Cape Cod Community College AMTS

Practical Project Guide for AMT 267 Powerplant Curriculum, Subject Item 20-23

Part 147, Appendix D, Part 2, Subject F – Fuel Metering Systems

Item 22. **Repair engine fuel metering system components.** (Level 2)
Item 23. **Inspect, check, service,** troubleshoot, **and repair reciprocating** and turbine **engine fuel metering systems.** (Level 3)

Project 1A & 1B & 1C

Purpose: To acquaint the student with the proper procedures of inspecting, checking, servicing, and repairing fuel metering system components and systems.

References:

(1) 14 CFR, Federal Aviation Regulations for Aviation Maintenance Technicians (Current Edition), Aviation Maintenance Technician Handbook – Powerplant, Volume 1 (FAA-H-8083-32) Chapter 2
(2) Piper Comanche 250 (PA-24) Service and Parts Manual
(3) Lycoming O-540 Engine Service Manual
(4) Piper Colt Flight and Parts Manuals
(5) Lycoming Direct Drive Overhaul Manual
(6) AeroTrain AE-30-320 Operation Manual
(7) O-320 Illustrated Parts Manual

Equipment and Tools Needed:

(1) Piper Comanche 250 (PA 24)
(2) Piper Colt (PA 22)
(3) AeroTrain AE-30-320 O-320 Operational Training Aid
(4) AMT Roll-Around Toolbox
(5) Computer workstation with internet access

Supplies and Materials Needed:

1. None

Procedure:

Complete following procedure on the assigned project 1A or 1B or 1C

(1) Inspect the Fuel Metering system on the assigned aircraft or Test Cell.
(2) List all discrepancies found and recommend repairs. The Instructor will verify that all discrepancies have been identified and the recommended repairs are correct by initialing below. Discrepancies and Recommended Repairs OK blank_____
(3) Repair the Instructor assigned discrepancies.
(4) Check the system for proper operation.

1. Complete maintenance record entries.

blank

Project 1A Item 22. **Repair engine fuel metering system components.** (Level 2) and Item 23. **Inspect, check, service,** troubleshoot, **and repair reciprocating** and turbine **engine fuel metering systems.** (Level 3)

(1) 14 CFR, Federal Aviation Regulations for Aviation Maintenance Technicians (Current Edition), Aviation Maintenance Technician Handbook – Powerplant, Volume 1 (FAA-H-8083-32) Chapter 2
(2) Piper Comanche 250 (PA-24) Service Manual
(3) Piper Comanche 250 (PA-24) Parts Catalog
(4) Lycoming O-540 Engine Service Manual

Project 1B Item 22. **Repair engine fuel metering system components.** (Level 2) and Item 23. **Inspect, check, service,** troubleshoot, **and repair reciprocating** and turbine **engine fuel metering systems.** (Level 3)

(1) 14 CFR, Federal Aviation Regulations for Aviation Maintenance Technicians (Current Edition), Aviation Maintenance Technician Handbook – Powerplant, Volume 1 (FAA-H-8083-32) Chapter 2
(2) Piper Colt (PA 22)
(3) Piper Colt Flight and Parts Manuals
(4) Lycoming Direct Drive Overhaul Manual

Project 1C Item 22. **Repair engine fuel metering system components.** (Level 2) and Item 23. **Inspect, check, service,** troubleshoot, **and repair reciprocating** and turbine **engine fuel metering systems.** (Level 3)

(1) 14 CFR, Federal Aviation Regulations for Aviation Maintenance Technicians (Current Edition), Aviation Maintenance Technician Handbook – Powerplant, Volume 1 (FAA-H-8083-32) Chapter 2
(2) AeroTrain AE-30-320 O-320 Operational Training Aid
(3) AeroTrain AE-30-320 Operation Manual
(4) O-320 Illustrated Parts Manual

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Part 147, Appendix D, Part 2, Subject F – Fuel Metering Systems

Item 21**. Overhaul carburetor**. (Level 2)
Item 22. **Repair engine fuel metering system components**. (Level 2)

Project 2A & 2B & 2C

Purpose: To acquaint the student with the proper procedures of repairing fuel metering system components and overhauling carburetors.

