



**GENUINE  
PARTS**

***ACDelco***

**Instructor-Led Training**  
**Seminars**  
**MyShop Training**  
**Virtual Training**  
**Web-Based Training**  
**Product Lite Technical Training**  
**Video On Demand**  
**TechTube Videos**



# **2025 ACDelco Training Course Catalogue**



# TABLE OF CONTENTS

---

Introduction.....	1
Service Advisor.....	15
Parts Sales Specialist.....	18
Alternative Propulsion.....	21
Engine Mechanical.....	37
Automatic Transmission.....	41
Manual Transmission / Driveline.....	47
Suspension / Steering.....	53
Brakes.....	56
Electrical / Electronic Systems.....	60
Heating and Air Conditioning.....	67
Engine Performance.....	70
Light Duty Diesel.....	77
Body Electrical and Communications.....	81
Safety and Security.....	84
Fundamentals.....	88
Diagnostic Systems.....	90
Business.....	93



## 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.

### 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.

### 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.

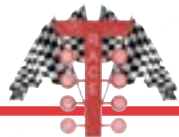
### 1970s



#### 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.

### 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.

### 2010s



#### EYE ON THE FUTURE

And in 2016 we celebrated our 100th anniversary with a continued commitment to offering the latest in GM technological improvements and innovation as the true GM original Equipment parts brand.



### 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.



### 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.



### 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.



### 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.



### 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 utilize engaging education methods in an industry-leading training portfolio to ensure aftermarket service professionals have the skills necessary to safely and effectively diagnose and repair customer vehicles.

# INTRODUCTION

## 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)
- Permits access to comprehensive training materials
- Tracks learner progress
- 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.



**If you have any questions or would like any additional information, contact your ACDelco Representative or the Help Desk at (800) 825-5886, prompt 3, then 1, then 4.**

## Access the ACDelco LMS:

1. Open your Internet browser
2. Type the following into your address bar: [techconnectcanada.com](http://techconnectcanada.com)
3. Click on the **Training Login**

### Tip:

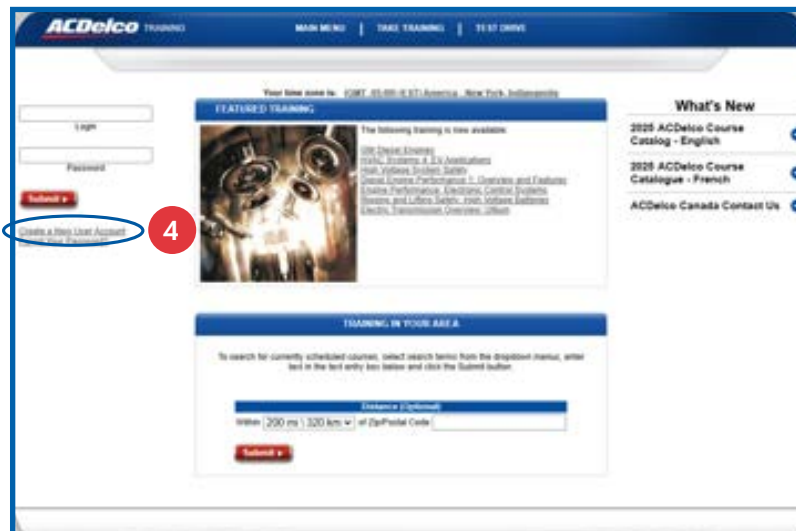
If you are an ACDelco program member, you must know your six-digit account number to register. If you don't know it, ask your manager or ACDelco rep.



Arrive at the ACDelco LMS login page.

## Create an Account:

4. Click on **Create a New User Account**



# INTRODUCTION

5. Complete the New User form.

**ACDelco** TRAINING    MAIN MENU | TAKE TRAINING | TEST DRIVE

## New User 5

If you require assistance: Contact the Help Desk between 8 AM and 5 PM EST. For Canada dial 1-800-26-Delco or send inquiries to the ACDelco Help Desk at [ACDelco.Learning@TrainingSupportAdmin.com](mailto:ACDelco.Learning@TrainingSupportAdmin.com)

Please select a Province and enter an Organization Code.  
NOTE: The Province you select must match the Organization Code you enter!

Province:

Organization Code/  
Account Number \*

Last Name \*

First Name \*

Middle Name

Every user must select a unique Login ID. It should be between 6 and 15 characters long and contain only alpha (A-Z, a-c) or numeric (0-9) characters.

Login ID \*

Please provide a valid email address. Training notifications will be sent to this email address. Click [here](#) for help checking your spam filter settings.

E-mail \*

Confirm E-mail \*

Preferred Language \*

Training Path \*

Time Zone \*

Automatically Adjust for Daylight Savings \*  Yes  No

Date Format \*

6

©2006 - 2013 General Motors. All Rights Reserved. Privacy Statement

6. Click **Submit**

### Tip:

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

7. The system will generate a password for you, but you will be prompted to change it.
8. Create a new password.
9. Select and answer 2 security questions.
10. Read the Personal Information statement.

## 11. Select I consent or I do not consent.

- Selecting I consent completes the User Application and automatically logs you in to the LMS.
- Selecting I do not consent will cancel the New User Account application.

Your time zone is: GMT-08:00 (PST) America - Los Angeles

Please change your password. Your password should be 6 to 50 characters long and contain a combination of letters and numbers. Apostrophes and special characters are not allowed in any of the fields.

All fields required.

New Password:  **8**

Confirm New Password:

Please enter two questions and answers below to allow you to reset your password in the future. Do not use apostrophes or special characters.

Question 1: (Select One)  **9**

Answer 1:

Question 2: (Select One)

Answer 2:

Before you provide your personal information, please read the text below.

I understand that the information I provide on this website, including but not limited to, my name, employer, email address, information about courses I take such as course name and results achieved, and survey information that may include my opinions and observations (hereafter "Personal Information"), will be made available to General Motors Corporation ("GM") and its various related entities and may be made available to the GM business entity in your country, (hereafter "GM Entities"). I further understand that my Personal Information may also be disclosed to suppliers of GM Entities, but solely for the purpose of providing services related to my use of this website. I am aware that GM Entities and their suppliers are domiciled in various countries, many of which do not have the same data protection laws as those of my country.

GM has informed me that:

**10**

- My Personal Information will be used by GM Entities for business purposes only and, unless required by applicable law, will not be made available to any third party for its independent use;
- GM Entities will exercise due care with respect to the security of my Personal Information; and
- I may access my Personal Information in accordance with applicable law and established procedures for the purposes of updating, correcting, or deleting it by contacting the ACDELco Help Desk.

Based on the above, I explicitly consent to the collection, transfer, storage and use of my Personal Information by selecting "I consent" below. I recognize that if I select "I do not consent" I will be unable to access courses and other training materials through this website and will have to contact the ACDELco Help Desk for any available alternatives.

(Please address any questions or concerns about this to ACDELco Help Desk)

**11**

## 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.

Descriptions of the various delivery methods are detailed below.

### Online Training

Each course is available to non-program participants for a nominal charge. Visit [Techconnectcanada.ca](http://Techconnectcanada.ca) or contact your ACDelco representative for more information.



**PRODUCT LITE TECHNICAL 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.



**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](http://acdelco.com) for more information.

## Face-to-Face Training



**INSTRUCTOR-LED TRAINING** courses are available in full-day (8 hour) sessions, and are facilitated 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).



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



**VIRTUAL SEMINARS** are hosted by an ACDelco professional virtually via the Web. This format allows the same interactivity and participation as in-person events. Seminars are designed to keep technicians abreast of rapidly changing vehicle technology, product information and diagnostic tips on ACDelco's top product lines.



**MYSHOP TRAINING** sessions are shorter Seminars, usually about an hour in duration and are available in-person or virtually online. During in-person MyShop sessions, the ACDelco professional brings a live procedure or demonstration right into the service bay. MyShop training sessions are designed for much smaller audiences - typically less than 10 technicians - and the format is more informal than a full Seminar.



**MYSHOP TRAINING** sessions are shorter Virtual Seminars. These training events are hosted by an ACDelco professional virtually via the Web. This format allows the same interactivity and participation as in-person events. MyShops are interactive and cover the specific issue or procedure live online.

# INTRODUCTION

## 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	IS = In-person MyShop
	MT = Manual Transmission / Driveline		03 = 3rd release	VI = Virtual MyShop
	SS = Suspension / Steering		04 = 4th release	SM = In-person Seminar
	BK = Brakes			VS = Virtual Seminar
	EL = Electrical / Electronic Systems			SL = Simulation
	AC = Heating & Air Conditioning			SF = Product Lite Technical Training
	EP = Engine Performance			TT = TechTube
	ST = Safety & Security			VO = Video on Demand
	DS = Diagnostic Systems			WB = Web-Based
	CC = Customer Communications			
	SC = Service Consultants			
	FM = Financial Management			
	PC = Parts Consultant			
	FN = Fundamentals			
	CL = Collision			
	DE = Diesel			
	AP = Alternative Propulsion			
	BE = Body Electrical			

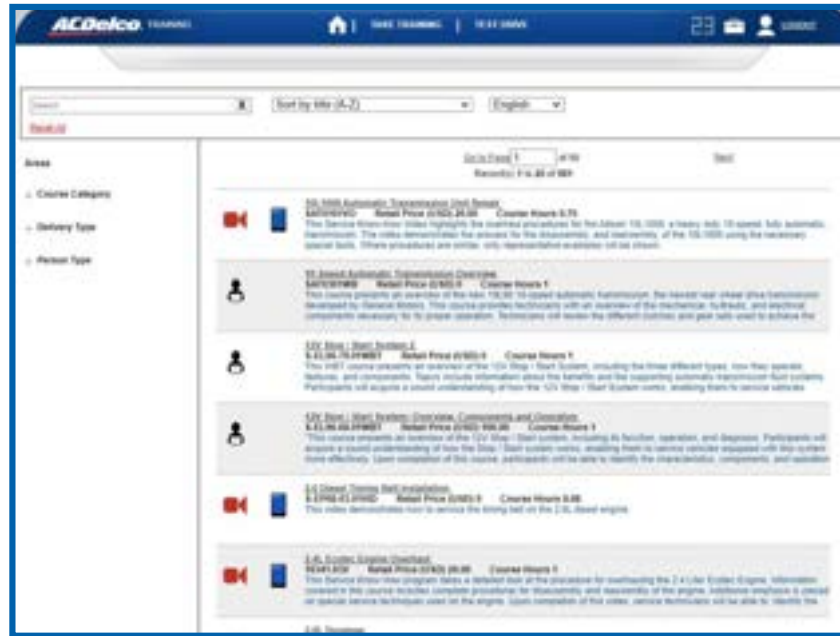
### Anatomy of a Course Code (Courses prior to 2018)

#### Sample - S-EL06-07.01WBT

Course Type	Skill Area	Sequential Course Number	Version Number	Media Type
S = Service	FN00 = Fundamentals		01 = 1st release	ILT = Instructor-Led Training
B = Business	EM01 = Engine Mechanical		02 = 2nd release	IST = MyShop Training
	AT02 = Automatic Transmission		03 = 3rd release	SEM = Seminar
	MT03 = Manual Transmission / Driveline		04 = 4th release	SIM = Simulation
	SS04 = Suspension / Steering			SST = Product Lite Technical Training
	BK05 = Brakes			TAS = TECHAssist
	EL06 = Electrical / Electronic Systems			VID = TechTube Video
	AC07 = Heating & Air Conditioning			V or D = Video on Demand
	EP08 = Engine Performance			WBT = Web-Based Training
	ST10 = Safety & Security			
	DS11 = Diagnostic Systems			
	CC30 = Customer Communications			
	CC60 = Marketing			
	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.



If you are not a current user or need help with your user ID and password, contact your local Technical Services Manager between 8:00 a.m. and 5:00 p.m. (EST).

My User ID: \_\_\_\_\_ My Password: \_\_\_\_\_

Willm Benda  
Prairie Provinces  
1-587-341-3060  
willm.benda@gov2x.com

William Carcone  
SW Ontario & Atlantic Canada  
1-905-213-9110  
william.carcone@gov2x.com

Daniel Mariani  
Ontario  
1-437-778-5021  
daniel.mariani@gov2x.com

Victor Medina  
Ontario East & Quebec  
1-613-222-4413  
victor.medina@gov2x.com

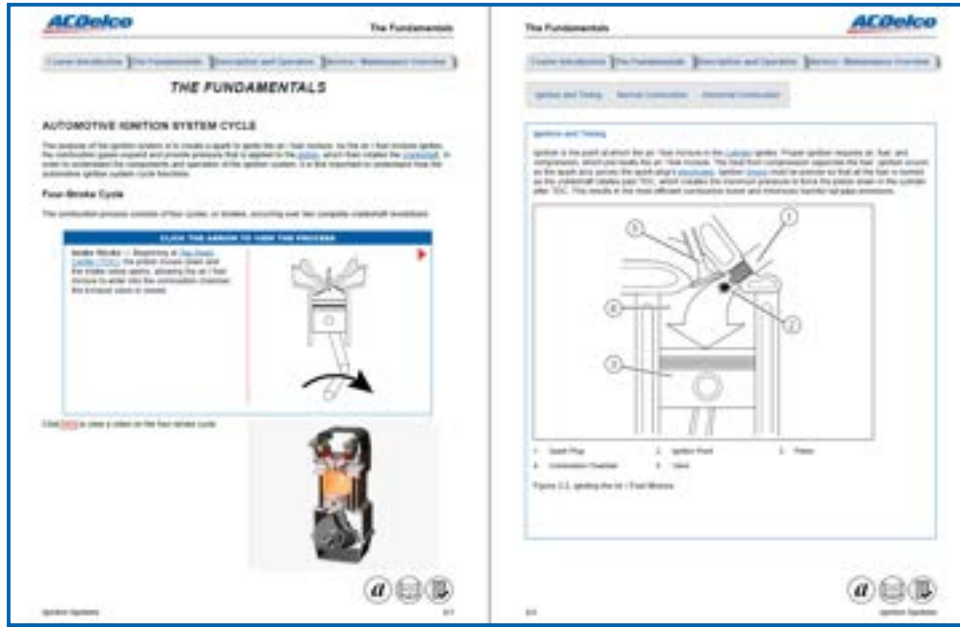
Pieter Van Schalkwyk  
British Columbia  
1-236-268-9506  
pieter.schalkwyk@gov2x.com

# INTRODUCTION

## Product Lite Technical Training



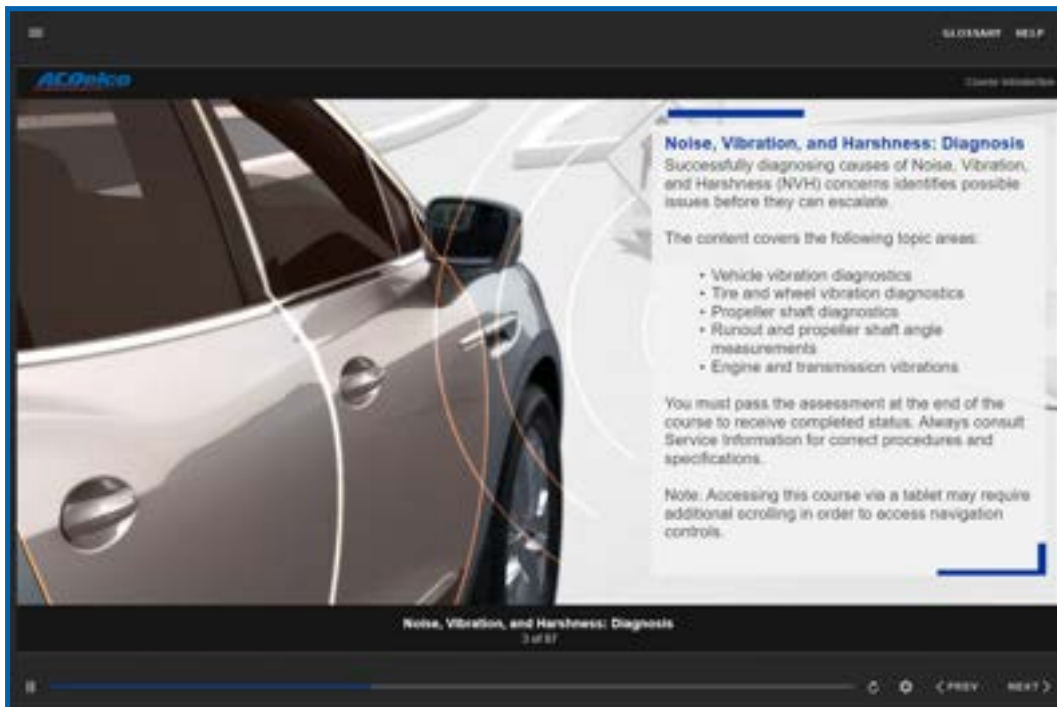
Product Lite Technical Training courses are interactive downloadable packets of technical information that can typically be reviewed in less than one hour. These guides are intended to help participants understand the technical aspect of various vehicle systems. After reviewing the information, participants 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.



## MyShops



MyShops are one hour sessions that are available in-person or virtually online. During an in-person MyShop, 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. Virtual MyShops are interactive and cover the specific issue or procedure live online.



## Seminar



Seminars are typically three hours in length and are hosted by an ACDelco professional at a shop, distributor facility, or virtually online. 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.



