Alexandria Technical and Community College

DIES 1640: Diesel Engine I

A. COURSE DESCRIPTION

   Credits: 6  
   Lecture Hours/Week: 3  
   Lab Hours/Week: 6  
   OJT Hours/Week: *.*  

   Prerequisites:  
   DIES 1633 - Diesel Electronic Systems (Number of Years Valid: 5) AND DIES 1641 - Diesel Fuel Systems (Number of Years Valid: 5)  

   Corequisites: None  

   MnTC Goals: None  

   This course is an introduction to the theory, operation, and repair procedures of a diesel engine. The student studies entry level technician requirements to safely disassemble, measure, rebuild, reassemble, and troubleshoot a diesel engine.

B. COURSE EFFECTIVE DATES: 05/19/2014 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

   1. Demonstrate proper shop and personal safety practices.  
   2. Outline service information repair access.  
   3. Demonstrate industry engine measuring practices.  
   4. Identify industry fasteners and applications.  
   5. Demonstrate lifting and hoisting practices.  
   6. Demonstrate proper engine disassembly procedures.  
   7. Identify major engine components.  
   8. Demonstrate major engine repair practices.  
  10. Identify major engine subcomponent systems.

D. LEARNING OUTCOMES (General)

   1. The learner will understand the role of a diesel technician.  
   2. The learner will demonstrate an understanding of OSHA and MSDS safety guidelines.  
   3. The learner will demonstrate competence in usage of precision measuring devices.  
   4. The learner will demonstrate an understanding of the operational theory of a diesel engine.  
   5. The learner will demonstrate diesel engine disassembly practices.  
   6. The learner will demonstrate reuse/rebuilt/replacement practices on key diesel engine components.  
   7. The learner will reassemble a diesel engine to industry standards.  
   8. The learner will demonstrate knowledge of major engine subcomponents.  
   9. The learner will demonstrate knowledge of diesel engine troubleshooting practices.  
  10. The learner will demonstrate the proper and safe use of hand tools.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

   None
F. LEARNER OUTCOMES ASSESSMENT
   As noted on course syllabus

G. SPECIAL INFORMATION
   None noted