TURBINE ENGINE INSPECTION / TROUBLESHOOTING
Course Syllabus

Course Number: TRPPM-3104  OHLAP Credit: No
OCAS Code: None
Course Length: 63 Hours
Career Cluster: Transportation, Distribution & Logistics
Career Pathway: Aviation Maintenance Technology
Career Major(s): Powerplant Mechanic

Pre-requisite(s):

Course Description: Purpose and types of turbine engine inspections will be discussed. Hands-on practice in inspecting and performing preventative maintenance will be accomplished with emphasis on manufacturer requirements.

Textbooks:
Dale Crane, Dictionary of Aviation Terms, Aviation Supplies and Academics, 1997
FAA, FAR Handbook for Aviation Maintenance Technicians, Jeppesen, Sanders, Inc.. 2001
FAA, Standards for Aviation Maintenance Handbook, Jeppesen, Sanders, Inc.. 1985
DOT, Aircraft Inspection and Repair, Jeppesen, Sanders, Inc., 1998

Course Objectives:

A. Lesson: INTRODUCTION TO TURBINE ENGINE INSPECTION
1. Discuss terms and definitions related to turbine engine inspection.
2. Discuss engine conformity and Airworthiness Directive compliance inspections.
4. Write log book entry to indicate A.D. compliance, if applicable. (Level 3) (App. D,I,B,6; D,I,C,8) (PP-C8)
5. Discuss inspection and troubleshooting unducted fan systems and components. (Level 1) (App. D,II,L,40)

B. Lesson: INTRODUCTION TO TURBINE ENGINE MAINTENANCE
1. Discuss terms and practices related to turbine engine maintenance.
2. Describe terms, methods, practices and types of maintenance programs.
3. Adjust output pressure of oil relief valve. (Level 3) (App. D,I,B,6)
4. Discuss inspection, checks, servicing, and troubleshooting turbine driven auxiliary power units. (Level 1) (App. D,II,M,41) (PP-B17)
5. Adjust oil pressure. (Level 3) (App. D,II,D,15,16) (PP- K2,K8,K9)

C. Lesson: TERMS AND PROCEDURES USED IN TROUBLESHOOTING
1. Troubleshoot turbine engine system malfunctions. (Level 3) (App. D,I,B,7; D,II,F,23) (PP- B18,H17,H19,K17,K18,L17,L18,L20)
2. Check for electrical malfunctions using a multimeter
3. List possible source or cause of metallic particles in the lubricating oil.
4. Discuss causes of fuel pressure fluctuation.
5. Describe sources of fuel system contamination.

D. Lesson: OKLAHOMA DEPARTMENT OF CAREER AND TECHNOLOGY EDUCATION PROGRAM COMPETENCY REQUIREMENTS.

Teaching Methods: The class will primarily be taught by the lecture and demonstration method and supported by various media materials to address various learning styles. There will be question and answer sessions over material covered in lecture and media presentations. Supervised lab time is provided for students to complete required projects.

Grading Procedures:
1. Students are graded on theory and shop practice and performance.
2. Each course must be passed with seventy (70%) percent or better.
3. Grading scale: A=90-100%, B=80-89%, C=70-79%, F=0-69%.

Description of Classroom, Laboratories, and Equipment: Tulsa Technology Center campuses are owned and operated by Tulsa Technology Center School District No. 18. All programs provide students the opportunity to work with professionally certified instructors in modern, well-equipped facilities.

Available Certifications/College Credit: The student may be eligible to take state, national or industry exam after completion of the program. College credit may be issued from Oklahoma State University-Okmulgee or Tulsa Community College. See program counselor for additional information.

College Credit Eligibility: The student must maintain a grade point average of 2.0 or better.