ACDelco’s approach to training combines a variety of proven training delivery methods to ensure the maximum learning benefit for the service professional.

**2020 Training Course Catalog**
- Instructor-Led Training
- Half Day Training
- Seminars
- InShop Training
- Web-Based Training
- TECHAssist
- Self Study Training
- Video on Demand
- TechTube Videos

**Access training at**
[www.acdelcotraining.com](http://www.acdelcotraining.com)
Contact us at (800) 825-5886, prompt 1.
TABLE OF CONTENTS

Introduction...............................................................................................................................1
A0: Alternative Propulsion........................................................................................................13
A1: Engine Mechanical ............................................................................................................21
A2: Automatic Transmission .................................................................................................25
A3: Manual Transmission / Driveline ......................................................................................28
A4: Suspension / Steering ......................................................................................................35
A5: Brakes ...............................................................................................................................39
A6: Electrical / Electronic Systems .....................................................................................42
A7: Heating and Air Conditioning .........................................................................................46
A8: Engine Performance .........................................................................................................49
A9: Light Duty Diesel ............................................................................................................53
A10: Body Electrical and Communications .........................................................................56
Safety and Security ................................................................................................................60
Fundamentals ........................................................................................................................63
Diagnostics..............................................................................................................................64
INTRODUCTION

ACDelco History

1900s

THE SPARK IGNITES
It began with William Durant and his United Motors Corporation, which acquired the dozens of smaller parts manufacturers, including Dayton Engineering Laboratories Company (DELCO). When General Motors came along, changing United Motors Corporation to United Motors Service and adding AC Spark Plug to the roster, only the sky was the limit.

1920s

LUCKY LINDY
Literally! When Charles Lindbergh set off in the Spirit of St. Louis to become the first person in history to be in New York one day and Paris the next, AC Spark Plug helped power the transatlantic journey that captured imaginations around the world.

1930s

QUEEN OF THE AIR
But there was more aviation history to be made, and we helped Amelia Earhart make it. The plane in which Earhart became the first woman pilot to fly solo across the Atlantic (in under 15 hours) featured AC spark plugs.

1940s

BUILDING FOR VICTORY
The 1940s brought the challenging, threatening years of World War II, and both UMS and AC Spark Plug parts went to work for the Allied cause. We also took to the skies again, producing DELCO batteries for Navy planes.

1950s

PEACETIME EXPANSION
Having helped secure a brighter future for all, we got to work building our own. United Motors Service branched out, and began providing sales, service and training for AC rebuilt fuel pumps, DELCO batteries, DELCO radio service parts, Saginaw recirculating-ball bumper jacks and more.

1960s

OUT OF THIS WORLD
But the space race was on, and we were proud parts of it. In fact, AC Spark Plug and Delco Electronics teams helped NASA develop the inertial guidance systems for the entire Apollo program that took the first Astronauts to the moon.

1970s

NEW FRONTIERS
We didn’t stop there. Once man landed on the moon, he needed a way to explore it. So AC Spark Plug and DELCO (which General Motors united to form ACDelco), helped to create key components of the lunar rover vehicle used by Apollo 15 Astronauts.

1980s

THE RIGHT FIT
Back on solid ground, we kept our minds on science. With field resources deployed to support the aftermarket, service engineers were brought into the engineering of GM vehicles to ensure that ACDelco parts fit exactly like true GM Original Equipment should.

1990s

SPEEDING AHEAD
Then we made the most of solid ground by hitting the track, with ACDelco sponsoring multiple drivers in leading motorsports events throughout the last decade of the millennium.

2000s

A GLOBAL IMPACT
The new millennium brought new and exciting ways to connect; online commerce helped ACDelco expand its already extensive reach, with distribution across North America, Africa, and countries including Japan and India.

ACDelco Training Mission Statement

ACDelco’s mission is to provide aftermarket service professionals with the skills necessary to help safely and effectively diagnose and repair customer vehicles utilizing inviting education methods within an extensive and engaging training portfolio.
Learning Management System

ACDelco’s Learning Management System (LMS) offers single source access for training 24/7.

What is it?
The ACDelco LMS delivers a global, single point of access for training for all personnel. The LMS is an easy-to-use, web-based application that streamlines the delivery and administration of the training program. Its many features reduce overall training costs and maximize employee time on the job.

What can it do?
• Offers a web-based, single point of access to training courses and student history
• Contains simple navigation that flattens the learning curve for Web-Based Training (WBT)
• Allows for scheduling and enrolling in Instructor-Led Training (ILT) events
• Permits access to comprehensive training materials
• Tracks learner progress
• Includes assessment / testing capabilities
• Ensures security of data

The ACDelco LMS enhances the ability to improve organizational skills and performance, without reducing employee productivity. It provides the strong foundation needed for any learning program. Currently the LMS supports Web-Based Training (WBT), Instructor-Led Training (ILT), and streaming video.

If you have any questions or would like any additional information, contact your ACDelco Representative or the Help Desk at (800) 825-5886, prompt 1
Access the ACDelco LMS:

1. Open your Internet browser
2. Type the following into your address bar: acdelco.com
3. Click on the For Professionals menu
4. Click on Training Resources
5. Click on the LAUNCH ONLINE TRAINING option

Arrive at the ACDelco LMS login page.

Create an Account:

6. Click on Create a New User Account

Tip:
If you are an ACDelco program member, you must know your six-digit account number to register. If you don’t know it, ask your manager or ACDelco rep.
7. Complete the New User form

8. Click **Submit**

9. The system will generate a password for you, but you will be prompted to change it

**Tip:** After registering, you will be prompted to change your password right away. Remember to write down your log-in ID!

**Log in to the LMS:**
10. Return to the Home page by clicking on the ACDelco logo at the top
11. Enter your login information
12. Click **Submit**
ACDelco Training Approach

ACDelco’s approach to training combines a variety of proven training delivery methods to ensure the maximum learning benefit for the service professional. In addition to traditional instructor-led technical training courses & seminars, a wide selection of online courses are also available. Online courses offer the latest available business & technical updates right at your fingertips.

ACDelco’s training approach offers online courses 24/7 which allow participants to complete the courses at their own pace and on their own schedule. In addition, they precisely dovetail into hands on, Instructor-led Training courses.

Descriptions of the various delivery methods are detailed below.

Online Training

Each course is available to non-program participants for a nominal charge. Visit acdelcotraining.com or contact your ACDelco representative for more information.

- **SELF STUDY TRAINING** courses are downloadable packets of technical information that can typically be reviewed in less than one hour. These guides are intended to help participants understand the technical aspect of various vehicle systems. Participants have the option to complete a test once material has been reviewed to receive credit for the course.

- **WEB-BASED TRAINING** courses range from 1-2 hours in length. Content is presented through voiceover narration, on-screen text, graphics, animations and videos. Technicians are tested on their progress frequently by completing activities and tests.

- **TECHASSIST** are shorter versions of WBT courses, typically 15-20 minutes in length. These courses provide technicians with content tailored to a specific task, procedure or common concern, and are designed to provide highly relevant information about current challenges technicians face.

- **VIDEO ON DEMAND** courses offer technicians the ability to view previously recorded content at any time. These videos are searchable, include the ability to navigate through specific topics, and are now compatible with mobile phones and tablet devices.

- **TECHTUBE VIDEOS** are short videos that focus on specific diagnostic procedures. Typically 3-7 minutes in length, these brief instructional videos offer a quick and convenient way to view various topics of instructional interest.

Courseware pricing is dependent upon program participation. Contact your ACDelco representative or visit acdelco.com for more information.
INTRODUCTION

Face-to-Face Training

**INSTRUCTOR-LED TRAINING** courses are available in full-day (8 hour) sessions, and are presented by an ACDelco instructor. Training is presented utilizing vehicles, hands-on exercises and diagnostic situations. Registration for these courses can be accessed through the ACDelco Learning Management System (LMS).

**HALF DAY TRAINING** courses are half day versions of full-length ILT sessions. An ACDelco Instructor leads the group through on-vehicle exercises and diagnostic skills in half the time. These sessions are tailored for those who want the benefits of Instructor-Led Training, but may not be able to commit to an entire day.

**SEMINARS** are 3-hour sessions that are interactive and fast-paced and are presented by an ACDelco professional in a shop or distributor facility. Seminars are designed to keep technicians abreast of rapidly changing vehicle technology, product information and diagnostic tips on ACDelco’s top product lines.

**INSHOP TRAINING** sessions are shorter Seminars, usually about an hour in duration. During InShop sessions, the ACDelco professional brings a live procedure or demonstration right into the service bay. They are designed for much smaller audiences - typically less than 5 technicians - and the format is more informal than a full Seminar.

Courseware pricing is dependent upon program participation. Contact your ACDelco representative or visit acdelco.com for more information.
ACDelco Training Course Numbering Methodology

Each ACDelco training course has a unique number. This number not only individually identifies each course for enrollment and credit tracking, but is combined with an alpha or numeric suffix to inventory all associated course materials.

**Anatomy of a Course Code (Courses in 2018 and beyond)**

**Sample - SEM0101IL**

- **Course Type** - **Skill Area** - **Sequential Course Number** - **Version Number** - **Media Type**
- S = Service
  - EM = Engine Mechanical
  - 01 = 1st release
  - IL = Instructor-Led 8 Hour
- B = Business
  - AT = Automatic Transmission
  - 02 = 2nd release
  - HD = Instructor-Led 4 Hour
  - MT = Manual Transmission / Driveline
  - 03 = 3rd release
  - IS = InShop
  - SS = Suspension / Steering
  - 04 = 4th release
  - SM = Seminar
  - BK = Brakes
  - EL = Electrical / Electronic Systems
  - AC = Heating & Air Conditioning
  - EP = Engine Performance
  - ST = Safety & Security
  - DS = Diagnostic Systems
  - CC = Customer Communications
  - SC = Service Consultants
  - FM = Financial Management
  - PC = Parts Consultant
  - FN = Fundamentals
  - CL = Collision
  - DE = Diesel
  - AP = Alternative Propulsion
  - BE = Body Electrical
  - TA = TECHAssist
  - EP = Engine Performance
  - TT = TechTube
  - V = Video on Demand
  - WB = Web-Based

**Anatomy of a Course Code (Courses prior to 2018)**

**Sample - S-FN00-01.01HDT**

- **Course Type** - **Skill Area** - **Sequential Course Number** - **Version Number** - **Media Type**
- S = Service
  - FN00 = Fundamentals
  - 01 = 1st release
  - HDT = Half Day Training
- B = Business
  - EM01 = Engine Mechanical
  - 02 = 2nd release
  - ILT = Instructor-Led Training
  - AT02 = Automatic Transmission
  - 03 = 3rd release
  - IST = InShop Training
  - MT03 = Manual Transmission / Driveline
  - 04 = 4th release
  - SEM = Seminar
  - SS04 = Suspension / Steering
  - SIM = Simulation
  - BK05 = Brakes
  - SST = Self Study Training
  - EL06 = Electrical / Electronic Systems
  - TAS = TECHAssist
  - AC07 = Heating & Air Conditioning
  - VID = TechTube Video
  - EP08 = Engine Performance
  - V or D = Video on Demand
  - ST10 = Safety & Security
  - WBT = Web-Based Training
  - DS11 = Diagnostic Systems
  - SC30 = Customer Communications
  - CC30 = Marketing
  - CC60 = Customer Communications
  - SC31 = Service Consultants
  - FM32 = Financial Management
  - PC33 = Parts Consultant
  - FC02 = Fuel Control
Searching for Courses

To search for courses, click on the **TAKE TRAINING** menu, and then **Catalog > Catalog Search**. Use the menu on the left to search for courses by Category, Delivery Type, or Person Type.

### Schedule

To search for currently scheduled courses, select search terms from the dropdown menus, enter text in the text entry box below, and click the Submit button.

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Language</th>
<th>Start Date</th>
<th>End Date</th>
<th>Location</th>
<th>Action</th>
<th>Extent</th>
<th>Delivery Type</th>
<th>Database ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>5051-001L9</td>
<td>English</td>
<td>10/26/2019</td>
<td>10/30/2019</td>
<td>North</td>
<td>Driver</td>
<td>70</td>
<td>Online</td>
<td>14376</td>
</tr>
<tr>
<td>5051-001L9</td>
<td>English</td>
<td>10/26/2019</td>
<td>10/30/2019</td>
<td>North</td>
<td>Driver</td>
<td>70</td>
<td>Online</td>
<td>14376</td>
</tr>
</tbody>
</table>

**My User ID:** ________________  **My Password:** ________________

To search live courses in your area, click on the **TAKE TRAINING** menu, and then **Schedule > Search Course Sessions**. Enter your search criteria and click Submit.

If you are not a current user or need help with your user ID and password, contact the Help Desk between 8:00 a.m. and 5:00 p.m. (EST) at 1-800-825-5886 and select prompt 1. You will need your organization’s six-digit account number available to register as a user.
**Self Study Training**

Self Study Training courses are downloadable packets of technical information that can typically be reviewed in less than one hour. These guides are intended to help participants understand the technical aspect of various vehicle systems. After reviewing the information, participants may receive credit for the course by completing a test.

**Web-Based Training**

Web-Based Training courses are typically 1-2 hours in length. Content is presented through voiceover narration, on-screen text, graphics, animations and videos. Technicians are tested on their progress frequently by completing activities and tests.

---

**Identification**

The CT6 Plug-in Hybrid Electric Vehicle (PHEV) is identifiable by nameplates located on the lower corners of each rear door. Another unique characteristic is the charge port located on the left rear quarter panel. Under the hood, large orange cables are visible, along with the power inverter module. The high voltage battery, also called the hybrid battery, takes up a significant portion of the trunk area.
INTRODUCTION

Instructor-Led and Half Day Training

Instructor-Led Training courses are full-day courses facilitated by an ACDelco instructor. Training is presented utilizing vehicles and hands-on exercises, providing technicians the opportunity to apply diagnostic skills to real concerns on actual vehicles.

ACDelco also offers Half Day Training sessions, which allow technicians to experience the same elements as a full-day ILT session, but in half the time. These 4-hour hands-on sessions are facilitated by an ACDelco Instructor at a dedicated training center. Training is presented utilizing vehicles and hands-on exercises, providing technicians the opportunity to apply diagnostic skills to real concerns on actual vehicles. Enroll in a course today by accessing the schedule search feature at acdelcotraining.com.

Seminar

Seminars are typically three hours in length and are hosted by an ACDelco professional at a shop or distributor facility. Seminars cover the latest and greatest vehicle technologies to keep technicians abreast of this ever-evolving industry. For the convenience of technicians and shop owners, seminars are typically conducted in the evening.
Video on Demand

Video on Demand allows technicians to review previously recorded content on the Learning Management System (LMS) at any time. VOD courses include monthly Service Know How Emerging Issues broadcasts from 2004 to current. This series of monthly broadcasts is designed to keep the service technicians up-to-date on current issues. During each 60-minute session, current GM service bulletins and warranty issues will be highlighted for technical awareness. Each session will feature a major service topic, supported by GM engineering and service experts. Regular segments include:

- Top Stories
- Featured Topic
- What’s Hot for Cars
- What’s Hot for Trucks
- Powertrain
- Back to Basics
- Fix it Right the First Time

TechTube Videos

ACDelco TechTube videos are short, vignette-style videos (typically 3-7 minutes) that are focused on specific technical procedures. These brief instructional videos offer a quick and convenient way to view various topics of instructional interest and value. Browse for videos today by accessing the training catalog on acdelcotraining.com.

TechTubes are also tablet and smart phone compatible!
INTRODUCTION

InShops

InShops are one hour sessions in which an ACDelco professional brings training into your service bay. The training may be targeted to a specific repair issue or procedure for the technicians at that shop.

TECHAssist

TECHAssists are shorter versions of WBTs - typically 15-20 minutes. These courses provide technicians with content tailored to a specific task, procedure or common concern, and are designed to provide highly relevant information about current challenges technicians face.
A recommended path for completing the Alternative Propulsion curriculum is outlined below. To complete the training below and to search for and complete additional training, visit acdelcotraining.com.

