



Western Technical College

## 32412403 Diesel Online Service Utilization

### Course Outcome Summary

#### Course Information

<b>Description</b>	This course will introduce the student to the online service information utilized by the diesel and heavy equipment industry. Students will develop the skills to search and navigate the various websites for operating instructions, measurements, specifications, system tests, repair procedures and troubleshooting procedures.
<b>Career Cluster</b>	Transportation, Distribution and Logistics
<b>Instructional Level</b>	Technical Diploma Courses
<b>Total Credits</b>	2
<b>Total Hours</b>	72

#### Textbooks

No textbook required.

#### Learner Supplies

Uniform: Four black/grey shirts with embroidered name. **Vendor:** Campus Shop. Required.

#### Program Outcomes

1. Diagnose, repair and service brake systems
2. Diagnose, repair and service steering & suspension systems
3. Diagnose, repair and service electrical/electronic systems
4. Diagnose, repair and service drive train systems
5. Diagnose, repair and service hydraulic systems

6. Diagnose, repair and service diesel engines

## Course Competencies

### 1. Explore Caterpillar Service Information Systems (SIS).

#### Assessment Strategies

- 1.1. online quiz
- 1.2. written objective test
- 1.3. skill demonstration

#### Criteria

*You will know you are successful when:*

- 1.1. Using Caterpillar SIS learner locates operating instructions for an engine.
- 1.2. Using Caterpillar SIS learner locates operating instructions for a piece of equipment.
- 1.3. Using Caterpillar SIS learner locates manufacturer's specifications for an engine.
- 1.4. Using Caterpillar SIS learner locates manufacturer's specifications for a piece of equipment.
- 1.5. Using Caterpillar SIS learner locates manufacturer's system tests for an engine or piece of equipment.
- 1.6. Using Caterpillar SIS learner locates manufacturer's repair procedure for an engine or piece of equipment.
- 1.7. Using Caterpillar SIS learner locates manufacturer's troubleshooting procedures for an engine or piece of equipment.

#### Learning Objectives

- 1.a. Identify how to check engine oil level on a specific engine.
- 1.b. Identify how to check hydraulic oil on a piece of equipment.
- 1.c. Identify crankcase oil capacity for a specific engine.
- 1.d. Identify coolant capacity for a specific engine.
- 1.e. Identify fuel transfer pump pressure for a specific engine.
- 1.f. Identify hydraulic pump output for a specific piece of equipment.
- 1.g. Identify how to test fuel transfer pump pressure on a specific engine.
- 1.h. Identify various engine fastener torque specifications for various components on a specific engine.
- 1.i. Identify engine wiring diagrams for a specific engine.
- 1.j. Identify troubleshooting steps for a specific engine fault code.

### 2. Explore Cummins Quickserve Online (QSOL).

#### Assessment Strategies

- 2.1. online quiz
- 2.2. written objective test
- 2.3. skill demonstration

#### Criteria

*You will know you are successful when:*

- 2.1. Using Cummins QSOL learner locates manufacturer's specifications for an engine.
- 2.2. Using Cummins QSOL learner locates manufacturer's troubleshooting procedures for an engine.
- 2.3. Using Cummins QSOL learner locates manufacturer's operating instructions for an engine.
- 2.4. Using Cummins QSOL learner locates manufacturer's repair procedures for an engine.
- 2.5. Using Cummins QSOL learner locates manufacturer's system tests for an engine.

#### Learning Objectives

- 2.a. Identify how to check engine oil level on a specific engine.
- 2.b. Identify the crankcase oil capacity for a specific engine.
- 2.c. Identify coolant capacity for a specific engine.
- 2.d. Identify fuel transfer pump pressure for a specific engine.
- 2.e. Identify various engine fastener torque specifications for various components on a specific engine.
- 2.f. Identify engine wiring diagrams for a specific engine.
- 2.g. Identify troubleshooting steps for a specific engine fault code.

