None
Course Length: 28 Hours
Career Cluster: Transportation, Distribution & Logistics
Career Pathway: Aviation Maintenance Technology
Career Major(s): General Aviation

Pre-requisite(s):
Course Description:
Students will be shown how to fabricate and install aircraft rigid and flexible fluid lines and fittings. Identification of line and hose markings and type of materials will be discussed. The student will install Military Standard flareless fittings and standard AN flared tube fittings as well as fabricate and install aircraft high and low pressure hoses.

Textbooks:
Dale Crane, Dictionary of Aviation Terms, Aviation Supplies and Academics, 1997
FAA, FAR Handbook for Aviation Maintenance Technicians, Jeppesen, Sanders, Inc.. 2001
FAA, Standards for Aviation Maintenance Handbook, Jeppesen, Sanders, Inc.. 1985

Course Objectives:
A. Lesson: RIGID FLUID LINES
1. Define terms related to rigid and flexible fluid lines and fittings.
2. Discuss materials and size designations of rigid tubing.
3. Discuss the fabrication of rigid tubing assemblies.
4. Discuss flared fittings used to connect rigid fluid lines.
5. Identify typical flareless fittings.
7. $ Perform tube bending. (Level 3) (App. B,D,13)
8. $ Install rigid and flexible fluid lines. (Level 3) (App. B,D,13)

B. Lesson: FLEXIBLE FLUID LINES
1. Discuss flexible hose construction.
2. Discuss measurement and identification of flexible fluid lines.
3. Discuss and identify low-, medium-, and high-pressure hose. (Gen.D9)
4. Discuss the construction, usage, and advantages of Teflon hose.
5. Discuss methods used for attaching fluid line fittings to components. (Gen.D7)
6. Discuss flexible hose fittings.
7. Identify correct and incorrect flexible hose and rigid tubing installations. (Gen.D10,D12)
8. Match color codes or names to related fluid line code symbols. (Gen.D8)
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Teaching Methods: The class will primarily be taught by the lecture and demonstration method and supported by various media materials to address various learning styles. There will be question and answer sessions over material covered in lecture and media presentations. Supervised lab time is provided for students to complete required projects.

Grading Procedures:
1. Students are graded on theory and shop practice and performance.
2. Each course must be passed with seventy (70%) percent or better.
3. Grading scale: A=90-100%, B=80-89%, C=70-79%, F=0-69%.

Description of Classroom, Laboratories, and Equipment: Tulsa Technology Center campuses are owned and operated by Tulsa Technology Center School District No. 18. All programs provide students the opportunity to work with professionally certified instructors in modern, well-equipped facilities.

Available Certifications/College Credit: The student may be eligible to take state, national or industry exam after completion of the program. College credit may be issued from Oklahoma State University-Okmulgee or Tulsa Community College. See program counselor for additional information.

College Credit Eligibility: The student must maintain a grade point average of 2.0 or better.