



**Our trainers are Daimler Trucks North America certified on the most up-to-date service and maintenance techniques.**



## Heavy Duty Truck Systems Course Code CVG01

**Overview:** This course shows service technicians how to get the most out of Daimler Trucks North America service publications as well as how to successfully perform some common service tasks. This Heavy Duty Truck course is the basic introduction to the use of the tools and techniques that are needed to diagnose and repair today's modern vehicles. By learning the correct way to approach vehicle maintenance, the student can avoid the pitfalls that can cost the technician and the dealer time and money. This course covers information on air brake systems, including sub-systems and system components. Students learn how the system and components are designed to operate and how to troubleshoot the system. They also learn how to diagnose problems and how to make proper adjustments and repairs. We also introduce the technician to vibration analysis and driveline angles.

### What Will Be Covered

- ♦ Find VINs/SNs
- ♦ Finding service information
- ♦ Suspension height
- ♦ Cab ride height
- ♦ Checking clutch adjustment
- ♦ Inspecting the driveline
- ♦ Testing the batteries
- ♦ Testing the alternator
- ♦ Checking the steering
- ♦ Pre-Delivery Inspection (PDI)
- ♦ Introduction to vibration analysis
- ♦ Wheel ends
- ♦ Air brake fundamentals
- ♦ Air supply system
- ♦ Air delivery system
- ♦ Parking/Emergency system
- ♦ Tractor/Trailer systems
- ♦ ABS fundamentals

**Length of Course** This 5-day course begins at 8:30 am and ends at 4:30 pm each day.

### Prerequisites

Web Based Training (WBT) Courses: [Accessfreightliner.com](http://Accessfreightliner.com) > The Learning Center

- ♦ OVQ04 - Vehicle Identification Numbers (VIN)
- ♦ OVT03 - Issues Affecting Wheel Alignment
- ♦ OVT01 - Pressure Testing the Power Steering System
- ♦ WBTPP-1 - Parts Pro Web-based Training
- ♦ OVQ25 - Service Pro for Service Technicians
- ♦ OVG02 - Replacing the Power Steering Gear Input Shaft Seals
- ♦ OVE23 - Basic Troubleshooting Process
- ♦ OVM08 - Wheel Bearing Adjustment

Self-Paced Training Courses: [Accessfreightliner.com](http://Accessfreightliner.com) > The Learning Center

- ♦ OVQ05-1 - Truck Talk!
- ♦ OVQ17 - Drivetrain Drivelines
- ♦ OVB03 - 'Gimme a Brake' Foundation Parts
- ♦ OVB02 - The Pressure's on: Air Brakes
- ♦ OVB08 - DTNA Secondary Air

**Note:** Technicians who have completed the following ILT combination are automatically grandfathered through and do not have to attend Heavy Duty Truck Systems CVG01. In order to qualify, both ILT courses listed must have a completion date of January 1, 2003 or later.

- ♦ Service & Maintenance CVM01 + Brakes & ABS CVB01

# Electrical Troubleshooting

Course Code CVE12

**Overview:** This electrical troubleshooting course is designed to guide the students through a step-by-step process to learn to analyze an electrical circuit, draw a schematic diagram of the main components, determine the best test points, estimate the values that a working circuit should exhibit at those test points and determine whether the circuit is good up to the test point. By repeating parts of this procedure, any circuit can be correctly diagnosed. Students in this class practice troubleshooting real circuits on a test board, at first using the voltmeter mode of their DMM and then switching to the ohmmeter mode for circuits made up of electrical harnesses. Once they are comfortable with the techniques and rules of diagnostics, they practice using Daimler Trucks North America software to obtain and use schematics and wiring harness drawings. Using the skills they just learned, the students then find the electrical "bugs" that the instructor has installed in the Daimler Trucks North America vehicles at the training center.

## What Will Be Covered

- ♦ Circuit basics
- ♦ Digital multimeter tips
- ♦ Digital multimeter modes
- ♦ Troubleshooting tips
- ♦ Troubleshooting procedures
- ♦ Troubleshooting with a DMM
- ♦ Predicting voltmeter readings by looking at a schematic
- ♦ Using a voltmeter to test a circuit without a relay
- ♦ Relay information
- ♦ Using a voltmeter to test a circuit with a relay
- ♦ Wiring schematic comparison
- ♦ Using the ohmmeter to test resistors and diodes
- ♦ Working with connectors and wire terminals
- ♦ Using an ohmmeter to test a circuit for good connections
- ♦ Troubleshooting using a harness drawing
- ♦ Diagnosing a complex circuit
- ♦ Using an ammeter to test a circuit
- ♦ Using DTNA resources
- ♦ Finding the correct module number for the description
- ♦ Using Parts Pro to find harness drawings and wiring schematics
- ♦ Isolating a circuit using a harness drawing
- ♦ Identifying PDM wire locations