# INTRODUCTION

## Instructor-Led Training



Instructor-Led Training courses are full-day (8 hour) hands-on sessions that are facilitated by an ACDelco Instructor at a dedicated training center. Training is presented utilizing vehicles, hands-on exercises and diagnostic situations, providing technicians the opportunity to apply service and diagnostic skills to real concerns on actual vehicles. Enroll in a course today by accessing the schedule search feature at [Techconnectcanada.ca](http://Techconnectcanada.ca)



## Video On Demand



Video On Demand (VOD) allows technicians to review previously recorded content on the Learning Management System (LMS) at any time. VOD courses include component specific overviews and service information. VOD courses also include monthly Service Know How Emerging Issues broadcasts.



## 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 catalogue on [techconnectcanada.ca](http://techconnectcanada.ca).



**TechTubes are also tablet compatible!**

## Canada's Ozone Layer Protection Awareness Program for Air Conditioning and Refrigeration Systems



ACDelco is an approved provider of Canada's ODP/ODS (Ozone Depletion Prevention/Ozone Depleting Substances), environmental awareness training. This environmental awareness training program, based on Environment Canada's "Code of Practice for Elimination of Fluorocarbon Emissions in Refrigeration and Air Conditioning Systems", deals with environmentally-correct equipment design, proper handling of refrigerants, and will prepare participants for complying with Federal and Provincial Regulations covering refrigeration and air conditioning systems.

This Instructor-led training course is a full-day session that is facilitated by an ACDelco Instructor. The Participant's Manual is available for download from the ACDelco LMS. Once the course is completed, the assessment will be available in the ACDelco LMS. This course is available in an Ontario and Non-Ontario version. The Ontario version is also available in Canadian French. Contact your local Technical Services Manager for enrollment information.

### Ontario Version

#### Course

S-AC07-01.02ILT-CA: Canada's Ozone Layer Protection Awareness Program - Ontario Only (English version)

#### Assessment

S-AC07-01.02ILA-CA: Canada's Ozone Layer Protection Awareness Program - Ontario Only (English version)

#### Course

S-AC07-03.01ILT-FR: Canada's Ozone Layer Protection Awareness Program - Ontario Only (Canadian French version)

#### Assessment

S-AC07-03.01ILA-FR: Canada's Ozone Layer Protection Awareness Program - Ontario Only (Canadian French version)

### Non-Ontario Version

#### Course

S-AC07-02.02ILT-CA: Canada's Ozone Layer Protection Awareness Program – Except Ontario (English version)

#### Assessment










S-AC07-02.02ILA-CA: Canada's Ozone Layer Protection Awareness Program – Except Ontario (English version)

A recommended path for completing the Service Advisor curriculum is outlined below. To complete the training below and to search for and complete additional training, visit [Techconnectcanada.ca](http://Techconnectcanada.ca).

## RECOMMENDED PATH

<b>SST</b> Alternators / Generators and Starters SFN0102SF	<b>SST</b> Batteries SFN0202SF	<b>SST</b> Belts and Hoses SFN0302SF	<b>SST</b> Brakes SFN0402SF	<b>SST</b> Suspension and Steering SFN0502SF
<b>SST</b> Diesel Emissions SFN0602SF	<b>SST</b> Emissions SFN0702SF	<b>SST</b> Filters SFN0802SF	<b>SST</b> Fluids and Chemicals SFN0902SF	<b>SST</b> Fuel Systems SFN1002SF
<b>SST</b> HVAC SFN1102SF	<b>SST</b> Ignition Systems SFN1202SF	<b>SST</b> Engine Cooling System SFN1302SF	<b>SST</b> Spark Plugs SFN1502SF	<b>SST</b> Manual Transmission Clutches SFN1602SF

## Product Lite Technical Training

-  **ALTERNATORS / GENERATORS AND STARTERS** **SFN0102SF**  
This course provides an overview of alternators / generators and starters, the components that comprise these parts and the system that is serviced by these products.  
**Languages:** English
-  **BATTERIES** **SFN0202SF**  
This course discusses batteries and their place as the foundation of the vehicle electrical system. Course topics include: battery safety, battery overview, construction, temperature effects, service and maintenance procedures.  
**Languages:** English
-  **BELTS AND HOSES** **SFN0302SF**  
This course provides an overview of ACDelco belts and hoses including safety, component operation, service, and maintenance.  
**Languages:** English
-  **BRAKES** **SFN0402SF**  
This course covers braking system components and operation. Topics include brake systems overview, description and operation of subsystem components, advanced braking systems and operation.  
**Languages:** English
-  **SUSPENSION AND STEERING** **SFN0502SF**  
This 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
-  **DIESEL EMISSIONS** **SFN0602SF**  
This 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
-  **EMISSIONS** **SFN0702SF**  
This course covers emission system components, operation and service. Course topics include: emission control valves, catalytic converters, air pumps, lines and hoses.  
**Languages:** English
-  **FILTERS** **SFN0802SF**  
This course covers filters and their operation. Course topics include oil filters, air filters, fuel filters, automatic transmission filters, and cabin air filters.  
**Languages:** English
-  **FLUIDS AND CHEMICALS** **SFN0902SF**  
This 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
-  **FUEL SYSTEMS** **SFN1002SF**  
This course provides an explanation of popular automotive fuel systems. Includes fuel injectors, regulators, Multiport Fuel Injection (MPI) systems and Spark Ignited Direct Injection (SIDI) components.  
**Languages:** English
-  **HVAC** **SFN1102SF**  
This course covers air conditioning system components, operation and service. Course topics include: air conditioning systems, air distribution systems, and HVAC service overview.  
**Languages:** English

## IGNITION SYSTEMS

SFN1202SF

This course covers ignition system components, operation, and service. Course topics include automotive ignition system cycle, types of ignition systems, primary and secondary circuit components, and maintenance precautions.

**Languages:** English



## ENGINE COOLING SYSTEM

SFN1302SF

This course covers engine cooling system components, operation, and service. Course topics include: engine cooling system components, engine cooling system failures, and engine cooling system service and maintenance.

**Languages:** English



## SPARK PLUGS

SFN1502SF

This course covers spark plug components, operation, and service. Course topics include spark plug components, system operation, types of spark plugs, and spark plug service and maintenance.

**Languages:** English



## MANUAL TRANSMISSION CLUTCHES

SFN1602SF

This course will describe the components of the manual transmission clutch system. Learners will understand the operation of the components and the interaction between the components of the clutch and the rest of the vehicle. Inspection and repair considerations will also be described.

**Languages:** English



# PARTS SALES SPECIALIST

A recommended path for completing the Parts Sales Specialist curriculum is outlined below. To complete the training below and to search for and complete additional training, visit [Techconnectcanada.ca](http://Techconnectcanada.ca).

## RECOMMENDED PATH

<b>SST</b> Alternators / Generators and Starters SFN0102SF	<b>SST</b> Batteries SFN0202SF	<b>SST</b> Belts and Hoses SFN0302SF	<b>SST</b> Brakes SFN0402SF	<b>SST</b> Suspension and Steering SFN0502SF
<b>SST</b> Diesel Emissions SFN0602SF	<b>SST</b> Emissions SFN0702SF	<b>SST</b> Filters SFN0802SF	<b>SST</b> Fluids and Chemicals SFN0902SF	<b>SST</b> Fuel Systems SFN1002SF
<b>SST</b> HVAC SFN1102SF	<b>SST</b> Ignition Systems SFN1202SF	<b>SST</b> Engine Cooling System SFN1302SF	<b>SST</b> Spark Plugs SFN1502SF	<b>SST</b> Manual Transmission Clutches SFN1602SF

## Product Lite Technical Training

### ALTERNATORS / GENERATORS AND STARTERS

SFN0102SF

This course provides an overview of alternators / generators and starters, the components that comprise these parts and the system that is serviced by these products.

**Languages:** English



### BATTERIES

SFN0202SF

This course discusses batteries and their place as the foundation of the vehicle electrical system. Course topics include: battery safety, battery overview, construction, temperature effects, service and maintenance procedures.

**Languages:** English



### BELTS AND HOSES

SFN0302SF

This course provides an overview of ACDelco belts and hoses including safety, component operation, service, and maintenance.

**Languages:** English



### BRAKES

SFN0402SF

This course covers braking system components and operation. Topics include brake systems overview, description and operation of subsystem components, advanced braking systems and operation.

**Languages:** English



### SUSPENSION AND STEERING

SFN0502SF

This 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



### DIESEL EMISSIONS

SFN0602SF

This 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



### EMISSIONS

SFN0702SF

This course covers emission system components, operation and service. Course topics include: emission control valves, catalytic converters, air pumps, lines and hoses.

**Languages:** English



### FILTERS

SFN0802SF

This course covers filters and their operation. Course topics include oil filters, air filters, fuel filters, automatic transmission filters, and cabin air filters.

**Languages:** English



### FLUIDS AND CHEMICALS

SFN0902SF

This 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



### FUEL SYSTEMS

SFN1002SF

This course provides an explanation of popular automotive fuel systems. Includes fuel injectors, regulators, Multiport Fuel Injection (MPI) systems and Spark Ignited Direct Injection (SIDI) components.

**Languages:** English



### HVAC

SFN1102SF

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

**Languages:** English



# PARTS SALES SPECIALIST

---



## IGNITION SYSTEMS

SFN1202SF

This course covers ignition system components, operation, and service. Course topics include automotive ignition system cycle, types of ignition systems, primary and secondary circuit components, and maintenance precautions.

**Languages:** English



## ENGINE COOLING SYSTEM

SFN1302SF

This course covers engine cooling system components, operation, and service. Course topics include: engine cooling system components, engine cooling system failures, and engine cooling system service and maintenance.

**Languages:** English



## SPARK PLUGS

SFN1502SF

This course covers spark plug components, operation, and service. Course topics include spark plug components, system operation, types of spark plugs, and spark plug service and maintenance.

**Languages:** English



## MANUAL TRANSMISSION CLUTCHES

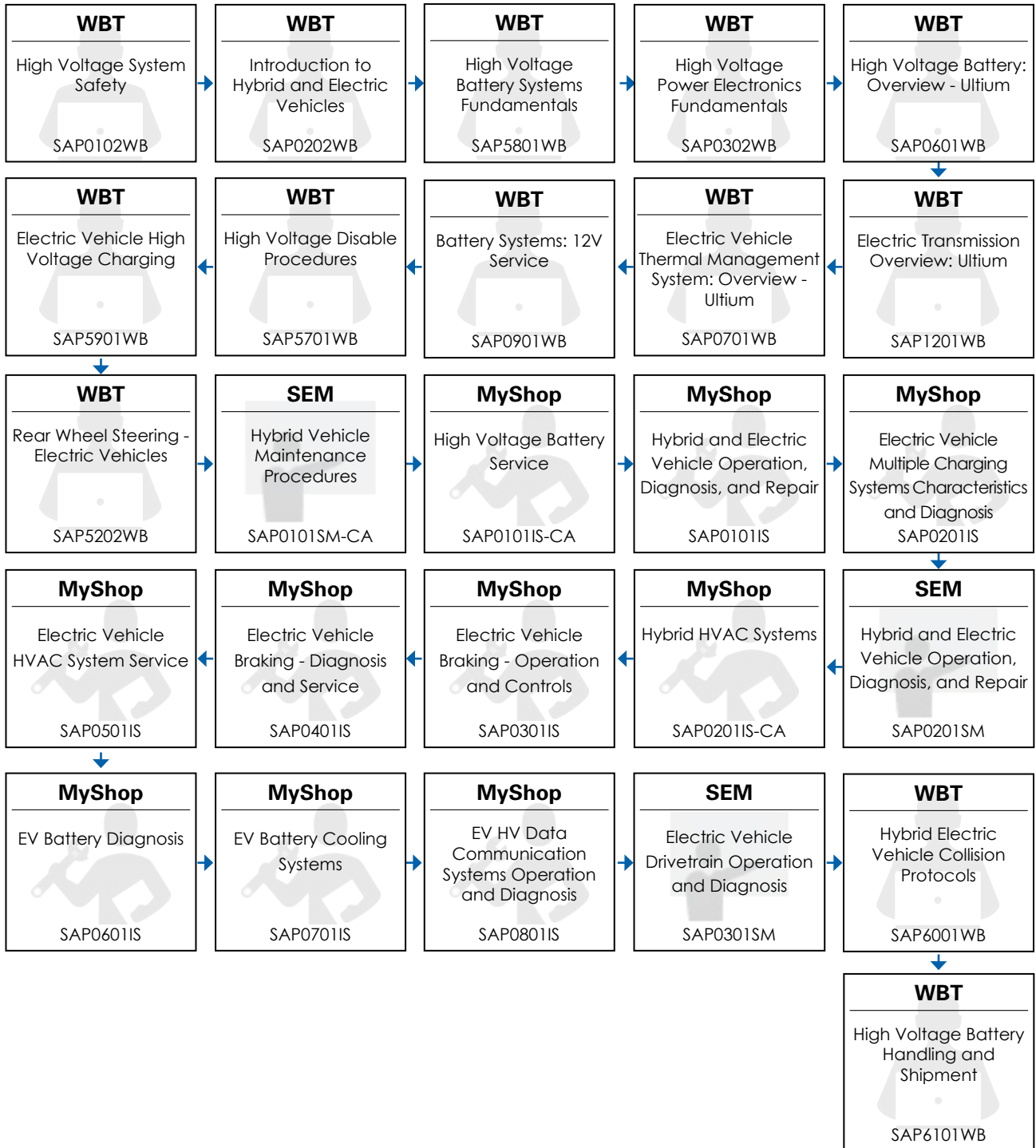
SFN1602SF

This course will describe the components of the manual transmission clutch system. Learners will understand the operation of the components and the interaction between the components of the clutch and the rest of the vehicle. Inspection and repair considerations will also be described.

**Languages:** English

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 [Techconnectcanada.ca](http://Techconnectcanada.ca).

## RECOMMENDED PATH

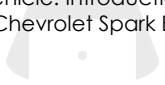
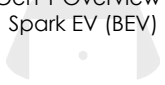
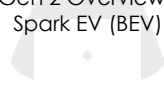
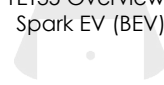


# ALTERNATIVE PROPULSION

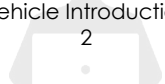


## Gen 1 Volt and Gen 2 Volt

<p><b>WBT</b></p> <p>Extended Range Electric Vehicle: Introduction - Gen 1 Chevrolet Volt</p> <p>SAP1401WB</p>	<p><b>WBT</b></p> <p>Extended Range Electric Vehicle: Introduction - Gen 1 Cadillac ELR</p> <p>SAP1501WB</p>	<p><b>WBT</b></p> <p>Extended Range Electric Vehicle: High Voltage Disable Procedure - Gen 1 Volt / ELR</p> <p>SAP1601WB</p>	<p><b>WBT</b></p> <p>High Voltage Battery: Overview 1 - Gen 1 Volt / ELR</p> <p>SAP1701WB</p>	<p><b>WBT</b></p> <p>High Voltage Battery: Overview 2 - Gen 1 Volt / ELR</p> <p>SAP1801WB</p>
<p><b>WBT</b></p> <p>High Voltage Power Electronics: Overview - Gen 1 Volt / ELR</p> <p>SAP1901WB</p>	<p><b>WBT</b></p> <p>Electric Transmission: 4ET50 Overview - Volt / ELR (EREV)</p> <p>SAP2001WB</p>	<p><b>WBT</b></p> <p>Extended Range Electric Vehicle: Supporting Systems 1 - Gen 1 Volt / ELR</p> <p>SAP2101WB</p>	<p><b>WBT</b></p> <p>Extended Range Electric Vehicle: Supporting Systems 2 - Gen 1 Volt / ELR</p> <p>SAP2201WB</p>	<p><b>WBT</b></p> <p>Extended Range Electric Vehicle: Introduction - Gen 2 Chevrolet Volt</p> <p>SAP2301WB</p>
<p><b>WBT</b></p> <p>High Voltage Battery: Overview - Gen 2 Volt</p> <p>SAP2401WB</p>	<p><b>WBT</b></p> <p>Electric Transmission: 5ET50 Overview - Gen 2 Volt</p> <p>SAP2501WB</p>			


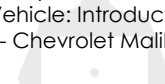

## BEV Spark

<p><b>WBT</b></p> <p>Battery Electric Vehicle: Introduction - Chevrolet Spark EV</p>  <p>SAP2601WB</p>	<p><b>WBT</b></p> <p>High Voltage Battery: Gen 1 Overview - Spark EV (BEV)</p>  <p>SAP2701WB</p>	<p><b>WBT</b></p> <p>High Voltage Battery: Gen 2 Overview - Spark EV (BEV)</p>  <p>SAP2801WB</p>	<p><b>WBT</b></p> <p>Electric Transmission: 1ET35 Overview - Spark EV (BEV)</p>  <p>SAP2901WB</p>
---	---	---	---

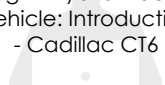


## BEV Bolt

<p><b>WBT</b></p> <p>Battery Electric Vehicle Introduction 2</p>  <p>S-EL06-80.01WBT</p>	<p><b>WBT</b></p> <p>High Voltage Battery: Overview - Bolt EV (BEV 2)</p>  <p>SAP3001WB</p>	<p><b>WBT</b></p> <p>Advanced Technology Vehicle Transmission 5: Chevrolet Bolt 1ET25</p>  <p>S-EL06-89.01WBT</p>
---	--	--

## HEV Malibu

<p><b>WBT</b></p> <p>Electric Transmission: 5ET50 Overview - Malibu</p>  <p>SAP3101WB</p>	<p><b>WBT</b></p> <p>Hybrid Electric Vehicle: Introduction - Chevrolet Malibu</p>  <p>SAP3201WB</p>	<p><b>WBT</b></p> <p>High Voltage Battery: Overview - Malibu</p>  <p>SAP3301WB</p>
--	--	---