### RECOMMENDED PATH

#### Gen 1 Volt and Gen 2 Volt

<table>
<thead>
<tr>
<th>WBT</th>
<th>High Voltage System Safety</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAP0101WB</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WBT</th>
<th>Introduction to Hybrid and Electric Vehicles</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAP0201WB</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WBT</th>
<th>High Voltage Power Electronics Fundamentals</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAP0301WB</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WBT</th>
<th>High Voltage Battery Systems Fundamentals</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAP0401WB</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SEM</th>
<th>Hybrid Vehicle Maintenance Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAP0101SM</td>
<td></td>
</tr>
</tbody>
</table>

#### BEV Spark

<table>
<thead>
<tr>
<th>WBT</th>
<th>Extended Range Electric Vehicle: Introduction - Gen 1 Chevrolet Volt</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEL1101WB</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WBT</th>
<th>Extended Range Electric Vehicle: Introduction - Gen 1 Cadillac ELR</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEL1201WB</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WBT</th>
<th>Extended Range Electric Vehicle: Introduction - Gen 2 Chevrolet Volt</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEL2001WB</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WBT</th>
<th>Extended Range Electric Vehicle: Introduction - Gen 1 Volt/ELR</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEL1301WB</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WBT</th>
<th>High Voltage Battery: Overview 1 - Gen 1 Volt/ELR</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEL1401WB</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WBT</th>
<th>High Voltage Battery: Overview 2 - Gen 1 Volt/ELR</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEL1501WB</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WBT</th>
<th>Electric Transmission: 4ET50 Overview - Volt/ELR (EREV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEL1601WB</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WBT</th>
<th>Electric Transmission: 1ET35 Overview - Spark EV</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEL1701WB</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WBT</th>
<th>Electric Transmission: 1ET25 Overview - Bolt EV</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEL1801WB</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WBT</th>
<th>High Voltage Battery: Overview - Gen 2 Volt</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEL2001WB</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WBT</th>
<th>Electric Transmission: 5ET50 Overview - Gen 2 Volt</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEL2101WB</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WBT</th>
<th>Electric Transmission: 1ET35 Overview - Spark EV (BEV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEL2201WB</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VOD</th>
<th>Electric Transmission: 1ET25 Unit Repair - Bolt EV</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAP0101V</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WBT</th>
<th>Battery Electric Vehicle: Introduction - Chevrolet Spark EV</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEL2301WB</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WBT</th>
<th>High Voltage Battery: Gen 1 Overview - Spark EV (BEV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEL2401WB</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WBT</th>
<th>High Voltage Battery: Gen 2 Overview - Spark EV (BEV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEL2501WB</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WBT</th>
<th>Electric Transmission: 1ET35 Overview - Spark EV (BEV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEL2601WB</td>
<td></td>
</tr>
</tbody>
</table>
### A0: ALTERNATIVE PROPULSION

#### BEV Bolt

<table>
<thead>
<tr>
<th>WBT</th>
<th>Battery Electric Vehicle Introduction 2: Chevrolet Bolt EV</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEL2701WB</td>
<td>S-EL06-80.01WBT</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WBT</th>
<th>High Voltage Battery: Overview - Bolt EV [BEV 2]</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEL2701WB</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WBT</th>
<th>Advanced Technology Vehicle Transmission 5: Chevrolet Bolt 1ET25</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEL2701WB</td>
<td>S-EL06-89.01WBT</td>
</tr>
</tbody>
</table>

#### HEV Malibu

<table>
<thead>
<tr>
<th>WBT</th>
<th>Electric Transmission: SET50 Overview - Malibu</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEL2801WB</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WBT</th>
<th>Hybrid Electric Vehicle: Introduction - Chevrolet Malibu</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEL2901WB</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WBT</th>
<th>High Voltage Battery: Overview - Malibu</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEL3001WB</td>
<td></td>
</tr>
</tbody>
</table>

#### PHEV CT6

<table>
<thead>
<tr>
<th>WBT</th>
<th>Plug-in Hybrid Electric Vehicle: Introduction - Cadillac CT6</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEL3101WB</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WBT</th>
<th>High Voltage Battery: Overview - CT6</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEL3201WB</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WBT</th>
<th>Electric Transmission: 4EL70 Overview - CT6</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEL3301WB</td>
<td></td>
</tr>
</tbody>
</table>

#### eAssist – Gen 1, Gen 2 and Gen 3

<table>
<thead>
<tr>
<th>WBT</th>
<th>eAssist System Gen 1: Introduction 1 - Buick LaCrosse/Chevrolet Malibu</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEL3401WB</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WBT</th>
<th>eAssist System Gen 1: Introduction 2 - Buick LaCrosse/Chevrolet Malibu</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEL3501WB</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WBT</th>
<th>High Voltage Battery: Overview - Gen 1 eAssist</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEL3601WB</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WBT</th>
<th>eAssist System Gen 1: Safety</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEL3701WB</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WBT</th>
<th>eAssist System Gen 2: Introduction - Chevrolet Silverado/ GMC Sierra</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEL3801WB</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WBT</th>
<th>High Voltage Battery: Overview - Gen 2 eAssist</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEL3901WB</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WBT</th>
<th>eAssist System Gen 3: Introduction - Buick LaCrosse/Chevrolet Malibu</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEL4001WB</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WBT</th>
<th>High Voltage Battery: Overview - Gen 3 eAssist</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEL4101WB</td>
<td></td>
</tr>
</tbody>
</table>
Web-Based Training

HIGH VOLTAGE SYSTEM SAFETY SAP0101WB
This course will introduce participants to the high voltage systems safety used in GM vehicles. This course focuses on hybrid safety, preparation for a safe working environment, personal protective equipment, best practices, tools, disabling high voltage systems, internal battery service, and first responder guides. Upon completion of this course, participants will be able to identify the characteristics of a high voltage system, identify the steps for preparing a safe working environment, identify personal protective equipment functions, identify three best practices for working with high voltage systems, identify high voltage systems safety tools, describe the steps on how to disable high voltage systems safely, describe the steps for internal battery service, and describe how to use the first responder guides.
Languages: English/French

INTRODUCTION TO HYBRID AND ELECTRIC VEHICLES SAP0201WB
This course introduces the concept, design, and a brief history of hybrid and electric vehicle technology within General Motors. It also covers electrical energy storage, transfer, and general concepts that are commonly used in electric vehicles. In addition, this course discusses the characteristics of hybrid controls. Upon completion of this course, participants will be able to recall the background of the development of hybrid and electric vehicles, recall the characteristics of electrical energy, identify electrical energy storage, delivery, and transfer systems, and identify the characteristics of hybrid control.
Languages: English

HIGH VOLTAGE POWER ELECTRONICS FUNDAMENTALS SAP0301WB
This course covers the features and operation of hybrid and electric vehicles. This course reviews hybrid and electric power electronic components as well as the advanced technology systems.
Languages: English

HIGH VOLTAGE BATTERY SYSTEMS FUNDAMENTALS SAP0401WB
This course covers the features of the global hybrid and electric vehicle high voltage battery systems. It provides the fundamentals of high battery voltage construction, control modules, thermal management, contactors, manual disconnect features, chassis isolation, and safety features. Upon completing this course, participants will be able to recall the fundamentals of high voltage battery construction, recall the fundamentals of high voltage control and monitoring, and recall the fundamental safety features of high voltage batteries.
Languages: English

EXTENDED RANGE ELECTRIC VEHICLE: INTRODUCTION - GEN 1 CHEVROLET VOLT SEL1101WB
This course introduces Extended Range Electric Vehicles (EREVs), and covers the key features, components, modes of operation, and characteristics of the electrical and charging systems. It also covers vehicle communication and high voltage interlock circuit systems, as well as the diagnostic process and safety precautions. Upon completion of this course, technicians will be able to identify the key features of extended range electric vehicles, identify the components and modes of operation, identify the characteristics of the electrical system and the types and characteristics of the vehicle communication system, identify the characteristics of the charging system, identify the characteristics of the high voltage interlock circuits, and identify the diagnostic process and safety precautions.
Languages: English

EXTENDED RANGE ELECTRIC VEHICLE: INTRODUCTION - GEN 1 CADILLAC ELR SEL1201WB
This course provides an introduction to the Cadillac ELR, including exterior and interior features, characteristics, and components. Exterior features covered include driving modes, Regen on Demand, dimensions and specifications, aerodynamic features, wheels and tires, and lighting. Vehicle components covered include the high voltage battery, charging system, transmission, engine, electric power steering system, suspension system, and braking system. Interior features covered include seating, lighting, driver information center and instrument panel cluster, driver selectable modes, safety features, and the center stack display.
Upon completion of this course, technicians will be able to recall Cadillac ELR exterior and interior features, components, and characteristics.
Languages: English

EXTENDED RANGE ELECTRIC VEHICLE: HIGH VOLTAGE DISABLE PROCEDURE - GEN 1 VOLT/ELR SEL1301WB
This course covers the step-by-step procedure to safely disable the high voltage system within an Extended Range Electric Vehicle (EREV). Upon completion of this course, technicians will be able to identify the high voltage system disable procedure.
Languages: English
A0: ALTERNATIVE PROPULSION

HIGH VOLTAGE BATTERY: OVERVIEW 1 - GEN 1 VOLT/ELR  SEL1401WB
This course covers the high voltage energy storage system. It also covers drive motor battery characteristics and drive motor battery component characteristics. Upon completion of this course, technicians will be able to identify the characteristics and operation of the drive motor battery and identify characteristics of the drive motor battery components.
Languages: English

HIGH VOLTAGE BATTERY: OVERVIEW 2- GEN 1 VOLT/ELR  SEL1501WB
This course covers the high voltage energy storage system. In this course, participants should be able to identify the thermal management system characteristics and operation, and the characteristics and troubleshooting process for the integrated charger. Upon completion of this course, technicians will be able to identify the characteristics and operation of the thermal management system and identify the characteristics and troubleshooting process for the high voltage battery charger.
Languages: English

HIGH VOLTAGE POWER ELECTRONICS: OVERVIEW - GEN 1 VOLT/ELR  SEL1601WB
This course covers the power electronics found in advanced technology vehicles. It includes the correct operation of the drive motor generator power inverter module and accessory Direct Current (DC) power module, as well as the characteristics and correct operation of their thermal management systems. Upon completion of this course, technicians will be able to identify the correct operation of the drive motor generator power inverter module and thermal management system.
Languages: English

ELECTRIC TRANSMISSION: 4ET50 OVERVIEW - VOLT/ELR (EREV)  SEL1701WB
This course covers the 4ET50 transmission including the transmission characteristics and modes of operation, mechanical and electrical system characteristics, and the fluid flow and power flow for each mode of operation. Upon completion of this course, technicians will be able to identify the characteristics and modes of operation of the 4ET50 transmission, recall mechanical and electrical system characteristics of the 4ET50 transmission, and recall the correct fluid flow and power flow for each operating mode of the 4ET50 transmission.
Languages: English

EXTENDED RANGE ELECTRIC VEHICLE: SUPPORTING SYSTEMS 1- GEN 1 VOLT/ELR  SEL1801WB
This course covers the unique characteristics of the 1.4L engine, as well as the fuel and evaporative emissions control systems including the refueling process. Upon completion of this course, technicians will be able to identify the characteristics and operation of the 1.4L engine and identify the characteristics and operation of the fuel and evaporative emissions control systems.
Languages: English

EXTENDED RANGE ELECTRIC VEHICLE: SUPPORTING SYSTEMS 2- GEN 1 VOLT/ELR  SEL1901WB
This course covers the unique characteristics of the braking system including regenerative braking capabilities and modes of operation. This course also covers the unique characteristics of the Heating, Ventilation, and Air Conditioning (HVAC) system, including the high voltage heater, electric air conditioning compressor and drive motor battery coolant cooler. Upon completion of this course, technicians will be able to identify the characteristics and operation of the braking system and identify the characteristics and operation of the heating ventilation and air conditioning system.
Languages: English

EXTENDED RANGE ELECTRIC VEHICLE: INTRODUCTION - GEN 2 CHEVROLET  SEL2001WB
This course introduces the second generation (Gen 2) Extended Range Electric Vehicle (EREV), which includes the Chevrolet Volt. The course presents the vehicle’s characteristics, components, and operation. The course also provides information on the EREV’s electrical and communication systems, as well as its charging, fuel, and braking systems. Upon completion of this course, technicians will be able to identify features of the Gen 2 EREV, describe the components and modes of operation, describe the electrical and communication systems, identify characteristics of the charging system, identify characteristics of the fuel system, and identify characteristics of the braking system.
Languages: English

HIGH VOLTAGE BATTERY: OVERVIEW - GEN 2 VOLT  SEL2101WB
This course covers the Generation 2 Extended Range Electric Vehicle (EREV) high voltage energy storage system. This content includes the drive motor battery assembly characteristics, drive motor battery components, thermal management system characteristics and operation, and diagnosis and service of the drive motor battery. Upon completion of this course, technicians will be able to recall components of the drive motor battery assembly, recall the operation of the drive motor battery, recall the operation of the thermal management system, and recall how to diagnose and service the drive motor battery.
Languages: English
**BATTERY ELECTRIC VEHICLE: INTRODUCTION - CHEVROLET SPARK EV**

This course provides an introduction to the battery electric vehicle. It covers key features, characteristics, and components of high voltage vehicle systems and supporting systems. High voltage vehicle systems covered include the propulsion system, thermal management system, and the charging system. Supporting systems covered include the climate control system, electrical and vehicle communication systems, braking system, and the steering system. This course also discusses modes of operation, as well as safe work practices, the diagnostic process, and the high voltage disabling procedure. Upon completion of this course, technicians will be able to recall the key characteristics and features of the battery electric vehicle, identify characteristics and components of the battery electric vehicle supporting systems, recall characteristics of battery electric vehicle operation, and recall battery electric vehicle service procedures.

**Languages:** English

**HIGH VOLTAGE BATTERY: GEN 1 OVERVIEW - SPARK EV (BEV)**

This course covers the battery electric vehicle high voltage energy storage system. It covers characteristics and failure modes of the drive motor battery, as well as special tools required to diagnose and service the drive motor battery. This course also covers characteristics of the lithium-ion battery modules and battery control systems, as well as operation of the contactors. Lastly, this course discusses the thermal management system, including its characteristics, components, and operation. Upon completion of this course, technicians will be able to recall the characteristics and operation of the drive motor battery, recall characteristics, components, and operation of the drive motor battery components, and recall the characteristics, components, and operation of the thermal management system.

**Languages:** English

**HIGH VOLTAGE BATTERY: GEN 2 OVERVIEW - SPARK EV (BEV)**

This WBT course provides a description of the specifications, components, configuration, connections, and function of the drive motor battery for the 2015 Spark EV (Electric Vehicle). The content of the course covers service procedures and cautions, as well as the associated parts of the drive motor battery system. Upon completion of this course, technicians will be able to identify the function and specifications of the drive motor battery, describe the components, configuration, and associated parts of the drive motor battery, and describe the service techniques and special tools associated with the drive motor battery.

**Languages:** English

**ELECTRIC TRANSMISSION: 5ET50 OVERVIEW - GEN 2 VOLT**

This course covers the 5ET50 transmission including the transmission characteristics and modes of operation, mechanical and electrical system characteristics, and the fluid flow and powerflow for each mode of operation. Upon completion of this course, technicians will be able to recognize the characteristics and modes of operation for the 5ET50 transmission, recognize the mechanical and electrical system characteristics of the 5ET50 transmission, and recognize the correct fluid flow and power flow for each operating mode of the 5ET50 transmission.

**Languages:** English

**ELECTRIC TRANSMISSION: 1ET35 OVERVIEW - SPARK EV (BEV)**

This course covers the 1ET35 transmission characteristics, components, modes of operation, and service tips. The characteristics of the 1ET35 transmission include transmission cooling and fluid type. Mechanical and electrical components are also covered, as well as drive, reverse, and regenerative braking modes of operation. The service tips covered include fluid filling procedure highlights, and transmission disassembly highlights. Upon completion of this course, technicians will be able to recall characteristics and components of the 1ET35 transmission, identify modes of operation of the 1ET35 transmission, and recall service procedure tips for the 1ET35 transmission.

**Languages:** English

**BATTERY ELECTRIC VEHICLE INTRODUCTION 2: CHEVROLET BOLT EV**

This course provides an introduction to the 2017 Bolt EV battery electric vehicle. It covers key features, characteristics, and components of high voltage vehicle systems and supporting systems. The high voltage vehicle systems covered include the propulsion system, thermal management system, and charging system. Supporting systems covered include the climate control system and the braking system. This course also discusses modes of operation and safe work practices.

**Languages:** English/French

**HIGH VOLTAGE BATTERY: OVERVIEW - BOLT EV (BEV 2)**

This course presents the high voltage energy storage systems in the latest battery electric vehicle from General Motors: the 2017 Chevrolet Bolt EV. The course covers characteristics and components of the drive motor battery, the associated thermal management system, and service procedures. Upon completion of this course, participants will be able to identify characteristics and components of the drive motor battery assembly, recall components and operation of the battery’s thermal management system, and recall diagnosis and service procedures for the drive motor battery.

**Languages:** English
A0: ALTERNATIVE PROPULSION

ADVANCED TECHNOLOGY VEHICLE TRANSMISSION 5: CHEVROLET BOLT 1ET25
S-EL06-89.01WBT

This WBT course provides technical information on the 1ET25 transmission, which is a key component of the electric Chevrolet Bolt. Topics included are the transmission’s electrical and mechanical components, modes of operation, electronic transmission range select, and service tips. Upon completion of this course, technicians will be able to identify characteristics and mechanical components specific to the 1ET25 transmission, identify electrical components of the 1ET25 transmission, identify the transmission cooling methods, fluid type and capacity related to the 1ET25 transmission, identify modes of operation performed by the 1ET25 transmission, and identify service tips related to the 1ET25 transmission.

Languages: English/French

HYBRID ELECTRIC VEHICLE: INTRODUCTION - CHEVROLET MALIBU
SEL2901WB

This course introduces the Hybrid Electric Vehicle (HEV), incorporated into the 2016 Chevrolet Malibu. The course presents the HEV’s characteristics, features, components, and operation. The course also provides information on the HEV’s electrical and communication systems, as well as its braking systems. Upon completion of this course, technicians will be able to describe the HEV features and components, describe the HEV modes of operation, describe the HEV electrical and communication systems, and identify characteristics of the braking system.

Languages: English

HIGH VOLTAGE BATTERY: OVERVIEW - MALIBU
SEL3001WB

This course presents a description of the high voltage battery found in hybrid electric vehicles such as the 2016 Chevrolet Malibu. Topics cover the battery’s main components, and the steps to disconnect the high voltage battery for service. Upon completion of this course, technicians will be able to recognize the characteristics and components of the high voltage battery assembly, including service procedures and tools.

Languages: English

ELECTRIC TRANSMISSION: 5ET50 OVERVIEW - MALIBU
SEL2801WB

This course presents the characteristics of the 5ET50 transmission, which is part of the hybrid electric Chevrolet Malibu. Topics cover the electrical and mechanical components of the transmission, along with its modes of operation, including the hydraulic fluid flow and mechanical power flow for each mode. Upon completion of this module, technicians will be able to recognize characteristics and operating modes of the 5ET50 transmission, mechanical and electrical system components of the 5ET50 transmission, and fluid flow and power flow for each operating mode of the 5ET50 transmission.

Languages: English

PLUG-IN HYBRID ELECTRIC VEHICLE: INTRODUCTION - CADILLAC CT6
SEL3101WB

This course introduces the 2017 Cadillac CT6 plug-in hybrid electric vehicle. Topics cover characteristics and components related to the vehicle’s high voltage systems and supporting systems such as climate control and braking. Upon completion of this module, technicians will be able to recognize identify key characteristics and features, recall high voltage systems, and identify supporting systems.

Languages: English

HIGH VOLTAGE BATTERY: OVERVIEW - CT6
SEL3201WB

This course presents the high voltage energy storage systems in the latest Plug-in Hybrid Electric Vehicle (PHEV) from General Motors: the 2017 Cadillac CT6 PHEV. The course covers characteristics and components of the lithium-ion drive motor battery, thermal management system, and an overview of service procedures, including special tools. Upon completion of this course, technicians will be able to identify characteristics and components of the drive motor battery assembly, recall components and operation of the battery’s thermal management system, and recall diagnosis and service procedures, including special tools.

Languages: English

ELECTRIC TRANSMISSION: 4EL70 OVERVIEW - CT6
SEL3301WB

This course covers the features and operation of the 4EL70 transmission. Those features include: transmission specifications, components and their operation, drive modes, diagnostics, and towing methods. Upon completion of this course, technicians will be able to identify the 4EL70 transmission features and operation.

Languages: English

eASSIST SYSTEM GEN 1: INTRODUCTION 1 - BUICK LACROSSE/ CHEVROLET MALIBU
SEL3401WB

This course covers the characteristics of the eAssist system and the impact the system has on the drive cycle. Upon completion of this course, technicians will be able to recall the characteristics of the eAssist system.