References:

(1) 14 CFR, Federal Aviation Regulations for Aviation Maintenance Technicians (Current Edition), Aviation Maintenance Technician Handbook – Powerplant, Volume 1 (FAA-H-8083-32) Chapter 2
(2) Piper Comanche 250 (PA-24) Service and Parts Manual
(3) Lycoming O-540 Engine Service Manual
(4) Piper Colt Flight and Parts Manuals
(5) Lycoming Direct Drive Overhaul Manual
(6) AeroTrain AE-30-320 Operation Manual
(7) O-320 Illustrated Parts Manual

Equipment and Tools Needed:

(1) Piper Comanche 250 (PA 24)
(2) Piper Colt (PA 22)
(3) AeroTrain AE-30-320 O-320 Operational Training Aid
(4) AMT Roll-Around Toolbox
(5) Computer workstation with internet access

Supplies and Materials Needed:

(1) None

Procedure:

Complete following procedure on the assigned project 2A or 2B or 2C

1. Remove the carburetor from the assigned aircraft or Test Cell.
2. Disassemble and inspect the carburetor assigned in order to determine its airworthiness. On page 2 & 3, fill in all the requested information. **ALSO SEE THE NOTES ON PAGE 3.**
3. On page 3, fill in the chart with the indicated measurements.

4. On page 4, list all parts (individually by part number) which are normally replaced during overhaul and lay them out on the bench for the Instructor's inspection. The Instructor will verify that all parts are correctly identified by initialing below.
    a) Overhaul Parts Identified and Laid Out blank_____
5. On page 4, list all discrepancies found and recommend repairs. Each discrepancy found must be shown to the Instructor. This is for all damage found on items not normally replaced. The Instructor will verify that all discrepancies have been identified by initialing below.
    a) Discrepancies and Recommended Repairs OK blank _____
6. Research AD Notes and list them on page 5. Comply with the applicable ones as much as possible. Sign off all applicable ones as part of your Logbook entry *as if you complied with them* (whether you complied with them or not).
7. Reassemble the carburetor using the original parts as required. The Instructor must witness and initial the following: Float Level Check and Float Drop Check and verify the completion by initialing below.
    a) Float Level Check blank _____ Float Drop Check blank _____
    Final Reassembly blank _____
8. Attach the Fuel Inlet Hose and fill the carburetor with fuel. Check to insure the Needle and Seat are functioning properly. Have the Instructor Initial below when the carburetor is full of fuel and Needle and Seat are functioning properly.
    a) Needle and Seat Ops Check blank _____
9. Complete maintenance record entries.
10. Go to Project 3 with your carburetor.

Project 2A Item 21. **Overhaul carburetor**. (Level 2) & Item 22. **Repair engine fuel metering system components.** (Level 2)

(1) 14 CFR, Federal Aviation Regulations for Aviation Maintenance Technicians (Current Edition), Aviation Maintenance Technician Handbook – Powerplant, Volume 1 (FAA-H-8083-32) Chapter 2
(2) Piper Comanche 250 (PA-24) Service Manual
(3) Piper Comanche 250 (PA-24) Parts Catalog
(4) Lycoming O-540 Engine Service Manual

Project 2B Item 21. **Overhaul carburetor**. (Level 2) & Item 22. **Repair engine fuel metering system components.** (Level 2)

(1) 14 CFR, Federal Aviation Regulations for Aviation Maintenance Technicians (Current Edition), Aviation Maintenance Technician Handbook – Powerplant, Volume 1 (FAA-H-8083-32) Chapter 2
(2) Piper Colt (PA 22)
(3) Piper Colt Flight and Parts Manuals
(4) Lycoming Direct Drive Overhaul Manual

Project 2C Item 21. **Overhaul carburetor**. (Level 2) & Item 22. **Repair engine fuel metering system components.** (Level 2)

(1) 14 CFR, Federal Aviation Regulations for Aviation Maintenance Technicians (Current Edition), Aviation Maintenance Technician Handbook – Powerplant, Volume 1 (FAA-H-8083-32) Chapter 2
(2) AeroTrain AE-30-320 O-320 Operational Training Aid
(3) AeroTrain AE-30-320 Operation Manual
(4) O-320 Illustrated Parts Manual

CARBURETOR INFORMATION:

MAKE Marvel Schebler Aircraft Carburetors LLC

MODEL blank_____

PART # blank _____ SERIAL # blank _____

TYPE OF MIXTURE CONTROL blank _____

TYPE OF ACCELERATOR SYSTEM blank _____

TYPE OF POWER ENRICHMENT SYSTEM blank _____

REQUIRED FLOAT SETTING blank _____

TORQUES: BOWL COVER SCREW blank _____ FLOAT BRACKET SCREW blank _____

THROTTLE LEVER CLAMP SCREW TORQUE blank_____

NOTES (EXCEPTIONS TO MANUFACTURER'S INSTRUCTIONS):

Don't remove the main venturi (only for this Lab).