**Length of Course** This 4-day course begins at 8:30 am and ends at 4:30 pm each day.

## Prerequisites

Instructor Led Training (ILT) Courses:

- ♦ Heavy Duty Truck Systems CVG01 (or Service & Maintenance CVM01 + Brakes & ABS CVB01)

Web Based Training (WBT) Courses: [Accessfreightliner.com](http://Accessfreightliner.com) > The Learning Center

- ♦ OVE22 - Seven Steps to Circuit Mapping
- ♦ OVD08 - Starter Circuit Quick Test
- ♦ OVE21 - New A06 Harness Drawing Standards
- ♦ OVE24 - Intelli-Check Alternator Testing
- ♦ OVQ25 - Battery Testing

Self-Paced Training Courses: [Accessfreightliner.com](http://Accessfreightliner.com) > The Learning Center

- ♦ OVE19 - Basic Electricity: Volts, Ohms & Amps
- ♦ OVE09 - Basic Electricity: Terms
- ♦ OVE08 - Basic Electricity: Symbols & Diagrams
- ♦ OVE07 - Basic Electricity: Magnetism
- ♦ OVQ06 - Using a DMM

**NOTE:** Due to the demand for training in certain classes, training dates may be added or cancelled without notice. Please check the schedule or contact us to ensure that the training date you require is still available before submitting an application. Technical Advancement Center reserves the right to cancel or reschedule any class.

## Electronic Systems Course Code CVE05

**Overview:** The Electronic Systems course covers state-of-the-art electronic systems and data buses used on Daimler Trucks North America brand vehicles. Students will gain an in-depth understanding of each system including: where the system and components are located, how the system and components communicate, essential troubleshooting skills, electrical diagnostics and the use of MIDs, SIDs, PIDs and FMIs for system diagnostics.

### What Will Be Covered

- ♦ Course exercises
- ♦ Inputs, Outputs and Controls
- ♦ J1708/1587, J1939 and Multiplexing
- ♦ Reading fault codes
- ♦ Servicelink operation and interpretation
- ♦ Vendor and OEM Circuits
- ♦ 7 Step troubleshooting process to diagnose electronic problems

### Length of Course

This 3-day course begins at 8:30 am and ends at 4:30 pm each day.

### Prerequisites

Instructor Led Training (ILT) Courses:

- ♦ Heavy Duty Truck Systems CVG01 (or Service & Maintenance CVM01 + Brakes & ABS CVB01)
- ♦ Electrical Troubleshooting CVE12 (or Electrical Problem Solving CVE01)

## HVAC Diagnostics Course Code CVH02

**Overview:** With this course, students learn where to find service and maintenance information as well as how to service the A/C system. They learn refrigerant recovery and recycling procedures, safety precautions, purging, flushing, evacuation, recharging and testing. They will also practice the servicing procedures in the class. This course also covers diagnostics of HVAC systems. Students will learn how to diagnose heater and A/C problems, perform heater and A/C tests as well as performing service checks. They will also learn to test A/C performance, use gauges and check for system leaks. In addition, they will learn to apply system service safety precautions.

### What Will Be Covered

- ♦ Heating system operation and fundamentals
- ♦ A/C system operation and fundamentals
- ♦ Auxiliary systems
- ♦ System service routines
- ♦ System diagnostics
- ♦ System electrical principles
- ♦ Air conditioning protection and diagnostic system
- ♦ Blend air operation and diagnostics
- ♦ Performance testing

### Length of Course

This 4-day course begins at 8:30 am and ends at 4:30 pm each day.

### Prerequisites

Instructor Led Training (ILT) Courses:

- ♦ Heavy Duty Truck Systems CVG01 (or Service & Maintenance CVM01 + Brakes & ABS CVB01)
- ♦ Electrical Troubleshooting CVE12 (or Electrical Problem Solving CVE01)
- ♦ Electronic Systems CVE05

Web Based Training (WBT) Courses: [Accessfreightliner.com](http://Accessfreightliner.com) > The Learning Center

- ♦ OVQ26 - Introduction to the Park Smart Auxiliary HVAC Training
- ♦ OVH03 - Seven Steps to Refrigerant Leak Detection

Self-Paced Training Courses: [Accessfreightliner.com](http://Accessfreightliner.com) > The Learning Center

- ♦ OVH02 - DTNA HVAC Systems

**NOTE:** Due to the demand for training in certain classes, training dates may be added or cancelled without notice. Please check the schedule or contact us to ensure that the training date you require is still available before submitting an application. Technical Advancement Center reserves the right to cancel or reschedule any class.

