

Cape Cod Community College AMTS

Practical Project Guide for AMT 255 Powerplant Curriculum, Subject Item 8

Part 147, Appendix D, Part 1 - Subject C – Engine Inspection

Item 8. **Perform powerplant conformity** and air worthiness **inspections.** (Level 3)

Project 1A & 1B & 1C & 1D

Purpose: To acquaint the student with the proper procedures to conduct a Conformity Inspection of an installed engine.

References:

1. 14 CFR, Federal Aviation Regulations for Aviation Maintenance Technicians (Current Edition), Aviation Maintenance Technician Handbook – Powerplant, Volume 2 (FAA-H-8083-32) Chapter 10 & Aviation Maintenance Technician Handbook – General, (FAA-H-8083-30) Chapter 12
2. Piper Comanche 250 (PA-24) Service Manual and Parts Catalog
3. Cessna 402C Service Manual and Parts Manuals
4. Piper Colt PA 22-108 Flight Manual and Parts Catalog
5. Lycoming O-235 and O-540 Engine Service Manuals
6. Continental T S I O-520 Engine Service Manual
7. faa.gov

Equipment and Tools Needed:

- (1) Piper Comanche 250 (PA 24)
- (2) Cessna 402C
- (3) Piper Colt (PA 22-108)
- (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 or 1D

- (1) Remove engine cowling as necessary to gain access to the engine and accessories.
- (2) Inspect the engine for Conformity with the appropriate Type Certificate Data Sheet.
- (3) List any missing required accessories or equipment and list any extra accessories or equipment installed.
- (4) Answer this question: Does this engine (as it is installed) conform to the Type Certificate Data Sheet requirements? blank _____(yes or no)

- (5) Reinstall any cowling removed in step 1 in accordance with installation procedures.
- (6) Complete maintenance record entry.

Project 1A Item 8. Perform powerplant conformity and air worthiness inspections.

- 1. 14 CFR, Federal Aviation Regulations for Aviation Maintenance Technicians (Current Edition), Aviation Maintenance Technician Handbook – Powerplant, Volume 2 (FAA-H-8083-32) Chapter 7
- 2. Piper Comanche 250 (PA-24) Service Manual and Parts Catalog
- 3. Lycoming O-540 Engine Service Manual
- 4. faa.gov

Project 1B Item 8. Perform powerplant conformity and air worthiness inspections.

- 1. 14 CFR, Federal Aviation Regulations for Aviation Maintenance Technicians (Current Edition), Aviation Maintenance Technician Handbook – Powerplant, Volume 2 (FAA-H-8083-32) Chapter 7
- 2. Cessna 402C Service Manual and Parts Manual
 - a. NOTE: Left engine only
- 3. Continental T S I O-520 Engine Service Manual
- 4. faa.gov

Project 1C Item 8. Perform powerplant conformity and air worthiness inspections.

- 1. 14 CFR, Federal Aviation Regulations for Aviation Maintenance Technicians (Current Edition), Aviation Maintenance Technician Handbook – Powerplant, Volume 2 (FAA-H-8083-32) Chapter 7
- 2. Cessna 402C Service Manual and Parts Manual
 - a. NOTE: Right engine only
- 3. Continental T S I O-520 Engine Service Manual
- 4. faa.gov

Project 1D Item 8. Perform powerplant conformity and air worthiness inspections.

- 1. 14 CFR, Federal Aviation Regulations for Aviation Maintenance Technicians (Current Edition), Aviation Maintenance Technician Handbook – Powerplant, Volume 2 (FAA-H-8083-32) Chapter 7
- 2. Piper Colt PA 22-108 Flight Manual and Parts Catalog
- 3. Lycoming O-235 Engine Service Manuals
- 4. faa.gov

Cape Cod Community College AMTS

Practical Project Guide for AMT 255 Powerplant Curriculum, Subject Item 8

Part 147, Appendix D, Part 1 - Subject C – Engine Inspection

Item 8. **Perform powerplant** conformity and **air worthiness inspections.** (Level 3)

Project 2A & 2B & 2C & 2D

Purpose: To acquaint the student with the proper procedures to conduct a 100-Hour Inspection of an installed engine.