Don't remove the throttle bushings (only for this Lab).

Don't remove the Accelerator Pump seal.

MEASUREMENTS :

ITEM	MEASUREMENT	CLEARANCE
Mixture Control Hole in T-body		
Mixture Control Valve (top)		
Accelerator Pump hole in Tbody		
Accelerator Pump Shaft		
Mixture Control Valve (bottom)		
Mixture Control Sleeve		
Float Shaft Bracket		
Float Shaft		

Float Lever Pivot		
Throttle Shaft Bushing I.D.		
Throttle Shaft		
Accelerator Pump Lever Holes		
Accelerator Pump Link		
Float Adjustment Tab		
Accelerator Pump Cylinder		
Throttle Stop Pad on T-body		

OVERHAUL PARTS NORMALLY REPLACED:

DISCREPANCIES AND RECOMMENDED REPAIRS:

ADD NOTES:

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Part 147, Appendix D, Part 2, Subject F – Fuel Metering Systems

Item 22. **Repair engine fuel metering system components.** (Level 2)
Item 23. Inspect, **check, service, troubleshoot**, **and repair reciprocating** and turbine **engine fuel metering systems.** (Level 3)

Project 3A & 3B & 3C

Purpose: To acquaint the student with the proper procedures of checking, servicing, troubleshooting, and repairing fuel metering system components.

References:

(1) 14 CFR, Federal Aviation Regulations for Aviation Maintenance Technicians (Current Edition), Aviation Maintenance Technician Handbook – Powerplant, Volume 1 (FAA-H-8083-32) Chapter 2
(2) Piper Comanche 250 (PA-24) Service and Parts Manual
(3) Lycoming O-540 Engine Service Manual
(4) Piper Colt Flight and Parts Manuals
(5) Lycoming Direct Drive Overhaul Manual
(6) AeroTrain AE-30-320 Operation Manual
(7) O-320 Illustrated Parts Manual

Equipment and Tools Needed:

(1) Piper Comanche 250 (PA 24)
(2) Piper Colt (PA 22)
(3) AeroTrain AE-30-320 O-320 Operational Training Aid
(4) AMT Roll-Around Toolbox
(5) Computer workstation with internet access

Supplies and Materials Needed:

1. None

Procedure:

Complete following procedure on the assigned project 3A or 3B or 3C

(1) Install your carburetor from Project 2 back on the assigned aircraft or Test Cell.
(2) On the back of this sheet, write an Adjustment Checklist for Step #2 below. **Have the Instructor review your checklist BEFORE proceeding to Step #3.**
    a. OK to proceed blank_____
(3) Run the assigned engine and properly adjust the Idle Mixture and Idle Speed and have the Instructor Initial below when accomplished:
    a. Idle Mixture Check & Adjustment blank _____
    b. Idle Speed Check & Adjustment blank _____

(4) Fill in the information requested below:
    a. Assigned engine: Make blank _____ Model blank _____ Ser. No. blank _____
    b. Carburetor: Make blank _____ Model blank _____ Part No. blank _____
        a. Ser. No. blank _____
    c. Proper Idle Speed: blank _____ RPM
(5) Below and on the following page, troubleshoot the indicated problem for a Float Carburetor. Limit your answers to solutions involving only a Float Carburetor.
(6) Complete appropriate maintenance record entries.

Project 3A Item 22. **Repair engine fuel metering system components.** (Level 2) and Item 23. Inspect, **check, service, troubleshoot, and repair reciprocating** and turbine **engine fuel metering systems.** (Level 3)

(1) 14 CFR, Federal Aviation Regulations for Aviation Maintenance Technicians (Current Edition), Aviation Maintenance Technician Handbook – Powerplant, Volume 1 (FAA-H-8083-32) Chapter 2
(2) Piper Comanche 250 (PA-24) Service Manual
(3) Piper Comanche 250 (PA-24) Parts Catalog
(4) Lycoming O-540 Engine Service Manual

Project 3B Item 22. **Repair engine fuel metering system components.** (Level 2) and Item 23. Inspect, **check, service, troubleshoot, and repair reciprocating** and turbine **engine fuel metering systems.** (Level 3)

