

**Cambrian College**  
**School of Technology, Skills and Research**  
**Course Outline**

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**Course Name:** Diesel Engine Emissions

**Course No:** Technician Updating

**Credit Value:**

**Duration:** 16 Hrs

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**Program Name:** Heavy Duty Equipment Technician Emission Technology Updating

**Course Description:**

This training module has been developed to deliver the diesel emissions testing and diagnostic procedures using the ECOM gas analyzer and the DEEMS6 software. The students will take the concepts and best practices learned in this module and apply it to diagnosing of diesel engine systems.



**Date:** January 2005

**Prepared by:** Bob Huzij

**Approved by:** \_\_\_\_\_

## **PREREQUISITES:**

Heavy Duty Equipment Technician status

## **EQUIVALENCIES:**

N/A

## **RESOURCES REQUIRED:**

ECOM Emissions analyzer, equipment simulators and engine diagnostic test equipment supplied by Cambrian College.

## **COURSE OBJECTIVES/LEARNING OUTCOMES:**

Upon successful completion of this module the student will be able to:

- Identify the exhaust gas testing procedures used on diesel engines.**
- Identify the components that make up diesel exhaust gas.**
- Identify the different diesel exhaust gas colors and what causes them.**
- Identify how operating conditions that affect emissions.(ambient air temp,)**
- Identify the pre-test conditions for diesel emission testing.**
- Identify the testing protocol used to test diesel emissions.**
- Identify the layout and design of intake on engines.**
- Identify the testing procedure for pressure testing, and repair the intake system.**
- Perform an intake restriction and leakage test.**
- Identify the causes for poor turbo boost performance.**
- Perform a turbo boost pressure test and evaluate the results.**
- Identify the causes of high exhaust backpressure on diesel engines.**