## **Business Class M2** Course Code CVL02

**Overview:** This course covers familiarization with the Business Class M2 line of vehicles. Students will learn the functions, operation and troubleshooting basics for the electronically-controlled air conditioning system, the air management system and the multiplexed electrical system. Maintenance procedures for these vehicles as well as the special servicing needs will also be covered in this course. The students will gain a working knowledge of how to diagnose, service and repair the new Daimler Trucks North America component systems that are being introduced on this vehicle.

### What Will Be Covered

- ♦ Product overview
- ♦ Component familiarization
- ♦ Service manuals and online resources
- ♦ AMU overview, operation and diagnostics
- ♦ HVAC overview, operation and diagnostics
- ♦ Principles of power distribution
- ♦ Principles of multiplexing
- ♦ Service Link software
- ♦ Parts Pro and EZ Wiring
- ♦ Troubleshooting / Diagnostics / Parameters

### Length of Course

This 4-day course begins at 8:30 am and ends at 4:30 pm each day.

### Prerequisites

Instructor Led Training (ILT) Courses:

- ♦ Heavy Duty Truck Systems CVG01 (or Service & Maintenance CVM01 + Brakes & ABS CVB01)
- ♦ Electrical Troubleshooting CVE12 (or Electrical Problem Solving CVE01)
- ♦ HVAC Diagnostics CVH02 (or CVH01)
- ♦ Electronic Systems CVE05

Web Based Training (WBT) Courses: [Accessfreightliner.com](http://Accessfreightliner.com) > The Learning Center

- ♦ OVB05 - Hydraulic Brake Simulator
- ♦ OVE18 - Adding Parameter-Based Options
- ♦ OVE16 - Smart Switch Operation & Troubleshooting
- ♦ OVE20 - M2 Electrical Troubleshooting
- ♦ OVQ25 - M2 Failsafe & Overcurrent conditions
- ♦ OVQ11 - Business Class M2e Hybrid Interactive Training
- ♦ OVQ02 - Introduction to the AGS Transmission
- ♦ OVQ22 - Introduction to Multiplexing
- ♦ OVE25 - Service Link and the Business Class M2
- ♦ OVQ23 - Introduction to the Air Management Unit
- ♦ OVM09 - Servicing Pin Slide Calipers

**NOTE:** Due to the demand for training in certain classes, training dates may be added or cancelled without notice. Please check the schedule or contact us to ensure that the training date you require is still available before submitting an application. Technical Advancement Center reserves the right to cancel or reschedule any class.

## **Cascadia** Course Code CVL03

**Overview:** This course covers familiarization with the Cascadia line of vehicles. Students will learn the functions, operation and troubleshooting basics for the new electronically-controlled modules and the multiplexed electrical system. They will become familiar with power distribution introduced with this vehicle. We also cover Service link templates and usage along with troubleshooting methods.

### **What Will Be Covered**

- ◆ Product overview
- ◆ Component familiarization
- ◆ Service manuals and online resources
- ◆ HVAC overview, operation and diagnostics
- ◆ Principles of power distribution
- ◆ Principles of multiplexing
- ◆ Service Link software
- ◆ Parts Pro and EZ Wiring
- ◆ Troubleshooting / Diagnostics / Parameters

### **Length of Course**

This 4 day course begins at 8:30 am and ends at 4:30 pm each day.

### **Prerequisites**

Instructor Led Training (ILT) Courses:

- ◆ Heavy Duty Truck Systems CVG01 (or Service & Maintenance CVM01 + Brakes & ABS CVB01)
- ◆ Electrical Troubleshooting CVE12 (or Electrical Problem Solving CVE01)
- ◆ HVAC Diagnostics CVH02 (or CVH01)
- ◆ Electronic Systems CVE05

Web Based Training (WBT) Courses - Service Training Academy's Total Truck Care Program:\*

- ◆ OVM03 - New System and Serviceability
- ◆ OVE10 - New Electronics System
- ◆ OVD05 - Service Link Diagnostics

\* If you do not have Total Truck Care website access, please contact Service Training Academy Headquarters at (866) 851-9829 for enrollment or purchase of the required CD's and exams.

## **MBT / AGS Transmission Diagnostics and Rebuild** Course Code CVD02

**Overview:** This course provides students with detailed information in the principles of operation, maintenance and practical overhaul experience of the Mercedes Benz Transmissions. It also includes detailed information and diagnostic practice on the AGS Transmission.