(1) 14 CFR, Federal Aviation Regulations for Aviation Maintenance Technicians (Current Edition), Aviation Maintenance Technician Handbook – Powerplant, Volume 1 (FAA-H-8083-32) Chapter 2
(2) Piper Colt (PA 22)
(3) Piper Colt Flight and Parts Manuals
(4) Lycoming Direct Drive Overhaul Manual

Project 3C Item 22. **Repair engine fuel metering system components.** (Level 2) and Item 23. Inspect, **check, service, troubleshoot, and repair reciprocating** and turbine **engine fuel metering systems.** (Level 3)

(1) 14 CFR, Federal Aviation Regulations for Aviation Maintenance Technicians (Current Edition), Aviation Maintenance Technician Handbook – Powerplant, Volume 1 (FAA-H-8083-32) Chapter 2
(2) AeroTrain AE-30-320 O-320 Operational Training Aid
(3) AeroTrain AE-30-320 Operation Manual
(4) O-320 Illustrated Parts Manual

TROUBLESHOOTING PROBLEMS:

(1) An engine's RPM drops right off when the Mixture Control is pulled to Idle Cutoff. This would indicate what and what is the recommended solution(s)?
(2) Black smoke is coming out of the exhaust pipe. This would indicate what and what is the recommended solution(s)?
(3) Engine will start when the Primer is used but immediately stops when the Primer use is discontinued. This would indicate what and what is the recommended solution(s)?
(4) The engine starts but dies or will not idle. This would indicate what and what is the recommended solution(s)
(5) The engine runs roughly or will not accelerate properly. This would indicate what and what is the recommended solution(s)?
(6) When the Mixture Control is placed in the Idle Cutoff position, the engine does not quit but continues to barely run. This would indicate what and what is the recommended solution(s)?

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Item 22. **Repair engine fuel metering system components.** (Level 2)
Item 23. **Inspect, check, service, troubleshoot, and repair reciprocating** and turbine **engine fuel metering systems.** (Level 3)

Project 4A & 4B

Purpose: To acquaint the student with the inspection, checking, servicing, troubleshooting, and repair of a typical Fuel Injection System.

References:

(1) 14 CFR, Federal Aviation Regulations for Aviation Maintenance Technicians (Current Edition), Aviation Maintenance Technician Handbook – Powerplant, Volume 1 (FAA-H-8083-32) Chapter 2
(2) Cessna 402C Maintenance and Parts Manuals
(3) AeroTrain AE-30-520 Operations Manual
(4) Continental T S I O -520 Engine Service Manual
(5) AeroTrain Continental Fuel Injection CBT

Equipment and Tools Needed:

(1) Cessna 402C
(2) AeroTrain AE-30-520 Training Aid
(3) AMT Roll-Around Toolbox
(4) Computer workstation with internet access
(5) Fuel Pressure Test Gauge and Hose

Supplies and Materials Needed:

(1) None

Procedure:

Complete the following procedures on the assigned project 4A or 4B

(1) On pages 2 – 4, on the Continental Fuel Injection System pictures, identify and label all parts indicated by an arrow and label the items.
(2) Inspect the assigned engine's fuel injection system and list all discrepancies found.
(3) Install the Test Gauge and Test Hose as per the Cessna 402C Maintenance Manual.
(4) Perform the Section 73-20-00 Adjustment/Test procedures and record all pertinent parameters noted.
(5) Remove the Test equipment and perform the Fuel Line Purge procedure as per the Maintenance Manual.
(6) Secure the aircraft.
(7) Complete appropriate maintenance record entries.

