



DIESEL ENGINE TUNE-UP — HCEM 1256

A. Course Description

- **Credits:** 3.00
- **Lecture Hours/Week:** 1.00
- **Lab Hours/Week:** 2.00
- **OJT Hours/Week:** 0
- **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: 8/21/03 – Present

C. Outline of Major Content Areas

As noted on course syllabus

D. Learning Outcomes

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

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

F. Learner Outcomes Assessment

As noted on course syllabus

G. Special Information

None noted