## PHEV CT6

<p><b>WBT</b></p> <p>Plug-in Hybrid Electric Vehicle: Introduction - Cadillac CT6</p>  <p>SAP3401WB</p>	<p><b>WBT</b></p> <p>High Voltage Battery: Overview - CT6</p>  <p>SAP3501WB</p>	<p><b>WBT</b></p> <p>Electric Transmission: 4EL70 Overview - CT6</p>  <p>SAP3601WB</p>
--	--	---

# ALTERNATIVE PROPULSION

## eAssist – Gen 1, Gen 2 and Gen 3

<p><b>WBT</b></p> <p>eAssist System Gen 1: Introduction 1 - Buick LaCrosse / Chevrolet Malibu</p> <p>SAP3701WB</p>	<p><b>WBT</b></p> <p>eAssist System Gen 1: Introduction 2 - Buick LaCrosse / Chevrolet Malibu</p> <p>SAP3801WB</p>	<p><b>WBT</b></p> <p>High Voltage Battery: Overview - Gen 1 eAssist</p> <p>SAP3901WB</p>	<p><b>WBT</b></p> <p>eAssist System Gen 1: Safety</p> <p>SAP4001WB</p>
<p><b>WBT</b></p> <p>eAssist System Gen 2: Introduction - Chevrolet Silverado / GMC Sierra</p> <p>SAP4101WB</p>	<p><b>WBT</b></p> <p>High Voltage Battery: Overview - Gen 2 eAssist</p> <p>SAP4201WB</p>	<p><b>WBT</b></p> <p>eAssist System Gen 3: Introduction - Buick LaCrosse / Chevrolet Malibu</p> <p>SAP4301WB</p>	<p><b>WBT</b></p> <p>High Voltage Battery: Overview - Gen 3 eAssist</p> <p>SAP4401WB</p>

## GMC HUMMER EV

<p><b>WBT</b></p> <p>Battery Electric Vehicle: Introduction - GMC HUMMER EV</p> <p>SAP4801WB</p>	<p><b>WBT</b></p> <p>High Voltage Battery: Overview - GMC HUMMER EV</p> <p>SAP4901WB</p>	<p><b>WBT</b></p> <p>Electric Drive Transmission: P79 / S8L Overview - GMC HUMMER EV</p> <p>SAP5001WB</p>	<p><b>WBT</b></p> <p>Electric Vehicle Thermal Management System - GMC HUMMER EV</p> <p>SAP5101WB</p>
--	--	---	--

## Cadillac LYRIQ

<p><b>WBT</b></p> <p>Battery Electric Vehicle: Introduction - Cadillac LYRIQ</p> <p>SAP5301WB</p>	<p><b>WBT</b></p> <p>High Voltage Battery: Overview - Cadillac LYRIQ</p> <p>SAP541WB</p>	<p><b>WBT</b></p> <p>Electric Drive Transmission: P77 Overview - Cadillac LYRIQ</p> <p>SAP5501WB</p>	<p><b>WBT</b></p> <p>Electric Vehicle Thermal Management System - Cadillac LYRIQ</p> <p>SAP0501WB</p>
---	--	--	---

## Silverado / Blazer

<p><b>WBT</b></p> <p>Battery Electric Vehicle: Introduction - Silverado EV</p> <p>SAP0801WB</p>	<p><b>WBT</b></p> <p>Battery Electric Vehicle: Introduction - Blazer EV</p> <p>SAP1001WB</p>
---	--

## Equinox

### WBT

Battery Electric  
Vehicle: Introduction -  
Equinox EV

SAP1301WB

## Corvette

### WBT

Battery Electric  
Vehicle: Introduction -  
Corvette E-Ray

SAP1101WB

## Additional Training

### VOD

Electric Transmission:  
1ET25 Unit Repair -  
Bolt EV

SAP0101VO

### VOD

High Voltage Battery:  
Replacement  
Procedure - Cadillac  
LYRIQ

SAP0201VO

### VOD

High Voltage Battery:  
Replacement  
Procedure - GMC  
HUMMER EV

SAP0301VO

### VOD

Silverado EV Work  
Truck New Model  
Launch

SAP0401VO

### VOD

Electric Vehicles:  
New & Updates  
Video

SAP0501VO

# ALTERNATIVE PROPULSION

## Web-Based Training



### HIGH VOLTAGE SYSTEM SAFETY

SAP0102WB

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



### INTRODUCTION TO HYBRID AND ELECTRIC VEHICLES

SAP0202WB

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

SAP0302WB

This web-based course provides an overview of power electronics and electronic motor controllers. Upon completing this course, the technician will be able to identify the purpose of power electronics and thermal management characteristics. The technician will also be able to recall motor/generator functions, electrical motor theory, purpose and components of motor position sensors, and identify thermal management characteristics. Also be able to recall electrical power inversion characteristics, rectification characteristics, and power conversion characteristics.

**Languages:** English



### ELECTRIC VEHICLE THERMAL MANAGEMENT SYSTEM - CADILLAC LYRIQ

SAP0501WB

This course describes the thermal management system of the 2023 Cadillac LYRIQ, designed to support occupant comfort, energy optimization and drive quality. Upon completion of this course, EV technicians will be able to recognize the purpose and benefits of the Cadillac LYRIQ thermal management system, identify key components of the Cadillac LYRIQ coolant system, and recall operation, and identify key components of the Cadillac LYRIQ refrigerant system.

**Languages:** English



### HIGH VOLTAGE BATTERY: OVERVIEW - ULTIUM

SAP0601WB

This course provides foundational detail specific to the Ultium drive motor battery assembly. This course introduces Ultium battery characteristics and components, thermal management, and diagnosis and service procedures. Upon completing this course, participants will be able to identify Ultium battery characteristics and components, thermal management characteristics, and diagnosis and service procedures.

**Languages:** English



### ELECTRIC VEHICLE THERMAL MANAGEMENT SYSTEM: OVERVIEW - ULTIUM

SAP0701WB

This course provides an overview of the 2023 Ultium Electric Vehicle thermal management system. Upon completion of this course, the technician will be able to recall fundamental features and components of the 2023 Ultium Electric Vehicle thermal management system. They will be able to recognize the purpose and benefits of the thermal management system, identify key components of the coolant system and recall its operation, and identify key components of the refrigerant system and recall its operation.

**Languages:** English



### BATTERY ELECTRIC VEHICLE: INTRODUCTION - SILVERADO EV

SAP0801WB

This course provides an overview of the key features, characteristics, and components of the various systems of the 2024 Chevrolet Silverado EV. Upon completion of this course, technicians will be able to identify the characteristics and special features of the Silverado EV Battery electric Vehicle (BEV), the various components and safety precautions of the BEV high voltage systems, the characteristics and components of the BEV supporting systems, and be able to describe the operation of the Silverado EV BEV selectable modes and passive power moding.

**Languages:** English

## BATTERY SYSTEMS: 12V SERVICE ON ULTIUM ELECTRIC VEHICLES

SAP0901WB

This course provides an overview of the 12V charging system, including its components, the types of batteries used in the electric vehicles, and the procedures for the removal and installation of the 12V battery. In addition, it provides an overview of the vehicle charging system.

**Languages:** English



## BATTERY ELECTRIC VEHICLE: INTRODUCTION - BLAZER EV

SAP1001WB

This course provides an overview of the key features, characteristics, and components of the various systems within the 2024 Chevrolet Blazer Battery Electric Vehicle (BEV). Upon completing this course, technicians will be able to identify the characteristics and special features of the Chevrolet Blazer BEV. They will also be able to describe the high-voltage system, vehicle support system, and the different BEV operation modes.

**Languages:** English



## BATTERY ELECTRIC VEHICLE: INTRODUCTION - CORVETTE E-RAY

SAP1101WB

This course provides an overview of key features, characteristics, and components of the various systems within the in the 2024 Chevrolet Corvette E-Ray Battery Electric Vehicle (BEV). The content covers the following topic areas Hybrid System, Propulsion, and Hybrid System operation.

**Languages:** English



## ELECTRIC TRANSMISSION OVERVIEW: ULTIUM

SAP1201WB

The Electric Transmission Overview: Ultium course provides a high-level overview of the single and dual motor electric transmissions. In addition to discussing the components that makeup the transmission, the safety precautions that must be kept while working on the transmissions are discussed. This course ensures that technicians can identify the components and safely work on the vehicle.

**Languages:** English



## BATTERY ELECTRIC VEHICLE: INTRODUCTION - EQUINOX EV

SAP1301WB

This course provides an overview of the key features, characteristics, and components of the various systems within the 2024 Chevrolet Equinox Battery Electric Vehicle (BEV). Upon completion of this course, the technician will be able to identify the characteristics and special features of the Chevrolet Equinox BEV. Describe the high-voltage systems of the Chevrolet Equinox BEV, the vehicle support systems, and the different BEV operation modes.

**Languages:** English



## EXTENDED RANGE ELECTRIC VEHICLE: INTRODUCTION - GEN 1 CHEVROLET VOLT

SAP1401WB

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 / French



## EXTENDED RANGE ELECTRIC VEHICLE: INTRODUCTION - GEN 1 CADILLAC ELR

SAP1501WB

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

SAP1601WB

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 / French



# ALTERNATIVE PROPULSION



## HIGH VOLTAGE BATTERY: OVERVIEW 1 - GEN 1 VOLT / ELR

SAP1701WB

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 / French



## HIGH VOLTAGE BATTERY: OVERVIEW 2 - GEN 1 VOLT / ELR

SAP1801WB

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 / French



## HIGH VOLTAGE POWER ELECTRONICS: OVERVIEW - GEN 1 VOLT / ELR

SAP1901WB

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 and identify the correct operation of the accessory DC power control module and thermal management system.

**Languages:** English / French



## ELECTRIC TRANSMISSION: 4ET50 OVERVIEW - VOLT / ELR (EREV)

SAP2001WB

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 / French



## EXTENDED RANGE ELECTRIC VEHICLE: SUPPORTING SYSTEMS 1 - GEN 1 VOLT / ELR

SAP2101WB

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 modes of operation of the 1.4L engine and identify the characteristics and operation of the fuel and evaporative emissions control systems.

**Languages:** English / French



## EXTENDED RANGE ELECTRIC VEHICLE: SUPPORTING SYSTEMS 2 - GEN 1 VOLT / ELR

SAP2201WB

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 / French



## EXTENDED RANGE ELECTRIC VEHICLE: INTRODUCTION - GEN 2 CHEVROLET VOLT

SAP2301WB

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 / French



## HIGH VOLTAGE BATTERY: OVERVIEW - GEN 2 VOLT

SAP2401WB

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 / French

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

**SAP2501WB**

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 / French



## **BATTERY ELECTRIC VEHICLE: INTRODUCTION - CHEVROLET SPARK EV**

**SAP2601WB**

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 high voltage systems, 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)**

**SAP2701WB**

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)**

**SAP2801WB**

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

**SAP2901WB**

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



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

**SAP3001WB**

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



# ALTERNATIVE PROPULSION



## **ELECTRIC TRANSMISSION: 5ET50 OVERVIEW - MALIBU**

**SAP3101WB**

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 / French



## **HYBRID ELECTRIC VEHICLE: INTRODUCTION - CHEVROLET MALIBU**

**SAP3201WB**

This course introduces the hybrid electric vehicle system found in the Chevrolet Malibu. The course also provides information on the hybrid electric vehicle's components and modes of operation, as well as its electrical and communication systems and braking system. Upon completion of this course, participants will be able to identify the key features of the 2016 hybrid electric vehicle system, recall the components and modes of operation, describe the electrical and communication systems, and identify characteristics of the braking system.

**Languages:** English / French



## **HIGH VOLTAGE BATTERY: OVERVIEW - MALIBU**

**SAP3301WB**

This course presents a description of the 288-volt, lithium-ion high voltage battery found in hybrid electric vehicles such as the 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, participants will be able to recognize the characteristics and components of the high voltage battery assembly.

**Languages:** English / French



## **PLUG-IN HYBRID ELECTRIC VEHICLE: INTRODUCTION - CADILLAC CT6**

**SAP3401WB**

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 identify key characteristics and features, recall high voltage systems, and identify supporting systems.

**Languages:** English / French



## **HIGH VOLTAGE BATTERY: OVERVIEW - CT6**

**SAP3501WB**

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 / French



## **ELECTRIC TRANSMISSION: 4EL70 OVERVIEW - CT6**

**SAP3601WB**

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 / French



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

**SAP3701WB**

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 / French



## **eASSIST SYSTEM GEN 1: INTRODUCTION 2 - BUICK LACROSSE / CHEVROLET MALIBU**

**SAP3801WB**

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 / French

## HIGH VOLTAGE BATTERY: OVERVIEW - GEN 1 eASSIST

SAP3901WB

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 / French



## eASSIST SYSTEM GEN 1: SAFETY

SAP4001WB

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 / French



## eASSIST SYSTEM GEN 2: INTRODUCTION - CHEVROLET SILVERADO / GMC SIERRA

SAP4101WB

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 / French



## HIGH VOLTAGE BATTERY: OVERVIEW - GEN 2 eASSIST

SAP4201WB

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 / French



## eASSIST SYSTEM GEN 3: INTRODUCTION - BUICK LACROSSE / CHEVROLET MALIBU

SAP4301WB

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 / French



## HIGH VOLTAGE BATTERY: OVERVIEW - GEN 3 eASSIST

SAP4401WB

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 / French



## BATTERY ELECTRIC VEHICLE: INTRODUCTION – GMC HUMMER EV

SAP4801WB

This course covers the various components of the high voltage systems, the supporting Battery Electric Vehicle (BEV) systems, and vehicle operation of the 2022 GMC HUMMER EV.

**Languages:** English



## HIGH VOLTAGE BATTERY: OVERVIEW – GMC HUMMER EV

SAP4901WB

This course presents an overview of the high voltage battery in the 2022 GMC HUMMER Electric Vehicle (EV). This high voltage battery is also known as the hybrid/EV battery pack. Topics include the high voltage battery's characteristics, components, thermal management, and diagnosis and service.

**Languages:** English



## ELECTRIC DRIVE TRANSMISSION: P79 / S8L OVERVIEW – GMC HUMMER EV

SAP5001WB

This course covers the front and rear electric drive transmissions of the 2022 GMC HUMMER Electric Vehicle (EV). The content covers the following topic areas: the P79 rear 2-motor electric drive transmission, S8L front 1-motor electric drive transmission, and service considerations.

**Languages:** English



# ALTERNATIVE PROPULSION



## **ELECTRIC VEHICLE THERMAL MANAGEMENT SYSTEM – GMC HUMMER EV**

**SAP5101WB**

This course describes the thermal management system of the 2022 GMC HUMMER EV, designed to support occupant comfort, energy optimization, and drive quality. The content covers the following topic areas: the EV thermal management overview, coolant system, and refrigerant system.

**Languages:** English



## **REAR WHEEL STEERING - ELECTRIC VEHICLES**

**SAP5202WB**

Electric vehicle systems today have become more complex than ever before with the variations in steering technology and module control of steering systems. This course will help you understand the different rear wheel steering systems and rear steering service considerations you would need as a technician. Upon completing this course, the technician will be able to describe the rear wheel steering systems, identify the rear wheel steering components, and recall the rear steering service considerations.

**Languages:** English



## **BATTERY ELECTRIC VEHICLE: INTRODUCTION – CADILLAC LYRIQ**

**SAP5301WB**

This course covers the various components of the high voltage systems, supporting Battery Electric Vehicle (BEV) systems, and vehicle operation of the 2023 Cadillac LYRIQ. Upon completion of this course, technicians will be able to identify the characteristics and special features of the LYRIQ BEV system, identify the various components and safety precautions of the BEV high voltage systems, and identify the characteristics and components of the BEV supporting systems.

**Languages:** English



## **HIGH VOLTAGE BATTERY: OVERVIEW - CADILLAC LYRIQ**

**SAP5401WB**

This course presents an overview of the high voltage battery in the 2023 Cadillac LYRIQ Electric Vehicle (EV). This high voltage battery is also known as the hybrid/EV battery pack. This course provides a description of the high voltage battery in the Cadillac LYRIQ. Upon completion of this course, Technicians should be able to identify the characteristics and components, identify the thermal management system, and identify the diagnosis and service procedures.

**Languages:** English



## **ELECTRIC DRIVE TRANSMISSION: P77 OVERVIEW - CADILLAC LYRIQ**

**SAP5501WB**

This course covers key aspects and service considerations of the P77 Electric Drive Transmission of the 2023 Cadillac LYRIQ. Upon completion of this course, technicians will be able to identify the characteristics and components of the P77 Electric Drive Transmission and identify the service considerations of the P77 Electric Drive transmission.

**Languages:** English



## **HIGH VOLTAGE DISABLE PROCEDURES**

**SAP5701WB**

This course presents the general procedures for disabling and enabling the high voltage battery in a GM hybrid or Electric Vehicle (EV). Upon completion of this course, technicians will be able to identify how to disable the high voltage battery and how to enable the high voltage battery.

**Languages:** English



## **HIGH VOLTAGE BATTERY SYSTEMS FUNDAMENTALS**

**SAP5801WB**

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, high voltage control and monitoring, and the fundamental safety features of high voltage batteries.