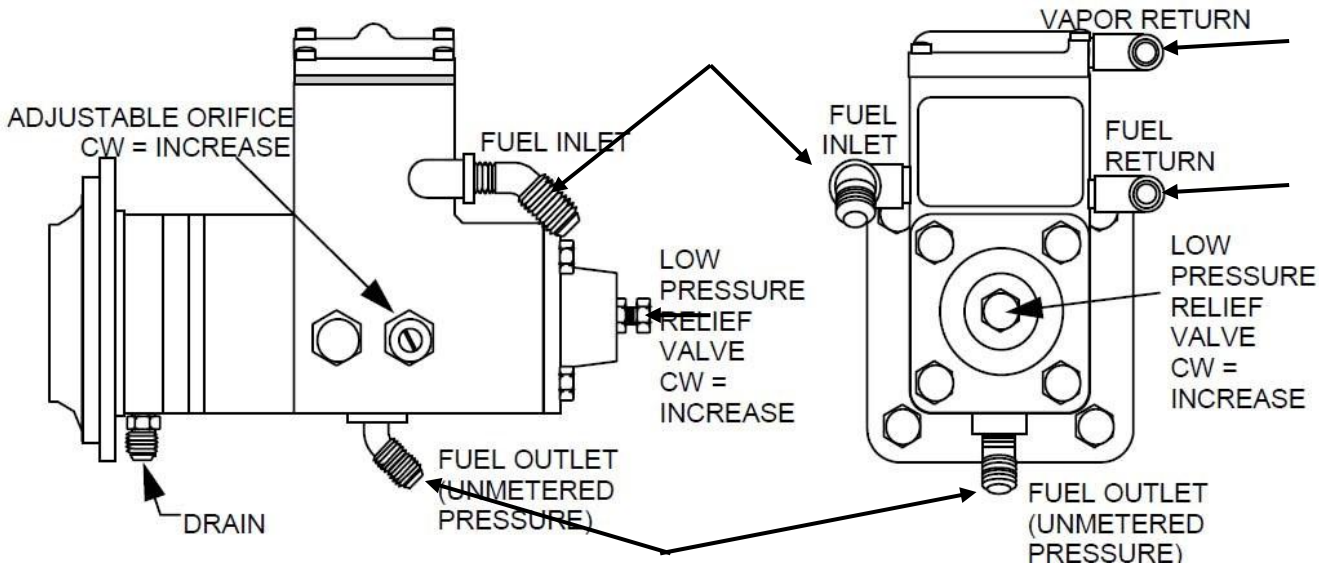
Project 4A Item 22. **Repair engine fuel metering system components.** (Level 2) and Item 23. **Inspect, check, service, troubleshoot, and repair reciprocating** and turbine **engine fuel metering systems.** (Level 3)

(1) 14 CFR, Federal Aviation Regulations for Aviation Maintenance Technicians (Current Edition), Aviation Maintenance Technician Handbook – Powerplant, Volume 1 (FAA-H-8083-32) Chapter 2
(2) Cessna 402C
a. NOTE: only use one engine
(3) Cessna 402C Service Manual and Parts Manual
(4) Continental T S I O -520 Engine Service Manual

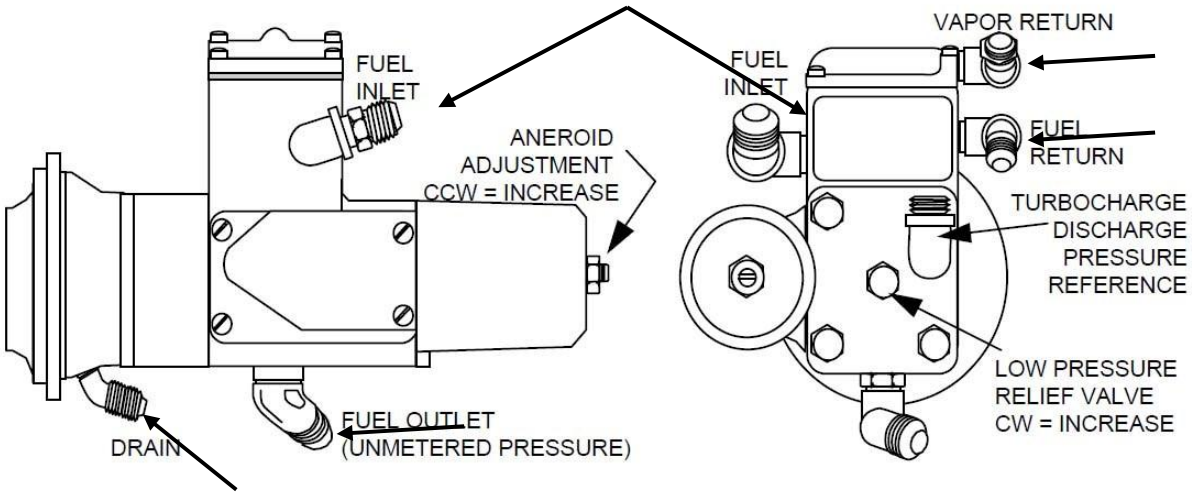
Project 4B Item 22. **Repair engine fuel metering system components.** (Level 2) and Item 23.