Languages: English
eASSIST SYSTEM GEN 2: INTRODUCTION 1 - BUICK LACROSSE/CHEVROLET MALIBU  
SEL3501WB
This course covers the components, operation, and servicing of the eAssist system. Components discussed include the starter generator, liquid cooling system, accessory drive belt system, high voltage battery assembly, and supporting systems. Upon completion of this course, technicians will be able to identify the components, and recall the operation and service procedures of the eAssist system.
Languages: English

HIGH VOLTAGE BATTERY: OVERVIEW - GEN 1 eASSIST  
SEL3601WB
This course covers the components, characteristics, and operation of the eAssist generator control and battery module assembly and the external cooling system. Upon completion of this course, technicians will be able to identify the eAssist generator control and battery module assembly components, recall the generator battery assembly components and characteristics, identify the generator control module characteristics and functions, and recall the battery cooling system components, characteristics, and operation.
Languages: English

eASSIST SYSTEM GEN 1: SAFETY  
SEL3701WB
This course covers high voltage safety precautions and eAssist service procedures, including the disabling and enabling procedures. Upon completion of this course, technicians will be able to identify high voltage safety and service procedures and identify the high voltage disabling and enabling procedures.
Languages: English

eASSIST SYSTEM GEN 2: INTRODUCTION - CHEVROLET SILVERADO/GMC SIERRA  
SEL3801WB
This course introduces the eAssist System and will describe the cooling systems, generator control module, and motor generator, including their operation. Upon completion of this course, technicians will be able to describe overall features, drive cycle features, and motor generator unit components and operation.
Languages: English

HIGH VOLTAGE BATTERY: OVERVIEW - GEN 2 eASSIST  
SEL3901WB
This course covers the eAssist battery storage system 2. This content includes the eAssist components and operation of the drive motor battery assembly and the operation of the thermal management system. Upon completion of this course, technicians will be able to recall the components of the generator and battery and recall the battery pack components and functions.
Languages: English

eASSIST SYSTEM GEN 3: INTRODUCTION- BUICK LACROSSE/CHEVROLET MALIBU  
SEL4001WB
This course presents the eAssist technology contained in the 2018 Buick LaCrosse. Topics include the eAssist drive cycle, the cooling system for power electronics, and the components and operation of the drive motor and the drive belt. Upon completion of this course, participants will be able to describe the eAssist technology in the 2018 Buick LaCrosse features, components, and operation.
Languages: English

HIGH VOLTAGE BATTERY: OVERVIEW - GEN 3 eASSIST  
SEL4101WB
This course covers the eAssist Battery Storage System 3. The content includes the eAssist components, the operation of the drive motor battery assembly, and the operation of the thermal management system. Upon completion of this course, technicians will be able to describe the eAssist battery system and identify the generator battery components and functions.
Languages: English

12V STOP / START SYSTEM: OVERVIEW, COMPONENTS AND OPERATION  
S-EL06-79.01WBT
This course presents an overview of the 12V Stop / Start System, including the three different types, how they operate, features, and components. Topics include information about the benefits and the supporting automatic transmission fluid systems. Participants will acquire a sound understanding of how the 12V Stop / Start System works, enabling them to service vehicles equipped with this system more effectively.
Languages: English
A0: ALTERNATIVE PROPULSION

COMPRESSED NATURAL GAS (CNG) FUEL SYSTEMS

The WBT component provides knowledge of regulations, component function and operation, vehicles, diagnosis, service, and maintenance procedures for Compressed Natural Gas (CNG) fuel systems. Upon completion of this WBT component technicians will be able to recall laws, regulations, characteristics, and safety procedures for compressed natural gas fuel systems, describe the compressed natural gas system components and operation, identify compressed natural gas vehicles, engines and diagnostic procedures, and recall compressed natural gas inspection and maintenance procedures.

Languages: English

BI-FUEL SYSTEM OPERATION

General Motors bi-fuel systems use a combination of Compressed Natural Gas (CNG) fuel and traditional gasoline systems. This course covers the process of how the bi-fuel system operates and performs in comparison to a traditional gasoline vehicle. It also identifies components involved in bi-fuel system operation and bi-fuel supply operations. Bi-fuel diagnostic scenarios for no start and improper CNG operation will be discussed. In addition to diagnostics, the bi-fuel inspection and maintenance process including leak checking and tank removal safety will be presented. Vehicle storage will also be covered. Upon completion of this course, participants will be able to describe the bi-fuel system components and operation, describe bi-fuel system diagnostic procedures, and recall bi-fuel system inspection and maintenance procedures.

Languages: English

Seminars

HYBRID VEHICLE MAINTENANCE PROCEDURES

This course will focus on maintenance service procedures that aftermarket technicians can perform on hybrid electric vehicles. Participants will receive a high-level overview of the operation of hybrid components, related safety concerns, and serviceable systems. These include high voltage system operation, supporting systems such as HVAC and brake systems, and internal combustion engine.

Languages: English

TechTube Videos

ELECTRIC TRANSMISSION: 1ET25 UNIT REPAIR - BOLT EV

This Service Know-How Video highlights the overhaul procedures for the 1ET25 Advanced Technology Vehicle Transmission. The video demonstrates the procedures for the disassembly and reassembly of the 1ET25 using the necessary special tools. Where procedures are similar, only representative examples will be shown. Even though the 1ET25 is less complex than most conventional transmissions, many of the disassembly and reassembly procedures and tools will be unfamiliar to transmission technicians. This video has been produced to help technicians successfully overhaul the 1ET25.

Languages: English
A recommended path for completing the Engine Mechanical curriculum is outlined below. To complete the training below and to search for and complete additional training, visit acdelcotraining.com.

**RECOMMENDED PATH**

<table>
<thead>
<tr>
<th>WBT</th>
<th>Gas / Diesel Engine Mechanical Diagnosis and Measurement 1: Diagnosis</th>
<th>SEM0101WB</th>
</tr>
</thead>
<tbody>
<tr>
<td>WBT</td>
<td>Gas / Diesel Engine Mechanical Diagnosis and Measurement 2: Disassembly</td>
<td>SEM0201WB</td>
</tr>
<tr>
<td>WBT</td>
<td>Gas / Diesel Engine Mechanical Diagnosis and Measurement 3: Inspection 1</td>
<td>SEM0301WB</td>
</tr>
<tr>
<td>WBT</td>
<td>Gas / Diesel Engine Mechanical Diagnosis and Measurement 4: Inspection 2</td>
<td>SEM0401WB</td>
</tr>
<tr>
<td>WBT</td>
<td>Gas / Diesel Engine Mechanical Diagnosis and Measurement 5: Assembly 1</td>
<td>SEM0501WB</td>
</tr>
<tr>
<td>WBT</td>
<td>Gas / Diesel Engine Mechanical Diagnosis and Measurement 6: Procedures</td>
<td>SEM0601WB</td>
</tr>
<tr>
<td>WBT</td>
<td>Gas / Diesel Engine Mechanical Diagnosis and Measurement 7: Unique Gasoline Procedures</td>
<td>SEM0701WB</td>
</tr>
<tr>
<td>WBT</td>
<td>Gas / Diesel Engine Mechanical Diagnosis and Measurement 8: Unique Diesel Procedures</td>
<td>SEM0801WB</td>
</tr>
</tbody>
</table>

**ADDITIONAL TRAINING**

<table>
<thead>
<tr>
<th>VID</th>
<th>Water Pump Service</th>
<th>S-EM01-01.01VID</th>
</tr>
</thead>
<tbody>
<tr>
<td>VID</td>
<td>4.3 Balance Shaft Timing Chain Replacement (Gen V)</td>
<td>S-EM01-02.01VID</td>
</tr>
<tr>
<td>VID</td>
<td>Cylinder Leak Down Test</td>
<td>S-EM01-03.01VID</td>
</tr>
<tr>
<td>VID</td>
<td>Static Compression Test</td>
<td>S-EM01-04.01VID</td>
</tr>
<tr>
<td>VID</td>
<td>Active Fuel Management Lifters</td>
<td>S-EM01-06.01VID</td>
</tr>
<tr>
<td>VID</td>
<td>Engine Mounts</td>
<td>S-EM01-07.01VID</td>
</tr>
<tr>
<td>VID</td>
<td>Running Compression Test</td>
<td>S-EM01-05.01VID</td>
</tr>
</tbody>
</table>
Web-Based Training

GAS / DIESEL ENGINE MECHANICAL DIAGNOSIS AND MEASUREMENT 1: SEM0101WB
DIAGNOSIS
This course covers the diagnostic process for lower and upper 3.6L LGX V6 engine concerns, including engine noises, misfire, oil pressure concerns, and external component noises. This course is intended for service technicians and covers the theory of 3.6L LGX engine diagnosis. Topics include proven diagnostic procedures, test equipment, and methods. Upon completion of this course, the participants will be able to recall how to diagnose lower engine noise, recall how to diagnose upper engine noise, recall how to diagnose engine misfire, and identify oil pressure concerns.
Languages: English

GAS / DIESEL ENGINE MECHANICAL DIAGNOSIS AND MEASUREMENT 2: SEM0201WB
DISASSEMBLY
This course is intended for service technicians and covers the principles and procedures of 3.6L LGX engine disassembly. This course covers the disassembly process for the upper and lower sections of the 3.6L LGX V6 engine. First, it will cover the disassembly of the upper section of the 3.6L LGX V6 engine, and then the disassembly of the lower section. Related content in this course includes proven diagnostic procedures, test equipment, and methods of disassembly. Upon completion of this course, the participants will be able to recall pre-disassembly procedures, recall how to disassemble the overhead cam and camshaft, and recall how to disassemble the engine block.
Languages: English

GAS / DIESEL ENGINE MECHANICAL DIAGNOSIS AND MEASUREMENT 3: SEM0301WB
INSPECTION 1
This course is intended for service technicians and covers the principles and procedures of the 3.6L LGX engine post-disassembly inspection. It covers the inspection process for the upper and lower sections of the 3.6L LGX V6 engine. Related content in this course includes proven inspection procedures, test equipment, and methods of measurement. Upon completion of this course, the participants will be able to summarize how to inspect the disassembled 3.6L LGX engine, recall how to clean, inspect and measure the engine block and crankshaft, recall how to disassemble, clean and inspect piston and rod assemblies, and recall how to clean and inspect the flexplate and balancer.
Languages: English

GAS / DIESEL ENGINE MECHANICAL DIAGNOSIS AND MEASUREMENT 4: SEM0401WB
INSPECTION 2
This course covers various engine procedures, including engine timing, removal and replacement of oil pump balance shafts, direct injector removal and replacement, turbocharger removal and replacement, camshaft removal and replacement, and other maintenance procedures. The engines included in this course are the LGX, LGE, and SGE gasoline engines and the L5P, LWN, LUZ, and LH7 diesel engines. This WBT also presents additional specifications, service and maintenance procedures, and unique features for these gasoline and diesel engines.
Languages: English

GAS / DIESEL ENGINE MECHANICAL DIAGNOSIS AND MEASUREMENT 5: SEM0501WB
ASSEMBLY 1
This course is intended for service technicians and covers the principles and procedures of starting 3.6L LGX engine assembly. It covers the first parts of the assembly process, concentrating on the upper components of the 3.6L LGX V6 engine including the installation of the crankshaft, piston and rod, rear main seal, oil pump and pan, and cylinder head. Related content in this course includes proven inspection procedures, test equipment, and methods of measurement. Upon completion of this course, the participants will be able to describe how to assemble the upper components of the disassembled 3.6L LGX engine, recall how to reassemble the block and install the crankshaft, recall how to reassemble piston and rod assemblies, measure rod clearance and crankshaft bearings and assemble and tighten connecting rods and bearings, recall the steps of the alternate clearance procedure, recall how to install the rear main seal, recall how to install the oil pump and pan, and recall how to install and torque the cylinder heads.
Languages: English
GAS / DIESEL ENGINE MECHANICAL DIAGNOSIS AND MEASUREMENT 6: SEM0601WB

PROCEDURES
This course is intended for service technicians and covers the second half of the principles and procedures used during 3.6L LGX engine reassembly. It covers specific parts of the engine assembly process, concentrating on the upper components of the 3.6L LGX V6 engine including the installation of the camshaft actuator, timing chain guide and tensioner, oil pump, camshaft sprockets, fuel pump, high pressure fuel rail crossover pipe, front cover, oil pan, water pump, camshaft cover, engine coolant thermostat housing, water outlet, intake manifold, and crankshaft balancer. Related content in this course includes proven inspection procedures, test equipment, and methods of measurement. Upon completion of this course, the participants will be able to recall the order of the steps taken to re-assemble the left side of the 3.6L LGX engine, recall the order of the steps taken to re-assemble the right side of the 3.6L LGX engine, recall the order of the steps taken for re-installation of 3.6L LGX engine components including: the oil pump, the crankshaft assembly, fuel pump, the high pressure fuel rail crossover pipe, the engine front cover, oil pan, water pump, camshaft cover, engine coolant thermostat housing, water outlet, intake manifold, and the crankshaft balancer.
Languages: English

GAS / DIESEL ENGINE MECHANICAL DIAGNOSIS AND MEASUREMENT 7: SEM0701WB

UNIQUE GASOLINE PROCEDURES
This course is intended for service technicians and covers unique principles and procedures of engine service. It covers the unique parts of the disassembly, inspection, and assembly processes, concentrating on procedures and tools used for unique models of gasoline engines. Upon completion of this course, the participants will be able to: recall unique service procedures for Cylinder Set Strategy (CSS) gasoline engines, recall unique service procedures for various small and midsize gasoline engines, and recall unique service procedures used for 4.3L LV3 gasoline engines.
Languages: English

GAS / DIESEL ENGINE MECHANICAL DIAGNOSIS AND MEASUREMENT 8: SEM0801WB

UNIQUE DIESEL PROCEDURES
This course is intended for service technicians and covers unique principles and procedures of engine service. It covers the unique parts of the disassembly, inspection, and assembly processes, concentrating on procedures and tools used for unique models of diesel engines. Upon completion of this course, the participants will be able to: recall unique service procedures for the 6.6L Duramax diesel engine, recall unique service procedures used for the 2.8L LWN diesel engine, recall unique service procedures used for the 2.0L LUZ diesel engine, and recall unique service procedures used for the 1.6L LH7 diesel engine.
Languages: English

TechTube Videos

WATER PUMP SERVICE S-EM01-01.01VID
This service video will share some information on things to look for when replacing a water pump and servicing the coolant system to reduce repeat pump failures.
Languages: English

4.3 BALANCE SHAFT TIMING CHAIN REPLACEMENT (GEN V) S-EM01-01.02VID
This video demonstrates how to replace the balancer shaft timing chain on a Gen V 4.3L engine.
Languages: English

CYLINDER LEAK DOWN TEST S-EM01-01.03VID
This video demonstrates how to perform a cylinder leak down test to gauge the health of an engine, using a diagnostic scenario.
Languages: English

STATIC COMPRESSION TEST S-EM01-01.04VID
This video demonstrates how to perform a static compression test and how the readings can help diagnose a base engine problem.
Languages: English

RUNNING COMPRESSION TEST S-EM01-01.05VID
This video demonstrates how to perform a running compression test and how the readings can help diagnose a base engine problem.
Languages: English
**ACTIVE FUEL MANAGEMENT LIFTERS**  
S-EM01-06.01VID  
This video describes General Motors Active Fuel Management (AFM) system operation, diagnosis and inspection of AFM lifters and proper replacement procedures.  
**Languages:** English

**ENGINE MOUNTS**  
S-EM01-07.01VID  
This video demonstrates inspection and diagnosis of engine mounts for front wheel drive and rear wheel drive vehicles.  
**Languages:** English
A recommended path for completing the Automatic Transmission curriculum is outlined below. To complete the training below and to search for and complete additional training, visit acdelcotraining.com.