### **What Will Be Covered**

- Basic principles of operation of the manual transmission
- Service and maintenance practices
- Location of the online literature
- Overhaul procedures and practices for the transmission
- AGS principles of operation and detailed description of components
- Troubleshooting for the manual and AGS transmissions
- Practical application of diagnostics using Service Link
- Interpretation of the electrical diagrams as applied to the AGS transmission

### **Length of Course**

This 3-day course begins at 8:30 am and ends at 4:30 pm each day.

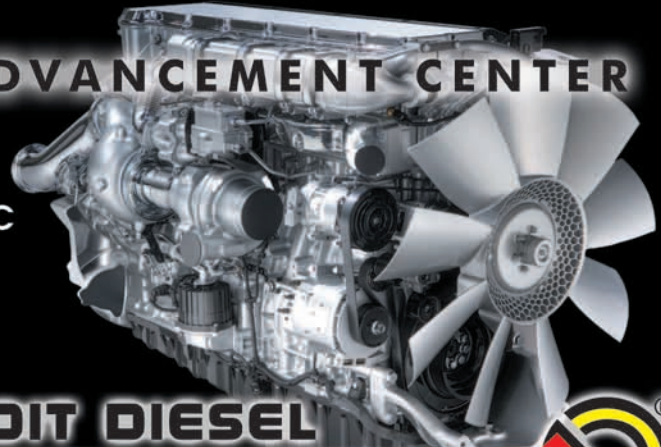
### **Prerequisites**

None



# TECHNICAL ADVANCEMENT CENTER

Our trainers have been certified by DDC on the latest engine components and EPA regulations.



**DETROIT DIESEL**  
CORPORATION



## Series 60 EGR Major Repair v2 Course Code: CES08

**Overview:** This course will cover the disassembly and reassembly of the Series 60 EGR engine. Students will learn to correctly repair and overhaul engine components, perform preventive maintenance and tune-up procedures and recognize EGR components. Upon complete assembly, the engine is tuned and will perform on a fully operational engine dynamometer under normal operating conditions. Program includes both classroom lectures and practical hands-on exercises.

### What Will Be Covered

- ♦ General construction and operation principles
- ♦ Fuel system
- ♦ Air system
- ♦ Lube system
- ♦ Cooling system
- ♦ Governors and other fuel control devices
- ♦ Overhaul procedures and specifications
- ♦ Tune up procedures
- ♦ EGR components
- ♦ Preventive maintenance

### Prerequisites (Web-Based Training)

Web-Based Training courses and exams completed through G2 Program:\*

- ♦ OES01 - Product Intro - Series 60 Fuel
- ♦ OES02 - Product Intro - Series 60 Tune-Up
- ♦ OES03 - Product Intro - Series 60 Cooling
- ♦ OES04 - Product Intro - Series 60 Air Intake
- ♦ OES05 - Product Intro - Series 60 Lubrication
- ♦ OES06 - Series 60 Maintenance
- ♦ OER01 - DDEC Reports
- ♦ OED06 - Basic Diagnostics
- ♦ OES07 - Series 60 DDEC IV-V

\*If you do not have G2 website access, please contact Service Training Academy Headquarters at (866) 851-9829 for enrollment or purchase of the required CD's and exams.

**Note:** Technicians that have taken the following combinations do not have to attend Major Repair v2.

- ♦ Pre-EGR Overhaul (1439) + '04 Update (DDC 8879) or
- ♦ Pre-EGR Overhaul (1439) + '02/'04 Update (DDC 8883) or
- ♦ Series 60 EGR Major Repair (DDC 8893)

### Length of Course

This 4-day course begins at 8:30 am and ends at 4:30 pm each day.

## **MBE 4000 EGR Major Repair v2** Course Code: CEF01

**Overview:** This course will cover the disassembly and reassembly of the MBE 4000 EGR engine. Students will learn to correctly repair and overhaul engine components, perform preventive maintenance and tune-up procedures and recognize EGR components. Upon complete assembly, the engine is tuned and will perform on a fully operational engine dynamometer under normal operating conditions. Program includes both classroom lectures and practical hands-on exercises.