Inspect, check, service, troubleshoot, and repair reciprocating and turbine **engine fuel metering systems.** (Level 3)

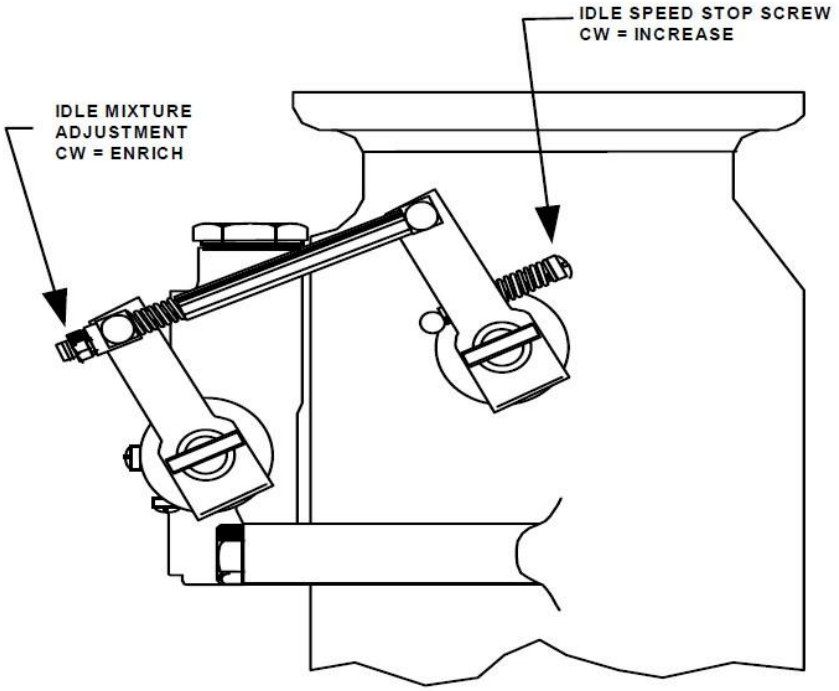
(1) 14 CFR, Federal Aviation Regulations for Aviation Maintenance Technicians (Current Edition), Aviation Maintenance Technician Handbook – Powerplant, Volume 1 (FAA-H-8083-32) Chapter 2 & Volume 2 Chapters 6 & 10
(2) T S I O -520 Test Stand (AeroTrain AE-30-520 Training Aid)
(3) AeroTrain AE-30-520 Operations Manual
(4) Continental T S I O -520 Engine Service Manual

