

Cape Cod Community College AMTS

Practical Project Guide for AMT 225 Airframe Curriculum, Subject Item 44

Part 147, Appendix C, Part 2, Subject F – Aircraft Fuel Systems Item

44. Repair aircraft fuel system components (Level 2)

Project 1

Purpose: To acquaint the student with the proper procedures for repairing aircraft fuel system components.

References:

- (1) 14 CFR Federal Aviation Regulations for Aviation Maintenance Technicians, Aviation Maintenance Technician Handbook – Airframe, Volume 2 (FAA-H-8083-31) Chapter 14
- (2) AeroTrain AS11 Turbine Fuel System Trainer Manual.

Equipment and Tools Needed:

- (1) AeroTrain AS11 Turbine Fuel System Trainer
- (2) Snap-on Toolbox
- (3) Meter
- (4) Personal Protection Equipment (PPE)

Supplies and Materials Needed:

- (1) Rags

Procedure:

Complete following procedure on assigned project 1

- 1) Before performing any maintenance, read cautions, notes, and safety procedures for Aircraft Fuel Systems.
- 2) All aircraft fuel system maintenance shall be performed as per the AeroTrain Turbine Fuel System, Model AS11 Manual.
- 3) Instructor will provide several different fuel discrepancies on the AeroTrain Turbine Fuel System Trainer.
- 4) After scenarios are given, students will then troubleshoot and repair the AeroTrain Fuel System Trainer as per the Turbine Fuel System Manual for model AS11.

Project 1 Item 44. Repair aircraft fuel system components

Cape Cod Community College AMTS

Practical Project Guide for AMT 225 Airframe Curriculum, Subject Item 45

Part 147, Appendix C, Part 2, Subject F – Aircraft Fuel Systems

Item 45. Inspect and repair fluid quantity indicating systems (Level 2)

Project 2

Purpose: To acquaint the student with the proper procedures for inspecting and repairing fluid quantity indicating systems

References:

- (1) 14 CFR Federal Aviation Regulations for Aviation Maintenance Technicians, Aviation Maintenance Technician Handbook – Airframe, Volume 2 (FAA-H-8083-31) Chapter 14
- (2) Aircraft Fuel System Trainer Model AS-11 Manual

Equipment and Tools Needed:

- (1) Aircraft Fuel System Trainer Model AS-11

Supplies and Materials Needed:

- (1) Safety Glasses
- (2) Class B Fire Extinguisher

Procedure:

Complete following procedure on assigned project 2

- (1) Before performing checks on the trainer read the Fire Safety section of Reference (1).
- (2) Compare the operation of the fuel flow gage to the operation of the fuel pressure gage.
- (3) Complete steps 1 – 8 on page 7 section 28-10-10
- (4) Where does each gage get its input from?
- (5) What 3 components are common to each gage?
- (6) Which gage is affected by an inverter failure and why?
- (7) With the throttle closed and boost pump on, why do you have fuel pressure but no fuel flow?
- (8) How could use the fuel pressure indicating system to troubleshoot the fuel flow indicating system?
- (9) Complete steps 13 and 14

Project 2 Item 45. Inspect and repair fluid quantity indicating systems

Cape Cod Community College AMTS

Practical Project Guide for AMT 225 Airframe Curriculum, Subject Item 46

Part 147, Appendix C, Part 2, Subject F – Aircraft Fuel Systems

Item 46. Troubleshoot, service, and repair fluid pressure and temperature warning system (Level 2)

Project 3

Purpose: To acquaint the student with the proper procedures to troubleshoot, service, and repair fluid pressure and temperature warning systems.

References:

- (1) 14 CFR Federal Aviation Regulations for Aviation Maintenance Technicians, Aviation Maintenance Technician Handbook – Airframe, Volume 2 (FAA-H-8083-31) Chapter 14
- (2) Cessna 402C Maintenance Manual

Equipment and Tools Needed:

- (1) Cessna 402C
- (2) Snap-on Toolbox
- (3) Personal Protection Equipment (PPE)

Supplies and Materials Needed:

- (1) Rags

Procedure:

Complete following procedure on assigned project 3

- (1) Before performing any maintenance, read cautions, notes, and safety procedures for aircraft fuel systems.
- (2) All aircraft fuel system maintenance shall be performed as per the Cessna 402 Maintenance Manual.
- (3) Service Cessna 402 by fueling and defueling. While fueling, pressure, and make repairs before continuing if pressure exceeds the required PSI.
- (4) All fueling and defueling shall be done as per the Manual, Chapters 12-10-01, and 12-10-02.

Project 3 Item 46. Troubleshoot, service, and repair fluid pressure and temperature warning system

Cape Cod Community College AMTS

Practical Project Guide for AMT 225 Airframe Curriculum, Subject Item 47

Part 147, Appendix C, Part 2, Subject F – Aircraft Fuel Systems

Item 47. Inspect, check, service, troubleshoot, and repair aircraft fuel systems (Level 3)

Project 4

Purpose: To acquaint the student with the proper procedures for inspect, check, troubleshoot, and repairing aircraft fuel systems.

References:

- (1) 14 CFR Federal Aviation Regulations for Aviation Maintenance Technicians, Aviation Maintenance Technician Handbook – Airframe, Volume 2 (FAA-H-8083-31) Chapter 14
- (2) Cessna 402C Maintenance Manual

Equipment and Tools Needed:

- (1) Cessna 402C
- (2) Snap-on Toolbox
- (3) Personal Protection Equipment (PPE)

Supplies and Materials Needed:

- (1) Safety Wire
- (2) Fuel seal kit
- (3) Rags

Procedure:

Complete following procedure on assigned project 4

- (1) Before performing any maintenance, read cautions, notes, and safety procedures for aircraft fuel systems.
- (2) All aircraft fuel system maintenance shall be performed as per the Cessna 402C Maintenance manual.
- (3) Clean Cessna 402C fuel filter as per the 402 Maintenance Manual Chapter 28-20-01, Page 211.
- (4) After inspecting, fabricating, servicing, and cleaning the fuel filter, perform test/checkout procedure of the fuel system as per the Cessna 402C Maintenance Manual Chapter 28-20-01.

Project 4 Item 47. Inspect, check, service, troubleshoot, and repair aircraft fuel systems

This workforce product was funded by a grant awarded by the U.S. Department of Labor's Employment and Training Administration. The product was created by the grantee and does not necessarily reflect the official position of the U.S. Department of Labor. The U.S. Department of Labor makes no guarantees, warranties, or assurances of any kind, express or implied, with respect to such information, including any information on linked sites and including, but not limited to, accuracy of the information or its completeness, timeliness, usefulness, adequacy, continued availability, or ownership.

This work is licensed under a Creative Commons Attribution 4.0 International License.

