Cape Cod Community College AMTS

Curriculum Subject Guide for AMT 113 General Curriculum, Subject Items 22 and 23

Part 147, Appendix B, Subject G – Cleaning and Corrosion Control

Subject: Cleaning and Corrosion Control

Item 22. Identify and select cleaning materials (Level 3)
T – 3.0 Hrs / L – 8.0 Hrs
Item 23. Inspect, identify, remove, and treat aircraft corrosion and perform aircraft cleaning (Level 3)
T – 7.25 Hrs / L – 19 Hrs

Classroom time:	10.25 hours
Lab or shop time:	27 hours
Test time:	2.75 hours
Total Time:	40 hours
Teaching Level	3
Project 1A & 1B	Project 2A, 2B, & 2C
Item 22 – 8 Hrs	Item 23 – 9.5 Hrs
Item 23 – 9.5 Hrs	
Theory Test 1	Practical Test 1
0.25 Hrs	2.5 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 22:

Student Performance Goal(s)

Given: Samples of caustic cleaners and aluminum alloys

Performance: The student will apply caustic cleaning materials to the aluminum alloy samples and observe the effects of varying soak times. The student will recognize and point
out damage due to excessive strengths and soak times should they appear in the samples being cleaned.

Standard: From a display of aluminum alloy samples, the student will recognize those samples that have been damaged by excessive cleaning.

Given: Manufacturer's information sheets, manuals, product catalogues, and typical aircraft and engine parts.

Performance: The student will use the reference information to guide their selection of the correct cleaning material for steel, aluminum, titanium, and magnesium parts. They will demonstrate their ability to identify and use approved cleaners and brighteners

Standard: The student will interpret information from the reference manuals and catalogues without error. They will correctly identify packaged cleaning and brightening agents and follow printed instruction for use of such products

Item 23:

Student Performance Goal(s)

Given: Appropriate cleaners and equipment

Performance: The student will select and employ the correct materials and clean the exterior surfaces of an airplane.

Standard: The task will be accomplished without damage to the finish and components or systems of the airplane

Given: Sample corroded aluminum parts

Performance: The student will select those parts which indicate inter-granular corrosion. The student will describe two methods of preventing and/or controlling this type of corrosion

Standard: The student will identify at least 80% of the samples showing corrosion

Given: Corroded aluminum parts, appropriate cleaning agents, equipment, and facilities.

Reference information

Performance: The student will remove corrosion products, such as metal flakes, scale, powder and salt deposits from aluminum parts. The student will describe how parts are protected from dissimilar metal corrosion

Standard: Removal of corrosion products shall not involve unnecessary removal of solid metal. Description of corrosion protection methods shall be in accordance with specific reference information

Given: Typical aircraft component parts, protective paints and organic coatings

Performance: The student will apply paints and/or similar organic coating to aircraft parts. The student will clean and protect battery compartments and adjacent areas by neutralizing the acid, removing corrosion, and applying acid-proof paints. The student will identify "fretting" corrosion.

Standard: Resultant finishes will be of return-to-service standard. When shown sample parts, the student will be able to distinguish between chemically induced and "fretting corrosion."

Given: Steel aircraft parts, rust inhibiting materials and suitable equipment for removing rust

Performance: The student will remove rust from ferrous aircraft parts and apply rust inhibiting finishes. The student will describe the methods of protecting the interior of steel tubing and demonstrate the use of blast cleaning methods

Standard: The finished parts shall be of return-to-service quality.

Given: Sample aircraft rubber products (tires, tubes, boots, etc.)

Performance: From sample rubber products that show the deteriorating effects of various cleaning materials, acids, caustics, hydrocarbons, sunlight, heat, etc. the student will describe the probable cause. The student will demonstrate acceptable methods of removing oil, hydraulic fluid, battery acid, solvents and caustics from tires.

Standard: Provided with ten samples displaying evidence of deterioration, the student will identify the probable cause in 70% of the sample cases. Cleaning of tires will be accomplished without further damage to the tire.

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