**Languages:** English



## **ELECTRIC VEHICLE HIGH VOLTAGE CHARGING**

**SAP5901WB**

This course provides information about high voltage charging in a GM Electric Vehicle (EV). The course covers charging system components and types, charging stations, and communication. The course covers charging levels such as onboard charging (Level 1 and Level 2) and Direct Current (DC) fast charging, as well as the charging operation and characteristics in Ultium EVs and the Bolt EV. Finally, technicians learn about charging indicators, scheduling, and issues. Upon completion of this course, technicians will be able to identify charging components and communication, the characteristics of battery charging in Ultium EVs and the Bolt EV, and charging indicators, scheduling, and issues.

**Languages:** English

## HYBRID ELECTRIC VEHICLE COLLISION PROTOCOLS

SAP6001WB

This course provides an overview of the collision protocols for Hybrid/Electric Vehicles (EVs) and their importance. Upon completing this course, the technician will be able to recall high voltage safety precautions, key elements of high voltage system inspection, and the steps for high voltage vehicle inspection. Technicians will also be able to describe high voltage collision repair best practices.

**Languages:** English



## HIGH VOLTAGE BATTERY HANDLING AND SHIPMENT

SAP6101WB

This course provides an overview of the high voltage battery handling and shipment protocols and their importance. Upon completing this course, the technician will be able to recall the high voltage battery handling while removed from vehicle protocols, the steps in preparing a high voltage battery for shipment, and the high voltage battery shipment protocols.

**Languages:** English



## BATTERY ELECTRIC VEHICLE INTRODUCTION 2

S-EL06-80.01WBT

This WBT 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



## 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



## COMPRESSED NATURAL GAS (CNG) FUEL SYSTEMS

S-EP08-23.01WBT

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



## Seminars

### HYBRID VEHICLE MAINTENANCE PROCEDURES

SAP0101SM-CA

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 / French



### HYBRID AND ELECTRIC VEHICLE OPERATION, DIAGNOSIS, AND REPAIR

SAP0201SM

This Instructor-led training seminar provides an overview of hybrid and electric vehicle designs, operation, and servicing. Diagnosing and servicing Hybrid Electric Vehicles (HEV) and Battery Electric Vehicles (BEV) requires an in-depth understanding of their design and operation. This course covers the operation of HEV and BEV propulsion systems, driveline configurations, high voltage batteries, drive motors / generators, and charging systems. The course also covers HEV and BEV servicing procedures including high voltage safety, high voltage disabling / enabling, loss of isolation diagnosis, and range related conditions.

**Languages:** English



# ALTERNATIVE PROPULSION



## ELECTRIC VEHICLE DRIVETRAIN OPERATION AND DIAGNOSIS

SAP0301SM

This 3-hour instructor-led training seminar will increase your awareness and understanding of Electric Vehicle (EV) drivetrain components and operation, types of electric drivetrain motors used in EVs, and EV-specific drivetrain diagnosis and service guidelines and procedures.

**Languages:** English / French



## MyShop Training



## HYBRID AND ELECTRIC VEHICLE OPERATION, DIAGNOSIS, AND REPAIR

SAP0101IS

This Instructor-led training MyShop provides an overview of hybrid and electric vehicle designs, operation, and servicing. Diagnosing and servicing Hybrid Electric Vehicles (HEV) and Battery Electric Vehicles (BEV) requires an in-depth understanding of their design and operation. This course covers the operation of HEV and BEV propulsion systems, driveline configurations, high voltage batteries, drive motors / generators, and charging systems. The course also covers HEV and BEV servicing procedures including high voltage safety, high voltage disabling / enabling, loss of isolation diagnosis, and range related conditions.

**Languages:** English



## HIGH VOLTAGE BATTERY SERVICE

SAP0101IS-CA

This course will provide an overview of High Voltage (HV) safety practices, and will highlight the types of hybrid and Electric Vehicles (EVs) and fundamental concepts related to the HV battery. Topics will include preparing for HV battery service and common HV battery service and maintenance procedures.

**Languages:** English



## HYBRID HVAC SYSTEMS

SAP0201IS-CA

This course will provide an overview of hybrid Heating, Ventilation, and Air Conditioning (HVAC) systems. Hybrid HVAC safety practices will be discussed. Course topics will include operation of hybrid heating / cooling system components and common hybrid HVAC service and maintenance procedures.

**Languages:** English



## ELECTRIC VEHICLE MULTIPLE CHARGING SYSTEMS CHARACTERISTICS AND DIAGNOSIS

SAP0201IS

This 1-hour course will cover high voltage safety and Electric Vehicle (EV) charging systems, including on-board and off-board charging diagnosis. Participants will also review specific bulletins that have implications across multiple manufacturers.

**Languages:** English / French



## ELECTRIC VEHICLE BRAKING - OPERATION AND CONTROLS

SAP0301IS

This 1-hour course will cover high voltage safety, Electric Vehicle (EV) braking modes including regenerative braking and friction braking main components and how regenerative braking and hydraulic braking interact.

**Languages:** English / French



## ELECTRIC VEHICLE BRAKING - DIAGNOSIS AND SERVICE

SAP0401IS

This 1-hour course will cover high voltage safety, Electric Vehicle (EV) test meters, disabling and isolating high voltage, and EV-specific Braking diagnosis and service guidelines and procedures.

**Languages:** English / French



## ELECTRIC VEHICLE HVAC SYSTEM SERVICE

SAP0501IS

This 1-hour course will cover high voltage safety, Electric Vehicle (EV) test meters, disabling and isolating high voltage, and EV-specific HVAC service guidelines and procedures.

**Languages:** English / French



## EV BATTERY DIAGNOSIS

SAP0601IS

This 1-hour instructor-led training seminar will increase your awareness and understanding of high voltage battery components and their function, high voltage battery controls, the purpose and function of the Battery Management System (BMS), high voltage safety guidelines, and procedures and guidelines for testing high voltage electric batteries.

**Languages:** English / French



## EV BATTERY COOLING SYSTEMS

SAP0701IS

This 1-hour instructor-led training seminar will increase your awareness and understanding of the operation, components, and advantages of liquid-cooled, refrigerant-cooled, and air-cooled cooling systems used in Electric Vehicles (EVs), and increase your awareness and understanding of high voltage cooling system service procedures and safety guidelines.

**Languages:** English / French



## EV HIGH VOLTAGE DATA COMMUNICATION SYSTEMS OPERATION AND DIAGNOSIS

SAP0801IS

This instructor-led training seminar will increase your awareness and understanding of how the data communication network in a Electric Vehicle (EV) high voltage system operates, how the Battery Management System (BMS) operates, how the Global B data system operates, what causes communication faults, and how to diagnose high voltage data communication circuits.

**Languages:** English / French



## Video On Demand

### ELECTRIC TRANSMISSION: 1ET25 UNIT REPAIR - BOLT EV

SAP0101VO

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



### HIGH VOLTAGE BATTERY: REPLACEMENT PROCEDURE - CADILLAC LYRIQ

SAP0201VO

The Cadillac LYRIQ is a unique vehicle with unique service requirements. This Service Know-How Video will focus on the Hybrid/Electric Vehicle Battery Pack removal and installation procedures. Upon completion of the course, Electric Vehicle Technicians will be able to recall the LYRIQ's Hybrid/Electric Vehicle Battery Pack removal and installation procedures, and recall the special tools required to handle, remove and install the LYRIQ's Hybrid/Electric Vehicle Battery Pack.

**Languages:** English



### HIGH VOLTAGE BATTERY: REPLACEMENT PROCEDURE - GMC HUMMER EV

SAP0301VO

The GMC HUMMER EV is a unique vehicle with unique service requirements. This video will focus on the Hybrid/Electric Vehicle Battery Pack removal and installation procedures. Upon completion of the course, Electric Vehicle Technicians will be able to recall the Hybrid/Electric Vehicle Battery Pack removal and installation procedures.

**Languages:** English



# ALTERNATIVE PROPULSION

---

## **SILVERADO EV WORK TRUCK NEW MODEL LAUNCH**

**SAP0401VO**

This Virtual Classroom Training (VCT) course for GM Fleet technicians has three modules. The first module presents the 2024 Chevrolet Silverado Electric Vehicle (EV) Work Truck (WT) and its key features, including the Ultium propulsion system and battery charging. The second module covers pre-delivery inspection and the installation of the soft tonneau cover. The third and final module deals with safety, high voltage labels, lifting procedures, and service considerations related to this vehicle. Upon completion of the course, technicians will be able to identify characteristics of the 2024 Chevrolet Silverado EV WT, identify pre-delivery inspection and vehicle readiness, and identify high voltage vehicle safety and low voltage systems service procedures.

**Languages:** English

## **ELECTRIC VEHICLES: NEW & UPDATES VIDEO**

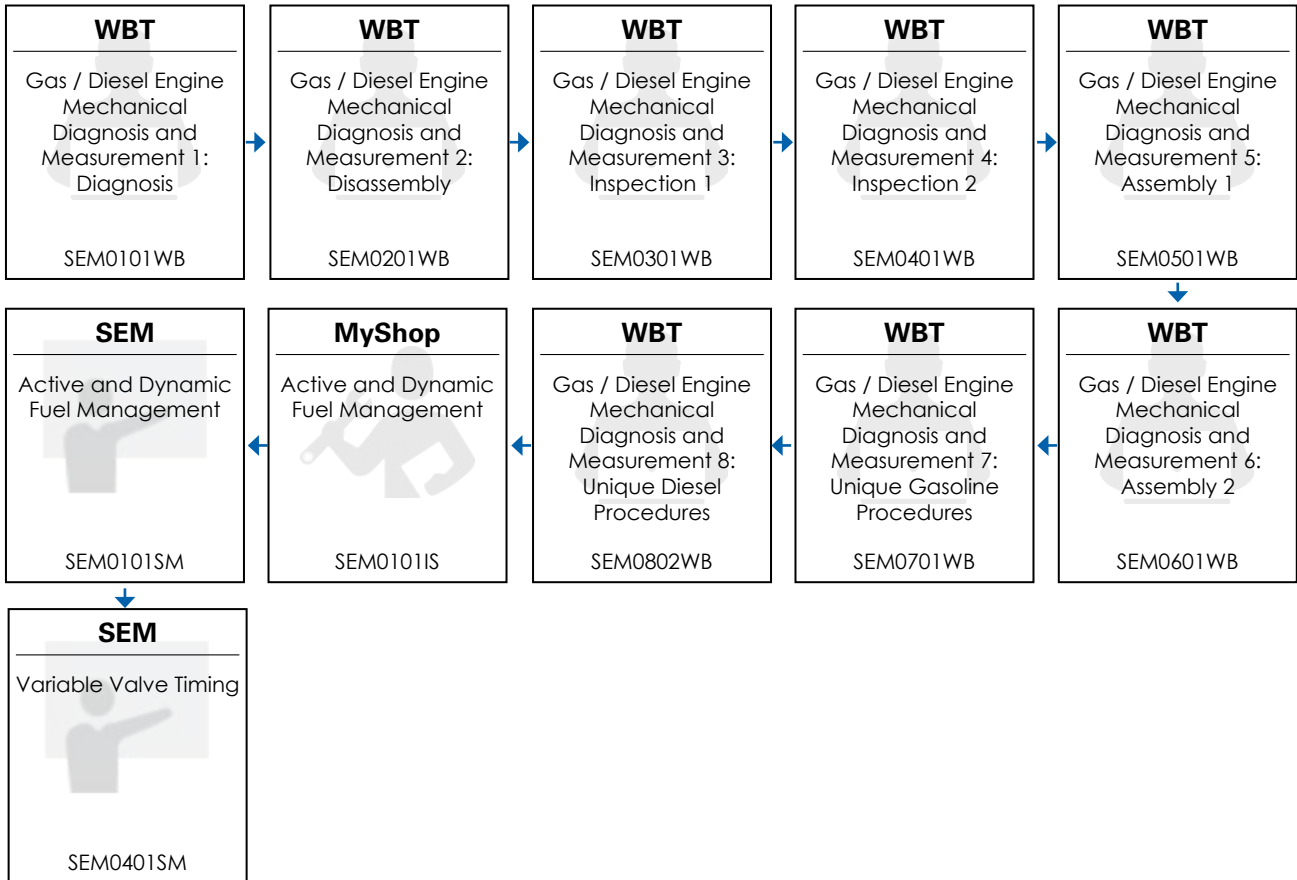
**SAP0501VO**

This video version of the Virtual Classroom Training (VCT) course begins with information about the safety practices and the Personal Protective Equipment (PPE) required to work around the high voltage battery in an Electric Vehicle (EV). The course covers upcoming EVs from General Motors (GM), enhancements to current GM EVs, and service related to EVs. Upon completion of this course, technicians will be able to recognize high voltage safety requirements, identify upcoming GM EVs and service procedures, and enhancements and updates to current GM EVs.

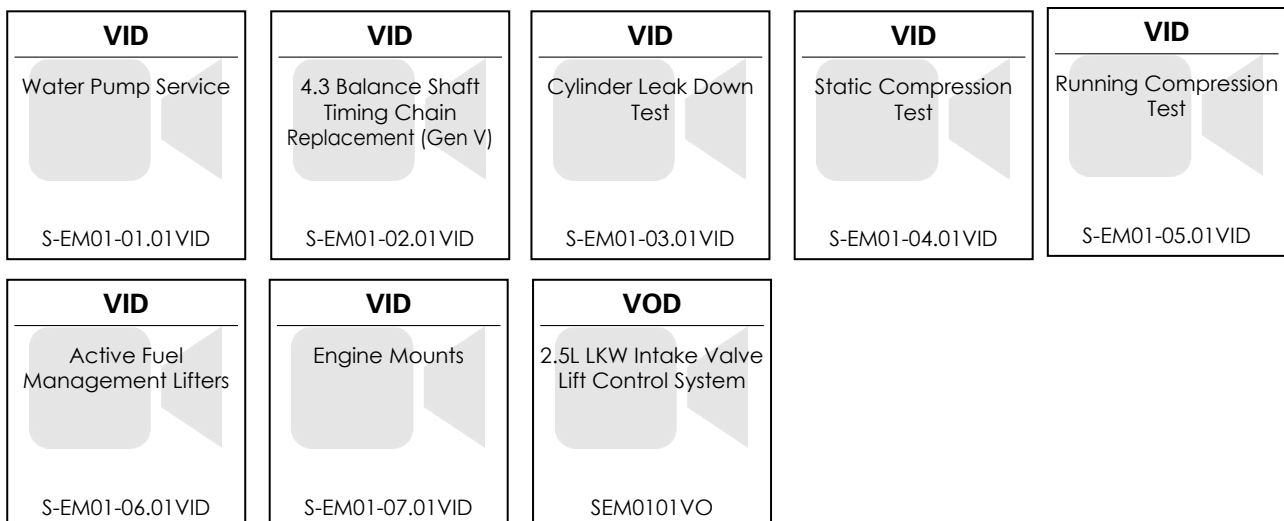
**Languages:** English

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 [Techconnectcanada.ca](http://Techconnectcanada.ca).

## RECOMMENDED PATH



## ADDITIONAL TRAINING



## Web-Based Training



### **GAS / DIESEL ENGINE MECHANICAL DIAGNOSIS AND MEASUREMENT 1: DIAGNOSIS**

**SEM0101WB**

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 / French



### **GAS / DIESEL ENGINE MECHANICAL DIAGNOSIS AND MEASUREMENT 2: DISASSEMBLY**

**SEM0201WB**

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 / French



### **GAS / DIESEL ENGINE MECHANICAL DIAGNOSIS AND MEASUREMENT 3: INSPECTION 1**

**SEM0301WB**

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 / French



### **GAS / DIESEL ENGINE MECHANICAL DIAGNOSIS AND MEASUREMENT 4: INSPECTION 2**

**SEM0401WB**

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 second part of the inspection process, concentrating on the upper components 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: describe how to inspect the upper components of the disassembled 3.6L LGX engine, recall how to clean and inspect the fuel injector rails and injectors, recall how to clean, inspect, measure, and reassemble the camshaft/timing gear, valve lifters, and valve rocker arms, recall how to disassemble, clean, inspect, and assemble engine front cover, camshaft covers/carriers, and intake manifold, recall how to repair cylinder block bolt holes.

**Languages:** English / French



### **GAS / DIESEL ENGINE MECHANICAL DIAGNOSIS AND MEASUREMENT 5: ASSEMBLY 1**

**SEM0501WB**

course includes proven inspection procedures, test equipment, and methods of measurement. Upon completion of this course, participants will be able to describe how to assemble the upper components of the disassembled 3.6L LGX engine, recall how to assemble the piston and rod assemblies, recall how to perform the alternate clearance checking procedure, recall how to install the rear main seal, recall how to install the oil pump, and recall how to install and properly torque the cylinder head assembly.

**Languages:** English / French

## **GAS / DIESEL ENGINE MECHANICAL DIAGNOSIS AND MEASUREMENT 6: ASSEMBLY 2**

**SEM0601WB**



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 / French

## **GAS / DIESEL ENGINE MECHANICAL DIAGNOSIS AND MEASUREMENT 7: UNIQUE GASOLINE PROCEDURES**

**SEM0701WB**



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 / French

## **GAS / DIESEL ENGINE MECHANICAL DIAGNOSIS AND MEASUREMENT 8: UNIQUE DIESEL PROCEDURES**

**SEM0802WB**



This course is intended for service technicians and covers unique principles and procedures of engine service. Specifically, this course covers the unique aspects 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 used for the 6.6L Duramax diesel engine, 2.8L LWN diesel engine, 3.0L LM2 diesel engine, and the 1.6L LH7 diesel engine.

