

# Dakota County Technical College

## HCEM 1256: Diesel Engine Tune-up

### A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 1

Lab Hours/Week: 2

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: None

This course includes component identification, testing procedures, problem analysis, valve and injection adjustment, pump replacement, and engine tune-up. Troubleshooting is stressed. Prerequisites: None.

**B. COURSE EFFECTIVE DATES:** 08/21/2003 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

### D. LEARNING OUTCOMES (General)

1. demonstrate shop safety practices
2. explain diesel fuel systems
3. demonstrate use of specialized tooling and equipment
4. demonstrate use of hand tools
5. exhibit professionalism
6. perform diesel engine tune-up
7. demonstrate engine timing techniques
8. explain diesel fuel pump operation
9. perform cooling system tests
10. explain cooling system tests
11. determine compression loss sources
12. perform cylinder leakage test

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

None

### F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

### G. SPECIAL INFORMATION

None noted