**RECOMMENDED PATH**

<table>
<thead>
<tr>
<th>WBT</th>
<th>Automatic Transmission Inspection and Maintenance</th>
<th>SAT0101WB</th>
</tr>
</thead>
<tbody>
<tr>
<td>WBT</td>
<td>Automatic Transmission Characterization Programming</td>
<td>SAT0201WB</td>
</tr>
<tr>
<td>WBT</td>
<td>10-Speed Automatic Transmission Overview</td>
<td>SAT0301WB</td>
</tr>
<tr>
<td>WBT</td>
<td>Electronic TRS Operation and Service</td>
<td>SAT0401WB</td>
</tr>
<tr>
<td>WBT</td>
<td>Automatic Transmission: Principles of Operation</td>
<td>SAT0501WB</td>
</tr>
<tr>
<td>WBT</td>
<td>Automatic Transmission: Powerflow</td>
<td>SAT1001WB</td>
</tr>
<tr>
<td>WBT</td>
<td>Automatic Transmission: Outputs</td>
<td>SAT0901WB</td>
</tr>
<tr>
<td>WBT</td>
<td>Automatic Transmission: Inputs</td>
<td>SAT0801WB</td>
</tr>
<tr>
<td>WBT</td>
<td>Automatic Transmission: Hydraulic Operation</td>
<td>SAT0701WB</td>
</tr>
<tr>
<td>WBT</td>
<td>Automatic Transmission: Mechanical Components</td>
<td>SAT0601WB</td>
</tr>
<tr>
<td>WBT</td>
<td>Automatic Transmission: Diagnosis and Service</td>
<td>SAT1101WB</td>
</tr>
<tr>
<td>WBT</td>
<td>8-Speed Automatic Transmission Overview</td>
<td>S-AT02-13.01WBT</td>
</tr>
</tbody>
</table>

**ADDITIONAL TRAINING**

<table>
<thead>
<tr>
<th>VID</th>
<th>6 speed Transmission Fluid Level Checking</th>
<th>S-AT02-01.01VID</th>
</tr>
</thead>
<tbody>
<tr>
<td>VID</td>
<td>Trans IMS Testing</td>
<td>S-AT02-02.01VID</td>
</tr>
</tbody>
</table>
Web-Based Training

AUTOMATIC TRANSMISSION INSPECTION AND MAINTENANCE  SAT0101WB
This course covers how to perform visual inspections of the automatic transmission system. The course also covers service procedures for removing and replacing the external speed sensor seal and adjusting the transmission fluid level.
Languages: English

AUTOMATIC TRANSMISSION CHARACTERIZATION PROGRAMMING  SAT0201WB
This course describes the purpose and process to successfully complete the Solenoid Valve Characterization Reprogramming Procedure required for all new eight, nine and ten speed automatic transmissions. This course will direct you on the proper programming required to store the information in the Transmission Control Module. When specific transmission components have been replaced during service, the characterization data must be retrieved from a database and reprogrammed into the Transmission Control Module. Upon completing this course, participants will be able to identify the purpose and importance of characterization programming, identify important elements within the Solenoid Valve Characterization Programming, and identify the process and steps involved to successfully perform the Solenoid Valve Characterization Programming.
Languages: English

10-SPEED AUTOMATIC TRANSMISSION OVERVIEW  SAT0301WB
This course presents an overview of the new 10L90 10-speed automatic transmission, the newest rear wheel drive transmission developed by General Motors. This course provides technicians with an overview of the mechanical, hydraulic, and electrical components necessary for its proper operation. Technicians will review the different clutches and gear sets used to achieve the forward and reverse gears. Fluid and filters are discussed to ensure proper operation and servicing. Finally, the programming is reviewed to ensure a quality repair.
Languages: English

ELECTRONIC TRS OPERATION AND SERVICE  SAT0401WB
This course covers the Electronic Transmission Range Select (ETRS) system. The characteristics of various features are described in this course, including ETRS system benefits, external and internal components, operation, and service procedures.
Languages: English

AUTOMATIC TRANSMISSION: PRINCIPLES OF OPERATION  SAT0501WB
This WBT course covers automatic transmission principles and hydraulics. Specific topics include characteristics of the planetary gear set, theory of torque multiplication, and reduction and types of automatic transmissions. Upon completion of this course, technicians will be able to recall principles of automatic transmissions and recall principles of hydraulics.
Languages: English

AUTOMATIC TRANSMISSION: MECHANICAL COMPONENTS  SAT0601WB
This WBT course covers torque converter characteristics, mechanical system fundamentals and characteristics of the one-way clutch and final drive. Other components include the torque converter pump, starter lock-up, turbine, brazed hammer down blades, stator, torque converter clutch, and planetary gear set types. Upon completion of this course, technicians will be able to identify fundamentals of the torque converter, identify fundamentals of the mechanical system, and identify characteristics of the one-way clutch and the final drive.
Languages: English

AUTOMATIC TRANSMISSION: HYDRAULIC OPERATION  SAT0701WB
This course covers the hydraulic system characteristics and valve body components of automatic transmissions systems. Upon completion of this course, technicians will be able to recall the hydraulic system characteristics of an automatic transmission and identify characteristics of the valve body.
Languages: English/Spanish/French

AUTOMATIC TRANSMISSION: INPUTS  SAT0801WB
This course covers electrical system inputs of an automatic transmission system. Topics also include: driver shift control types, manual shaft position switch types, pressure switches, speed sensors, temperature sensors, and throttle position. Upon completion of this course, technicians will be able to identify the electrical system inputs in an automatic transmission.
Languages: English
AUTOMATIC TRANSMISSION: OUTPUTS
This course covers electrical system outputs of an automatic transmission system. Topics also include: output solenoid characteristics, control module characteristics and operation. Upon completion of this course, technicians will be able to identify the electrical system outputs in an automatic transmission.
Languages: English

AUTOMATIC TRANSMISSION: POWERFLOW
This course covers the automatic transmission control system power flow and modes of operation. Specific operations include: clutch-to-clutch, freewheeling and engine braking. Upon completion of this course, technicians will be able to recall automatic transmission system power flow and modes of operation and identify the steps of automatic transmission diagnostic process.
Languages: English

AUTOMATIC TRANSMISSION: DIAGNOSIS AND SERVICE
This WBT course covers the hydraulic system characteristics and valve body components of automatic transmissions systems. Specifics include characteristics and types of: automatic transmission fluids, fluid pumps, lubrication systems, accumulator types, solenoids, and valve bodies. Upon completion of this course, technicians will be able to recall automatic transmission diagnostic procedures and recall how to perform automatic transmission service procedures.
Languages: English

8-SPEED AUTOMATIC TRANSMISSION OVERVIEW
This WBT course presents an overview of the 8-speed automatic transmission known as the 8L90. Topics cover the 8L90’s features, components, power flow and programming requirements, as well as the start-stop system. Upon completion of this course, technicians will be able to identify features of the 8L90, identify components of the 8L90, identify the power flow through the hard components for each gear of the 8L90, recall the requirements for programming the 8L90, and describe the start-stop system.
Languages: English

TechTube Videos

6 SPEED TRANSMISSION FLUID LEVEL CHECKING
This video demonstrates how to properly check and adjust fluid levels on the GM 6T70/75, 6T40 and 6L80 automatic transmissions.
Languages: English

TRANS IMS TESTING
This video demonstrates how to test the trans Internal Mode Switch (IMS) on GM’s 6L80/6L90 automatic transmissions.
Languages: English
A recommended path for completing the Manual Transmission / Driveline curriculum is outlined below. To complete the training below and to search for and complete additional training, visit acdelcotraining.com.

### RECOMMENDED PATH

<table>
<thead>
<tr>
<th>SST</th>
<th>WBT</th>
<th>WBT</th>
<th>WBT</th>
<th>WBT</th>
<th>WBT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual Transmission Clutch Self Study Training</td>
<td>Front-Wheel Drive (FWD) / Rear-Wheel Drive (RWD) Operation, Diagnosis and Service 1: FWD Operation</td>
<td>Front-Wheel Drive (FWD) / Rear-Wheel Drive (RWD) Operation, Diagnosis and Service 2: FWD Diagnosis</td>
<td>Front-Wheel Drive (FWD) / Rear-Wheel Drive (RWD) Operation, Diagnosis and Service 3: RWD Operation</td>
<td>Front-Wheel Drive (FWD) / Rear-Wheel Drive (RWD) Operation, Diagnosis and Service 4: RWD Diagnosis</td>
<td></td>
</tr>
<tr>
<td>SFN1601SF</td>
<td>S-MT03-03.01WBT</td>
<td>S-MT03-04.01WBT</td>
<td>S-MT03-05.01WBT</td>
<td>S-MT03-06.01WBT</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WBT</th>
<th>WBT</th>
<th>WBT</th>
<th>WBT</th>
<th>WBT</th>
<th>WBT</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMT0501WB</td>
<td>SMT0401WB</td>
<td>SMT0601WB</td>
<td>SMT0801WB</td>
<td>SMT0901WB</td>
<td>SMT1001WB</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WBT</th>
<th>WBT</th>
<th>WBT</th>
<th>WBT</th>
<th>WBT</th>
<th>WBT</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-MT03-09.01WBT</td>
<td>SMT1401WB</td>
<td>SMT1301WB</td>
<td>SMT1201WB</td>
<td>SMT1101WB</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WBT</th>
<th>WBT</th>
<th>WBT</th>
<th>WBT</th>
<th>WBT</th>
<th>ILT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Truck AWD/4WD Operation, Diagnosis &amp; Service 2: Diagnosis</td>
<td>Propshafts and Rear Axle Operation, Diagnosis, and Service 1: Fundamentals and Characteristics</td>
<td>Propshafts and Rear Axle Operation, Diagnosis, and Service 2: Diagnosis</td>
<td>Drivetrain Inspection and Maintenance</td>
<td>All-Wheel Drive / Four Wheel Drive</td>
<td></td>
</tr>
<tr>
<td>S-MT03-10.01WBT</td>
<td>S-MT03-11.01WBT</td>
<td>S-MT03-12.01WBT</td>
<td>S-MT03-13.02WBT</td>
<td>S-MT03-01.01ILT</td>
<td></td>
</tr>
</tbody>
</table>

Continued to next page
Continued from previous page

<table>
<thead>
<tr>
<th>HDT</th>
<th>HDT</th>
</tr>
</thead>
<tbody>
<tr>
<td>All-Wheel Drive</td>
<td></td>
</tr>
<tr>
<td>S-MT03-02.01HDT</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Four Wheel Drive</td>
<td></td>
</tr>
<tr>
<td>S-MT03-01.01HDT</td>
<td></td>
</tr>
</tbody>
</table>

### ADDITIONAL TRAINING

- **VID**
  - Proper Way to Check Ring Gear Backlash
    - S-MT03-01.01VID
  - Transfer Case
    - S-MT03-01.02VID
  - Front Axle Actuator Diagnosis
    - S-MT03-01.03VID
A3: MANUAL TRANSMISSION / DRIVELINE

Self Study Training

MANUAL TRANSMISSION CLUTCH SELF STUDY TRAINING
An explanation of popular automotive clutch systems. Includes clutch discs, pressure plates, mechanical and hydraulic release systems, flywheels and pilot bearings.
Languages: English

Web-Based Training

FRONT-WHEEL DRIVE (FWD) / REAR-WHEEL DRIVE (RWD)
OPERATION, DIAGNOSIS AND SERVICE 1: FWD OPERATION
Part one of this four-part WBT course covers manual drivetrain / axle types, where to locate manual drivetrain / axle resources, and how to service a manual drivetrain / axle using safe practices. This course also covers front wheel drive (FWD) characteristics, FWD transmission clutch types and steps of operations, manual transmission characteristics, including the mechanical components, the shift mechanism, and the steps of operation. The course further covers manual transmission steps of operation, manual transmission electronic control system characteristics, and front wheel drive half shaft assembly types and steps of operation. Upon completion of this course, technicians will be able to, identify manual driveline fundamentals, identify FWD manual transmission fundamentals, recall FWD transmission clutch types and operation, recall FWD manual transmission mechanical system characteristics and operation, recall FWD manual transmission operation, identify FWD manual transmission electronic control system characteristics, and recall FWD half shaft assembly fundamentals.
Languages: English/Spanish/French

FRONT-WHEEL DRIVE (FWD) / REAR-WHEEL DRIVE (RWD)
OPERATION, DIAGNOSIS AND SERVICE 2: FWD DIAGNOSIS
Part two of this four-part WBT course covers diagnostics of a Front-Wheel Drive (FWD) manual transmission clutch, manual transmission, and an axle shaft. This course also covers how to diagnose a FWD manual transmission, clutch, and axle shaft using visual and operational inspections, symptom-based diagnostics, and Diagnostic Trouble Code (DTC)-based diagnostics. Upon completion of this course, technicians will be able to, describe FWD manual transmission clutch diagnostics, recall FWD manual transmission diagnostics, recall FWD manual transmission symptom-based diagnostics, and identify FWD axle shaft diagnostics.
Languages: English/Spanish/French

FRONT-WHEEL DRIVE (FWD) / REAR-WHEEL DRIVE (RWD)
OPERATION, DIAGNOSIS AND SERVICE 3: RWD OPERATION
Part three of this four-part WBT course covers Rear-Wheel Drive (RWD) characteristics and manual transmission clutch types. This course also covers Tremec® 6-speed manual transmission characteristics, fluid characteristics, and mechanical component characteristics. This course also covers Tremec® 6-speed manual transmission shift mechanism types, and direct mounted and remote mounted operation. The course further covers Tremec® 6-speed manual transmission operation, electronic control system characteristics and modes of operation. Upon completion of this course, technicians will be able to, identify Rear-Wheel Drive (RWD) fundamentals, identify manual transmission fundamentals of a Tremec® 6-speed transmission, recall operational steps of a Tremec® 6-speed manual transmission, and identify characteristics and the operation of the manual Tremec® 6-speed transmission electronic control system.
Languages: English/Spanish/French

FRONT-WHEEL DRIVE (FWD) / REAR-WHEEL DRIVE (RWD)
OPERATION, DIAGNOSIS AND SERVICE 4: RWD DIAGNOSIS
Part four of this four-part WBT course covers how to troubleshoot Rear-Wheel Drive (RWD) manual transmissions using a systematic strategy-based diagnosis process. This course also covers how to diagnose rear-wheel drive manual transmissions using a preliminary inspection, an operational test, preliminary symptom-based diagnostics, and preliminary diagnostic trouble code-based diagnostics. Further, this course covers how to diagnose rear-wheel drive manual transmissions using electronic and electrical tools. Upon completion of this course, technicians will be able to recall how to diagnose rear-wheel drive manual transmissions.
Languages: English/Spanish/French

PASSENGER CAR AWD
This course provides an overview to service technicians on the newest selectable All-Wheel Drive (AWD) systems for Front-Wheel Drive (FWD) vehicles. This course covers the single and twin clutch AWD systems with the selectable power transfer unit, as well as an overview of the system, its components, and operation.
Languages: English/Spanish/French
PROPSHAFTS & REAR AXLES: REAR AXLE OPERATION (W1)  SMT0201WB
This WBT course covers propshafts and rear drive axle fundamentals, characteristics, types, operation, and diagnosis. Upon completing of this course, technicians will be able to identify propshaft and rear drive axle fundamentals and characteristics, recognize the difference between semi and full-floating rear drive axle mechanical system, and recall rear drive axle operation.
Languages: English

PROPSHAFTS & REAR AXLES: DRIVE SHAFT OPERATION (W2)  SMT0301WB
This course covers propshaft fundamentals including their mechanical operation and characteristics as well as FWD wheel drive shaft assembly fundamentals. Characteristics covered are types of propshaft joints, bearings and assemblies. In addition, the course describes the proper diagnosis of semi- and full-floating rear drive axle systems using symptom-based methods, operational tests, and visual inspection. Upon completing of this course, technicians will be able to identify fundamentals of the mechanical system, identify characteristics of the one-way clutch and the final drive, and identify characteristics of the one-way clutch and the final drive.
Languages: English

PROPSHAFTS & REAR AXLES: REAR DRIVE MODULES  SMT0401WB
This course covers the operation of rear-drive modules for all-wheel drive vehicles. Covered topics include all-wheel drive electric clutch operation and all-wheel drive electro-hydraulic clutch operation. Upon completing of this course, technicians will be able to identify how to diagnose and service an all-wheel drive electric clutch, identify how to diagnose and service an all-wheel drive electro-hydraulic clutch, and identify how to diagnose and service a rear-wheel drive direct-connect module.
Languages: English

PROPSHAFTS & REAR AXLES: ELECTRONIC DIFFERENTIALS  SMT0501WB
This course covers operation and components, including modes of operation and the integrated chassis control module, and diagnosis and service of the electronic locking rear axle and front axle. In addition, this course covers operation of the rear axle and front axle, and different types of sensors. It also describes the locking differential indicator, and identifies diagnostic trouble codes. Upon completing of this course, technicians will be able to identify how to diagnose semi- and full-floating rear drive axles with symptom-based diagnosis, an operational test, and visual inspection.
Languages: English

PROPSHAFTS & REAR AXLES: FRONT DRIVE AXLES (W1)  SMT0601WB
This course covers front drive axle types, components, and operation. Upon completing of this course, technicians will be able to identify fundamentals of the mechanical system, identify characteristics of the one-way clutch and the final drive, and identify characteristics of the one-way clutch and the final drive.
Languages: English

PROPSHAFTS & REAR AXLES: DIAGNOSIS  SMT0701WB
This WBT covers identification and diagnoses of semi-and full-floating rear drive axles as well as rear-wheel drive direct-connect modules. Upon completing of this course, technicians will be able to identify fundamentals of the mechanical system, identify characteristics of the one-way clutch and the final drive, and identify characteristics of the one-way clutch and the final drive.
Languages: English

MANUAL TRANSMISSION: OVERVIEW  SMT0801WB
This WBT course covers manual driveline fundamentals, including the manual drivetrain and axle types, location, and service. This course also covers how to service a manual drivetrain and axle using safe practices. Upon completing this course, participants will be able to identify manual driveline fundamentals, identify front wheel drive manual transmission fundamentals.
Languages: English

MANUAL TRANSMISSION: CLUTCH OPERATION & DIAGNOSIS  SMT0901WB
This course covers front-wheel drive manual transmission diagnostics and symptom-based manual transmission diagnostics. Upon completing this course, participants will be able to describe the steps to diagnose a manual transmission and the steps to diagnose a manual transmission using symptom-based diagnostics and recall how to troubleshoot a manual transmission using a systematic, strategy-based diagnostic process.
Languages: English
A3: MANUAL TRANSMISSION / DRIVELINE

MANUAL TRANSMISSION: FWD OPERATION  SMT1001WB
This WBT course covers front-wheel drive manual transmission fundamentals, mechanical systems, operation, and the electronic control system. Upon completing this course, participants will be able to describe the FWD manual transmission characteristics, describe the FWD manual transmission characteristics, recall the FWD manual transmission operation, and describe the FWD manual transmission electronic control system characteristics.
Languages: English

MANUAL TRANSMISSION: RWD OPERATION  SMT1101WB
This course covers Rear-Wheel Drive (RWD) characteristics, manual transmission clutch types, and manual shift mechanism types. This course also covers Tremec 6-speed manual transmission characteristics, mechanical component characteristics, and fluid characteristics. Upon completing this course, participants will be able to identify RWD characteristics, clutch types, and shift mechanisms and recall the characteristics and components of the Tremec 6-speed transmission.
Languages: English

MANUAL TRANSMISSION: FWD DIAGNOSIS  SMT1201WB
This course covers Tremec 6-speed manual transmission operation and electronic control system characteristics and steps of operation. Upon completing this course, participants will be able to identify manual transmission fundamentals of a Tremec 6-speed transmission, recall the operational steps of a Tremec 6-speed transmission, and recall the characteristics and the operation of the manual Tremec 6-speed transmission electronic control system.
Languages: English

MANUAL TRANSMISSION: RWD DIAGNOSIS  SMT1301WB
This course covers manual transmission clutch types and operation. This course also covers how to diagnose clutch mechanical and hydraulic systems. Upon completing this course, participants will be able to identify manual transmission clutch types, manual transmission clutch operation, and manual transmission hydraulic operation.
Languages: English

PASSENGER CAR AWD SYSTEMS: DIAGNOSIS  SMT1401WB
Part two of this two-part WBT course covers the diagnostic procedures for passenger car all-wheel drive systems, transfer cases, and rear drive axle systems. The diagnostic procedures discussed for passenger car all-wheel drive systems include preliminary visual inspections, functional tests, symptom-based diagnostics, Diagnostic Trouble Code (DTC)-based diagnostics, and scan tool data and special functions. Upon completion of this course, technicians will be able to identify passenger car all-wheel drive system diagnostic procedures, recall how to diagnose passenger all-wheel drive systems using symptom-based diagnostics, recall how to diagnose passenger all-wheel drive systems using DTC-based diagnostics, and identify passenger car all-wheel drive transfer case and rear drive axle diagnostic procedures.
Languages: English

