HIBBING COMMUNITY COLLEGE
COURSE OUTLINE

COURSE TITLE & NUMBER: DSL 1560: Heavy Equipment Air Conditioning
CREDITS: 3 (Lec 2 / Lab 1)
PREREQUISITES: None

CATALOG DESCRIPTION:
Heavy Equipment Air Conditioning will cover fundamentals of air conditioning and their application to heavy-duty equipment such as semi-tractors, delivery trucks, and off-road equipment. Students learn the operating principles and apply them in troubleshooting and servicing on actual equipment.

OUTLINE OF MAJOR CONTENT AREAS:
1. Air conditioning principles
2. Major components and their functions
3. Use of reclaiming equipment
   A. Operate recycle and recharging equipment
   B. Operate gas leak detector
4. Troubleshoot air conditioning (A/C) system
5. Electrical circuits
   A. Read diagrams
   B. Electrical switches and their functions
6. Inspect, test, and service live equipment: Peterbuilt
7. M.A.C.S. certification for refrigerant handling required

COURSE GOALS/OBJECTIVES/OUTCOMES:
1. The student will evacuate and charge A/C system.
2. The student will diagnose A/C electrical controls and operation.
3. The student will diagnose A/C system operation.
4. The student will explain and identify A/C and air flow.
5. The student will explain A/C principles.
6. The student will explain and test orifice tube operation.
7. The student will identify mechanical components.
8. The student will inspect and service A/C system.

HCC COMPETENCIES MET:
Working Productively & Cooperatively
Communicating Clearly & Effectively
Thinking Creatively & Critically
Social Responsibility

STUDENT CONTRIBUTIONS:

DSL1560
KD:2/18
The student is expected to
1. attend all lectures and working sessions.
2. participate in class activities.
3. participate in class discussions.
4. hand in outside assignments when due.
5. ask questions if he/she does not understand any part of the instructions or procedures.

METHODS FOR EVALUATING STUDENT LEARNING:
Student learning is evaluated through exams, lab work, assignments, class participation, projects, lab reports and logs.

ADDITIONAL INFORMATION:
Training materials:
Caterpillar slides, videos, service manuals, and handouts.
ASE Guide and Test for Handling Refrigerants.
CDX Heavy duty text.

Curriculum Committee Approval Date: March 13, 2018

AASC APPROVAL DATE: March 20, 2019
REVIEW DATE: March 2024