Cape Cod Community College

Practical Project Guide for AMT 217 Airframe Curriculum, Subject Items 31 and 32

Part 147, Appendix C, Part II, Subject B – Hydraulic and Pneumatic Power Systems

Item 31. Identify and select hydraulic fluids (Level 3)
Item 32. Inspect, check, service, troubleshoot and repair hydraulic and pneumatic power system (Level 3)

Project 1

Purpose: To acquaint the student with the identification and selection of hydraulic fluids and the proper procedures for inspection, checking, and servicing of hydraulic and pneumatic power systems.

References:

(1) 14 CFR Federal Aviation Regulations for Aviation Maintenance Technicians, Aviation Maintenance Technician Handbook – Airframe, Volume 2 (FAA-H-8083-31) Chapter 12
(2) Cessna Aircraft Company 402 Maintenance Manual

Equipment and Tools Needed:

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

Supplies and Materials Needed:

(1) O-rings
(2) Filter Elements
(3) Rags

Procedure:

(1) Before performing any maintenance, read cautions, notes, and safety procedures for hydraulic systems.
(2) All maintenance shall be performed as per the Cessna Aircraft Company 402 Maintenance manual Chap 29.
(3) Inspect/Check Cessna 402 filter bowls and filters.
(4) Replace filters, identify, select and service hydraulic system with correct hydraulic fluid.
(5) Complete system checkout as per the Cessna Aircraft Company 402 Maintenance Manual 2910-03 Page 201.

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Part 147, Appendix C, Part II, Subject B – Hydraulic and Pneumatic Power Systems

Item 30. Repair hydraulic and pneumatic power system components (Level 2)
Item 32. Inspect, check, service, troubleshoot and repair hydraulic and pneumatic power systems (Level 3)

Project 2

Purpose: To acquaint the student with the proper troubleshooting and repair of hydraulic power systems and 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 12
(2) Cessna Aircraft Company 402 Maintenance manual

Equipment and Tools Needed:

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

Supplies and Materials Needed:

(1) O-rings
(2) Rags

Procedure:

(1) Before performing any maintenance, read cautions, notes, and safety procedures for hydraulic systems.
(2) All maintenance shall be performed as per the Cessna Aircraft Company 402 Maintenance manual Chap 29.
(3) Troubleshoot Cessna 402 hydraulic flow indicating system.
(4) Repair, remove, inspect, and re-install hydraulic pressure switch.
(5) Complete system checkout as per the 402 Maintenance Manual 29-30-00 Page 201.

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Part 147, Appendix C, Part II, Subject B – Hydraulic and Pneumatic Power Systems

Item 30. Repair hydraulic and pneumatic power system components (Level 2)
Item 32. Inspect, check, service, troubleshoot and repair hydraulic and pneumatic power systems (Level 3)

Project 3

Purpose: To acquaint the student with the proper troubleshooting and repair of pneumatic power systems and 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 12
(2) Cessna Aircraft Company 402C Maintenance Manual

Equipment and Tools Needed:

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

Supplies and Materials Needed:

(1) O-rings/Gaskets
(2) Rags

Procedure:

(1) Before performing any maintenance, read cautions, notes, and safety procedures for hydraulic systems.
(2) All maintenance shall be performed as per the Cessna Aircraft Company 402C Maintenance manual, Chapter 78.
(3) Troubleshoot Cessna 402C engine's pneumatic waste gate.
(4) Remove, inspect, repair, and re-install engine pneumatic waste gate.
(5) Complete system checkout as per the Cessna 402C Maintenance Manual 78-10-00 page 401.

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