**Languages:** English

## **Seminar**

### **ACTIVE AND DYNAMIC FUEL MANAGEMENT**

**SEM0101SM**



This Instructor-led Training Seminar focuses on the operation and diagnostic procedures of Active and Dynamic Fuel Management Systems. Modern engines employ valve timing and lift adjustment strategies to improve fuel economy, power, and emissions. Course content includes function and operation of variable valve timing, valve lift and cylinder deactivation systems. Additionally, this course highlights procedures and protocol for proper vehicle repairs, diagnostic procedures, service tips, and special tools. Various Original Equipment Manufacturers (OEMs) will be highlighted.

**Languages:** English



### **VARIABLE VALVE TIMING**

**SEM0401SM**



This course is intended for the experienced technician who is interested in learning advanced techniques for diagnosing Variable Valve Timing (VVT) and Variable Valve Lift (VVL) system concerns utilizing oscilloscope and scan tool data. Technicians attending this course will have knowledge of engine operation and diagnosis, as well as a working knowledge of oscilloscopes and scan tools. These technicians may have some experience with VVT and VVL systems but want more knowledge about operation, diagnostics, and service.

**Languages:** English / French



## MyShop Training



### ACTIVE AND DYNAMIC FUEL MANAGEMENT

SEM0101IS

This Instructor-led Training MyShop focuses on the operation and diagnostic procedures of Active and Dynamic Fuel Management Systems. Modern engines employ valve timing and lift adjustment strategies to improve fuel economy, power, and emissions. Course content includes function and operation of variable valve timing, valve lift and cylinder deactivation systems. Various Original Equipment Manufacturers (OEMs) will be highlighted.

**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-EM01-02.01VID

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-EM01-03.01VID

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-EM01-04.01VID

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-EM01-05.01VID

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

## Video On Demand



### 2.5L LKW INTAKE VALVE LIFT CONTROL SYSTEM

SEM0101VO

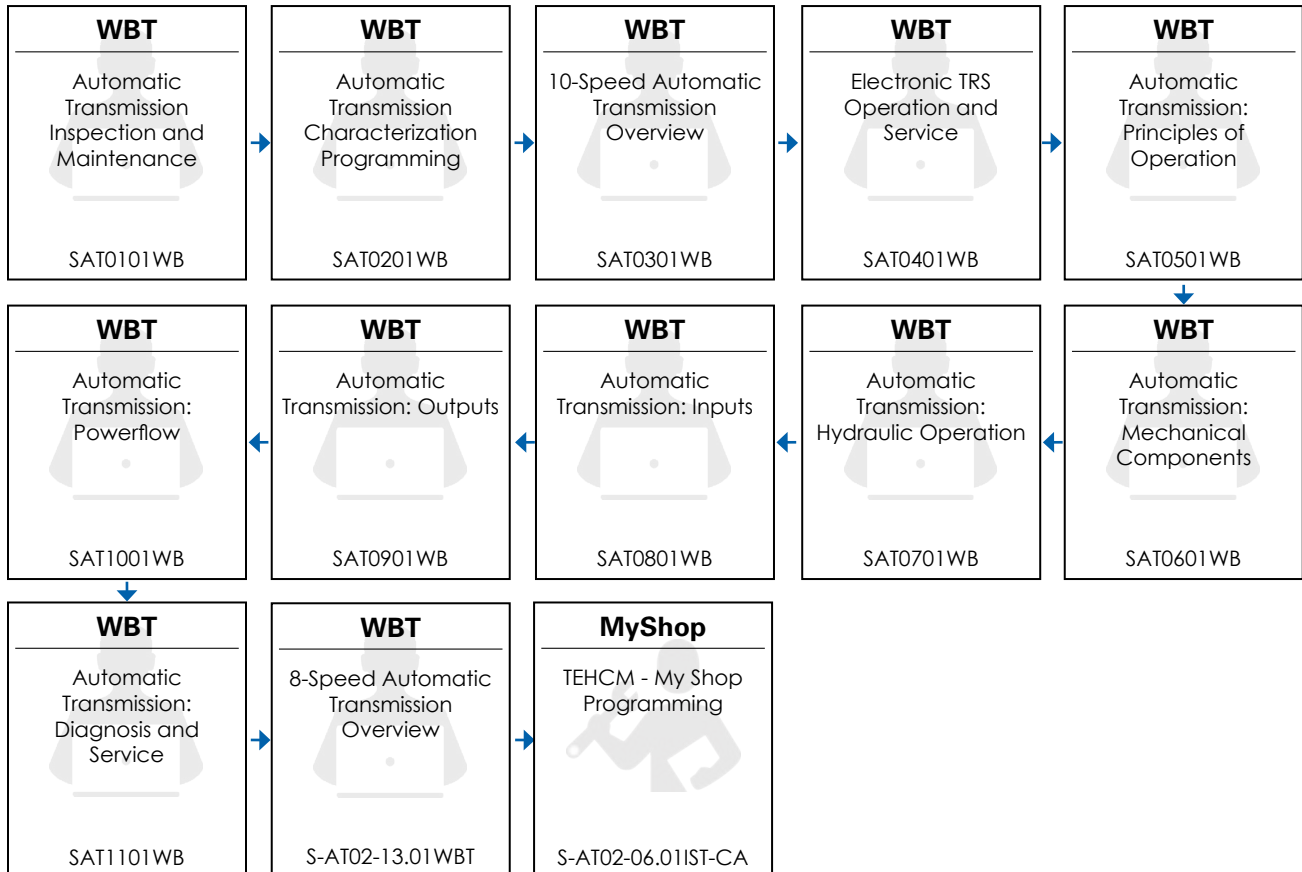
This video focuses on the Intake Valve Lift Control System or the Variable Lift System used on the 2.5L LKW engine. The video highlights component identification and system operation. Components include the camshaft, Oil Control Valve (OCV) or the rocker arm actuator control solenoid, inner and outer rocker arm assembly, and the dual feed lash adjuster.

**Languages:** English

# AUTOMATIC TRANSMISSION

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 [Techconnectcanada.ca](http://Techconnectcanada.ca).

## RECOMMENDED PATH

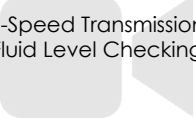


# AUTOMATIC TRANSMISSION

## ADDITIONAL TRAINING

**VID**

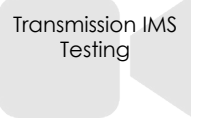
6-Speed Transmission  
Fluid Level Checking



S-AT02-01.01VID

**VID**


Transmission IMS  
Testing



S-AT02-02.01VID

**VOD**


10L1000 Automatic  
Transmission Unit  
Repair



SAT0101VO

**VOD**


8L90 Automatic  
Transmission Unit  
Repair



SAT0201VO

**VOD**


9-Speed Automatic  
Transmission  
Overview



SAT0301VO

**VOD**


9T50 Automatic  
Transmission Unit  
Repair



SAT0401VO

**VOD**


10L90 Automatic  
Transmission Unit  
Repair



SAT0501VO

**VOD**

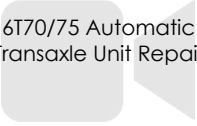
Allison LCT1000 Unit  
Repair



SAT0601VO

**VOD**


6T70/75 Automatic  
Transaxle Unit Repair



SAT0701VO

**VOD**

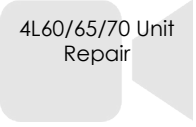
6L80 Functions and  
Features



SAT0801VO

**VOD**

4L60/65/70 Unit  
Repair



SAT0901VO

## 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 / French



### **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 / French



### **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 / French



### **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, stator 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 / French



### **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 / 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 / French



# AUTOMATIC TRANSMISSION



## **AUTOMATIC TRANSMISSION: OUTPUTS**

**SAT0901WB**

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 / French



## **AUTOMATIC TRANSMISSION: POWERFLOW**

**SAT1001WB**

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 / French



## **AUTOMATIC TRANSMISSION: DIAGNOSIS AND SERVICE**

**SAT1101WB**

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 / French



## **8-SPEED AUTOMATIC TRANSMISSION OVERVIEW**

**S-AT02-13.01WBT**

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

## **MyShop Training**



### **TEHCM - MY SHOP PROGRAMMING**

**S-AT02-06.01IST-CA**

Specialized MyShop; This MyShop will focus on TEHCM programing techniques.

**Languages:** English



## **TechTube Videos**



### **6-SPEED TRANSMISSION FLUID LEVEL CHECKING**

**S-AT02-01.01VID**

This video demonstrates how to properly check and adjust fluid levels on the GM 6T70/75, 6T40 and 6L80 automatic transmissions.

**Languages:** English



### **TRANSMISSION IMS TESTING**

**S-AT02-02.01VID**

This video demonstrates how to test the transmission Internal Mode Switch (IMS) on GM's 6L80/6L90 automatic transmissions.

**Languages:** English

## **Video On Demand**



### **10L1000 AUTOMATIC TRANSMISSION UNIT REPAIR**

**SAT0101VO**

This Service Know-How Video highlights the overhaul procedures for the Allison 10L1000, a heavy duty 10-speed, fully automatic, transmission. The video demonstrates the process for the disassembly, and reassembly, of the 10L1000 using the necessary special tools. Where procedures are similar, only representative examples will be shown.

**Languages:** English

## 8L90 AUTOMATIC TRANSMISSION UNIT REPAIR

SAT0201VO

This Service Know How video takes a detailed look at overhauling the Hydra-matic 8L90 8-speed automatic transmission. Information covered in this course includes procedures for transmission disassembly and reassembly. Additional topics include component measuring and inspections. Upon completing this video, participants will be able to identify the disassembly and reassembly procedures for the Hydra-matic 8L90 8-speed automatic transmission and recall the component measuring and inspection procedures for the Hydra-matic 8L90 8-speed automatic transmission.

**Languages:** English



## 9-SPEED AUTOMATIC TRANSMISSION OVERVIEW

SAT0301VO

This course presents an overview of the new 9T50 9-speed automatic transmission, the newest front wheel drive transmission developed by Hydra-matic. This course provides technicians with an overview of the mechanical, hydraulic, and electrical components necessary for 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 the transmission is service with the correct components necessary for proper operation. Finally, the programming is reviewed to ensure a quality repair. Upon completing this course, participants will be able to identify features, components and power flow operation of the 9T50 and recall the requirements for solenoid characterization reprogramming.

**Languages:** English



## 9T50 AUTOMATIC TRANSMISSION UNIT REPAIR

SAT0401VO

This Service Know-How Interactive Video (iVideo) showcases the overhaul procedures for the Hydramatic 9T50, a 9-Speed, fully automatic, transmission for transverse-mounted engines. Early applications for this transmission include the Chevrolet Malibu and Equinox, and the GMC Terrain. The iVideo demonstrates the process for the complete disassembly and reassembly of the 9T50 using the necessary special tools. Where procedures are similar, only representative examples will be shown. Removal and installation of pressed-in bearings and seals will not be presented. Interactive features of this iVideo include integrated testing, clickable "Deep Dives" that present additional pertinent information, and navigation aids. After watching this iVideo, service technicians will be able to identify the disassembly and reassembly procedures for the Hydramatic 9T50 and identify the differences between versions of the 9T50 installed in vehicles with or without Electronic Transmission Range Select (or ETRS).

**Languages:** English



## 10L90 AUTOMATIC TRANSMISSION UNIT REPAIR

SAT0501VO

This Service Know-How Interactive Video (iVideo) showcases the overhaul procedures for the Hydramatic 10L90, a 10-Speed, fully automatic, transmission. The iVideo demonstrates the process for the complete disassembly and reassembly of the 10L90 using the necessary special tools. Where procedures are similar, only representative examples will be shown. Removal and installation of pressed-in bearings and seals will not be presented. Interactive features of this iVideo include integrated testing, clickable "Deep Dives" that present additional pertinent information, and navigation aids. After watching this iVideo, service technicians will be able to identify the disassembly and reassembly procedures for the Hydramatic 10L90 and recall the special tools required for 10L90 disassembly and reassembly.

**Languages:** English



## ALLISON LCT1000 UNIT REPAIR

SAT0601VO

This Service Know-How showcases the Allison LCT1000, which is a 6-Speed, fully automatic, heavy-duty transmission. Applications for this transmission are the Chevrolet Silverado and the GMC Sierra. The course highlights parts, special tools and procedures used in the disassembly and assembly of this transmission. After watching this video, participants will be able to identify the disassembly and reassembly procedures for the Allison LCT1000 and recall component measuring and inspection procedures for the Allison LCT1000.

**Languages:** English



## 6T70/75 AUTOMATIC TRANSAXLE UNIT REPAIR

SAT0701VO

For all Advanced GM Service Transmission Technicians, this course provides an introduction and overview of the internal components of the 6T70 Automatic Transaxle including complete overhaul procedures using the required special tools.

**Languages:** English



## 6L80 FUNCTIONS AND FEATURES

SAT0801VO

For experienced GM Transmission Service Technicians, this video introduces the Hydra-Matic 6L80 6-speed automatic transmission. While the main focus is on overhaul procedures and techniques, other topics include introduction to the transmission's key components and the special tools required to service the 6L80.

**Languages:** English

## 4L60/65/70 UNIT REPAIR

SAT0901VO

This Service Know How program takes a detailed look at overhauling the Hydra-Matic 4L60/65/70 4-speed automatic transmission. Information covered in this course includes procedures for transmission disassembly and reassembly. Additional emphasis is placed on component inspections. Upon completion of this video, service technicians will be able to identify the disassembly and reassembly procedures for the Hydra-Matic 4L60/65/70 4-speed automatic transmission and recall the inspection procedures for the Hydra-Matic 4L60/65/70 4-speed automatic transmission.

**Languages:** English

# MANUAL TRANSMISSION / DRIVELINE

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 [Techconnectcanada.ca](http://Techconnectcanada.ca).


## RECOMMENDED PATH



## ADDITIONAL TRAINING

**VID**

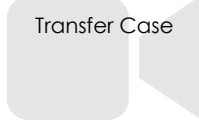
Proper Way to Check  
Ring Gear Backlash



S-MT03-01.01VID

**VID**

Transfer Case



S-MT03-02.01VID

## Product Lite Technical Training

### MANUAL TRANSMISSION CLUTCHES

SFN1602SF

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

### PASSENGER CAR AWD SYSTEMS: SELECTABLE AWD SYSTEMS

SMT0101WB

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 / French



### PROPSHAFTS & REAR AXLES: REAR AXLE OPERATION

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 / French



### PROPSHAFTS & REAR AXLES: DRIVE SHAFT OPERATION

SMT0301WB

This course covers propshaft fundamentals, including their mechanical operation and characteristics covered are types of propshaft joints, bearings, and assemblies. Upon completion of this course, participants will be able to recall propshaft types and characteristics and recall front-wheel drive wheel driveshaft fundamentals.

**Languages:** English / French



### 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 / French



### PROPSHAFTS & REAR AXLES: ELECTRONIC DIFFERENTIALS

SMT0501WB

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, identify characteristics of the one-way clutch and the final drive.

**Languages:** English / French



### PROPSHAFTS & REAR AXLES: FRONT DRIVE AXLES

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 / French



### PROPSHAFTS & REAR AXLES: DIAGNOSIS

SMT0701WB

This course covers the operation, diagnosis, and service of several types of rear-drive modules for all-wheel drive and rear-wheel drive vehicles. Topics include the proper diagnosis of semi- and full-floating rear drive-axle systems using symptom-based methods, operational tests, and visual inspection; and rear-wheel drive direct-connect module diagnosis and service. Upon completion of this course, participants will be able to identify how to diagnose semi- and full-floating rear drive axles, identify how to diagnose and service a rear-wheel-drive direct-connect module.

**Languages:** English / French



# MANUAL TRANSMISSION / DRIVELINE



## MANUAL TRANSMISSION: OVERVIEW

SMT0801WB

This 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 completion of this course, participants will be able to identify manual driveline fundamentals.

**Languages:** English / French



## MANUAL TRANSMISSION: CLUTCH OPERATION AND DIAGNOSIS

SMT0901WB

This course covers manual transmission clutch types and operation. This course also covers how to diagnose clutch mechanical and hydraulic systems. Upon completion of this course, participants will be able to identify the manual transmission clutch types and operation and identify the manual transmission clutch diagnostics.

**Languages:** English / French



## MANUAL TRANSMISSION: FWD OPERATION

SMT1001WB

This course covers front-wheel drive manual transmission fundamentals, mechanical systems, operation, and the electronic control system. Upon completion of this course, participants will be able to identify the front-wheel drive manual transmission characteristics, identify the front-wheel drive manual transmission mechanical systems, components, and shift mechanism characteristics, recall the front-wheel drive manual transmission operation, recall the front-wheel drive manual transmission electronic control system characteristics.

**Languages:** English / French



## 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 / French



## MANUAL TRANSMISSION: FWD DIAGNOSIS

SMT1201WB

This course covers front-wheel drive manual transmission diagnostics and symptom-based manual transmission diagnostics. Upon completion of this course, technicians will be able to identify the steps to diagnose a manual transmission, identify the steps to diagnose a manual transmission using symptom-based diagnostics.

**Languages:** English / French



## MANUAL TRANSMISSION: RWD DIAGNOSIS

SMT1301WB

This course covers Tremec 6-speed manual transmission operation and electronic control system characteristics and steps of operation. Upon completion of this course, technicians will be able to recall the operational steps of a Tremec 6-speed transmission, recall the characteristics and the operation of the manual Tremec 6-speed transmission electronic control system.

**Languages:** English / French



## PASSENGER CAR AWD SYSTEMS: DIAGNOSIS

SMT1401WB

This 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 all-wheel drive system diagnostic procedures, recall how to diagnose all-wheel drive systems using symptom-based diagnostics, recall how to diagnose all-wheel drive systems using DTC-based diagnostics.

