Cape Cod Community College AMTS

Practical Project Guide for AMT 121 General Curriculum, Subject Item 31

Part 147, Appendix B, Subject K Maintenance Publications

Item 31: Demonstrate the ability to read, comprehend, and apply information contained in FAA, manufacturer's aircraft maintenance specifications, data sheets, manuals, publications, and related Federal Aviation Regulations, Airworthiness Directives, and Advisory Material. (Level 3)

Project 1

Purpose: Teach student how to locate, interpret and determine applicability of Manufacturer and FAA maintenance publications, data sheets, and specifications.

References:

(1) Aircraft Specification NO. 1A15
(2) Piper Comanche Service Manual (PART NUMBER 753-516)

Equipment and Tools Needed:

(1) Warp Drive Propeller Protractor
(2) PA 24-250 Comanche

Procedure:

Complete following procedure on project 1

Project 1

(1) Access and read Technical Data:
    a. Locate PA 24-250 Specification Sheet (Aircraft Specification No 1A15)
    b. Identify Control Surface Movement Section and Make note of Aileron travel requirements (19° up, 15° down) See Fig 1
(2) Apply information, and perform verification:
    a. Using Provided protractor measure degrees of full travel up and down and compare to Aircraft Specifications (Document on answer sheet).

Number of Seats	4 (2 at +85, 2 at +118.5) (S/N 26-2 through 26-124) 4 (2 at +85, 2 at +120.5) (S/N 26-125 through 26-148)					
Maximum Baggage	200 lb. at (+142) (Rear compartment)					
Fuel Capacity	130 gallons at (+90) (Two 30 gallon wing tanks) (124 gallons usable) 130 gallons at (+94) (Two 35 gallon wing tanks) (124 gallons usable) See NOTE 1 for unusable fuel data.					
Oil Capacity	17 quarts at (+21) (12 quarts usable)					
Control Surface Movements	Main Surfaces	Aileron	19°	Up	15°	Down
		Stabilator (L.E.)	4.5°	Up	15.5°	Down
		Rudder	25°	Left	25°	Right
		Flap			38°	Down
	Anti-Servo Tab (Stabilizer Neutral)		4.5°	Up	9°	Down
Serial Numbers Eligible	26-2 through 26-148.					
Required Equipment	In addition to the pertinent required basic equipment specified in CAR 3, the following items of equipment must be installed: 7(a), 7(b), 115, 116, 118, 119, 201(c), 205, 206(b), 302(a), 305, 401(ag), 603, and 605.					

Model PA-24-260, 4 PCLM (Normal Category), Approved June 19, 1964, or 6 PCLM (Normal Category), Approved June 30, 1965, and April 11, 1969 when Item 611 is installed (See NOTE 2(m) placard for 6 PCLM Limitations.).

Engine	Lycoming O-540-E4A5 (See Item 109(f) and 109(g) for additional optional engines and 109(h) for optional turbocharged engines)			
Fuel	91/96 min. grade aviation gasoline (normally aspirated engine) 100/130 min. grade aviation gasoline (turbocharged engine)			
Engine Limits	All operations, 2700 r.p.m. (260 hp)			
Airspeed Limits	V_{ne}	(Never Exceed)***	203 mph	(177 knots)
	V_{no}	(Maximum Structural Cruise)	180 mph	(156 knots)
	V_{le}	(Landing Gear Extended)	150 mph	(130 knots)
	V_p	(Maneuvering)	144 mph	*(125 knots)
	V_{fe}	(Flaps Extended)	125 mph	(108 knots)
	V_p	(Maneuvering)	150 mph	**(130 knots)

* S/N 24-3642, 24-4000 through 24-4782, and 24-4784 through 24-4803.
** S/N 24-4783, 24-4804 through 24-5034.
*** See Item 618 for approved speed increase.

Fig 1

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Item 32. Read Technical Data (Level 3)

Project 2

Purpose: Teach student how to locate, interpret and determine applicability of Manufacturer and FAA maintenance publications, data sheets, and specifications.

References:

(1) Type Certificate Data Sheet A7CE

Equipment and Tools Needed:

(1) College Computer Work Station
(2) Access to https://www.faa.gov/

Procedure:

Complete following procedure on project 2

Project 2 Item 32. Read Technical Data (Level 3)

(1) Access and Read Technical Data:
   a. Locate Cessna 402C Type Certificate Data Sheet (TCDS) A7CE
(2) Record Data:
   a. (Blank)_____ Maximum allowable gross weight (Ramp, 6885 Pounds)
   b. (Blank)_____ Never Exceed Speed Vne (235 KIAS (270 m.p.h.))
   c. (Blank)_____ Minimum grade of fuel allowed (Grade one hundred or one hundred low lead)
   d. (Blank)_____ Center of Gravity Limits (+151.58) to (+160.67) at 6850 Pounds.((+149.08) at 5800 Pounds or less)

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Project 3

Purpose: Teach student how to locate, interpret and determine applicability of Manufacturer and FAA maintenance publications, data sheets, and specifications.

References:

(1) https://www.faa.gov/

Equipment and Tools Needed:

(1) College computer work station
(2) Access to https://www.faa.gov/
(3) Access to https://www.piper.com/

Procedure:

Complete following procedure on project 3

Project 3

(1) Access Technical Data:
   a. Locate Airworthiness Directives (AD) for the PA 24-250
   b. Locate Supplemental Type Certificates (STC) applicable to the PA 24-250
   c. Locate Service Bulletins and Service Letters (SB, SL) for the PA 24-250

(2) Completion Standard:
   a. Read and record one AD and describe purpose and details pertaining to compliance without error
   b. Read and record one STC and describe purpose and applicability without error
   c. Read and record one SB or SL and describe purpose without error