TRUCK AWD / 4WD OPERATION, DIAGNOSIS & SERVICE 1: OPERATION  S-MT03-09.01WBT
Part one of this two-part WBT course identifies 4WD / AWD drivetrain types and transfer cases. The course also covers truck 4WD / AWD clutch, viscous and differential operation. In addition, the course also identifies 4WD / AWD electrical and mechanical modes of operation. Upon completion of this course, technicians will be able to identify 4WD / AWD drivetrain types, identify 4WD / AWD transfer case types, recall truck 4WD / AWD clutch transfer case mechanical operation, recall truck 4WD / AWD viscous transfer case mechanical operation, recall truck 4WD / AWD differential transfer case mechanical operation, identify 4WD electrical modes of operation, and identify AWD electrical modes of operation.
Languages: English/Spanish/French

TRUCK AWD / 4WD OPERATION, DIAGNOSIS & SERVICE 2: DIAGNOSIS  S-MT03-10.01WBT
Part two of this two-part WBT course covers Four-Wheel Drive (4WD) / All-Wheel Drive (AWD) diagnostics for trucks, and truck transfer cases. Topics covered in this course include troubleshooting 4WD / AWD trucks and transfer cases using a systematic, strategy-based diagnostics process. This course also covers diagnosing 4WD / AWD trucks and transfer cases using preliminary symptom-based and Diagnostic Trouble Code (DTC)-based diagnostics, operational tests, and electronic / electrical tools. This course further covers the steps for diagnosing a 4WD truck transfer case, specifically the MP 3023/3024-NQH transfer case, using a visual inspection of the external and internal components. Upon completion of this course, technicians will be able to recall a systematic approach to 4WD / AWD transfer case diagnostics, recall how to diagnose 4WD / AWD truck transfer cases using symptom-based diagnostics, and identify the steps to follow when diagnosing 4WD truck transfer case, MP 3023 / 3024 NQH.
Languages: English/Spanish/French
A3: MANUAL TRANSMISSION / DRIVELINE

PROPSHAFT AND REAR AXLE OPERATION, DIAGNOSIS, AND SERVICE 1: S-MT03-11.01WBT
FUNDAMENTALS AND CHARACTERISTICS
Part one of this four-part WBT course covers propshaft and rear drive axle fundamentals, and semi- and full-floating rear drive axle characteristics, mechanical systems, and diagnostics. Upon completion of this course, technicians will be able to identify propshaft and rear drive axle fundamentals and characteristics, recall semi- and-full floating rear drive axle mechanical systems, and recall semi- and full-floating rear drive axle diagnostics.
Languages: English/Spanish

PROPSHAFT AND REAR AXLE OPERATION, DIAGNOSIS, AND SERVICE 2: S-MT03-12.01WBT
DIAGNOSIS
Part two of this four-part WBT course covers propshaft characteristics and types, how to diagnose a semi- and full-floating rear drive axle with the symptom-based and operational tests and a visual inspection. The course also covers how to diagnose a rear drive axle, the rear drive axle differentials, and the 8.6 inch rear drive module. Upon completion of this course, technicians will be able to identify the propshaft characteristics and types, recall how to diagnose a semi- and full-floating rear drive axle with the symptom-based and operational tests and the visual inspection, and recall how to diagnose a rear drive axle, the rear drive axle differential, and the 8.6 inch rear drive module.
Languages: English/Spanish

DRIVETRAIN INSPECTION AND MAINTENANCE S-MT03-13.02WBT
This course covers the characteristics and inspection procedures for the manual transmission clutch, manual transmission fluid, and transfer case. This course also covers the types and service procedures for drivetrain axles.
Languages: English

Instructor-Led Training

ALL-WHEEL DRIVE / FOUR WHEEL DRIVE S-MT03-01.01ILT
This Instructor-led Training (ILT) course will provide technicians the opportunity to learn about the various four wheel drive (4WD) and all-wheel drive (AWD) systems, how power is divided in these systems, components of four wheel drive (4WD) and all-wheel drive (AWD) systems, and some diagnostics of four wheel drive (4WD) and all-wheel drive (AWD) systems. The course will also include real world scenarios based on vehicles from several manufactures, and vehicle exercises to explore and apply diagnostic processes to some common symptoms.
Languages: English

Half Day Training

FOUR WHEEL DRIVE S-MT03-01.01HDT
This Half Day Training (HDT) session will provide technicians the opportunity to learn about the various four wheel systems, how power is divided in these systems, components of four wheel systems, and some diagnostics of four wheel (4WD) systems. The course will also include real world scenarios based on vehicles from several manufactures, and vehicle exercises to explore and apply diagnostic processes to some common symptoms.
Languages: English

ALL-WHEEL DRIVE S-MT03-02.01HDT
This Half Day Training (HDT) session will provide technicians the opportunity to learn about the various all-wheel drive systems, how power is divided in these systems, components of all-wheel drive systems, and some diagnostics of all-wheel drive (AWD) systems. The course will also include real world scenarios based on vehicles from several manufactures, and vehicle exercises to explore and apply diagnostic processes to some common symptoms.
Languages: English

TechTube Videos

PROPER WAY TO CHECK RING GEAR BACKLASH S-MT03-01.01VID
This video demonstrates how to measure backlash of a ring and pinion gearset and what the measurements mean.
Languages: English
A3: MANUAL TRANSMISSION / DRIVELINE

TRANSFER CASE  S-MT03-02.01VID
This video describes issues that can affect 4WD operation that you should be aware of before replacing a transfer case.
Languages: English

FRONT AXLE ACTUATOR DIAGNOSIS  S-MT03-03.01VID
This video shows how to verify if a front axle actuator is operating using a scan tool and how the actuator connects the front axles together.
Languages: English
A recommended path for completing the Suspension and Steering curriculum is outlined below. To complete the training below and to search for and complete additional training, visit acdelcotraining.com.

### RECOMMENDED PATH

**SST**  
Suspension and Steering Self Study Training  
SFN0501SF

**WBT**  
GM Chassis Control Systems  
S-SS04-08.02WBT

**WBT**  
GM Steering Systems and Diagnosis 1  
SSS0101WB

**WBT**  
GM Steering Systems and Diagnosis 2  
SSS0201WB

**WBT**  
GM Steering Systems and Diagnosis 1: Hydraulic and Electric Power Steering Systems  
S-SS04-10.01WBT

**SEM**  
Tire Pressure Monitoring Systems  
SSS0201SM

**SEM**  
Chassis Dynamics  
SSS0101SM

**SEM**  
Power Steering Technology  
S-SS04-09.01SEM

**SEM**  
Steering and Suspension Inspection and Maintenance  
S-SS04-12.02WBT

**SEM**  
Chassis Dynamics  
SSS0101SM

**IST**  
Successful Power Steering Service  
SSS0101IS

**WBT**  
GM Steering Systems and Diagnosis 2: Dual Pinion and Belt Driven Electric Power Steering Systems  
S-SS04-11.01WBT
Self Study Training

**SUSPENSION AND STEERING SELF STUDY TRAINING**

This self study course reviews suspension and steering components, operation and service through a systems overview of the suspension and steering and a functional component review.

*Languages: English*

Web-Based Training

**GM CHASSIS CONTROL SYSTEMS**

This WBT component covers the components, characteristics, and operation of various chassis control systems found in GM vehicles. Suspension system types, ride and alignment control, air suspension systems, automatic level control, electronically controlled damping, tire pressure monitoring, and alignment will be covered in this course. Upon completion of this WBT, technicians will be able to identify the characteristics and operation of independent and non-independent suspension systems, identify the components and operation of ride control and alignment control, identify the function of the air suspension systems, identify the components and operation of the automatic level control systems, identify the characteristics and operation of electronically controlled damping systems, identify the characteristics and operation of the direct tire pressure monitoring system, and identify the types and characteristics of alignment.

*Languages: English*

**GM STEERING SYSTEMS AND DIAGNOSIS 1**

This course covers the characteristics, types, operation, and diagnosis of the steering system and its main components, as well as a high level overview of some disassembly and assembly service procedures and tools.

*Languages: English*

**GM STEERING SYSTEMS AND DIAGNOSIS 2**

This course covers the features and characteristics of two electric power steering systems: the electronically controlled power steering and the electronic assist power steering.

*Languages: English*
GM STEERING SYSTEMS AND DIAGNOSIS 1: HYDRAULIC AND ELECTRIC POWER STEERING SYSTEMS

This WBT course covers the characteristics, types, operation, and diagnosis of the steering system and its main components. It also includes a high level overview of some disassembly and assembly service procedures and tools. Upon completion of this course, technicians will be able to identify, steering system fundamentals, steering column and brake transmission shift interlock components and diagnosis, steering gear and steering pump components and diagnosis, features of electronically controlled hydraulic steering systems, types, characteristics, and diagnosis of electronic power steering systems, and steering system performance factors and safety precautions.

Languages: English

GM STEERING SYSTEMS AND DIAGNOSIS 2: DUAL PINION AND BELT Driven ELECTRIC POWER STEERING SYSTEMS

This WBT course covers the features and characteristics of two electric power steering systems: the rack and dual pinion electric power steering system and the belt-driven electric power steering system. Upon successful completion of this WBT course, technicians will be able to recall the characteristics, features, and the service procedures of the rack and dual pinion electric power steering system and recall the characteristics and features of the belt-driven electric power steering system as well as the GDS2 power steering control module and its learn and reset functions.

Languages: English

STEERING AND SUSPENSION INSPECTION AND MAINTENANCE

This WBT provides the general and specific inspection and maintenance procedures for the steering and suspension systems. The technician will learn how to inspect and identify worn and damaged parts of the steering and suspension system. Upon completion of this course, service technicians will be able to identify the operation of the power steering systems, identify the inspection and maintenance process for inner and outer tie rods, identify the inspection and maintenance process for ball joints, differentiate between the operation and inspection procedures of other steering system components, recall the function of the suspension components, differentiate between dependent and independent front suspension, differentiate between dependent, semi-independent, and independent rear suspension, recall the operation and inspection of the electronic suspension, and identify the operation, inspection, and maintenance of the wheels and tires.

Languages: English

Seminar

CHASSIS DYNAMICS

Intended for the experienced technician, this seminar will explore the symptoms and corrective actions needed to address abnormal ride and handling concerns. Special attention will be paid to electronic ride control systems, conventional steering and suspension systems, modified vehicles, alignment geometry, yaw control and dynamic steering, and required calibration / programming procedures.

Languages: English

TIRE PRESSURE MONITORING SYSTEMS

This instructor-led training seminar will cover Tire Pressure Monitoring Systems installed on various vehicles. Direct and indirect systems will be covered in detail and will include Federal regulation and repair compliance requirements. Various Original Equipment Manufacturers (OEMs) will be highlighted, including an overview of the operation, diagnosis, and servicing of the systems and their components. Additional topics include: winter / accessory wheel fitment, TPMS tools, parts and information resources.

Languages: English

POWER STEERING TECHNOLOGY

This 3-hour seminar will cover some of the electric power steering systems found today. Including the components and operation, diagnostics and servicing these electric power steering systems. Even though electric power steering technology is expanding into more vehicles, let us not forget that many vehicles on the road still have hydraulic power steering. Additionally, some unique features of new technology found in electronically enhanced hydraulic systems, as well as diagnostic and service tips will be discussed.

Languages: English
**InShop Training**

**SUCCESSFUL POWER STEERING SERVICE**

This 1-hour InShop will cover the proper procedures for effective diagnosis and repair of today’s hydraulic and electric power steering systems. We will discuss ways to prevent come backs by using proper diagnostic and repair procedures. Common installation issues will be discussed including the use of proper fluids, flushing, and pulley installation. Electronic power steering installation and setup procedures will be discussed.

**Languages:** English

**TECHAssist**

**TIRE PRESSURE MONITORING SYSTEM (TPMS) DIAGNOSTICS**

This TECHAssist will show the diagnostic procedure for troubleshooting the Tire Pressure Monitoring System (TPMS) on vehicles.

**Languages:** English

**HIGH PERFORMANCE STRUT SUSPENSION**

This course covers the characteristics and advantages of the high performance strut suspension. Upon completion of this course, technicians will be able to recall the characteristics and advantages of the high performance strut suspension.

**Languages:** English

**TechTube Videos**

**HUB FLANGE RUNOUT CHECK**

This video demonstrates the process on how to properly measure hub flange runout.

**Languages:** English

**ON VEHICLE RUNOUT CHECK**

This video demonstrates how to measure on vehicle runout of the tire assembly, which includes the tire, rim and hub.

**Languages:** English

**READY STRUTS**

This video describes how to diagnose strut concerns and why you should use ACDelco Professional ReadyStrut complete assemblies.

**Languages:** English

**TPMS**

This video describes the operation of tire pressure monitor systems.

**Languages:** English

**ELECTRIC POWER STEERING**

This video describes the various types of electric power steering systems.

**Languages:** English

**AUTOMATIC LEVEL CONTROL REAR AIR SHOCK REPLACEMENT**

This video demonstrates diagnosis and repair of General Motors Auto Level Control Rear Air Shocks, from verifying air pressure, to proper installation of the replacement air shocks.

**Languages:** English

**DOOR HINGE PINS AND BUSHING KITS**

This video demonstrates inspection and replacement procedures of door hinge pins and bushings, highlighting ACDelco’s greaseable replacement pins and complete hinge assemblies.

**Languages:** English
A recommended path for completing the Brakes curriculum is outlined below. To complete the training below and to search for and complete additional training, visit acdelcotraining.com.

### RECOMMENDED PATH

<table>
<thead>
<tr>
<th>SST</th>
<th>WBT</th>
<th>WBT</th>
<th>WBT</th>
<th>WBT</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFN0401SF</td>
<td>S-BK05-14.01WB</td>
<td>SBK0202WB</td>
<td>SBK0301WB</td>
<td>SBK0401WB</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SEM</th>
<th>IST</th>
<th>IST</th>
<th>WBT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Braking System Diagnosis and Repair</td>
<td>Electro-Hydraulic Brake Assist</td>
<td>Electronic Park Brake Systems</td>
<td>Braking Systems: Enhanced Applications</td>
</tr>
<tr>
<td>SBK0101SM</td>
<td>SBK0201IS</td>
<td>SBK0101IS</td>
<td>SBK0501WB</td>
</tr>
</tbody>
</table>

### ADDITIONAL TRAINING

<table>
<thead>
<tr>
<th>VID</th>
<th>SEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>GM Truck Brake Line Kits</td>
<td>Braking System Diagnosis and Repair</td>
</tr>
<tr>
<td>S-BK05-03.01VID</td>
<td>SBK0101SM</td>
</tr>
</tbody>
</table>
A5: BRAKES

Self Study Training

**BRAKES SELF STUDY TRAINING**  
SFN0401SF  
This self study guide covers braking system components and their operation. Topics include an overview of braking systems, description and operation of braking subsystem components, and advanced braking systems.  
Languages: English

Web-Based Training

**BRAKES INSPECTION AND MAINTENANCE**  
S-BK05-14.01WBT  
This course covers the basic procedures for the inspection and maintenance of brake systems. The course presents an overview of the relevant components and their operation, and covers the appropriate inspection and maintenance procedures. Upon completion of this course, participants will be able to identify the major components of a vehicle’s brake system, recall the basic operation of the brake system, and recall how to inspect the brake system.  
Languages: English

**BRAKING SYSTEMS: BASE BRAKES**  
SBK0202WB  
This course covers brake fundamentals: the apply system, the boost systems, and the hydraulic braking system.  
Languages: English

**BRAKING SYSTEMS: BASE BRAKES COMPONENTS AND OPERATION**  
SBK0301WB  
This WBT course covers the components and operation of wheel brakes, both drum and disc brake systems, as well as manual and electronic parking brakes.  
Languages: English

**BRAKING SYSTEMS: ANTILOCK SYSTEMS**  
SBK0401WB  
This WBT course covers Antilock Braking System (ABS) characteristics and operation, and automatic traction control characteristics and operation. This course also covers vehicle stability enhancement system theory, characteristics, and operation.  
Languages: English

**BRAKING SYSTEMS: ENHANCED APPLICATIONS**  
SBK0501WB  
This WBT course covers the enhanced applications of braking systems, including optimized braking systems and performance braking systems.  
Languages: English

**MEDIUM DUTY AIR BRAKE SYSTEMS**  
SBK0101WB  
This course will detail the air brake and air brake antilock braking systems for medium duty trucks. Upon completing this course, participants will be able to summarize the air brake system of medium duty trucks, recognize the control components of the air brake system, recognize the foundation brake components of the air brake system, relate how each component operates within the air brake system, and summarize how the air brake antilock braking system functions.  
Languages: English

Seminar

**BRAKING SYSTEM DIAGNOSIS AND REPAIR**  
SBK0101SM  
This instructor-led training seminar focuses on braking system diagnosis, and covers components, operation, and proper service practices. This course highlights real world case studies to address brake noise, pulsation, pad wear, fluid leaks, and concerns with power assist systems. Enhanced braking system designs and features by various manufacturers will also be covered.  
Languages: English
InShop Training

**ELECTRONIC PARK BRAKE SYSTEMS**
SBK0101IS
This instructor-led InShop training course provides an overview of the various electronic park brake systems installed on modern vehicles. Various Original Equipment Manufacturers (OEM's) systems will be covered, including an overview of the operation, diagnosis, and servicing of the systems.
Languages: English

**ELECTRO-HYDRAULIC BRAKE ASSIST**
SBK0201IS
This instructor-led InShop training course provides an overview of the electro-hydraulic brake assist system installed on various GM vehicles. System features and benefits will be highlighted, as well as the operation, diagnosis and servicing of the system.
Languages: English

TechTube Videos

**GM TRUCK BRAKE LINE KITS**
S-BK05-03.01VID
This service video will address 1999-2007 GM full sized pickup trucks and SUVs that are in need of a hydraulic brake line repair. ACDelco offers pre-formed and flared brake line kits, each of which is sold with all the lines needed to replace the entire brake line assembly for these vehicles. This video will illustrate the key points of this repair as well as bulletin 14D-101.
Languages: English
A recommended path for completing the Electrical / Electronic Systems curriculum is outlined below. To complete the training below and to search for and complete additional training, visit acdelcotraining.com.