### **What Will Be Covered**

- ♦ General construction and operation principles
- ♦ Fuel system
- ♦ Air system
- ♦ Lube system
- ♦ Cooling system
- ♦ Governors and other fuel control devices
- ♦ Overhaul procedures and specifications
- ♦ Tune up procedures
- ♦ EGR components
- ♦ Preventive maintenance

### **Prerequisites** (Web-Based Training)

Web-Based training courses and exams completed through G2 Program:\*

- ♦ OEF05 - Product Intro - MBE 4000 Fuel
- ♦ OEQ03 - Product Intro - MBE 4000 Tune-Up
- ♦ OEF06 - Product Intro - MBE 4000 Cooling
- ♦ OEF07 - Product Intro - MBE 4000 Air Intake
- ♦ OEF04 - Product Intro - MBE 4000 Lubrication
- ♦ OEF03 - MBE 4000 Maintenance
- ♦ OER01 - DDEC Reports
- ♦ OED06 - Basic Diagnostics
- ♦ OEE06 - MBE Electronics

\*If you do not have G2 website access, please contact Service Training Academy Headquarters at (866) 851-9829 for enrollment or purchase of the required CD's and exams.

**Note:** Technicians that have taken the following combinations do not have to attend Major Repair v2.

- ♦ Pre-EGR Overhaul (DDC 8858) + '04 Update (DDC 8884) or
- ♦ MBE 4000 EGR Major Repair (DDC 8885)

### **Length of Course**

This 3-day course begins at 8:30 am and ends at 4:30 pm each day.

**NOTE:** Due to the demand for training in certain classes, training dates may be added or cancelled without notice. Please check the schedule or contact us to ensure that the training date you require is still available before submitting an application. Technical Advancement Center reserves the right to cancel or reschedule any class.

## **MBE 900 EGR Major Repair v2** Course Code: CEN03

**Overview:** This course will cover the disassembly and reassembly of the MBE 900 EGR engine. Students will learn to correctly repair and overhaul engine components, perform preventive maintenance and tune-up procedures and recognize EGR components. Upon complete assembly, the engine is tuned and will perform on a fully operational engine dynamometer under normal operating conditions. Program includes both classroom lectures and practical hands-on exercises.

### What Will Be Covered

- ◆ General construction and operation principles
- ◆ Fuel system
- ◆ Air system
- ◆ Lube system
- ◆ Cooling system
- ◆ Governors and other fuel control devices
- ◆ Overhaul procedures and specifications
- ◆ Tune up procedures
- ◆ EGR components
- ◆ Preventive maintenance

### Prerequisites (Web-Based Training)

Web-Based training courses and exams completed through G2 Program:\*

- ◆ OEN04 - Product Intro - MBE 900 Fuel
- ◆ OEQ03 - Product Intro - MBE 900 Tune-Up
- ◆ OEN05 - Product Intro - MBE 900 Cooling
- ◆ OEN01 - Product Intro - MBE 900 Air Intake
- ◆ OEN02 - Product Intro - MBE 900 Lubrication
- ◆ OEN07 - MBE 900 Maintenance
- ◆ OER01 - DDEC Reports
- ◆ OED06 - Basic Diagnostics
- ◆ OEE06 - MBE Electronics

\*If you do not have G2 website access, please contact Service Training Academy Headquarters at (866) 851-9829 for enrollment or purchase of the required CD's and exams.

**Note:** Technicians that have taken the following combinations do not have to attend Major Repair v2.

- ◆ Pre-EGR Overhaul (DDC 8859) + '04 Update (DDC 8889) or
- ◆ MBE 900 EGR Major Repair (DDC 8886)

### **Length of Course**

This 3-day course begins at 8:30 am and ends at 4:30 pm each day.

**NOTE:** Due to the demand for training in certain classes, training dates may be added or cancelled without notice. Please check the schedule or contact us to ensure that the training date you require is still available before submitting an application. The Technical Advancement Center reserves the right to cancel or reschedule any class.

## EPA '04 Engine Diagnostics Course Code: CED01

**Overview:** This course is designed to give students a practical and comprehensive look at all phases of the troubleshooting process for Detroit Diesel and Mercedes Benz electronics. Students will learn to effectively gather and assess preliminary information prior to beginning the diagnostic process and therefore develop an effective methodology by examining real life cases in an interactive dialog format. Program includes both classroom lectures and practical hands-on troubleshooting of faults using the latest electronic tools.

