



TRUCK A/C — HDTT 1223

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

The student will gain an understanding of the Caterpillar electrical systems, Caterpillar ET, Caterpillar Fuel systems, Caterpillar Tier 3 engines, and basic hydraulic fundamentals.

B. Course Effective Dates: 12/8/10 – Present

C. Outline of Major Content Areas

As noted on course syllabus

D. Learning Outcomes

1. charge A/C systems
2. check A/C unit compressor oil
3. check A/C unit system operation
4. define A/C/, refrigeration terms
5. describe A/C basic operation
6. describe A/C component operation
7. describe A/C controls operation
8. describe A/C unit preventive maintenance
9. describe A/C unit troubleshooting
10. describe cab A/C operation
11. describe cab A/C pre-start inspection
12. describe cab A/C unit operation
13. describe high/low side systems
14. describe refrigerant recovery methods
15. describe refrigerant recovery system
16. describe test gauges and equipment operation

17. describe theory of heat
18. disassemble A/C unit components
19. disassemble A/C unit compressors
20. identify A/C refrigeration components
21. identify A/C unit elec. components
22. identify laws pertaining to refrigerant use
23. identify safety procedures
24. identify test gauges and equipment
25. prepare for A.S.E. certification test
26. reassemble A/C compressors + components
27. test A/C unit elec. systems
28. test O.E.M. cab A/C systems
29. test after market add-on-cab A/C system
30. use service/maintenance manuals

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

F. Learner Outcomes Assessment

As noted on course syllabus

G. Special Information

None noted