### RECOMMENDED PATH

| SST | Alternators / Generators and Starters Self Study Training | SFN0101SF |
| SST | Batteries Self Study Training | SFN0201SF |
| WBT | Battery Inspection and Maintenance | S-EL06-33.02WBT |
| WBT | GM Global Electrical Systems 2 | SEL0401WB |
| WBT | GM Global Electrical Systems 1 | SEL0301WB |
| WBT | Electrical / Electronics Stage 1 | SEL0501WB |
| WBT | Electrical / Electronics Stage 2 | SEL0601WB |
| WBT | Electrical / Electronics Stage 3 | SEL0701WB |
| WBT | Electrical / Electronics Stage 4 | SEL0801WB |
| WBT | Electrical / Electronics Stage 5 | SEL0901WB |
| WBT | Electrical / Electronics Stage 6 | SEL1001WB |
| WBT | Battery Inspection and Maintenance | S-EL06-33.02WBT |
| WBT | Electrical / Electronics Stage 1 | SEL0501WB |
| WBT | Electrical / Electronics Stage 2 | SEL0601WB |
| WBT | Electrical / Electronics Stage 3 | SEL0701WB |
| WBT | Electrical / Electronics Stage 4 | SEL0801WB |
| WBT | Electrical / Electronics Stage 5 | SEL0901WB |
| WBT | Electrical / Electronics Stage 6 | SEL1001WB |
| ILT | Electrical Operation and Testing | SEL0101IL |
| ILT | Batteries, Starting, and Charging | SEL0201IL |
| ILT | Global Electrical Operations and Testing | SEL0301IL |
| ILT | Starting and Charging System Diagnosis and Repair | SEL0101IS |
| SEM | Advanced Driver Assistance Systems | SEL0401SM |
| SEM | Starting and Charging System Diagnosis | SEL0201SM |
| SEM | Vehicle Lighting and Access | SEL0301SM |
| IST | Batteries | S-EL06-01.01IST |

### ADDITIONAL TRAINING

| VID | Crimper 6 and 7 | S-EL06-01.01VID |
| VID | Ambient Air Temp Sensor Diagnosis | S-EL06-03.01VID |
| VID | Battery Maintenance and Testing Tips | S-EL06-04.01VID |
| VID | J38125-8 Crimping Tool Operation | S-EL06-02.01VID |
| VID | Local Interconnect Network Diagnosis | S-EL06-05.01VID |
Self Study Training

**ALTERNATORS / GENERATORS AND STARTERS SELF STUDY TRAINING**

A6: ELECTRICAL / ELECTRONIC SYSTEMS

An explanation of popular automotive alternator and starter designs. Includes alternator and starter functions as well as components, and hybrid vehicle starter-generator information.

Languages: English

**BATTERIES SELF STUDY TRAINING**

An explanation of popular automotive battery groups and designs. Includes construction, service and replacement information.

Languages: English

Web-Based Training

**BATTERY INSPECTION AND MAINTENANCE**

This course presents an overview of the components and procedures related to battery inspection and maintenance. The course covers battery location, inspection, replacement, and jump-starting. It also identifies the characteristics and procedures for the inspection of electrical centers, and the operational modes of ignition devices. In addition, the course covers the steps on how to restore personal radio settings in a customer’s vehicle after battery service.

Languages: English

**ELECTRICAL / ELECTRONICS STAGE 1**

This WBT course focuses on the fundamental laws of electricity and reading electrical schematics. The topics covered in this course include voltage, current, resistance, voltage drop, Ohm’s Law, electromagnetic induction, and electrical circuits. Upon completing this course, participants will be able to identify the basic characteristics of electricity, identify the basic characteristics of automotive electric circuits, and identify the characteristics of electrical circuit types.

Languages: English

**ELECTRICAL / ELECTRONICS STAGE 2**

This WBT course focuses on the fundamentals of electricity and vehicle diagnosis and repair. The topics covered in this course include sources of automotive electricity, circuit protectors, circuit control devices, and circuit loads. Upon completing this course, participants will be able to identify sources of automotive electricity, identify the characteristics and functions of circuit protectors, identify the characteristics of circuit control devices, and identify the characteristics of circuit loads.

Languages: English

**ELECTRICAL / ELECTRONICS STAGE 3**

This WBT course focuses on the fundamentals of the Digital Multimeter (DMM) controls and functions and DMM usage. The topics covered in this course include safety and caution, proper DMM set up, measurement scales, measuring voltage, measuring voltage drop, measuring resistance, and measuring amperage. Upon completing this course, participants will be able to recall Digital Multimeter (DMM) controls and functions, recall safety and caution, recognize proper set up, identify measurement scales, recall how to measure voltage, recall how to measure voltage drop, recall how to measure resistance, and recall how to measure amperage.

Languages: English

**ELECTRICAL / ELECTRONICS STAGE 4**

This WBT course focuses on important types, characteristics, and diagnosis of various solid state electrical components. The topics covered in this course include characteristics of capacitors, types of semiconductors, characteristics of semiconductors, types of diodes, characteristics of diodes, diagnosis of diodes, and characteristics of transistors. Upon completing this course, participants will be able to recall the characteristics of capacitors, recall types of semiconductors, recall the characteristics of semiconductors, recall different types of diodes, recall the characteristics of diodes, recall diagnosis of diodes, and recall the characteristics of transistors.

Languages: English

**ELECTRICAL / ELECTRONICS STAGE 5**

This WBT course will familiarize the service technicians with electrical and electronics systems used on today’s GM vehicles, as well as the characteristics and functions of control modules. The service technicians will also become familiarized with the characteristics and diagnosis of various electronic sensors and communication throughout the vehicle. Upon completing this course, participants will be able to identify common characteristics and functions of control modules, identify the types of variable resistance sensors, identify the characteristics and diagnosis of various electronic sensors, and identify important features of communication systems.

Languages: English
ELECTRICAL / ELECTRONIC SYSTEMS STAGE 6  
This WBT course will familiarize the service technicians with electrical and electronics systems used on GM vehicles. The service technicians will also become familiarized with the fundamentals of electricity and how it pertains to successful vehicle diagnosis and repair. Upon completing this course, participants will be able to identify electrical circuit components, identify the characteristics of electrical circuit faults, and identify the characteristics of electrical circuit repairs.

Languages: English

GM GLOBAL ELECTRICAL SYSTEMS 1  
This course presents the principles of electrical circuits, including the common types of circuits and functions used in the electrical architecture of GM vehicles. Upon completion of this course, participants will be able to identify concepts of electrical circuits, including ground and voltage circuits, characteristics of signal circuits and control circuits, and serial data circuits and communication.

Languages: English

GM GLOBAL ELECTRICAL SYSTEMS 2  
This course presents standard procedures for the diagnosis of electrical systems in GM vehicles. Upon completion of this course, participants will be able to identify the characteristics of global diagnostics for electrical systems, including the information for the diagnosis of electrical faults, the diagnostic format to verify electrical circuits, and the logical order in which to test electrical systems.

Languages: English

Instructor-Led Training

ELECTRICAL OPERATION AND TESTING  
This Instructor-led Training (ILT) course covers the properties of electricity, electrical testing, and diagnosis. Topics covered include: review of the common circuits and functions used in vehicle electrical systems, DMM functions and usage, test lights, terminal service and component testing. Exercises allow participants to apply circuit testing strategies and tools to different components, circuits, and functions.

Languages: English

BATTERIES, STARTING, AND CHARGING  
This Instructor-led Training (ILT) course covers battery, starting, and charging system component operation, diagnosis and testing, and best service practices. Hands-on exercises provide opportunities for improving skills, performing measurements, interpreting test results, and making diagnostic decisions.

Languages: English

GLOBAL ELECTRICAL OPERATIONS AND TESTING  
This Instructor-led Training (ILT) course covers the properties of electricity, interpreting and using electrical schematics, advanced digital multimeter (DMM) usage, scan tool diagnosis tactics, and alternate test tool usage. Hands-on exercises provide opportunities for practicing skills, making measurements, interpreting test results and making diagnostic decisions.

Languages: English

Seminar

BATTERY MARKETER  
This course will focus on the ACDelco battery product line. Attending participants will be prepared to sell and support ACDelco branded batteries. At a high level, discussion will include battery function, service, safety, and warranty when handling batteries, battery industry sales, and marketing batteries to installers.

Languages: English

STARTING AND CHARGING SYSTEM DIAGNOSIS  
This seminar covers battery, starting, and charging system component operation, diagnosis and testing, and correct service practices. The discussion on battery operation will include details on flooded and Absorbent Glass Mat, (AGM) types of batteries with emphasis on correct diagnosis and service. Starting topics will include processor controlled cranking systems, stop / start technology, and current diagnostic procedures. Participants will discuss computer-controlled charging systems including Regulated Voltage Controls (RVC), electrical power management, and advanced diagnostic procedures.

Languages: English
VEHICLE LIGHTING AND ACCESS
This seminar covers vehicle lighting and access system component operation, diagnosis, testing, and correct service practices. The discussion on vehicle lighting systems will include details on bulb monitoring, Pulse Width Modulated (PWM) lamp control, LED lighting, xenon lighting, dynamic headlight range and level control, adaptive forward lighting, laser lighting, and vehicle lighting system diagnostic strategies. Vehicle access system topics will include door lock, liftgate, and trunk release system operation and diagnostic strategies. Participants will discuss movable glass systems including power window system operation, and diagnostic strategies for door windows, back glass and sunroof systems.

Languages: English

ADVANCED DRIVER ASSISTANCE SYSTEMS
This instructor-led training seminar focuses on Advanced Driver Assistance Systems installed on various vehicles. Systems including; Forward Collision Warning, Automatic Emergency Braking, Lane Keep Assist, Lane Departure Warning, Adaptive Cruise Control, Park Assist and others will be covered in detail. Various Original Equipment Manufacturers (OEMs) will be highlighted, including an overview of the operation, diagnosis, and servicing of the systems and their components.

Languages: English

InShop Training

STARTING AND CHARGING SYSTEM DIAGNOSIS AND REPAIR
This 1-hour InShop course covers the proper way to diagnose and repair starting and charging systems. Emphasis will be placed on discovering the root cause of starting and charging system failures and proper service procedures.

Languages: English

BATTERIES
This 1-hour InShop will cover battery testing and replacement. Topics include: battery testing, charging and replacement, parasitic draw testing and OnStar precautions.

Languages: English

TechTube Videos

CRIMPER 6 AND 7
This short video will explain the proper use of electrical crimpers number 6 and 7 in the GM terminal and connector kit.

Languages: English

J38125-8 CRIMPING TOOL OPERATION
This video demonstrates the proper use of the J-38125-8 crimping tool for installing a Duraseal Crimp splice sleeve on vehicle wiring to create an effective and lasting repair.

Languages: English

AMBIENT AIR TEMP SENSOR DIAGNOSIS
This video shows a diagnosis procedure for an ambient temp sensor using the schematic to isolate the concern.

Languages: English

BATTERY MAINTENANCE AND TESTING TIPS
This video describes battery concerns due to long periods of non-use and the importance of maintenance charging, as well as tips for cold battery diagnosing, testing and charging.

Languages: English

LOCAL INTERCONNECT NETWORK DIAGNOSIS
This video shows the diagnosis of the Local Interconnect Network (LIN) and how to locate module programming and setup procedures.

Languages: English
A7: HEATING AND AIR CONDITIONING

A recommended path for completing the Heating and Air Conditioning curriculum is outlined below. To complete the training below and to search for and complete additional training, visit acdelcotraining.com.

### RECOMMENDED PATH

<table>
<thead>
<tr>
<th>SST</th>
<th>WBT</th>
<th>WBT</th>
<th>WBT</th>
<th>WBT</th>
</tr>
</thead>
<tbody>
<tr>
<td>HVAC Self Study Training</td>
<td>Cooling System Inspection and Maintenance</td>
<td>HVAC System Inspection and Maintenance</td>
<td>HVAC Systems and Operation Stage 1: Fundamentals</td>
<td>HVAC Systems and Operation Stage 2: Air Distribution and Controls</td>
</tr>
<tr>
<td>SFN1101SF</td>
<td>S-AC07-12.02WBT</td>
<td>S-AC07-13.02WBT</td>
<td>S-AC07-08.02WBT</td>
<td>S-AC07-09.03WBT</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IST</th>
<th>ILT</th>
<th>SEM</th>
<th>SEM</th>
<th>WBT</th>
</tr>
</thead>
<tbody>
<tr>
<td>A/C Compressor Replacement</td>
<td>Refrigeration Systems Operation and Testing</td>
<td>Refrigeration Diagnostics and Service Procedures</td>
<td>HVAC Controls Diagnosis and Service Techniques</td>
<td>HVAC Systems and Operation Stage 3: Diagnosis, Recovery, and Recharging</td>
</tr>
<tr>
<td>S-AC07-01.01IST</td>
<td>S-AC07-05.01ILT</td>
<td>S-AC07-07.01SEM</td>
<td>S-AC07-06.01SEM</td>
<td>S-AC07-14.01WBT</td>
</tr>
</tbody>
</table>

### ADDITIONAL TRAINING

<table>
<thead>
<tr>
<th>VID</th>
<th>VID</th>
<th>VID</th>
<th>VID</th>
<th>VID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actuator Recalibration Procedure</td>
<td>HFO-1234yf New Cooler</td>
<td>HVAC Actuator Reset Procedure</td>
<td>R-1234yf Leak Detector</td>
<td>A/C Refrigerant Oils</td>
</tr>
<tr>
<td>S-AC07-01.01VID</td>
<td>S-AC07-03.01VID</td>
<td>S-AC07-02.01VID</td>
<td>S-AC07-05.01VID</td>
<td>S-AC07-04.01VID</td>
</tr>
</tbody>
</table>
Self Study Training

**HVAC SELF STUDY TRAINING**

This self study course covers air conditioning system components, operation and service. Course topics include: air conditioning systems, air distribution systems, and HVAC service overview.

Languages: English

**Web-Based Training**

**COOLING SYSTEM INSPECTION AND MAINTENANCE**

This course covers the inspection and maintenance of the accessory drive belt, including the replacement of the drive belt and tensioner. This course also covers the inspection and maintenance of the radiator and coolant hoses, including pressure testing and documenting the findings on a work order.

Languages: English

**HVAC SYSTEM INSPECTION AND MAINTENANCE**

This course presents an overview of a vehicle’s Heating, Ventilation, and Air Conditioning (HVAC) system, including components and operation, and then covers the basic procedures for the inspection and maintenance of an HVAC system. The course also covers relevant aspects of the inspection of HVAC systems in a hybrid vehicle.

Languages: English

**HVAC SYSTEMS AND OPERATION STAGE 1: FUNDAMENTALS**

This course provides the fundamentals of Heating, Ventilation, and Air Conditioning (HVAC) systems. It covers the theory, characteristics, and operation of HVAC Air Conditioning (A/C) systems. This course provides an overview of the function and operation of HVAC components. It provides information about the various types of compressors, along with the operation of the piston-type and scroll-type compressors. This course also covers the characteristics of refrigerants and the operation of fixed orifice systems. Participants will also learn safety practices. Upon completion of this course, participants will be able to recall HVAC system characteristics and theory and identify refrigerant systems and their components.

Languages: English/French

**HVAC SYSTEMS AND OPERATION STAGE 2: AIR DISTRIBUTION AND CONTROLS**

This course provides the servicing and performance diagnosis of Heating, Ventilation, and Air Conditioning (HVAC) systems. It also covers the operation of recovery and recharging stations. Upon completion of this course, the participant will be able to recall Heating, Ventilation and Air Conditioning (HVAC) system servicing, including performance diagnosis, and identifying recovery / recharging station functions.

Languages: English/Spanish/French

**HVAC SYSTEMS AND OPERATION STAGE 3: DIAGNOSIS, RECOVERY, AND RECHARGING**

This course provides the fundamentals of Heating Ventilation and Air Conditioning (HVAC) systems. It also covers HVAC theory, the function and operation of HVAC components, and servicing HVAC systems. Upon completion of this course, participants will be able to recall practices for servicing heating, ventilation, and air conditioning systems, recall air conditioning performance diagnosis, identify recovery and recharging stations, recall air distribution fundamentals, and identify control head input and output components.

Languages: English/French

**Instructor-Led Training**

**REFRIGERATION SYSTEMS OPERATION AND TESTING**

This full day Instructor-Led Training (ILT) course will provide technicians with the foundational knowledge of Air Conditioning (A/C) system operation required to effectively service, diagnose and repair R-134a and R-1234yf based A/C systems. The operation, computerized control and common failures will be discussed from the point of view of system diagnostics and servicing. The goal is to teach service procedures that result in maximum A/C system efficiency. The following components will be covered in detail: variable displacement compressors, electrically driven compressors, expansion valves, Internal Heat Exchangers (IHX), enhanced evaporators and condensers. Hands-on exercises will emphasize proper use of the tools and equipment while performing common service scenarios and diagnostics.

Languages: English
A7: HEATING AND AIR CONDITIONING

Seminar

HVAC CONTROLS DIAGNOSIS AND SERVICE TECHNIQUES  S-AC07-06.01SEM
This seminar will provide technicians with the diagnostic techniques and strategies required to diagnose non-refrigerant related issues with the HVAC electronic controls that impact electronically regulated compressor operation and the air delivery system. Specific components and systems covered include: HVAC control inputs, condenser and blower motor fan controls and operation, manual, electronic and automatic temperature control and electronic mode door actuators and their control of air delivery and airflow in single and multiple zone adjustable systems. Setup procedures for all related modules will be reviewed. This course will include simulated diagnostic exercises to apply the principles learned.
Languages: English

REFRIGERATION DIAGNOSTICS AND SERVICE PROCEDURES  S-AC07-07.01SEM
Designed for technicians with prior understanding of the refrigerant cycle and system operation, this seminar will provide technicians with techniques and strategies required to isolate the root cause and perform repairs of failures in R-134a and R-1234yf equipped Air Conditioning (AC) systems. The use of pressure-temperature and humidity readings as a diagnostic aide will be the foundation of the course. Specific component diagnosis includes variable displacement compressors, electrically driven compressors, expansion valves, Internal Heat Exchangers (IHX), enhanced evaporators and condensers. This course will include simulated diagnostic exercises to apply the principles learned.
Languages: English

InShop Training

A/C COMPRESSOR REPLACEMENT  S-AC07-01.01IST
This 1-hour InShop will cover important tips and procedures for replacing A/C compressors to ensure a long service life. Topics include: system contamination and flushing procedures, and the selection of correct refrigerant oil.
Languages: English

TechTube Videos

ACTUATOR RECALIBRATION PROCEDURE  S-AC07-01.01VID
This short video will demonstrate how to perform an HVAC actuator recalibration on some GM vehicles.
Languages: English

HVAC ACTUATOR RESET PROCEDURE  S-AC07-02.01VID
This short video will demonstrate how to get an HVAC actuator back in range if it has been run out of its set points.
Languages: English

HFO-1234YF NEW COOLER  S-AC07-03.01VID
This video will share some information about a new A/C refrigerant (R-1234yf) that will be in your shop soon if you haven’t already seen it.
Languages: English

A/C REFRIGERANT OILS  S-AC07-04.01VID
This video looks at A/C refrigerant oils and concerns to be aware of, including, why A/C mineral oil 525 should be used to lubricate A/C system o-rings to prevent corrosion of connections.
Languages: English

R-1234YF LEAK DETECTOR  S-AC07-05.01VID
This video shows how to use the R-1234yf leak detector and why you should not use a detector that is not rated for R-1234yf.
Languages: English
A recommended path for completing the Engine Performance curriculum is outlined below. To complete the training below and to search for and complete additional training, visit acdelcotraining.com.