### What Will Be Covered

- ♦ Pre-EPA '07 engine platforms - Series 60, MBE 900 & MBE 4000
- ♦ Utilizing available resources - DDCSN website
- ♦ Basic electrical theory, concepts and tools
- ♦ Practical problem solving using snap shot data
- ♦ Practical problem solving methods to examine fuel economy issues
- ♦ Practical problem solving for issues related to incorrect parameter settings
- ♦ Understanding cylinder misfire diagnostics using electronic tools
- ♦ Reading and interpreting wiring schematics and diagrams

### Prerequisites (Instructor Led & Web-Based Training)

Series 60 Major Repair Instructor Led class and the following Web-Based Training courses and exams through G2 Program:\*

- ♦ OES01 - Product Intro - Series 60 Fuel
- ♦ OES02 - Product Intro - Series 60 Tune-Up
- ♦ OES03 - Product Intro - Series 60 Cooling
- ♦ OES04 - Product Intro - Series 60 Air Intake
- ♦ OES05 - Product Intro - Series 60 Lubrication
- ♦ OES06 - Series 60 Maintenance
- ♦ OER01 - DDEC Reports
- ♦ OED06 - Basic Diagnostics
- ♦ OES07 - Series 60 DDEC IV-V

Or

MBE 4000 Major Repair Instructor Led class and the following Web-Based Training courses and exams through G2 Program:\*

- ♦ OEF05 - Product Intro - MBE 4000 Fuel
- ♦ OEQ03 - Product Intro - MBE 4000 Tune-Up
- ♦ OEF06 - Product Intro - MBE 4000 Cooling
- ♦ OEF07 - Product Intro - MBE 4000 Air Intake
- ♦ OEF04 - Product Intro - MBE 4000 Lubrication
- ♦ OEF03 - MBE 4000 Maintenance
- ♦ OER01 - DDEC Reports
- ♦ OED06 - Basic Diagnostics
- ♦ OEE06 - MBE Electronics

Or

MBE 900 Major Repair Instructor Led class and the following Web-Based Training courses and exams through G2 Program:\*

- ♦ OEN04 - Product Intro - MBE 900 Fuel
- ♦ OEQ03 - Product Intro - MBE 900 Tune-Up
- ♦ OEN05 - Product Intro - MBE 900 Cooling
- ♦ OEN01 - Product Intro - MBE 900 Air Intake
- ♦ OEN02 - Product Intro - MBE 900 Lubrication
- ♦ OEN07 - MBE 900 Maintenance
- ♦ OER01 - DDEC Reports
- ♦ OED06 - Basic Diagnostics
- ♦ OEE06 - MBE Electronics

\*If you do not have G2 website access, please contact Service Training Academy Headquarters at (866) 851-9829 for enrollment or purchase of the required CD's and exams.

### Length of Course

This 5-day course begins at 8:30 am and ends at 4:30 pm each day.

**NOTE:** Due to the demand for training in certain classes, training dates may be added or cancelled without notice. Please check the schedule or contact us to ensure that the training date you require is still available before submitting an application. The Technical Advancement Center reserves the right to cancel or reschedule any class.

## 2007 Product Update Course Code: CEU01

**Overview:** This course provides technicians with detailed information regarding the changes in the operation, control, maintenance and repair of the EPA '07 engines. Program includes both classroom lectures and practical hands-on exercises. This course will include coverage of all three product lines. (Series 60 / MBE 900 / MBE 4000)

### What Will Be Covered

- ♦ Maintenance procedures and changes
- ♦ Component changes to all engine platforms
- ♦ Advanced diagnostic software DDDL 7.xx
- ♦ Log file interpretation
- ♦ DDEC VI electronics
- ♦ Aftertreatment system component review
- ♦ Aftertreatment system operation review
- ♦ Diagnostic fault codes
- ♦ New tooling
- ♦ ULSD fuel / CJ-4 oil

### Prerequisites (Instructor Led Training)

- ♦ EPA '04 certified for at least one engine platform - Series 60, MBE 900 or MBE 4000

### Prerequisites (Web-Based Training)

Web-Based training courses and exams completed through G2 Program:\*

- ♦ OED04 - 2007 Basic Diagnostics
- ♦ OED03 - 2007 Aftertreatment System
- ♦ OEF02 - 2007 MBE 4000 Engine Update
- ♦ OEN06 - 2007 MBE 900 Engine Update
- ♦ OES09 - 2007 Series 60 Engine Update

\*If you do not have G2 website access, please contact Service Training Academy Headquarters at (866) 851-9829 for enrollment or purchase of the required CD's and exams.

### Length of Course

This 4-day course begins at 8:30 am and ends at 4:30 pm each day.

**NOTE:** Due to the demand for training in certain classes, training dates may be added or cancelled without notice. Please check the schedule or contact us to ensure that the training date you require is still available before submitting an application. The Technical Advancement Center reserves the right to cancel or reschedule any class.

## **DD15 Major Repair** Course Code: CEP01

**Overview:** This course will cover the disassembly and reassembly of the DD15 engine with emphasis on the air, coolant, lube and fuel systems. The course will also include special tools to be used and a basic diagnostic overview of the high pressure common rail fuel system. During reassembly, students will learn how to properly set up the gear train and gear lash as well as setting the valve and jake brake lashes. Upon complete assembly, the engine is tuned and will perform on a fully operational engine dynamometer under normal operating conditions. Program includes both classroom lectures and practical hands-on exercises.