### 3. Explore Detroit Diesel Customer Service Network (DDCSN).

### **Assessment Strategies**

- 3.1. online quiz
- 3.2. written objective test
- 3.3. skill demonstration

### **Criteria**

*You will know you are successful when:*

- 3.1. Using DDCSN learner locates manufacturer's specifications for an engine.
- 3.2. Using DDCSN learner locates manufacturer's troubleshooting procedures for an engine.
- 3.3. Using DDCSN learner locates manufacturer's operating instructions for an engine.
- 3.4. Using DDCSN learner locates manufacturer's repair procedures for an engine.
- 3.5. Using DDCSN learner locates manufacturer's system tests for an engine.

### **Learning Objectives**

- 3.a. Identify how to check engine oil level on a specific engine.
- 3.b. Identify crankcase oil capacity for a specific engine.
- 3.c. Identify coolant capacity for a specific engine.
- 3.d. Identify fuel transfer pump pressure for a specific engine.
- 3.e. Identify engine fastener torque specifications for various components on a specific engine.
- 3.f. Identify engine wiring diagrams for a specific engine.
- 3.g. Identify troubleshooting steps for a specific engine fault code.

## **4. Explore Navistar OnCommand.**

### **Assessment Strategies**

- 4.1. online quiz
- 4.2. written objective test
- 4.3. skill demonstration

### **Criteria**

*You will know you are successful when:*

- 4.1. Using Navistar OnCommand learner locates manufacturer's specifications for a Navistar truck/tractor.
- 4.2. Using Navistar OnCommand learner locates manufacturer's system troubleshooting procedures for a Navistar truck/tractor.
- 4.3. Using Navistar OnCommand learner locates manufacturer's repair procedures for a Navistar truck/tractor.
- 4.4. Using Navistar OnCommand learner locates manufacturer's system tests for a Navistar truck/tractor.
- 4.5. Using Navistar OnCommand learner locates manufacturer's specifications for Navistar engine.
- 4.6. Using Navistar OnCommand learner locates manufacturer's system troubleshooting procedures for a Navistar engine.
- 4.7. Using Navistar OnCommand learner locates manufacturer's operating instructions for a Navistar engine.
- 4.8. Using Navistar OnCommand learner locates manufacturer's repair procedures for a Navistar engine.
- 4.9. Using Navistar OnCommand learner locates manufacturer's system tests for a Navistar engine.
- 4.10. Using Navistar OnCommand learner locates manufacturer's wire diagrams for a Navistar truck/tractor.
- 4.11. Using Navistar OnCommand learner locates manufacturer's operating instructions for a Navistar truck/tractor.

### **Learning Objectives**

- 4.a. Identify how to check engine oil level on a specific engine.
- 4.b. Identify crankcase oil capacity for a specific engine.
- 4.c. Identify the coolant capacity for a specific engine.
- 4.d. Identify the fuel transfer pump pressure for a specific engine.
- 4.e. Identify various fastener torque specifications for various components on a specific engine/truck.
- 4.f. Identify wiring diagrams for a specific engine/truck.
- 4.g. Identify troubleshooting steps for a fault code using Navistar OnCommand.

## **5. Explore Access Freightliner.**

### **Assessment Strategies**

- 5.1. online quiz
- 5.2. written objective test

5.3. skill demonstration

**Criteria**

*You will know you are successful when:*

- 5.1. Using Access Freightliner learner locates manufacturer's specifications for a Freightliner truck/tractor.
- 5.2. Using Access Freightliner learner locates manufacturer's system troubleshooting procedures for a Freightliner truck/tractor.
- 5.3. Using Access Freightliner learner locates manufacturer's operating instructions for a Freightliner truck/tractor.
- 5.4. Using Access Freightliner learner locates manufacturer's repair procedures for a Freightliner truck/tractor.
- 5.5. Using Access Freightliner learner locates manufacturer's system tests for a Freightliner truck/tractor.
- 5.6. Using Access Freightliner learner locates manufacturer's wire diagrams for a Freightliner truck/tractor.

**Learning Objectives**

- 5.a. Identify fastener torque specifications for various truck components.
- 5.b. Identify wiring diagrams for truck systems.
- 5.c. Identify various troubleshooting procedures for truck systems.
- 5.d. Identify various truck system capacities.
- 5.e. Identify preventive maintenance schedules for trucks.
- 5.f. Identify wear limits for various truck components.
- 5.g. Identify various adjustment procedures for truck components.