**RECOMMENDED PATH**
A8: ENGINE PERFORMANCE

Self Study Training

BELTS AND HOSES SELF STUDY TRAINING
An explanation of popular automotive belts and hoses design. Includes multi-ribbed serpentine belts, V-belts and engine timing belts. Molded radiator and bypass hoses along with fuel-resistant and specialty hoses will be covered. Hybrid vehicle information as it relates to belts is also explored.
Languages: English

EMISSIONS SELF STUDY TRAINING
An explanation of popular automotive emission systems. Includes EVAP Systems, catalytic converters, PCV Valves, air injection systems, secondary air pumps and EGR Valves.
Languages: English

FILTERS SELF STUDY TRAINING
An explanation of popular automotive filter designs. Includes construction, identification, and replacement information for air, oil, fuel, transmission, coolant and cabin air filters.
Languages: English

FUEL SYSTEMS SELF STUDY TRAINING
An explanation of popular automotive fuel systems. Includes fuel injectors, regulators, Multiport Fuel Injection (MFI) systems and Spark Plug Ignited Direct Injection (SIDI) components.
Languages: English

IGNITIONS SELF STUDY TRAINING
An explanation of popular automotive ignition systems and high voltage delivery system designs. Includes coils, spark plug wires, spark plugs, primary and secondary circuit components, distributor and distributorless systems.
Languages: English

ENGINE COOLING SYSTEM SELF STUDY TRAINING
An explanation of popular automotive cooling system designs. Includes water pumps, radiators, coolants, chemicals, hoses and heater cores. Hybrid vehicle information as it relates to engine cooling system is also explored.
Languages: English

SPARK PLUGS SELF STUDY TRAINING
An explanation of popular automotive spark plugs and design. Conventional tip, extended tip, RAPIDFire Platinum, and heat ranges are presented.
Languages: English

Web-Based Training

TUNE-UP, INSPECTION AND MAINTENANCE
This WBT provides the general and specific inspection and maintenance procedures for tune ups. The technician will learn how to inspect and identify specific components involved in a tune up. Upon completion of this course, service technicians will be able to identify the types and condition of spark plugs, identify wire inspection procedures, identify the types of coil packs, identify the location of cylinder number 1, and identify the replacement procedures for tune up components.
Languages: English

BATTERY SYSTEMS
This course covers the basics of battery operation and service.
Languages: English

CHARGING SYSTEMS
This course covers the basics of charging system operation and service.
Languages: English
STARTING SYSTEMS
This course covers the basics of starting systems operation and service.
Languages: English

BI-FUEL SYSTEM OPERATION
General Motors bi-fuel systems use a combination of Compressed Natural Gas (CNG) fuel and traditional gasoline systems. This course covers the process of how the bi-fuel system operates and performs in comparison to a traditional gasoline vehicle. It also identifies components involved in bi-fuel system operation and bi-fuel supply operations. Bi-fuel diagnostic scenarios for no start and improper CNG operation will be discussed. In addition to diagnostics, the bi-fuel inspection and maintenance process including leak checking and tank removal safety will be presented. Vehicle storage will also be covered. Upon completion of this course, participants will be able to describe the bi-fuel system components and operation, describe bi-fuel system diagnostic procedures, and recall bi-fuel system inspection and maintenance procedures.
Languages: English

ENGINE PERFORMANCE: AIR MANAGEMENT
This course covers the fundamentals of engine performance, including the internal combustion process, air induction, fuel supply, and the exhaust system. The focus is on air management in relation to the internal combustion engine. Topics include atmospheric pressure, volumetric efficiency, components of induction systems, electronic throttle operation, and airflow diagnostics. Upon completion of this course, participants will be able to describe the principles of internal combustion engines and the air management system, including the underlying science, components, electronic throttle control, and intake flow rationality diagnostics.
Languages: English/Spanish/French

ENGINE PERFORMANCE: FUEL AND DELIVERY
This course covers the theory and characteristics of fuel management systems in GM vehicles, including the operation of sequential port fuel injection and spark-ignited direct injection. Upon completion of this course, participants will be able to identify the theory, characteristics, and operation of different types of fuel management systems.
Languages: English/Spanish/French

ENGINE PERFORMANCE: IGNITION
This course presents the characteristics of ignition systems, including the different sections and their functions. Topics cover the operation of the coil-near-plug and coil-on-plug ignition systems. Upon completion of this course, participants will be able to identify basic characteristics of ignition systems, as well as the crankshaft position variation learn procedure.
Languages: English/Spanish/French

ENGINE PERFORMANCE: ELECTRONIC CONTROL SYSTEMS
This course presents the electronic control systems in GM vehicles in relation to engine performance. Topics include: the function of the engine control module, modes of operation, the fundamentals of emission control systems, characteristics of Onboard Diagnostics II (OBD-II), the diagnostics of engine off natural vacuum, the operation of positive crankcase ventilation, and monitoring techniques for emission control systems. Upon completion of this course, participants will be able to describe the characteristics of electronic control systems and emission control systems, along with the techniques for monitoring emission control systems.
Languages: English/Spanish/French

ENGINE PERFORMANCE: TROUBLESHOOTING
This course presents engine performance troubleshooting using strategy-based diagnostics. Topics cover how to diagnose engine performance using external visual inspection, system-based strategy, diagnosis based on Diagnostic Trouble Codes (DTCs), and misfire monitoring. The course also provides information about how to diagnose engine performance support systems, including the air conditioning clutch, communications, cooling fan, cruise control, active fuel management, cam phaser, and enhanced electronic pedal override. Upon completion of this course, participants will be able to describe how to troubleshoot and diagnose engine performance concerns, and how to diagnose engine performance support systems.
Languages: English

BI-FUEL SYSTEM OPERATION FOR RPO LFR/FHV
General Motors bi-fuel systems use a combination of Compressed Natural Gas (CNG) fuel and traditional gasoline systems. This course covers bi-fuel system components, operation, and diagnostics and repair for the RPO LFR / FHV system. It describes how the bi-fuel system operates and performs in comparison to a traditional gasoline vehicle. This course also identifies components involved in bi-fuel system operation and supply, as well as some common diagnostic and service procedures.
Languages: English
Instructor-Led Training

ENGINE PERFORMANCE DIAGNOSIS  SEP0101IL
This course focuses on failure modes that contribute most often to misfire and no-start engine performance concerns. Lessons are sequenced in priority order, from issues with the highest fault potential, to systems with the lowest fault potential. This course uses real world scenarios based on vehicles from several manufacturers to focus on various failure modes and related diagnostic procedures.
Languages: English

Seminars

IGNITION SYSTEMS DIAGNOSTICS  S-EP08-40.01SEM
Diagnosing ignition system misfires can be a difficult task, especially when the concern is intermittent. This seminar will improve the technician’s ability to identify the root cause of ignition systems faults. Ignition system components including: crank and cam sensors, knock sensors, coils, spark plugs and spark plug wires, computer controlled ignition timing and spark delivery strategies from multiple automobile manufacturers will be covered. Cylinder misfire detection and diagnostic strategies, known malfunctions, real-world case studies and diagnostic exercises will be presented.
Languages: English

EVAP DIAGNOSIS  S-FC02-02.01SEM
This seminar will provide an overview of evaporative emissions and the systems that control them. Topics include the function of the fuel tank ventilation system, charcoal canister, purge and vent valves, fuel tank pressure sensors, Leak Detection Pumps (LDP) and other components. We will discuss the strategies and function of Onboard Refueling Vapor Recovery (ORVR), Engine Off Natural Vacuum (EONV), including the diagnosis of P0440, P0442 and other EVAP system DTCs.
Languages: English

InShop Training

FUEL PUMP REPLACEMENT  S-EP08-0101IST
This 1-hour InShop will cover important tips and procedures for servicing electric in-tank fuel pumps. Topics include: fuel tank inspection, importance of a clean tank, installation tips and servicing the electrical connector (pigtail).
Languages: English
A recommended path for completing the Light Duty Diesel curriculum is outlined below. To complete the training below and to search for and complete additional training, visit acdelcotraining.com.

### RECOMMENDED PATH

<table>
<thead>
<tr>
<th>SST</th>
<th>WBT</th>
<th>WBT</th>
<th>WBT</th>
<th>WBT</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFN0601SF</td>
<td>SDE0102WB</td>
<td>SDE0202WB</td>
<td>SDE0302WB</td>
<td>SDE0401WB</td>
</tr>
<tr>
<td>WBT</td>
<td>WBT</td>
<td>WBT</td>
<td>WBT</td>
<td>WBT</td>
</tr>
<tr>
<td>SDE0302WB</td>
<td>SDE0401WB</td>
<td>SDE0501WB</td>
<td>S-EP08-84.01WBT</td>
<td>S-EP08-84.01WBT</td>
</tr>
<tr>
<td>WBT</td>
<td>WBT</td>
<td>WBT</td>
<td>SST</td>
<td>SST</td>
</tr>
<tr>
<td>Diesel Emissions and Exhaust Aftertreatment</td>
<td>Diesel Emissions Self Study Training</td>
<td>Diesel Emissions Self Study Training</td>
<td>Next Generation GM Diesel Engines</td>
<td>Next Generation GM Diesel Engines</td>
</tr>
<tr>
<td>S-EP08-37.01SEM</td>
<td>SFN0601SF</td>
<td>SFN0601SF</td>
<td>SDE0101SM</td>
<td>SDE0101SM</td>
</tr>
</tbody>
</table>

### ADDITIONAL TRAINING

<table>
<thead>
<tr>
<th>VID</th>
<th>VID</th>
<th>VID</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0 Diesel Timing Belt Installation</td>
<td>DEF Contaminants Test</td>
<td>DEF Quality Test</td>
</tr>
<tr>
<td>S-EP08-03.01VID</td>
<td>S-EP08-17.01VID</td>
<td>S-EP08-16.01VID</td>
</tr>
</tbody>
</table>
A9: LIGHT DUTY DIESEL

Self Study Training

**DIESEL EMISSIONS SELF STUDY TRAINING**

This self study course covers diesel gas emissions and the technology employed to reduce the exhaust emissions to comply with environmental regulations. Topics will include the function of diesel emission controls, symptoms of malfunctions, and basic maintenance and service checks.

*Languages:* English

Web-Based Training

**DIESEL ENGINE PERFORMANCE 1: OVERVIEW AND FEATURES**

This course covers diesel engine performance, including an introduction to diesel engines, models, features, vehicle applications, operational components, systems, and Environmental Protection Agency regulation. Upon completing this course, participants will be able to describe the diesel engine characteristics, identify different types of diesel engines, and identify Environmental Protection Agency regulations for diesel engines.

*Languages:* English

**DIESEL ENGINE PERFORMANCE 2: INDUCTION SYSTEMS**

This course covers the diesel engine induction system, including induction system components and exhaust gas recirculation. It also covers the purpose and types of turbochargers. In addition, this course describes diesel engine induction system inputs, after treatment inputs, and diesel engine induction system controls. Upon completing this course, participants will be able to describe the diesel engine induction system, describe diesel engine turbochargers, identify diesel engine induction system inputs, and identify diesel engine induction system controls.

*Languages:* English

**DIESEL ENGINE PERFORMANCE 3: FUEL SYSTEMS**

This course covers the diesel engine fuel supply, including fuel supply types, components, fuel conditioning, and operation. It also covers diesel engine fuel injection types. In addition, this course describes fuel return components and fuel system testing.

*Languages:* English

**DIESEL ENGINE PERFORMANCE 4: EMISSIONS SYSTEMS**

This course covers the diesel aftertreatment emission system and diagnosis. It also covers diesel particulate filter regeneration and crankcase ventilation systems, including heated crankcase ventilation systems.

*Languages:* English

**DIESEL ENGINE PERFORMANCE 5: EXHAUST AFTERTREATMENT SYSTEMS**

This course covers the diesel exhaust aftertreatment system, including aftertreatment components and operation. It also covers the diesel exhaust fluid systems, Selective Catalytic Reduction (SCR) operation, and service considerations.

*Languages:* English

**2.8L DURAMAX**

This WBT course presents a description of the 2.8L Duramax diesel engine. The course provides a description of the engine’s applications and specifications. Other topics are a comprehensive overview of components of the 2.8L diesel engine, and its aftertreatment system. Upon completion of this course, technicians will be able to identify applications of the 2.8L diesel engine, identify features of the 2.8L diesel engine, identify components of the 2.8L diesel engine, identify service procedures for the 2.8L diesel engine, and identify the aftertreatment system of the 2.8L diesel engine.

*Languages:* English

**MEDIUM DUTY TRUCK OVERVIEW**

This WBT course is an overview of the new medium duty truck and covers the exterior features, HVAC, power and signal distribution, entertainment, body systems, safety and security, suspension, steering and brakes. Topics include specifications, options, operation, and procedures. Upon completion of this course, technicians will be able to describe the new / updated aspects of the specifications features, describe the new / updated aspects of the HVAC, power and signal, and drivers information and entertainment system, describe the new / updated aspects of the body systems, safety and security, and describe the new / updated aspects of the suspension, steering, brakes and maintenance.

*Languages:* English
MEDIUM DUTY TRUCK POWERTRAIN  S-EP08-88.01WBT
This WBT course presents an overview of the powertrain systems found on GM’s medium duty trucks. Topics cover the applicable medium duty diesel engines, the diesel exhaust treatment, and the driveline systems as well as service considerations. Upon completion of this course, technicians will be able to recognize the components of the engines in the medium duty truck, recognize the characteristics of the diesel exhaust treatment system in the medium duty truck, and recognize the driveline systems in the medium duty truck.
Languages: English

Seminar

NEXT GENERATION GM DIESEL ENGINES  SDE0101SM
This course prepares technicians to diagnose and service the new generation of diesel engines from General Motors, including the 1.6L offered in the Chevrolet Cruze, the 2.8L offered in the Chevrolet Colorado and GMC Canyon, and the 6.6L offered in the Chevrolet Silverado and GMC Sierra. Topics will include unique features, maintenance procedures, documented service concerns, and special service tools for each next generation diesel engine covered.
Languages: English

DIESEL EMISSIONS AND EXHAUST AFTERTREATMENT  S-EP08-37.01SEM
Modern diesel engines are subject to increasingly stringent emission regulations and monitoring requirements. This seminar will prepare technicians to effectively diagnose and repair diesel exhaust emission reduction failures by developing an understanding of the emissions created by diesel engines and the systems designed to reduce those emissions. Both pre- and aftertreatment systems will be covered. Specific systems and components will include intake air swirl and heating, glow plugs, exhaust gas recirculation, oxidation catalysts, diesel particulate filtration, NOx reduction technologies, selective catalyst reduction, and diesel exhaust fluid. Technicians will strengthen their diagnostic techniques by focusing on the conditions used by the Engine Control Module (ECM) to set codes related to these systems, developing an understanding of how false codes could be set, and determining the root cause of any code or failure. Common failures will be covered.
Languages: English

TechTube Videos

2.0 DIESEL TIMING BELT INSTALLATION  S-EP08-03.01VID
This video demonstrates how to service the timing belt on the 2.0L diesel engine.
Languages: English

DEF QUALITY TEST  S-EP08-16.01VID
This video shows how to perform the DEF quality test as directed by service information.
Languages: English

DEF CONTAMINANTS TEST  S-EP08-17.01VID
This video shows how to perform a DEF contaminants test using a refractometer.
Languages: English
A recommended path for completing the Body Electrical and Communications curriculum is outlined below. To complete the training below and to search for and complete additional training, visit acdelcotraining.com.

**RECOMMENDED PATH**

- **WBT** SuperCruise
  - SEL0102WB

- **WBT** Infotainment Systems 1: Radios
  - SBE0101WB

- **WBT** Infotainment Systems 2: Speakers
  - SBE0201WB

- **WBT** Infotainment Systems 3: Peripheral Connectivity
  - SBE0301WB

- **WBT** Infotainment Systems 4: Rear Entertainment Systems
  - SBE0401WB

- **WBT** Infotainment Systems 5: Head-up Display
  - SBE0501WB

- **WBT** Infotainment Systems 6: Integrated Center Stack
  - SBE0601WB

- **WBT** Infotainment Systems 7: Next Gen Infotainment & Navigation Systems
  - SBE0701WB

- **WBT** Infotainment Systems 8: Infotainment Systems IOR, IOS, IOU, IOT
  - SBE0801WB

- **SEM** Vehicle Lighting and Access
  - SEL0301SM

- **SEM** SRS and Safety Systems
  - S-ST10-01.01SEM

- **SEM** Diagnosing Multiplexed Data Bus Networks
  - S-EL06-74.01SEM

- **ILT** Global Electrical Operations and Testing
  - SEL0301IL

- **ILT** Multiplexed Data Bus Networks
  - S-EL06-05.01ILT
Web-Based Training

SUPERCruise  
This WBT provides specific information on the technologies and operation of the new GM Super Cruise driver assistance system. Upon completing this course, participants will be able to identify the purpose of the Super Cruise system, identify the technologies and components present in the Super Cruise system, recall the operation of Super Cruise system, and identify the fail-safes present for the Super Cruise system.

Languages: English

INFOTAINMENT SYSTEMS 1: RADIOS  
This course is intended for GM dealership service technicians who will be servicing GM entertainment system components, including radios and antennas, and servicing radio frequency interference concerns. Topics discussed include different types of radio waves, how they travel, and the types of noise that affect radio reception, as well as the types of antennas, including fixed mast, glass mounted, and roof/trunk mounted, along with the procedures to test antenna reception. This course also discusses the procedures for isolating the cause of radio frequency interference, and the noise suppression devices to service radio frequency interference. Finally, this course discusses the operation and diagnosis of XM® satellite radio systems.