References:

1. 14 CFR, Federal Aviation Regulations for Aviation Maintenance Technicians (Current Edition), Aviation Maintenance Technician Handbook – Powerplant, Volume 2 (FAA-H-8083-32) Chapter 10 &
2. Aviation Maintenance Technician Handbook – General, (FAA-H-8083-30) Chapter 12
3. Piper Comanche 250 (PA-24) Service Manual and Parts Catalog
4. Cessna 402C Service Manual and Parts Manuals
5. Piper Colt PA 22-108 Flight Manual and Parts Catalog
6. Lycoming O-235 and O-540 Engine Service Manuals
7. Continental T S I O-520 Engine Service Manual
8. faa.gov

Equipment and Tools Needed:

- (1) Piper Comanche 250 (PA 24)
- (2) Cessna 402C
- (3) Piper Colt (PA 22-108)
- (4) AMT Roll-Around Toolbox
- (5) Differential Compression Tester
- (6) Magneto Timing Box
- (7) High Tension Ignition Lead Tester
- (8) Spark Plug Cleaner/Tester
- (9) Parts Cleaner
- (10) Computer workstation with internet access.

Supplies and Materials Needed:

- (1) Engine cleaning materials
- (2) engine oil
- (3) oil drain bucket & hose

Procedure:

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

1. Remove engine cowling as necessary to gain access to the engine and accessories.
2. Inspect the system as per the manufacturer's Checklist.
3. List any discrepancies noted and show them to the Instructor.
4. Perform an engine Operational Check (Run-up) as per the manufacturer's Checklist.
5. Reinstall any cowling removed in step 1 in accordance with installation procedures.
6. Answer this question: Based on this inspection, is this engine Airworthy? blank _____(yes or no)
7. Complete the appropriate maintenance record entry.

Project 2A Item 8. Perform powerplant conformity and air worthiness inspections.

1. 14 CFR, Federal Aviation Regulations for Aviation Maintenance Technicians (Current Edition), Aviation Maintenance Technician Handbook – Powerplant, Volume 2 (FAA-H-8083-32) Chapter 7
2. Piper Comanche 250 (PA-24) Service Manual and Parts Catalog
3. Lycoming O-540 Engine Service Manual
4. faa.gov

Project 2B Item 8. Perform powerplant conformity and air worthiness inspections.

1. 14 CFR, Federal Aviation Regulations for Aviation Maintenance Technicians (Current Edition), Aviation Maintenance Technician Handbook – Powerplant, Volume 2 (FAA-H-8083-32) Chapter 7
2. Cessna 402C Service Manual and Parts Manual
 - a. NOTE: Left engine only
3. Continental T S I O-520 Engine Service Manual
4. faa.gov

Project 2C Item 8. Perform powerplant conformity and air worthiness inspections.

1. 14 CFR, Federal Aviation Regulations for Aviation Maintenance Technicians (Current Edition), Aviation Maintenance Technician Handbook – Powerplant, Volume 2 (FAA-H-8083-32) Chapter 7
2. Cessna 402C Service Manual and Parts Manual
 - a. NOTE: Right engine only
3. Continental T S I O-520 Engine Service Manual
4. faa.gov

Project 2D Item 8. Perform powerplant conformity and air worthiness inspections.

1. 14 CFR, Federal Aviation Regulations for Aviation Maintenance Technicians (Current Edition), Aviation Maintenance Technician Handbook – Powerplant, Volume 2 (FAA-H-8083-32) Chapter 7
2. Piper Colt PA 22-108 Flight Manual and Parts Catalog
3. Lycoming O-235 Engine Service Manuals
4. faa.gov

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.