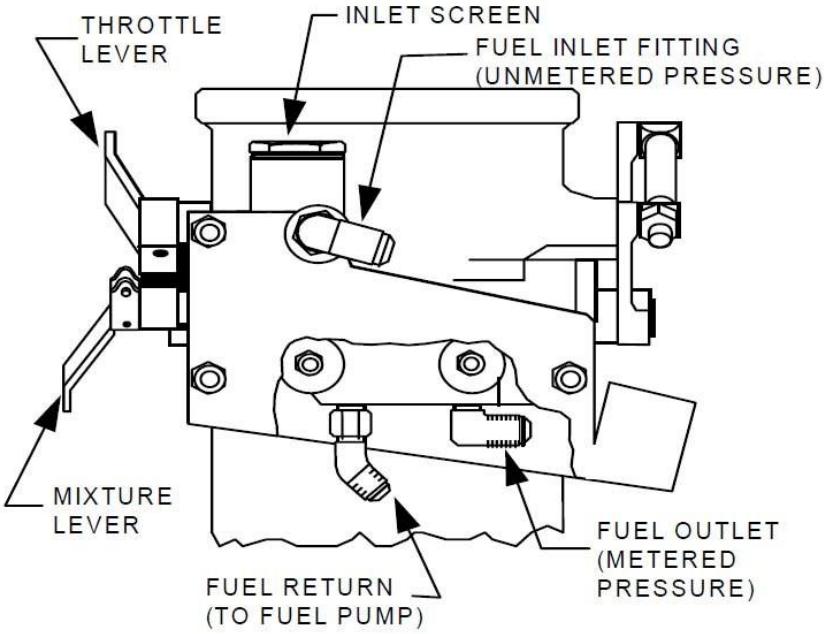


Item A (2 views): bank _____

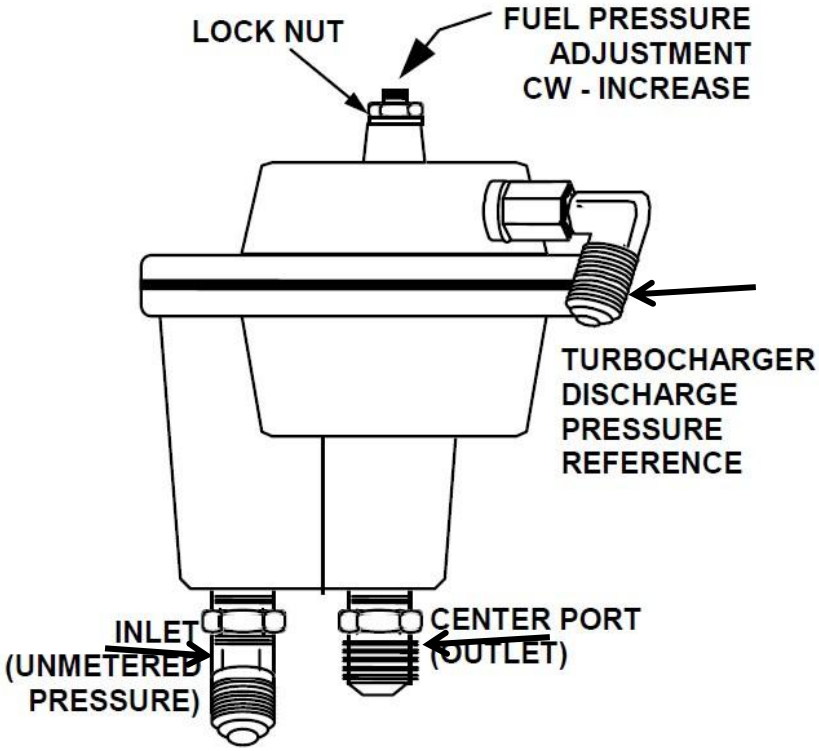


Item B (2 views): blank_____





Item C (2 views): blank _____ (NOTE: Except GTSIOs)


LOCK NUT
FUEL PRESSURE
ADJUSTMENT
CW - INCREASE
TURBOCHARGER
DISCHARGE
PRESSURE
REFERENCE
INLET
(UNMETERED
PRESSURE)
CENTER PORT
(OUTLET)

Item D: blank _____

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Item 22. **Repair engine fuel metering system components.** (Level 2)
Item 23. Inspect, check, service, **troubleshoot, and repair reciprocating** and turbine **engine fuel metering systems.** (Level 3)

Project 5

Purpose: To acquaint the student with the troubleshooting of typical Fuel Injection Systems.

References:

(1) 14 CFR, Federal Aviation Regulations for Aviation Maintenance Technicians (Current Edition), Aviation Maintenance Technician Handbook – Powerplant, Volume 1 (FAA-H-8083-32) Chapter 2
(2) Cessna 402C Maintenance and Parts Manuals
(3) AeroTrain AS-42 Continental Fuel Injection Trainer Operation and Training Manual
(4) AeroTrain Continental Fuel Injection CBT
(5) http://precisionairmotive.com

Equipment and Tools Needed:

(1) AeroTrain AS-42 Continental Fuel Injection Trainer
(2) AMT Roll-Around Toolbox
(3) Computer workstation with internet access
(4) Multimeter

Supplies and Materials Needed:

(1) None

Procedure:

Complete the following procedures on the assigned project 5

(1) Below and on the following page answer the Troubleshooting questions using information from the Cessna 402C Maintenance Manual and from the Bendix RSA information available online at www.precisionairmotive.com/rsasupport.htm.
(2) Operate the AeroTrain AS-42 Trainer and troubleshoot the Instructor-induced problem.
(3) Discuss with the Instructor how you determined what the problem is and how to repair it.

CONTINENTAL FUEL INJECTION:

(1) Engine fails to start. This would indicate what and what is the recommended solution(s)?
(2) Engine starts but dies or will not idle. This would indicate what and what is the recommended solution(s)?
(3) Engine runs roughly, will not accelerate properly, or lacks power. This would indicate what and what is the recommended solution(s)?
(4) Poor Idle Cutoff. This would indicate what and what is the recommended solution(s)?

RSA FUEL INJECTION SYSTEMS:

(1) High Fuel Flow indicated and rough running engine. This would indicate what and what is the recommended solution(s)?

---

(2) Poor Idle Cutoff. This would indicate what and what is the recommended solution(s)?

(3) Rough Idle. This would indicate what and what is the recommended solution(s)?

(4) Hard Starting. This would indicate what and what is the recommended solution(s)?

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Part 147, Appendix D, Part 2, Subject F – Fuel Metering Systems

Item 22. **Repair engine fuel metering system components.** (Level 2)
Item 23. **Inspect, check, service,** troubleshoot, **and repair** reciprocating and **turbine engine fuel metering systems.** (Level 3)

Project 6A & 6B

Purpose: To acquaint the student with the inspection, checking, servicing, and repair of a typical Turbine Engine Fuel Metering System.