### **What Will Be Covered**

- ♦ General construction and operation principles
- ♦ New tooling
- ♦ System components and functions
- ♦ Common rail fuel system overview
- ♦ Fuel system flow and basic diagnostics
- ♦ Engine overhaul procedures and specifications
- ♦ DDEC VI electronics
- ♦ Tune up procedures
- ♦ Preventive maintenance

### **Prerequisites** (Instructor Led Training)

- ♦ CEU01 - 2007 Product Update (DDC 8925)

### **Prerequisites** (Web-Based Training)

Web-Based training courses and exams completed through G2 Program:\*

- ♦ OEP09 - Product Intro - DD15 Base Engine
- ♦ OEP16 - Product Intro - DD15 Fuel
- ♦ OEP11 - Product Intro - DD15 Tune-Up
- ♦ OEP10 - Product Intro - DD15 Cooling
- ♦ OEP12 - Product Intro - DD15 Air System
- ♦ OEP13 - Product Intro - DD15 Lubrication
- ♦ OEP14 - DDEC VI
- ♦ OEP15 - DD15 Maintenance
- ♦ OEP17 - DD13 Engine Overview
- ♦ OER01 - DDEC Reports
- ♦ OED03 - 2007 Aftertreatment System
- ♦ OED04 - 2007 Basic Diagnostics

\*If you do not have G2 website access, please contact Service Training Academy Headquarters at (866) 851-9829 for enrollment or purchase of the required CD's and exams.

### **Length of Course**

This 5-day course begins at 8:30 am and ends at 4:30 pm each day.

**NOTE:** Due to the demand for training in certain classes, training dates may be added or cancelled without notice. Please check the schedule or contact us to ensure that the training date you require is still available before submitting an application. The Technical Advancement Center reserves the right to cancel or reschedule any class.

# DD15 Engine Diagnostics Course Code: CEP02

**Overview:** This course is designed to give students a review of the DD15 engine component and sub-system relations. Students will interpret and analyze diagnostic overviews of the EGR system using DDDL along with diagnosing real work failure modes on the engine. Performance and symptom based diagnostics will include learning and understanding the fuel system schematic, flow and pressures. Program includes both classroom lectures and practical hands-on troubleshooting using the latest tools and software.

## What Will Be Covered

- ♦ EGR system operation, codes and diagnostics
- ♦ Fuel system components and failure modes
- ♦ Fuel schematic interpretation to pressure readings
- ♦ Aftertreatment operation, codes and diagnostics
- ♦ Regeneration process and strategies
- ♦ MCM / CPC operation and parameterization
- ♦ Engine wiring schematic review and exercises
- ♦ Vehicle related electronics
- ♦ Understanding multiplexing systems

## Prerequisites (Instructor Led Training)

- ♦ CEP01 - DD15 Major Repair

## Prerequisites (Web-Based Training)

Web-Based training courses and exams completed through G2 Program:\*

- ♦ OEP09 - Product Intro - DD15 Base Engine
- ♦ OEP16 - Product Intro - DD15 Fuel
- ♦ OEP11 - Product Intro - DD15 Tune-Up
- ♦ OEP10 - Product Intro - DD15 Cooling
- ♦ OEP12 - Product Intro - DD15 Air System
- ♦ OEP13 - Product Intro - DD15 Lubrication
- ♦ OEP14 - DDEC VI
- ♦ OEP15 - DD15 Maintenance
- ♦ OEP17 - DD13 Engine Overview
- ♦ OER01 - DDEC Reports
- ♦ OED03 - 2007 Aftertreatment System
- ♦ OED04 - 2007 Basic Diagnostics

\*If you do not have G2 website access, please contact Service Training Academy Headquarters at (866) 851-9829 for enrollment or purchase of the required CD's and exams.

## Length of Course

This 5-day course begins at 8:30 am and ends at 4:30 pm each day.

**NOTE:** Due to the demand for training in certain classes, training dates may be added or cancelled without notice. Please check the schedule or contact us to ensure that the training date you require is still available before submitting an application. Technical Advancement Center reserves the right to cancel or reschedule any class.

## **EPA 2010 Update** Course Code: CEU02

**Overview:** This course provides technicians with detailed information regarding the changes in the operation, control, diagnostics and repair of the EPA 2010 DD platform engines. Students will use log file data to perform guided diagnostics to examine real life cases of SCR failure modes and OBD based fault codes. Program includes both classroom lectures and practical hands-on troubleshooting using the latest tools and software on a fully functional DD15 SCR simulator.