**Languages:** English / French



## PASSENGER CAR AWD SYSTEMS: OVERVIEW

SMT1801WB

This course provides the fundamentals to service General Motors (GM) passenger cars with all-wheel drive systems. Topics discussed include an all-wheel drive system overview, the types of passenger car all-wheel drive systems, the characteristics and operation of a passenger car all-wheel drive system, and the types and operation of the passenger car all-wheel drive transfer case. In this course passenger car refers to all cars, Sport Utility Vehicles (SUVs), and crossovers that do not use a full frame.

**Languages:** English / French

## AWD / 4WD SYSTEMS: OVERVIEW

SMT1901WB

This course identifies AWD/4WD system characteristics, operation, and configuration. Upon completion of this course, technicians will be able to identify the characteristics of AWD systems, identify AWD system configuration, operation, components, controls, and driving conditions, identify the characteristics of 4WD systems, and identify 4WD system operation, components, and controls.

**Languages:** English



## AWD / 4WD SYSTEMS: PASSENGER CAR

SMT2001WB

The AWD/4WD Systems: Passenger Car Web-Based Training (WBT) identifies AWD/4WD system components and operation in both longitudinal and transverse vehicle configurations. Upon completing this course, participants will be able to recognize the components of the passenger car all-wheel-drive system configurations, recall the operation of components within passenger car all-wheel-drive systems with transverse configurations, and recall the operation of components within passenger car all-wheel-drive systems with longitudinal configurations.

**Languages:** English



## AWD / 4WD SYSTEMS: CUV / SUV

SMT2101WB

The AWD/4WD Systems: CUV and SUV online course identifies system components and operation in All-Wheel Drive (AWD) Compact Utility Vehicles (CUVs) and Sport Utility Vehicles (SUVs). Upon completing this course, participants will be able to recall the operation of system components within CUV and SUV AWD systems and recall the operation and serviceability of the rear drive axle in CUV and SUV AWD systems.

**Languages:** English



## AWD / 4WD SYSTEMS: FULL SIZE TRUCK AND SUV 4WD

SMT2201WB

The AWD/4WD Systems: Full-size truck/SUV 4WD Web-Based Training (WBT) identifies system components and operation in 4WD full-size truck and Sport Utility Vehicles (SUVs). Topics include 4WD system configuration and components, system operation, and an overview of the front drive axle. Upon completing this course, participants will be able to recall full-size truck/SUV 4WD system configurations and components, recall the operation of components in full-size truck/SUV 4WD systems, and recall the front drive axle operation of components.

**Languages:** English



## TRUCK AWD / 4WD OPERATION, DIAGNOSIS & SERVICE 1: OPERATION

S-MT03-09.01WBT

This course focuses on the types, characteristics, and operations of manual and electric shift transfer cases as well as the All-Wheel Drive (AWD) viscous clutch style transfer case. Some diagnostic practices are also described in this course.

**Languages:** English / French



## TRUCK AWD / 4WD OPERATION, DIAGNOSIS & SERVICE 2: DIAGNOSIS

S-MT03-10.01WBT

This course focuses on the types, characteristics, and operations of manual and electric shift transfer cases as well as the All-Wheel Drive (AWD) viscous clutch style transfer case. Some diagnostic practices are also described in this course.

Upon completion of this course, technicians will be able to identify the characteristics and types of transfer cases. They will be able to recall the components and operation of the clutch, viscous and differential transfer cases, along with modes of operation. The technicians will be able to describe how to diagnose a transfer case using the SBD process, operational testing, and diagnose using symptom-based diagnostics.

**Languages:** English / French



## 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



## PROPSHAFT AND REAR AXLE OPERATION, DIAGNOSIS AND SERVICE 4: ELECTRIC LOCKING AXLES



S-MT03-18.01WBT

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.

**Languages:** English

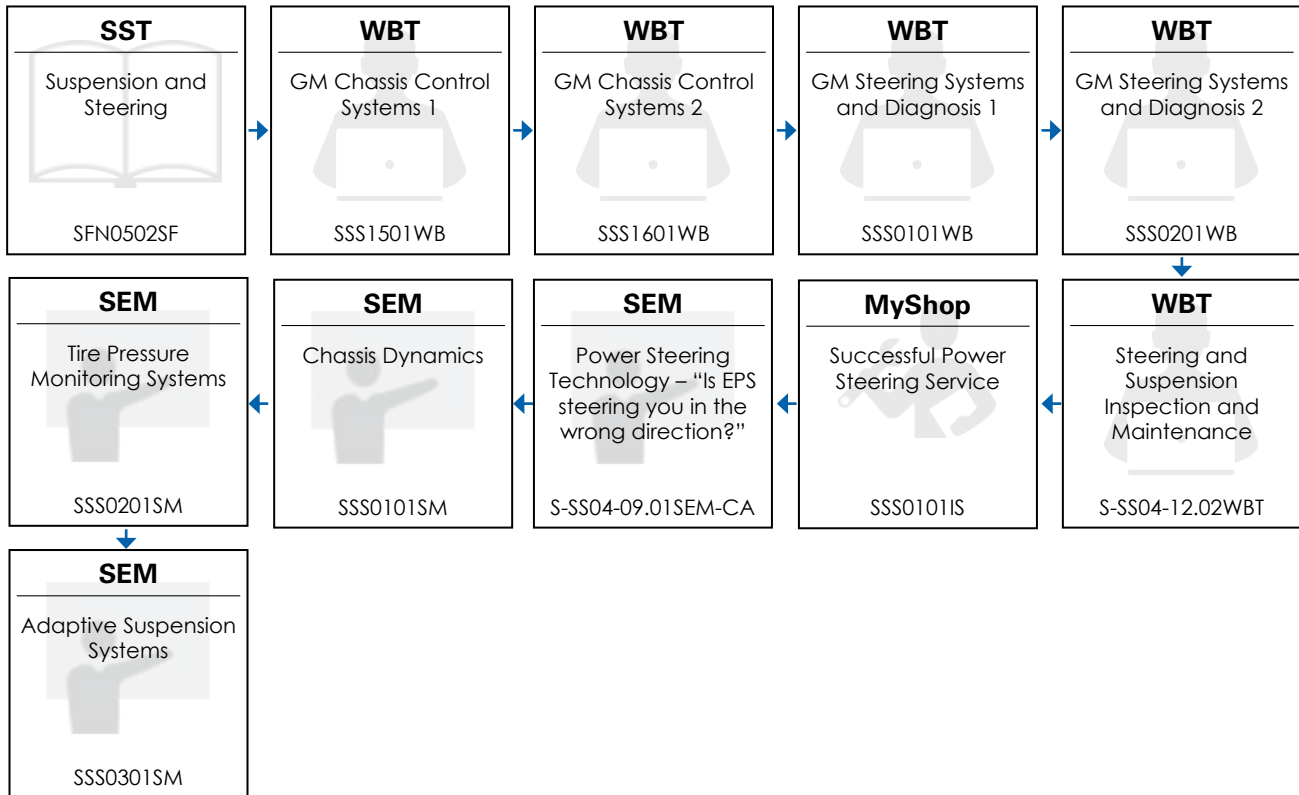


## TechTube Videos

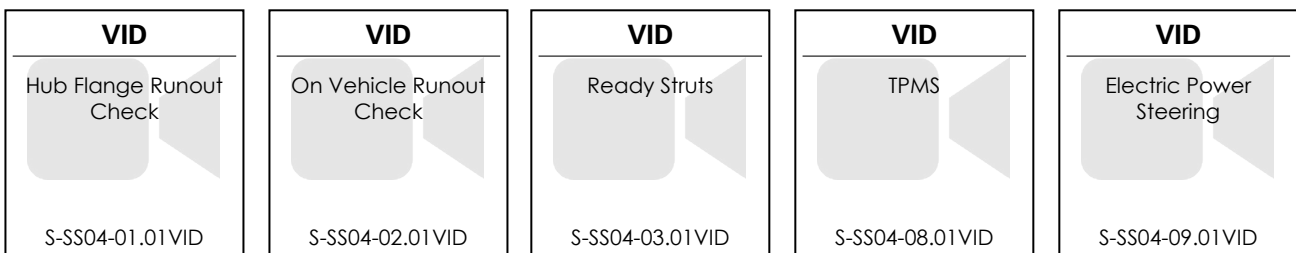
-  **PROPER WAY TO CHECK RING GEAR BACKLASH** **S-MT03-01.01VID**  
This video demonstrates how to measure backlash of a ring and pinion gearset and what the measurements mean.  
**Languages:** English
-  **TRANSFER CASE** **S-MT03-02.01VID**  
This video describes issues that can affect 4WD operation that you should be aware of before replacing a transfer case.  
**Languages:** English

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 [Techconnectcanada.ca](http://Techconnectcanada.ca).

## RECOMMENDED PATH



## ADDITIONAL TRAINING



# SUSPENSION / STEERING

## Product Lite Technical Training



### SUSPENSION AND STEERING

SFN0502SF

This 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 STEERING SYSTEMS AND DIAGNOSIS 1

SSS0101WB

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 / French



### GM STEERING SYSTEMS AND DIAGNOSIS 2

SSS0201WB

This course covers the features, characteristics, and operation of the electronically controlled power steering system and the electronic assist power steering system. Upon completion of this course, participants will be able to recall the features, characteristics, and operation of electronically controlled hydraulic power steering systems.

**Languages:** English / French



### GM CHASSIS CONTROL SYSTEMS 1

SSS1501WB

This course covers the components, characteristics, and operation of various chassis control systems found in GM vehicles. Suspension system types, ride and alignment control, tire pressure monitoring, and alignment will be covered in this course. Upon completing this course, 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, and identify the characteristics and operation of the tire pressure monitoring system.

**Languages:** English



### GM CHASSIS CONTROL SYSTEMS 2

SSS1601WB

This course covers the components, characteristics, and operation of various chassis control systems found in GM vehicles. Air suspension systems, automatic level control, electronically controlled damping, and alignment will be covered in this course. Upon completing this course, technicians will be able to identify the function of the air suspension systems, components and operation of the automatic level control systems, characteristics and operation of electronically controlled damping systems, and identify the types of alignment.

**Languages:** English / French



### STEERING AND SUSPENSION INSPECTION AND MAINTENANCE

S-SS04-12.02WBT

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

SSS0101SM

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 / French



## TIRE PRESSURE MONITORING SYSTEMS

SSS0201SM

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



## ADAPTIVE SUSPENSION SYSTEMS

SSS0301SM

This three-hour seminar is intended for the experienced technician who is interested in learning advanced techniques for diagnosing air ride and magnetic ride control systems. Technicians will have knowledge of common suspension systems.

**Languages:** English / French



## POWER STEERING TECHNOLOGY – “IS EPS STEERING YOU IN THE WRONG DIRECTION?”

S-SS04-09.01SEM-CA

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



## MyShop Training

### SUCCESSFUL POWER STEERING SERVICE

SSS0101IS

This 1-hour MyShop 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 / French



## TechTube Videos

### HUB FLANGE RUNOUT CHECK

S-SS04-01.01VID

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

**Languages:** English



### ON VEHICLE RUNOUT CHECK

S-SS04-02.01VID

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

**Languages:** English



### READY STRUTS

S-SS04-03.01VID

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

**Languages:** English



### TPMS

S-SS04-08.01VID

This video describes the operation of tire pressure monitor systems.

**Languages:** English



### ELECTRIC POWER STEERING

S-SS04-09.01VID

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

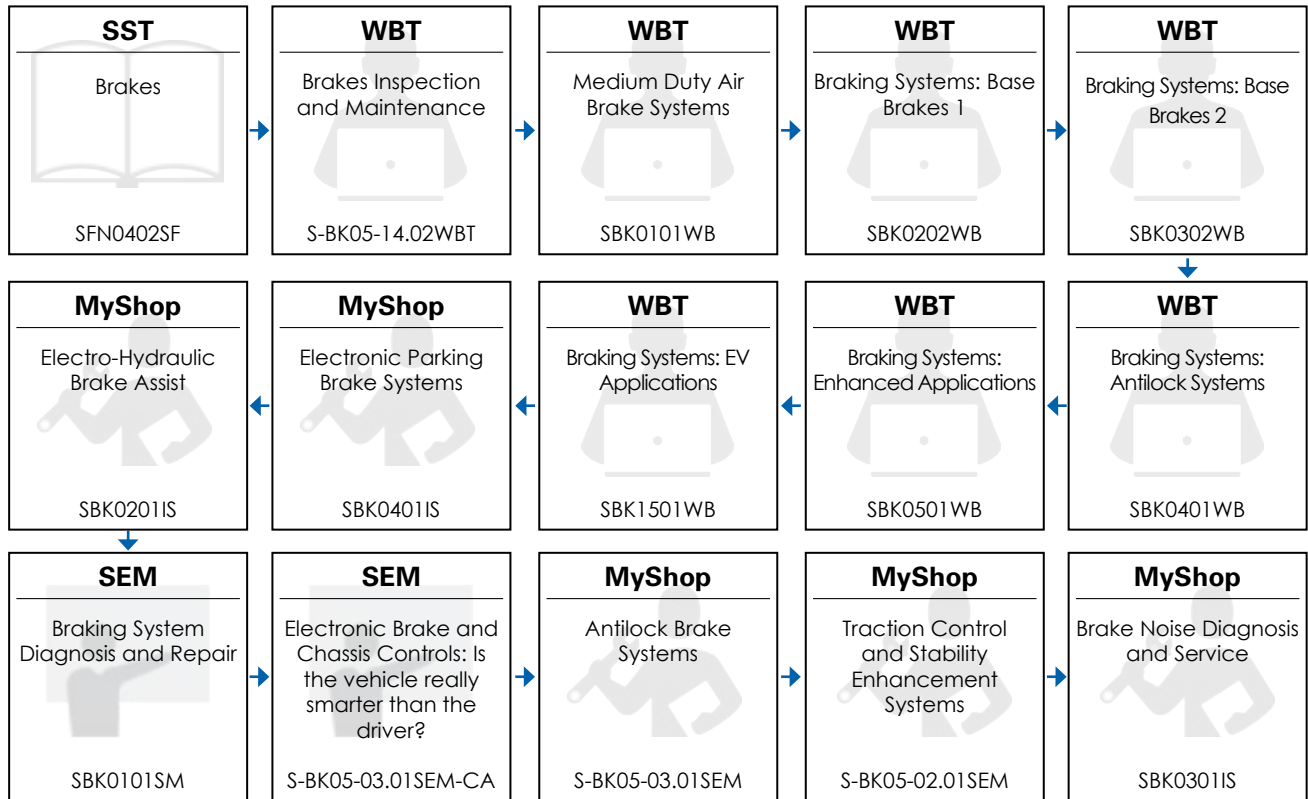
**Languages:** English



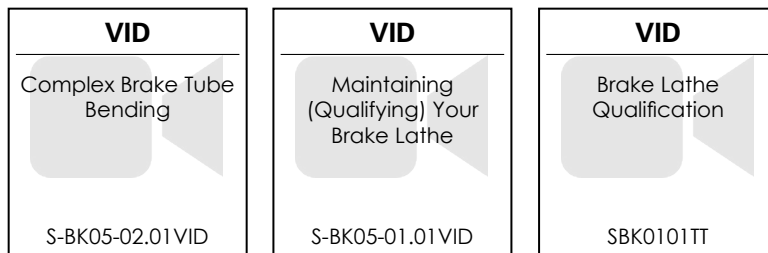
# BRAKES

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 [Techconnectcanada.ca](http://Techconnectcanada.ca).

## RECOMMENDED PATH



## ADDITIONAL TRAINING



## Product Lite Technical Training

### BRAKES

SFN0402SF

This 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

### 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



### BRAKING SYSTEMS: BASE BRAKES 1

SBK0202WB

This course covers brake fundamentals: the apply system, the boost systems, and the hydraulic braking system.

**Languages:** English / French



### BRAKING SYSTEMS: BASE BRAKES 2

SBK0302WB

This course covers the components, types, and operation of drum brakes, disc brakes, and manual and electronic parking brakes. The course also provides information about calibration, brake pad life monitoring systems, and tests related to braking systems. Upon completion of this course, technicians will be able to identify the components, types, and operation of drum brakes and disc brakes. Identify the components, types, and operation of manual and electronic parking brakes. Recall related service topics, including calibration and brake pad life systems.

**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 / French



### 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 / French



### BRAKING SYSTEMS: EV APPLICATIONS

SBK1501WB

This Web-Based Training (WBT) course is for the non-Electric Vehicle (EV) Technician and explains the referenced components by determining safety limits in servicing the EV braking system. This course aids the technician in answering what is similar and what is different within the EV braking systems when compared to conventional braking systems. Also covered in this course will be the components, characteristics, and operation of regenerative braking, including one-pedal driving and Regen On-Demand. Note: This WBT can be utilized as a technician's refresher course as needed. Upon completing this course, the technician will be able to recall the characteristics and operation of the EV braking system. Identify the components, characteristics, and operation of regenerative braking, and identify the components, characteristics, and operation of One-Pedal Driving and Regen On-Demand.

**Languages:** English



### BRAKES INSPECTION AND MAINTENANCE

S-BK05-14.02WBT

Brake systems enable a vehicle to stop in a controlled manner. The performance of this system is critical to the safety and well-being of the occupants, other drivers, and pedestrians. Familiarization of the brake system components and operation is essential to perform a proper inspection. 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.