Languages: English

INFOTAINMENT SYSTEMS 2: SPEAKERS  
This course is intended for GM dealership service technicians who will be servicing GM entertainment system components, including speakers, amplifiers, and active noise cancellation. Topics discussed include speaker characteristics and diagnosis. It also focuses on amplifier characteristics, operation, and diagnosis. Finally, this course discusses active noise cancellation operation, diagnostics, and components. Upon completing this course, participants will be able to describe the characteristics of speakers, describe the characteristics of amplifiers, and identify the characteristics of active noise cancellation.

Languages: English

INFOTAINMENT SYSTEMS 3: PERIPHERAL CONNECTIVITY  
This course is intended for GM dealership service technicians who will be servicing GM entertainment systems and components, including Universal Serial Bus (USB) and Bluetooth® connectivity.

Languages: English

INFOTAINMENT SYSTEMS 4: REAR ENTERTAINMENT SYSTEMS  
This course is intended for GM dealership service technicians who will be servicing GM entertainment systems and components, including mobile wireless charging and rear seat entertainment systems.

Languages: English

INFOTAINMENT SYSTEMS 5: HEAD-UP DISPLAY  
Upon completion of this course, the participant will be able to describe the head-up Display characteristics and components.

Languages: English

INFOTAINMENT SYSTEMS 6: INTEGRATED CENTER STACK  
This course covers the components and operation of the integrated center stack radio entertainment systems on GM vehicles. Upon completion of this course, participants will be able to recall the components and operation of the integrated center stack radio entertainment systems.

Languages: English

INFOTAINMENT SYSTEMS 7: NEXT GEN INFOTAINMENT & NAVIGATION SYSTEMS  
This course provides an overview and description of the Next Generation Infotainment (NGI) and navigation systems in GM vehicles. This includes the operation, characteristics, and components of these systems. This course also covers the characteristics, operation, and diagnostics of the MOST® network, as well as the operation and diagnostics of the navigation systems. Upon completion of this course, participants will be able to identify the components and operation of the NGI infotainment system, recall the characteristics, operation, and diagnostics of the MOST® network, and recognize components and characteristics of the navigation radio systems.

Languages: English
A10: BODY ELECTRICAL AND COMMUNICATIONS

INFOTAINMENT SYSTEMS 8: INFOTAINMENT SYSTEMS IOR, IOS, IOU, IOT  SBE0801WB
This course covers the integrated radio systems, including components, data communication, audio features, and location services. Upon completion of this course, participants will be able to recall infotainment components and modes of operation, identify various data communication methods used by the infotainment system, recall the audio components and features of the infotainment system, and recall the characteristics of the navigation system.
Languages: English

GM MOVEABLE ROOF AND SUNROOF SYSTEMS 1: OPERATION  S-EL06-29.01WBT
Part one of this two part WBT course covers the types of moveable roof systems, hydraulic roof systems, soft top, and hard top systems. This course also covers the components, operation, and service of the moveable roof systems. Upon completion of this course technicians will be able to identify the components and operation for the types of moveable roof systems; identify the components, operation, and diagnostic and service procedures for hydraulic roof systems; identify operation and service procedures for the soft top roof systems; and identify components and operation for the hard top system.
Languages: English

GM MOVEABLE ROOF AND SUNROOF SYSTEMS 2: DIAGNOSIS  S-EL06-30.01WBT
Part two of this two part WBT course explains how to diagnose and service hard and soft top moveable roof systems. It also describes the operation of power sunroofs. Upon completion of this course component technicians will be able to diagnose and service the hard top and soft top systems; and recall the type, panoramic characteristics and operation, and systematic diagnostic process of power sunroofs.
Languages: English

Instructor-Led Training

GLOBAL ELECTRICAL OPERATIONS AND TESTING  SEL0301IL
This Instructor-led Training (ILT) course covers the properties of electricity, interpreting and using electrical schematics, advanced digital multimeter (DMM) usage, scan tool diagnosis tactics, and alternate test tool usage. Hands-on exercises provide opportunities for practicing skills, making measurements, interpreting test results and making diagnostic decisions.
Languages: English

MULTIPLEXED DATA BUS NETWORKS  S-EL06-05.01ILT
What do you do when the Scan Tool does not communicate? In this course, the technician will learn how networks function and how to diagnosis network problems when conventional methods don’t work. The focus will be on the diagnosis of serial data failure modes in multiplex data buses. Diagnostic techniques will be applied on vehicles to help technicians develop problem solving skills. Power moding, network protocols: CAN, LIN, GMLAN, and repair methods will be covered.
Languages: English

Seminar

VEHICLE LIGHTING AND ACCESS  SEL0301SM
This seminar covers vehicle lighting and access system component operation, diagnosis, testing and correct service practices. The discussion on vehicle lighting systems will include details on bulb monitoring, Pulse Width Modulated (PWM) lamp control, LED lighting, xenon lighting, dynamic headlight range and level control, adaptive forward lighting, laser lighting, and vehicle lighting system diagnostic strategies. Vehicle access system topics will include door lock, liftgate, and trunk release system operation and diagnostic strategies. Participants will discuss movable glass systems including power window system operation, and diagnostic strategies for door windows, back glass and sunroof systems.
Languages: English

SRS AND SAFETY SYSTEMS  S-ST10-01.01SEM
This three-hour seminar covers the operation and diagnostic procedures of current Supplemental Restraint Systems (SRS) and why they are needed. Course content includes SRS sub-systems and components found on current vehicles, their function(s) and interrelated systems, such as OnStar. This course also covers the SRS safety procedures to be followed while making repairs, safe operation of a vehicle post-accident, diagnostic procedures, service tips, and special tools.
Languages: English
DIAGNOSING MULTIPLEXED DATA BUS NETWORKS

Diagnosing complex network system failures is a challenge even for experienced technicians. In this seminar, technicians will focus on diagnostic strategy to hone their problem solving skills for serial data failure modes in multiplex networks. Included network protocols: CAN, LIN, GMLAN, MOST®, and repair methods will be covered.

Languages: English
A recommended path for completing the Safety and Security curriculum is outlined below. To complete the training below and to search for and complete additional training, visit acdelcotraining.com.

### RECOMMENDED PATH

<table>
<thead>
<tr>
<th>WBT</th>
<th>WBT</th>
<th>WBT</th>
<th>WBT</th>
<th>WBT</th>
</tr>
</thead>
<tbody>
<tr>
<td>SST0101WB</td>
<td>SST0201WB</td>
<td>SST0301WB</td>
<td>SST0401WB</td>
<td>SST0501WB</td>
</tr>
<tr>
<td>WBT</td>
<td>WBT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SST0801WB</td>
<td>SST0901WB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WBT</td>
<td>WBT</td>
<td>WBT</td>
<td>WBT</td>
<td></td>
</tr>
<tr>
<td>SST0701WB</td>
<td>S-ST10-05.01WBT</td>
<td>S-ST10-04.01WBT</td>
<td>SST0601WB</td>
<td></td>
</tr>
</tbody>
</table>

### ADDITIONAL TRAINING

<table>
<thead>
<tr>
<th>WBT</th>
<th>IST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structural Adhesive and Fastening Applications</td>
<td>Pedestrian Safety Systems</td>
</tr>
<tr>
<td>SCL0401WB</td>
<td>SCL0201IS</td>
</tr>
</tbody>
</table>
Web-Based Training

STRUCTURAL ADHESIVE AND FASTENING APPLICATIONS  SCL0401WB
In addition to covering structural adhesive, this course will aid in identifying self-piercing rivets, structural blind rivets, and flow drill screws, how each fastener works, and when to use the fasteners during a repair.
Languages: English/French

GM SAFETY SYSTEMS 1: BODY STRUCTURE AND RESTRAINTS  SST0101WB
This course is intended for service technicians and covers the characteristics, components, operation, and service procedures used to repair GM vehicle safety systems. It covers the overall construction of the vehicle body structure, seat belts and restraints, and child restraint systems.
Languages: English/French

GM SAFETY SYSTEMS 2: SUPPLEMENTAL RESTRAINTS  SST0201WB
This course is intended to assist GM service technicians who will be servicing GM vehicle supplemental restraint systems. It covers GM vehicle supplemental restraints that include sub-systems such as airbags, supplemental restraint system components, functions, operation, diagnostics, repair, service, and post-repair considerations.
Languages: English/French

GM SAFETY SYSTEMS 3: OBJECT DETECTION  SST0301WB
Upon completion of this course, participants will be able to identify characteristics and operation of the GM vehicle ultrasonic object detection system and characteristics and operation of the GM vehicle radar-based object detection system.
Languages: English/French

GM SAFETY SYSTEMS 4: WARNING SYSTEMS  SST0401WB
This course covers GM vehicle warning systems, especially those using vehicle-mounted cameras.
Languages: English/French

GM SAFETY SYSTEMS 5: ACTIVE SAFETY SYSTEM  SST0501WB
This course covers GM vehicle active safety systems, including the features, diagnostic strategies, and service procedures of active safety systems.
Languages: English/French

GM SAFETY SYSTEMS 6: ENHANCED SAFETY FEATURES  SST0601WB
This course covers the enhanced safety systems of the electronic pedal override, Teen Driver, and advanced trailering.
Languages: English/French

ENTRY AND SECURITY SYSTEMS: CONTENT THEFT DETERRENT  SST0801WB
This course covers the characteristics, components, and operation of Active keyless entry and security systems, including content theft deterrent systems. Upon completion of this course, participants will be able to identify the characteristics, components, and operation of keyless entry and security systems, identify the characteristics, components, and operation of content theft deterrent systems, and recall the diagnostic strategies and service considerations for keyless entry and security systems.
Languages: English/French

ENTRY AND SECURITY SYSTEMS: PASSIVE ENTRY AND KEYLESS IGNITION  SST0901WB
This course covers the characteristics, components, and operation of Active keyless entry and security systems, including content theft deterrent systems. Upon completion of this course, participants will be able to identify the characteristics, components, and operation of keyless entry and security systems and identify the characteristics, components, and operation of content theft deterrent systems.
Languages: English/French

ONSTAR SYSTEMS 1: GENERATIONS 6 THROUGH 9  S-ST10-04.01WBT
This WBT course provides a description of the OnStar systems including generations 6 through 9. The many features of OnStar are described. The course also provides detailed information about the OnStar components, as well as information on GPS and cellular technology. Upon completion of this course, technicians will be able to identify the various features of OnStar, identify the components of OnStar, and identify aspects and diagnostics of cellular and GPS technology.
Languages: English/French
SAFETY AND SECURITY

**ONSTAR SYSTEMS 2: GENERATION 10**

This WBT course provides a description of the generation 10 OnStar system. The characteristics of various features are described, including antennas and other components, Wi-Fi and aspects of connectivity, as well as warnings and diagnostics. Upon completion of this course, participants will be able to describe the characteristics of OnStar generation 10, identify the antennas and other components of OnStar, and describe OnStar generation 10 diagnostics and programming.

**Languages:** English/French

**ONSTAR SYSTEMS 3**

This course provides a description of the Gen 11 OnStar system. The characteristics of various features are described in this course, including antennas and other components, Wi-Fi and aspects of connectivity, and warnings and diagnostics. Upon completing this course, participants will be able to: describe the characteristics of OnStar Gen 11, identify the OnStar Gen 11 components, describe the OnStar Gen 11 diagnostics.

**Languages:** English

**InShop Training**

**PEDESTRIAN SAFETY SYSTEMS**

This 1-hour InShop covers Front Pedestrian Braking (FPB) and Pedestrian Impact Detection System (PIDS). The topics discussed will include the need for pedestrian safety systems, description and operation of these systems, and replacement and repair procedures.

**Languages:** English
Web-Based Training

SI OVERVIEW  
This course covers the navigation of the Service Information (SI) website. It also covers search procedures, publication types, schematics, routine diagrams, and how to interpret schematic symbols.  
Languages: English

LUBRICATION INSPECTION AND MAINTENANCE  
This course is an overview of the knowledge and skills involved in performing an oil change. It covers inspection of vehicle systems, oil change procedures, resetting the oil life monitor system, and selecting the correct grade and amount of oil to add to the engine.  
Languages: English

FUNDAMENTALS OF HYDRAULIC THEORY AND OPERATION  
Hydraulics technology forms the core technology for many automotive systems, including brakes, steering, transmission, engine, and axles. Exploring and understanding hydraulic systems provides essential foundational knowledge of automotive systems. This WBT provides the general concepts, operation, and applicable components involved in the hydraulic systems of an automobile. Upon completion of this course, service technicians will be able to identify the ways that hydraulics are utilized in an automobile, recall Pascal and Pascal’s Law, identify hydraulics technology and fluid properties, and differentiate between the types of hydraulic systems, fluids, and components.  
Languages: English

Self Study Training

FLUIDS AND CHEMICALS SELF STUDY TRAINING  
This self study course covers the functions and attributes of fluids and chemicals to be aware of, and their proper use. Course topics include fluids and chemicals for the engine, air conditioning, transmission, brakes, and other vehicle maintenance needs.  
Languages: English

TechTube Videos

PROPER TIRE INSPECTION  
This video demonstrates the proper technique for inspecting a tire. The inspection starts with checking the tire inflation, then measuring the tread depth. Wear patterns from improper inflation, incorrect alignment or out of balance are discussed. Inspection of the sidewall for damage, tread for foreign objects and cracked rubber are shown.  
Languages: English

CLUTCH STYLE LOCK CYLINDER  
This video shows the normal operation of the clutch style door lock cylinder that everyone should be aware of and how to access on some models.  
Languages: English

TECHAssist

SERVICE INFORMATION SEARCH  
This TECHAssist covers the Service Information search functions. Topics covered include descriptions of the basic and advanced search features, a demonstration of how to enable the AutoComplete feature in Internet Explorer 7 and 8. Technicians will also be able to practice searching for specific components using both the basic and advanced search functions. Upon completion of this TECHAssist technicians will be able to recall how to use Service Information basic and advanced search features to find documents and specific components.  
Languages: English
**DIAGNOSTICS**

### Web-Based Training

**NOISE, VIBRATION AND HARSHNESS (NVH)**  
S-DS11-04.03WBT  
This course covers vibration theory and the operation of components that may cause abnormal noise or vibration concerns. It also covers diagnosis techniques, such as road tests, and test equipment used in diagnosing vibration concerns.  
Languages: English

**DATA BUS DIAGNOSTIC TOOL**  
S-DS11-15.02WBT  
This course presents a description and introduction to the Data Bus Diagnostic Tool (DBDT). Topics include the DBDT’s major characteristics: software installation, main screen (window), Detected State tab, Measured Voltage tab, Message Monitor tab, and Error Messages.  
Languages: English

**INTRODUCTION TO THE DIGITAL STORAGE OSCILLOSCOPE**  
S-DS11-16.01WBT  
This course introduces the digital storage oscilloscope (DSO) as an important tool in diagnosing vehicle concerns that may otherwise require significant time or disassembly for testing. Topics covered include: key components and basic setup; terminology, display outputs, waveform fundamentals and parameters; and how to interpret display data.  
Languages: English

**GDS 2**  
S-FN00-06.02WBT  
This course consists of WBT and Hands-On components and is designed to provide the technician with the skills necessary to properly diagnose current and future vehicle platforms, using Global Diagnostic System 2 (GDS 2) and the Multiple Diagnostic Interface (MDI). Basic hardware requirements and networking concepts are addressed to aid technicians with installation, setup, update, and operation of both GDS 2 and MDI. Use of both tools during vehicle diagnostics including navigation, graphing, data display and DTC display are also covered.  
Languages: English

### Instructor-Led Training

**SCOPES, CIRCUITS & SENSORS**  
S-DS11-04.01ILT  
The ability to quickly and accurately solve complex electrical signal faults is a necessity for advanced diagnostic technicians. Using Oscilloscopes, technicians will learn to identify specific signal types and distinguish between good signals and specific failures. On-vehicle exercises will cover signals from sensor categories such as: Speed, Position, Proximity, Acceleration, Force, Flow, Temperature, Pressure, Gas and Concentration.  
Languages: English

### InShop Training

**SERVICE PROGRAMMING**  
SDS0101IS  
This 1-hour InShop Training (IST) session will explore service programming on GM vehicles. Special attention will be paid to what service programming is, how to approach service programming, the locations of service programming information, how to address a service programming error, and special service programming considerations.  
Languages: English

### TechTube Videos

**PROGRAMMING KEY FOBs**  
S-DS11-01.01VID  
This video will discuss some of the different methods to add, learn, or program a remote keyless entry system transmitter to a GM vehicle.  
Languages: English

**USING A DIGITAL MULTI METER TO CHECK AMPERAGE**  
S-DS11-02.01VID  
This video discusses what amperage is and the proper techniques for measuring amperage. The Fluke 87 digital multi-meter is used to demonstrate the procedure. The video also demonstrates how to check the fuses on the meter and the proper settings for the meter. The video concludes by demonstrating the correct arrangement of leads to measure amperage or current flow on a live circuit.  
Languages: English
TEST LIGHTS, IS THERE A DIFFERENCE?  S-DS11-03.01VID
This video will help you determine the proper test light to use for various electrical diagnostic tests and why this is important. OHMS law is utilized to calculate the working resistance and current draw of a test light.
Languages: English

HOW TO PERFORM A PARASITIC LOAD TEST  S-DS11-04.01VID
This video demonstrates the proper parasitic load test procedure to identify unwanted loads on the battery.
Languages: English

EXP-800 CAPACITANCE TESTING BATTERY - BATTERY TEST  S-DS11-05.01VID
This video demonstrates how to test a battery using the EXP 800 tester.
Languages: English

EXP-800 CAPACITANCE TESTING SYSTEM - SYSTEM TEST  S-DS11-06.01VID
This video demonstrates how to perform a system test (Battery, Starter, Alternator) using the EXP 800 tester.
Languages: English

FLUKE MIN / MAX FEATURE  S-DS11-07.01VID
This video demonstrates using the Min / Max feature of the Fluke 87 series digital multi meter for intermittent concerns, through an on car scenario and mock up circuits. Min / Max can be used while measuring voltage, amperage or resistance.
Languages: English

AGM BATTERY TESTING AND CHARGING  S-DS11-08.01VID
This video describes the construction, testing and charging of Absorbed Glass Mat (AGM) batteries.
Languages: English

DATA BUS DIAGNOSTIC TOOL HELPS DIAGNOSE BATTERY DRAINS  S-DS11-09.01VID
This video demonstrates the Data Bus Diagnostic Tool Message Monitor function to help diagnose battery drain concerns by monitoring the data line to see what modules wake up.
Languages: English