### **What Will Be Covered**

- ◆ MCM / ACM / CPC software overview
- ◆ Review of SCR system overview
- ◆ Review of SCR configurations
- ◆ Review of SCR components and operation
- ◆ DEF air system
- ◆ DEF fluid system
- ◆ DEF coolant system
- ◆ Aftertreatment regeneration strategy
- ◆ Electronics and diagnostic software
- ◆ Elements and rules of On-Board Diagnostics (OBD)
- ◆ OBD fault reactions and diagnostics
- ◆ Guided fault diagnostics

### **Prerequisites** (Instructor Led Training)

- ◆ CEP01 - DD15 Major Repair
- ◆ CEP02 - DD15 Engine Diagnostics

### **Prerequisites** (Web-Based Training)

Web-Based training courses and exams completed through G2 Program:\*

- ◆ OEQ12 - Introduction to The BlueTec System
- ◆ OEQ13 - Introduction to BlueTec Components
- ◆ OEQ14 - Introduction to On Board Diagnostics
- ◆ OEU03 - 2010 DD Engine Component Changes

\*If you do not have G2 website access, please contact Service Training Academy Headquarters at (866) 851-9829 for enrollment or purchase of the required CD's and exams.

### **Length of Course**

This 5-day course begins at 8:30 am and ends at 4:30 pm each day.

**NOTE:** Due to the demand for training in certain classes, training dates may be added or cancelled without notice. Please check the schedule or contact us to ensure that the training date you require is still available before submitting an application. Technical Advancement Center reserves the right to cancel or reschedule any class.

# TAC TECHNICAL ADVANCEMENT CENTER

Get to know the complete ins and outs of bus maintenance, electrical schematics and diagnostic software.



## Saf-T-Liner C2 Familiarization & Multiplexing Course Code TB8050

**Overview:** During this course, students will learn component locations for and operation of pneumatic, hydraulic, and electrical systems. An overview of the manufacturing process and body repair techniques will be discussed as well as maintenance requirements for the body and chassis. Students will learn to access and utilize all electronic resources available from Daimler Trucks North America and Thomas Built Bus.

Students will learn the design and operation of multiplexed systems. They will learn the functions, operation and troubleshooting basics for the electronically-controlled air conditioning system, the air management system and the multiplexed electrical system. The student will gain a working knowledge of how to diagnose, service and repair the new Freightliner and Thomas Built Bus component systems that are being introduced on this vehicle.

### What Will Be Covered

- ◆ Learn function and location of major electrical components
- ◆ Learn to read and use electronic information
- ◆ Use printed and internet formatted schematics for troubleshooting during exercises
- ◆ System diagnostics
- ◆ System electrical
- ◆ Working with connectors and wire terminals
- ◆ Isolating a circuit using a harness drawing
- ◆ Identifying PDM wire locations
- ◆ AMU
- ◆ HVAC
- ◆ Power Distribution
- ◆ Multiplexing

**Length of Course:** This 2-day course begins at 8:30 am and ends at 4:30 pm each day.

**NOTE:** Due to the demand for training in certain classes, training dates may be added or cancelled without notice. Please check the schedule or contact us to ensure that the training date you require is still available before submitting an application. Technical Advancement Center reserves the right to cancel or reschedule any class.

## **Service Link for Saf-T-Liner C2** Course Code TB8051

**Overview:** Students will learn to diagnose electrical issues utilizing Service Link diagnostic software and will also learn to read and interpret Saf-T-Liner C2 electrical schematics, diagrams and drawings for Daimler Trucks North America and Thomas Built Bus.

**Prerequisites:** TB8050 Saf-T-Liner C2 Familiarization & Multiplexing

### **What Will Be Covered**

- ◆ Learn the component relationships for system operation
- ◆ Learn to read and use electronic information
- ◆ Utilize ICU dash for fault code retrieval
- ◆ Use printed and internet formatted schematics for troubleshooting during exercises
- ◆ Use Service Link to "hands-on" troubleshoot electrical and component failures
- ◆ Use Service Link to add aftermarket options / features
- ◆ Troubleshooting using bus symptoms, ICU, Service Solutions and schematics.

**Length of Course:** This 2-day course begins at 8:30 am and ends at 4:30 pm each day.

**NOTE:** Due to the demand for training in certain classes, training dates may be added or cancelled without notice. Please check the schedule or contact us to ensure that the training date you require is still available before submitting an application. Technical Advancement Center reserves the right to cancel or reschedule any class.