References:

(1) 14 CFR, Federal Aviation Regulations for Aviation Maintenance Technicians (Current Edition), Aviation Maintenance Technician Handbook – Powerplant, Volume 1 (FAA-H-8083-32) Chapter 2
(2) PT6 Maintenance and Parts Manuals
(3) International Aero Engines V-2500 Installation and Operations Manual

Equipment and Tools Needed:

(1) Pratt & Whitney PT6A-20 or 34 (as assigned)
(2) International Aero Engines V-2500-A1
(3) AMT Roll-Around Toolbox
(4) Computer workstation with internet access

Supplies and Materials Needed:

1) None

Procedure:

Complete the following procedures on the assigned project 6A or 6B

(1) Prepare a 100-Hour Inspection checklist for the Fuel Metering System on your engine, to include (but not limited to) checking and adjusting ("trimming") the assigned engine. Indicate what parameter is used as a measurement and how to properly adjust it if incorrect.
(2) Remove, inspect and reinstall the assigned Fuel Nozzle(s) from the engine as per the manufacturer's information.
(3) Write a description of the operation of the assigned nozzle(s) and how you would clean and check the proper operation of it/them.

Project 6A Item 22. **Repair engine fuel metering system components.** (Level 2) and Item 23. **Inspect, check, service,** troubleshoot, **and repair** reciprocating and **turbine engine fuel metering systems.** (Level 3)

(1) 14 CFR, Federal Aviation Regulations for Aviation Maintenance Technicians (Current Edition), Aviation Maintenance Technician Handbook – Powerplant, Volume 1 (FAA-H-8083-32) Chapter 2
(2) Pratt & Whitney PT6A-__ (assigned model)
(3) PT6 Maintenance and Parts Manuals

Project 6B Item 22. **Repair engine fuel metering system components.** (Level 2) and Item 23. **Inspect, check, service,** troubleshoot, **and repair** reciprocating and **turbine engine fuel metering systems.** (Level 3)

(1) 14 CFR, Federal Aviation Regulations for Aviation Maintenance Technicians (Current Edition), Aviation Maintenance Technician Handbook – Powerplant, Volume 1 (FAA-H-8083-32) Chapter 2
(2) International Aero Engines V-2500-A1
(3) International Aero Engines V-2500 Installation and Operations Manual

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Item 23. Inspect, check, service, **troubleshoot,** and repair reciprocating and **turbine engine fuel metering systems.** (Level 3)

Project 7

Purpose: To acquaint the student with the troubleshooting of typical Turbine Engine Fuel Metering System.

References:

(1) 14 CFR, Federal Aviation Regulations for Aviation Maintenance Technicians (Current Edition), Aviation Maintenance Technician Handbook – Powerplant, Volume 1 (FAA-H-8083-32) Chapter 2
(2) PT6A Maintenance Manual

Equipment and Tools Needed:

(1) Pratt & Whitney PT6A-20
(2) Computer workstation with internet access

Supplies and Materials Needed:

(1) None

Procedure:

Complete the following procedures on the assigned project 7

1. Fill in the following Troubleshooting Chart as per the PT6 Maintenance Manual. Only indicate Causes and Remedies as they apply to the Fuel Metering System.

TROUBLE	PROBABLE CAUSE(S)	REMEDY
Delayed Start		

TROUBLE	PROBABLE CAUSE(S)	REMEDY
Fluctuating Idle RPM		
Engine fails to Light Off when Power Lever is advanced to the Ground Idle position		
Engine Lights Off but fails to accelerate to Idle RPM or excessive Start-to-Idle time		
Hot Start		
Delayed Hot Start and Torching		
Fluctuating RPM and Inter-Turbine Temperature		

TROUBLE	PROBABLE CAUSE(S)	REMEDY
Ground Idle speed incorrect		
Engine surges during acceleration or fails to accelerate properly		
Uncontrolled acceleration up to maximum RPM		
Improper fuel flow at altitude		
Engine fails to decelerate		

TROUBLE	PROBABLE CAUSE(S)	REMEDY
Maximum available power at take-off abnormally low		
Engine flame-out during deceleration		
Engine continues to run a short time with Power Lever in cut-off or with fuel cut-off lever Closed		
Engine overtemperature		
Engine overspeed at low ambient temperature		

TROUBLE	PROBABLE CAUSE(S)	REMEDY
Engine flame-out		

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