Cape Cod Community College AMTS

Curriculum Subject Guide for AMT 107 General Curriculum, Subject Item 13

Part 147, Appendix B, Subject D – Fluid Lines and Fittings

Subject: Fluid Lines and Fittings

Item 13. Fabricate and install rigid and flexible fluid lines and fittings
(Level 3) *T – 6.25 Hrs / L – 17 Hrs*

Classroom time:	6.25 hours
Lab or shop time:	17 hours
Test time:	1.75 hours
Total Time:	25 hours
Teaching Level	3
Project 1A & 1B	**Theory Test 1**
Item 13 – 8 Hrs	0.25 Hrs
Project 2	**Practical Test 1**
Item 13 – 4.5 Hrs	1.5 Hrs
Project 3	
Item 13 – 4.5 Hrs	

Prerequisite(s)

(1) None

Course Interruptions: All interruptions or changes in course sequence will be in accordance with the Order of Instruction policy, located in Cape Cod Community College's Operations Manual, page 17.

Item 13:

Student Performance Goal(s)

Given: Sections of Aluminum and stainless steel tubing, manual tube bending tool, and Aviation Maintenance Technician Handbook – General, Volume 1 (FAA-8083-30), Chapter 7, and Avotek H-90 Fluid Lines and Fittings Training aid.

Performance: Make at least one 90 degree bend in each sample of aluminum and steel tubing using the hand bending tool.
Standard: Bends will meet return to service standards as described in Aviation Maintenance Technician Handbook – General FAA-8083-30 Ch07 for circular shape, smooth appearance and conforming to minimum bend Radii standards.

Given: Sections of Aluminum and stainless steel tubing, manual tube bending tool, and Aviation Maintenance Technician Handbook – General, Volume 1 (FAA-8083-30), Chapter 07, and Avotek H-90 Fluid Lines and Fittings Training aid.

Performance: Form a bead at the end of the aluminum tubing.

Standard: Beads will comply with dimensions and quality of workmanship described in Aviation Maintenance Technician Handbook – General, Volume 1, (FAA-8083-30) Chapter 7, and shown on Avotek H-90 Fluid Lines and Fittings Training aid.

Given: Aluminum tubing, flaring tools and reference information.

Performance: Form a single flare at one end and a double flare at the other.

Standard: Flares will comply with quality of workmanship described in Aviation Maintenance Technician Handbook – General, Volume 1 (FAA-8083-30), Chapter 7, and shown on Avotek H90 Fluid Lines and Fittings Training aid.

Given: Fluid replaceable fittings, flexible hose, installation tools and Aviation Maintenance Technician Handbook – General, Volume 1 (FAA-8083-30), Chapter 7, and Avotek H-90 Fluid Lines and Fittings Training aid.

Performance: Identify and select the correct hose materials and fittings from stock, make-up and install a flexible hose assembly.

Standard: The hose assembly and installation will function without leakage under system operating pressures using Avotek H-86 Hydraulic System Training Aid.

Given: Random samples of metal tubing that may display defects that would be cause for rejection.

Performance: Select one sample section of tubing that would be rejected due to each of the following defects.

- Deep scratches or dents
- Flattened tube bends
- Defective flare

Standard: Identification of samples containing defects without error. Criteria for defects contained in Aviation Maintenance Technician Handbook – General, Volume 1 (FAA-8083-30), Chapter 7.

Given: Sections of replacement tubing, and the H-86 Hydraulic System Trainer.

Performance: Install replacement sections of both rigid and flexible tubing as the procedure to repair a fluid system. Discuss proper routing and support of tubing, and conduct operations leak check of the system.

Standard: Installation will be of such quality that the system functions normally and there are no leaks.

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