**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



### ELECTRONIC BRAKE AND CHASSIS CONTROLS: IS THE VEHICLE REALLY SMARTER THAN THE DRIVER??

**S-BK05-03.01SEM-CA**

The Electronic Brake and Chassis Controls seminar uses real-world scenarios based on vehicles from several manufacturers. Seminar content focuses on the different strategies and components used to control chassis and brake systems. After exploring the operation of various systems and their components, OEM supported diagnostic techniques will be examined. Technicians who attend this seminar will be able to diagnose common concerns in the following systems: Antilock Brakes, Tire Pressure Monitoring and Electronic Power Steering.

**Languages:** English

## MyShop Training



### ELECTRO-HYDRAULIC BRAKE ASSIST

**SBK0201IS**

This instructor-led MyShop 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



### BRAKE NOISE DIAGNOSIS AND SERVICE

**SBK0301IS**

This 1-hour in-person session covers diagnosis and service in regard to common brake noises. Topics include diagnostic strategies for brake noise, brake pad and rotor composition and coatings, regulatory and environmental changes, and brake service.

**Languages:** English / French



### ELECTRONIC PARKING BRAKE SYSTEMS

**SBK0401IS**

This MyShop will cover the basic components and operation of the electronic parking brake system. Included are an overview of diagnostic procedures, service mode, calibration, and manual release.

**Languages:** English / French



### TRACTION CONTROL AND STABILITY ENHANCEMENT SYSTEMS

**S-BK05-02.01SEM**

This 1-hour MyShop covers Traction Control and Stability Enhancement systems, as well as similar systems found on various vehicle manufacturers. The history and future trends of these systems will also be covered. The main components of Traction Control systems will be covered, including engine speed components, throttle position, ECM / PCM, throttle actuator module, TCS "OFF" switch, and lateral accelerometer. Operation of this system, including engine management and brake intervention will be covered. Operation and control of Stability Enhancement systems will be briefly discussed, including understeer and oversteer, zero point calibration, active yaw control, and vehicle stability assist. The seminar will also cover the typical components within Stability Enhancement systems, including lateral and longitudinal accelerometers, yaw rate sensor, wheel speed sensor, and steering wheel position sensor. Diagnosis of the two systems and how they are integrated together will also be covered.

**Languages:** English

## ANTILOCK BRAKE SYSTEMS

S-BK05-03.01SEM

This 1-hour Seminar covers the major suppliers of Antilock Brake Systems (ABS). The major components of ABS will be covered, including the Electronic Brake Control Module (EBCM) and Brake Pressure Modulator Valve (BPMV), as well as how these components enable operation of the system. Operation of the system will be discussed in comparison with non-ABS vehicles. ABS service and diagnostics will also be covered, include brake bleed procedures and tire replacement.

**Languages:** English



## TechTube Videos

### MAINTAINING (QUALIFYING) YOUR BRAKE LATHE

S-BK05-01.01VID

The Brake lathe qualification video will assist Technicians in the inspection of bench brake lathe components. This is done visually and through taking measurements of critical surfaces to ensure accurate and precise brake drum and rotor resurfacing avoiding run out issues.

**Languages:** English



### COMPLEX BRAKE TUBE BENDING

S-BK05-02.01VID

The Brake Tube Bending video demonstrates the art of tubing bends and brake pipe coils without creating restrictions in the tubing.

**Languages:** English



### BRAKE LATHE QUALIFICATION

SBK0101TT

The Brake lathe qualification video will assist Technicians in the inspection of bench brake lathe components. Visual inspections and measurements of critical surfaces will ensure accurate and precise brake drum and rotor resurfacing, avoiding run out issues.

**Languages:** English



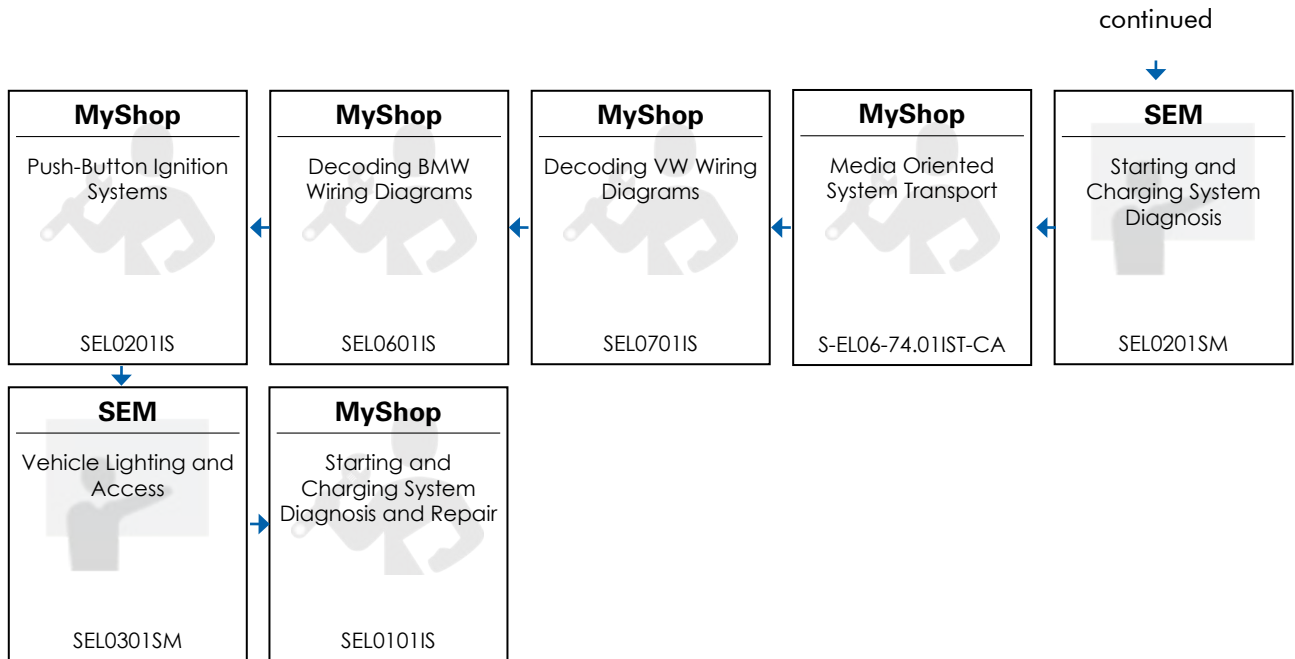
# ELECTRICAL / ELECTRONIC SYSTEMS

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 [Techconnectcanada.ca](http://Techconnectcanada.ca).

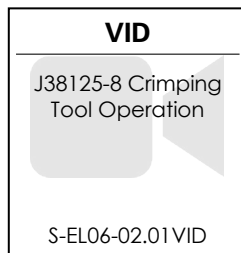
## RECOMMENDED PATH



continued below



## ADDITIONAL TRAINING



## Product Lite Technical Training



### ALTERNATORS / GENERATORS AND STARTERS

SFN0102SF

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

SFN0202SF

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

**Languages:** English

## Web-Based Training



### SUPER CRUISE

SEL0102WB

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 / French



### GM GLOBAL ELECTRICAL SYSTEMS 1

SEL0301WB

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 / French



### GM GLOBAL ELECTRICAL SYSTEMS 2

SEL0401WB

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 / French



### ELECTRICAL / ELECTRONICS STAGE 1

SEL0501WB

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 / French



### ELECTRICAL / ELECTRONICS STAGE 2

SEL0601WB

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 / French



### ELECTRICAL / ELECTRONICS STAGE 3

SEL0701WB

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 / French

## ELECTRICAL / ELECTRONICS STAGE 4

SEL0801WB

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 / French



## ELECTRICAL / ELECTRONICS STAGE 5

SEL0902WB

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 / ELECTRONICS STAGE 6

SEL1002WB

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: CIRCUIT OPERATIONS

SEL6301WB

This course presents the types and characteristics of common vehicular electrical circuits in GM vehicles. Topics include the functions of the serial data gateway module and comparisons of the five circuit types.

**Languages:** English / French



## STRATEGY BASED DIAGNOSTICS

SEL6401WB

This course covers GM's strategy based diagnostics process and is intended to assist service technicians in diagnosing vehicle issues. Upon completion of this course, participants will be able to recognize how to verify the vehicle concern and perform preliminary checks. Identify diagnostic procedures, and recall how to isolate and repair the root cause and verify the repair.

**Languages:** English



## VOLTAGE DROP TESTING

SEL6501WB

This course covers the fundamentals of an electrical circuit. It also covers how to safely perform voltage testing. Upon completion of this course, participants will be able to recall the fundamentals of electricity recall the safe methods for performing voltage drop testing.

**Languages:** English



## SUPER CRUISE: INTRODUCTION - VIP SYSTEM

SEL6602WB

This course provides information about the characteristics and functionality of GM's Super Cruise system, which assists drivers with highway cruising. The focus is on the system's function in vehicles with VIP (Vehicle Intelligence Platform) electrical architecture. This includes the hands-off lane changing function. Always consult Service Information for the correct procedures and specifications, and check local regulations because the laws in some regions may not permit hands-off driving. Upon completion of this course, technicians will be able to identify the technologies and components of the Super Cruise system. Recall the operation and limitations of the Super Cruise driver assistance system.

**Languages:** English



## BATTERY SYSTEMS

SEL7902WB

This course covers the basic operation and service of the 12-volt (12V) battery in a vehicle. Upon completion of this course, technicians will be able to identify 12V battery characteristics and battery inspection and testing procedures, recall 12V battery operation, and recognize battery service procedures.

**Languages:** English



# ELECTRICAL / ELECTRONIC SYSTEMS



## CHARGING SYSTEMS

SEL8002WB

This course covers the basics of charging system operation and service. Upon completion of this course, participants will be able to identify charging system components and operation, and recall how to perform charging system diagnostics.

**Languages:** English



## STARTING SYSTEMS

SEL8101WB

This course covers the basics of starting systems. Upon completing this course, participants will be able to: identify starting system characteristics and recall how to perform starting system diagnostics.

**Languages:** English



## BODY ELECTRICAL: LIGHTING SYSTEMS

SEL8501WB

This course covers the GM vehicle lighting system characteristics, operation, and diagnostics for exterior, interior, and trailer lighting. Upon completing this course, technicians will be able to identify the characteristics and operation associated with exterior and interior lights, identify the characteristics and operation associated with trailer lamps, and explain lighting diagnostic procedures.

**Languages:** English



## BATTERY INSPECTION AND MAINTENANCE

S-EL06-33.02WBT

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



## 12V STOP / START SYSTEM: OVERVIEW, COMPONENTS AND OPERATION

S-EL06-68.01WBT

This course presents an overview of the 12V Stop / Start system, including its function, operation, and diagnosis. Participants will acquire a sound understanding of how the Stop / Start system works, enabling them to service vehicles equipped with this system more effectively.

**Languages:** English



## 12V STOP / START SYSTEM: 2

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 / French

## Seminar



### STARTING AND CHARGING SYSTEM DIAGNOSIS

SEL0201SM

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 / French



### 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 / French

## MyShop Training

### STARTING AND CHARGING SYSTEM DIAGNOSIS AND REPAIR

SEL0101IS

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 / French



### BATTERY RUN DOWN PROTECTION AND PARASITIC DRAW

SEL0101IS-CA

This course will cover important tips and procedures related to battery run down protection and parasitic draw. Key topics include programming related to battery run down and causes and types of parasitic draw.

**Languages:** English / French



### PUSH-BUTTON IGNITION SYSTEMS

SEL0201IS

This 1-hour Seminar session explores push-button ignition systems. The beginning of this session covers push-button ignition system purpose, operation, components, and modes. Topics covered later in the session include diagnosis and the future of push-button ignition systems.

**Languages:** English / French



### BATTERIES

SEL0401IS

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

**Languages:** English



### ADVANCED OSCILLOSCOPE TESTING

SEL0501IS

This course is intended for the experienced technician who is interested in learning advanced techniques for diagnosing internal engine failures utilizing an oscilloscope. Technicians attending this course will have a working knowledge of compression testing.

**Languages:** English / French



### DECODING BMW WIRING DIAGRAMS

SEL0601IS

This course is intended for any technician who is interested in learning diagnostic techniques for European vehicles. In this course, participants will interpret European wiring diagrams and diagnose electrical concerns utilizing a Digital Multi-Meter (DMM), oscilloscope, and scan tool data. Technicians attending this course will have a working knowledge of lab oscilloscopes and scan tools.

**Languages:** English / French



### DECODING VW WIRING DIAGRAMS

SEL0701IS

This course is intended for any technician who is interested in learning diagnostic techniques for European vehicles. In this course, participants will interpret European wiring diagrams and diagnose electrical concerns utilizing a DMM, oscilloscope, and scan tool data. Technicians attending this course will have a working knowledge of lab oscilloscopes and scan tools.

**Languages:** English / French





## **MEDIA ORIENTED SYSTEM TRANSPORT**

**S-EL06-74.01IST-CA**

Diagnosing complex network system failures is a challenge, even for experienced technicians. In this 1-hour MyShop, technicians will learn about Media Oriented Systems Transport (MOST®) system, diagnosis and repair processes will be covered.

**Languages:** English / French



## **TechTube Videos**



## **J38125-8 CRIMPING TOOL OPERATION**

**S-EL06-02.01VID**

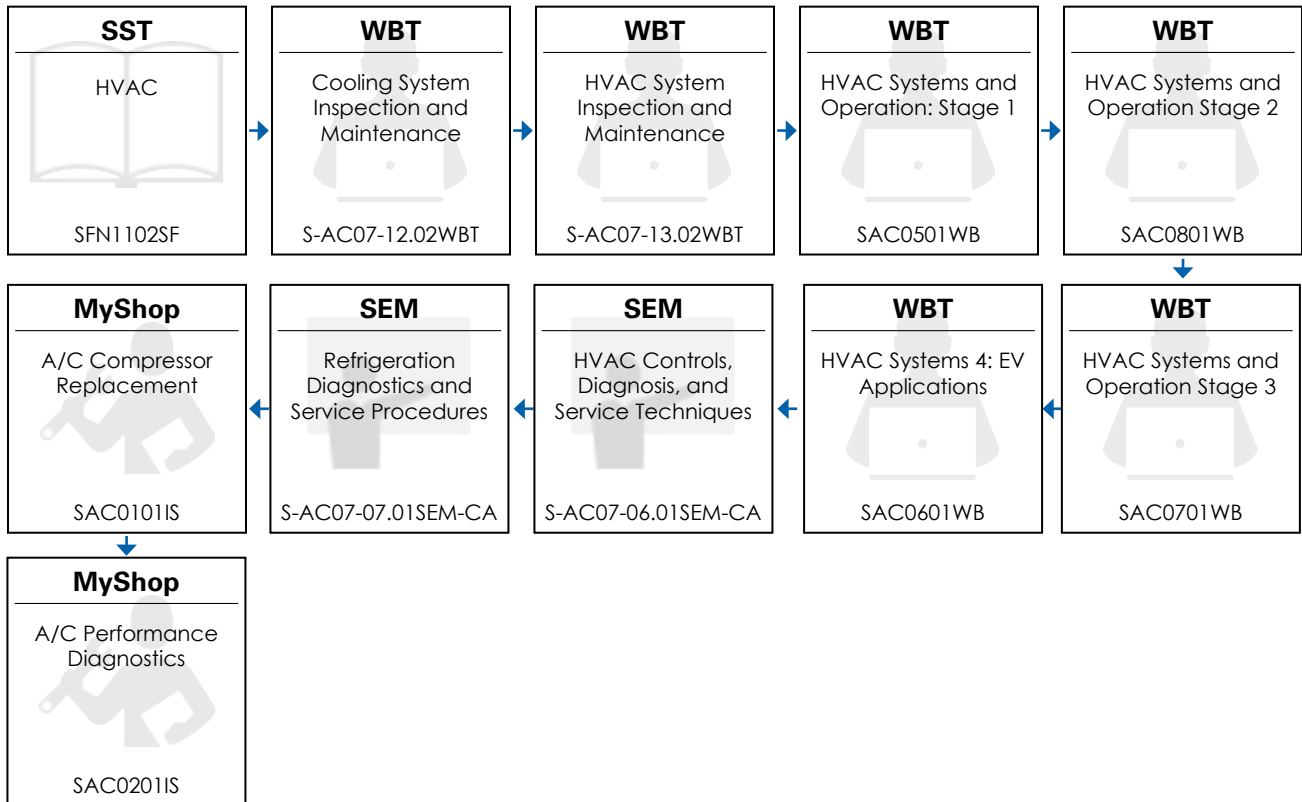
This video demonstrates the proper use of the J-38125-8 crimping tool for installing a Duraseal Crimp splice sleeve on vehicle wiring to create an effective and lasting repair.

**Languages:** English

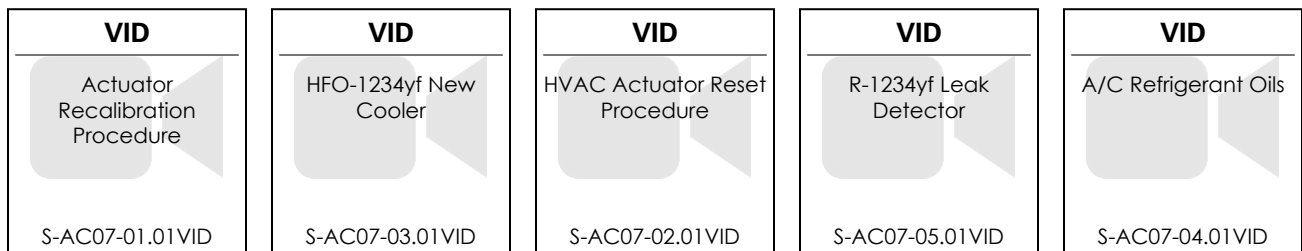
# HEATING AND AIR CONDITIONING

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 [Techconnectcanada.ca](http://Techconnectcanada.ca).

## RECOMMENDED PATH



## ADDITIONAL TRAINING



# HEATING AND AIR CONDITIONING

## Product Lite Technical Training



### HVAC

SFN1102SF

This 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



### HVAC SYSTEMS AND OPERATION: STAGE 1

SAC0501WB

This course provides the fundamentals of Heating, Ventilation, and Air Conditioning (HVAC) systems. Having a solid understanding of system components and their function and operation can help identify customer HVAC concerns more quickly and efficiently. The content of this course focuses on the components and operation of the A/C system while covering the following topics: HVAC system characteristics, HVAC system theory, refrigerant systems, and refrigerant systems components.

**Languages:** English



### HVAC SYSTEMS 4: EV APPLICATIONS

SAC0601WB

This course provides information and guidance to technicians about how to service Heating, Ventilation, and Air Conditioning (HVAC) systems in Electric Vehicles (EVs). Upon completion of this course, technicians will be able to identify how to perform service on the HVAC system in an EV with the Ultium battery and how to perform service on the HVAC system in a non-Ultium Bolt EV.

**Languages:** English



### HVAC SYSTEMS AND OPERATION STAGE 3

SAC0701WB

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 HVAC system service procedures, recovery and recharging station functions, and A/C performance diagnosis procedures.

**Languages:** English



### HVAC SYSTEMS AND OPERATION STAGE 2

SAC0801WB

This course recalls Heating, Ventilation, and Air Conditioning (HVAC) system distribution fundamentals. Upon completing this course, the technician will be able to recall Heating, Ventilation, and Air Conditioning (HVAC) system distribution fundamentals, and control methods and functions, and be able to identify control module input and output components.

**Languages:** English



### COOLING SYSTEM INSPECTION AND MAINTENANCE

S-AC07-12.02WB

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

S-AC07-13.02WB

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

## Seminar



### HVAC CONTROLS, DIAGNOSIS, AND SERVICE TECHNIQUES

S-AC07-06.01SEM-CA

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 / French

## REFRIGERATION DIAGNOSTICS AND SERVICE PROCEDURES

S-AC07-07.01SEM-CA

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 (A/C) systems. The use of pressure-temperature and humidity readings as a diagnostic aid will be the foundation of the course. Specific component diagnosis includes variable displacement compressors, electrically driven compressors, refrigerant metering devices, Internal Heat Exchangers (IHX), enhanced evaporators and condensers. This course will include simulated diagnostic exercises to apply the principles learned.

**Languages:** English / French



## MyShop Training

### A/C COMPRESSOR REPLACEMENT

SAC0101IS

This 1-hour MyShop 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



### A/C PERFORMANCE DIAGNOSTICS

SAC0201IS

This course aims to equip technicians with a comprehensive understanding of the critical role that air conditioning performance tests play in vehicle diagnostics. Participants will learn not only the significance of conducting these tests, but also how to accurately interpret the results to identify potential issues. By the end of this course, technicians will be proficient in performing A/C performance tests and using the data to ensure optimal system functionality and customer satisfaction.

**Languages:** English / French



## 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.

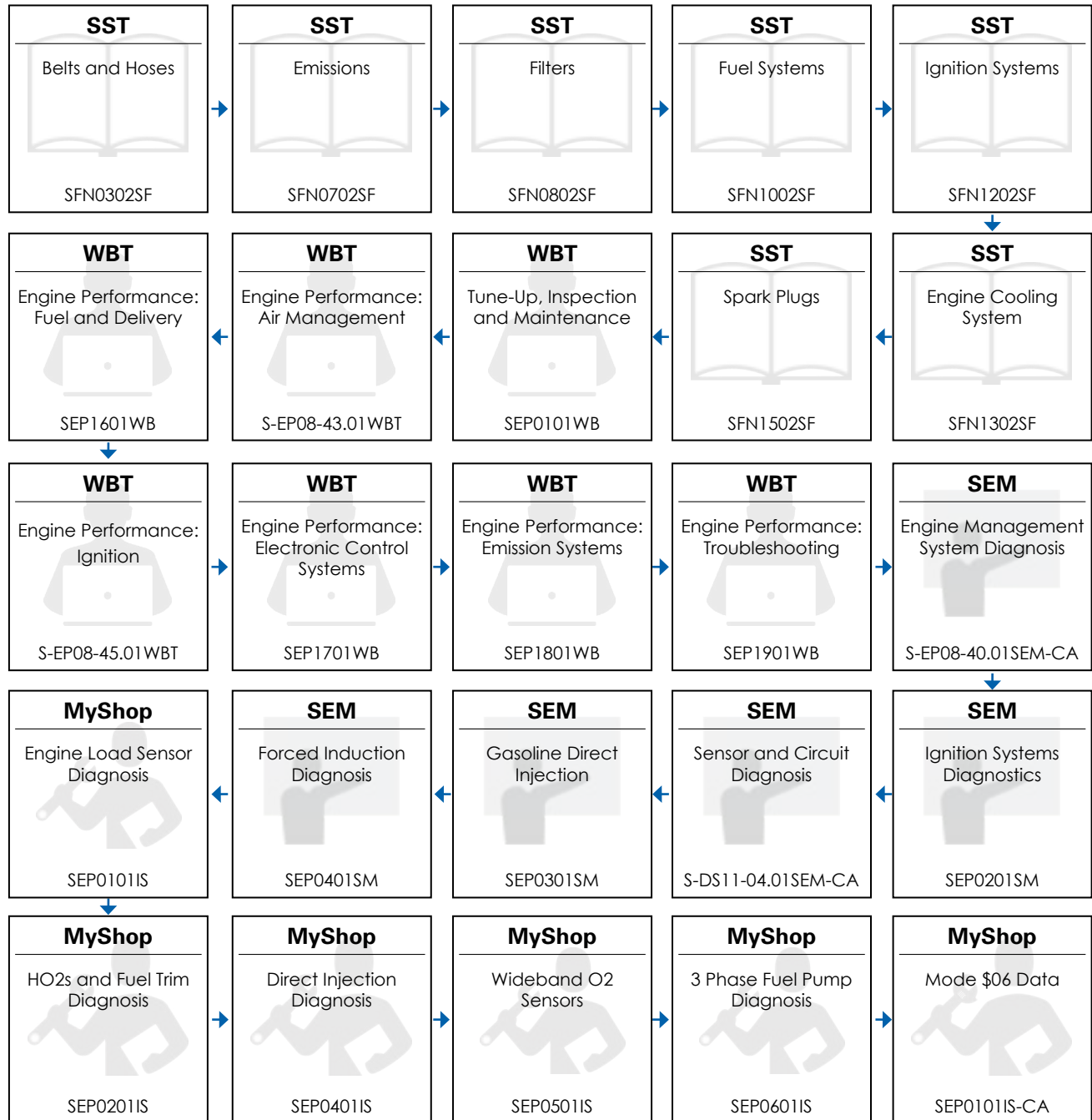
**Languages:** English




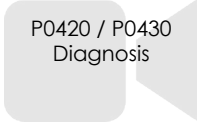



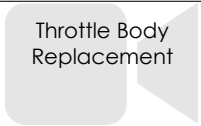
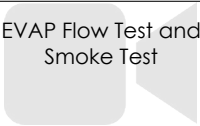
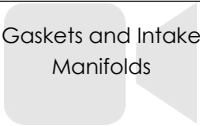
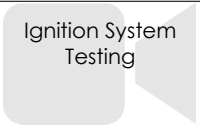
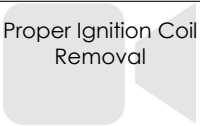
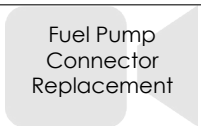
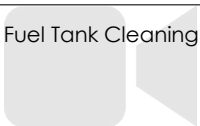
# ENGINE PERFORMANCE

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 [Techconnectcanada.ca](http://Techconnectcanada.ca).

## RECOMMENDED PATH



## ADDITIONAL TRAINING

<p><b>VID</b></p> <p>3.6 High Pressure Fuel Pump Replacement</p>  <p>S-EP08-04.01VID</p>	<p><b>VID</b></p> <p>P0420 / P0430 Diagnosis</p>  <p>S-EP08-05.01VID</p>	<p><b>VID</b></p> <p>Diesel Exhaust Treatment Stage 1</p>  <p>S-EP08-06.01VID</p>	<p><b>VID</b></p> <p>Diesel Exhaust Treatment Stage 2</p>  <p>S-EP08-07.01VID</p>	<p><b>VID</b></p> <p>Diesel Exhaust Treatment Stage 3</p>  <p>S-EP08-08.01VID</p>
<p><b>VID</b></p> <p>Throttle Body Replacement</p>  <p>S-EP08-09.01VID</p>	<p><b>VID</b></p> <p>EVAP Flow Test and Smoke Test</p>  <p>S-EP08-11.01VID</p>	<p><b>VID</b></p> <p>Gaskets and Intake Manifolds</p>  <p>S-EP08-12.01VID</p>	<p><b>VID</b></p> <p>Ignition System Testing</p>  <p>S-EP08-13.01VID</p>	<p><b>VID</b></p> <p>Proper Ignition Coil Removal</p>  <p>S-EP08-15.01VID</p>
<p><b>VID</b></p> <p>Fuel Pump Connector Replacement</p>  <p>S-EP08-18.01VID</p>	<p><b>VID</b></p> <p>Fuel Tank Cleaning</p>  <p>S-EP08-19.01VID</p>			

# ENGINE PERFORMANCE

## Product Lite Technical Training



### BELTS AND HOSES

SFN0302SF

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

SFN0702SF

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

SFN0802SF

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

SFN1002SF

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



### IGNITION SYSTEMS

SFN1202SF

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

SFN1302SF

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

SFN1502SF

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

SEP0101WB

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



### ENGINE PERFORMANCE: FUEL AND DELIVERY

SEP1601WB

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. The content covers theory and characteristics of fuel management systems and operation of sequential port fuel injection and spark-ignited direct injection systems.

**Languages:** English

## ENGINE PERFORMANCE: ELECTRONIC CONTROL SYSTEMS

SEP1701WB

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



## ENGINE PERFORMANCE: EMISSION SYSTEMS

SEP1801WB

This course presents topics related to emission systems in GM vehicles. The first module covers emission control systems: the three-way catalyst, enhanced evaporative emission control, engine off natural vacuum, positive crankcase ventilation, and exhaust gas heat recovery. The second module covers the monitoring of emission control systems. Upon completion of this course, technicians will be able to explain emission control systems and describe how emission control systems are monitored.

**Languages:** English



## ENGINE PERFORMANCE: TROUBLESHOOTING

SEP1901WB

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, communication, theft immobilizer, cooling fan, cruise control, active fuel management, camshaft position actuator, and enhanced electronic pedal override. Upon completion of this course, technicians 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

S-EP08-29.01WBT

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

S-EP08-43.01WBT

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



## ENGINE PERFORMANCE: IGNITION

S-EP08-45.01WBT

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



## BI-FUEL SYSTEM OPERATION FOR RPO LFR / FHV

S-EP08-85.01WBT

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



# ENGINE PERFORMANCE

## Seminars



### IGNITION SYSTEMS DIAGNOSTICS

SEP0201SM

Diagnosing ignition system misfires can be a difficult task, especially when the concern is intermittent. This course will improve the technician's ability to identify the root cause of ignition system faults. The ignition system components that will be covered include crank and cam sensors, knock sensors, coils, spark plugs, and spark plug wires, as well as computer-controlled ignition timing and spark delivery strategies from multiple automobile manufacturers. Cylinder misfire detection and diagnostic strategies, known malfunctions, real-world case studies, and diagnostic exercises will be presented.

**Languages:** English



### GASOLINE DIRECT INJECTION

SEP0301SM

This Instructor-led training Seminar provides an overview of Gasoline Direct Injection (GDI) Fuel System designs, operation, and servicing. Diagnosing and servicing of GDI fuel systems requires an understanding of fuel delivery systems. This course covers the operation of gasoline high-pressure systems and low-pressure systems as related to the GDI system. Direct fuel injectors, fuel control systems and combined direct and port fuel injection systems are covered. Diagnosis and service procedures using scan tools and special tools required for servicing GDI systems will be discussed.

**Languages:** English



### FORCED INDUCTION DIAGNOSIS

SEP0401SM

This 3-hour seminar will increase your awareness of forced induction systems, including turbochargers, twin-turbochargers, dual-charging, diesel, e-turbochargers, and superchargers. This course focuses on the diagnostics of the induction systems using symptom based and scan tool PIDs. The course also includes visual inspection process, including using a smoke machine.

**Languages:** English / French



### ENGINE MANAGEMENT SYSTEM DIAGNOSIS

S-EP08-40.01SEM-CA

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 / French



### SENSOR AND CIRCUIT DIAGNOSIS

S-DS11-04.01SEM-CA

The ability to quickly and accurately solve complex electrical signal faults is a necessity for advanced diagnostic technicians. In this course, technicians will learn to test, identify, and distinguish specific good signal types as well as specific failures using three different diagnostic approaches: the scan tool, digital multimeter and oscilloscope. A case study of a 2012 Audi A4 will provide a real-world experience for technicians.

**Languages:** English / French



## MyShop Training



### MODE \$06 DATA

SEP0101S-CA

This course provides an explanation of the Mode \$06 function in Onboard Diagnostics II (OBD II). The course demonstrates how this data can be used to make efficient and accurate diagnoses of the engine management and emission control systems.

**Languages:** English / French



### ENGINE LOAD SENSOR DIAGNOSIS

SEP0101S

This 1-hour Seminar session will explore airflow calculations, the operation of engine load sensors, the operation of sensors found in forced induction systems, and the diagnosis of engine load sensors.

**Languages:** English / French



## HO2S AND FUEL TRIM DIAGNOSIS

SEP0201IS

This 1-hour Seminar Session will cover the purpose and operation of the Heated Oxygen Sensor (HO2S) and fuel trim, as well as the diagnosis of fuel trim issues.

**Languages:** English / French



## DIRECT INJECTION DIAGNOSIS

SEP0401IS

This 1-hour Seminar session will cover Gasoline Direct Injection (GDI) system components, operation, diagnosis, and testing procedures.

**Languages:** English / French



## WIDEBAND O2 SENSORS

SEP0501IS

This instructor-led training seminar is intended for the technician who is interested in learning techniques to diagnose wideband Oxygen (O2) sensors and O2 sensor heater circuits using scan tool and oscilloscope data.

**Languages:** English / French



## 3 PHASE FUEL PUMP DIAGNOSIS

SEP0601IS

This course is designed to provide the technician with a working knowledge of a 3-phase fuel pump and will demonstrate steps to help diagnose a fuel delivery problem on a vehicle using a 3-phase fuel pump.

**Languages:** English / French



## TechTube Videos

### 3.6 HIGH PRESSURE FUEL PUMP REPLACEMENT

S-EP08-04.01VID

This video demonstrates the proper procedure to remove and install the high pressure fuel pump on a 3.6L LLT SIDI engine.

**Languages:** English



### P0420 / P0430 DIAGNOSIS

S-EP08-05.01VID

This video describes conditions to be aware of when diagnosing a P0420/P0430 catalytic converter efficiency code.

**Languages:** English



### DIESEL EXHAUST TREATMENT STAGE 1

S-EP08-06.01VID

This video describes the operation of the diesel exhaust aftertreatment system for Duramax engines focusing on the Diesel Oxidation Catalyst (DOC).

**Languages:** English



### DIESEL EXHAUST TREATMENT STAGE 2

S-EP08-07.01VID

This video describes the operation of the diesel exhaust aftertreatment system for Duramax engines focusing on diesel exhaust fluid and the selective catalyst reduction.

**Languages:** English



### DIESEL EXHAUST TREATMENT STAGE 3

S-EP08-08.01VID

This video describes the operation of the diesel exhaust aftertreatment system for Duramax engines focusing on the diesel particulate filter.

**Languages:** English



### THROTTLE BODY REPLACEMENT

S-EP08-09.01VID

This video describes how to perform the idle learn reset procedure after replacing a throttle body for GM trucks 2007 and newer, SUVs 2008 and newer with a V-8 engine.

**Languages:** English



# ENGINE PERFORMANCE

---



## EVAP FLOW TEST AND SMOKE TEST

S-EP08-11.01VID

This video shows the operation of the Evaporative Emission System Tester (EEST) for flow and smoke testing.

**Languages:** English



## GASKETS AND INTAKE MANIFOLDS

S-EP08-12.01VID

This video demonstrates best practices for preparing surfaces for gasket replacement and features of ACDelco gaskets, gaskets sets and intake manifolds.

**Languages:** English



## IGNITION SYSTEM TESTING

S-EP08-13.01VID

This video shows how to perform ignition system testing using a digital multimeter and a spark tester.

**Languages:** English



## PROPER IGNITION COIL REMOVAL

S-EP08-15.01VID

This video shows the proper procedure to remove ignition system coils without damaging them, on GM 1.4, 1.6 or 1.8 liter engines using T-handles or bolts.

**Languages:** English



## FUEL PUMP CONNECTOR REPLACEMENT

S-EP08-18.01VID

This video will demonstrate how to properly clean the inside of a fuel tank when replacing an in-tank fuel pump. The focus will be on ensuring debris from the failed pump does not contaminate the new component.

**Languages:** English



## FUEL TANK CLEANING

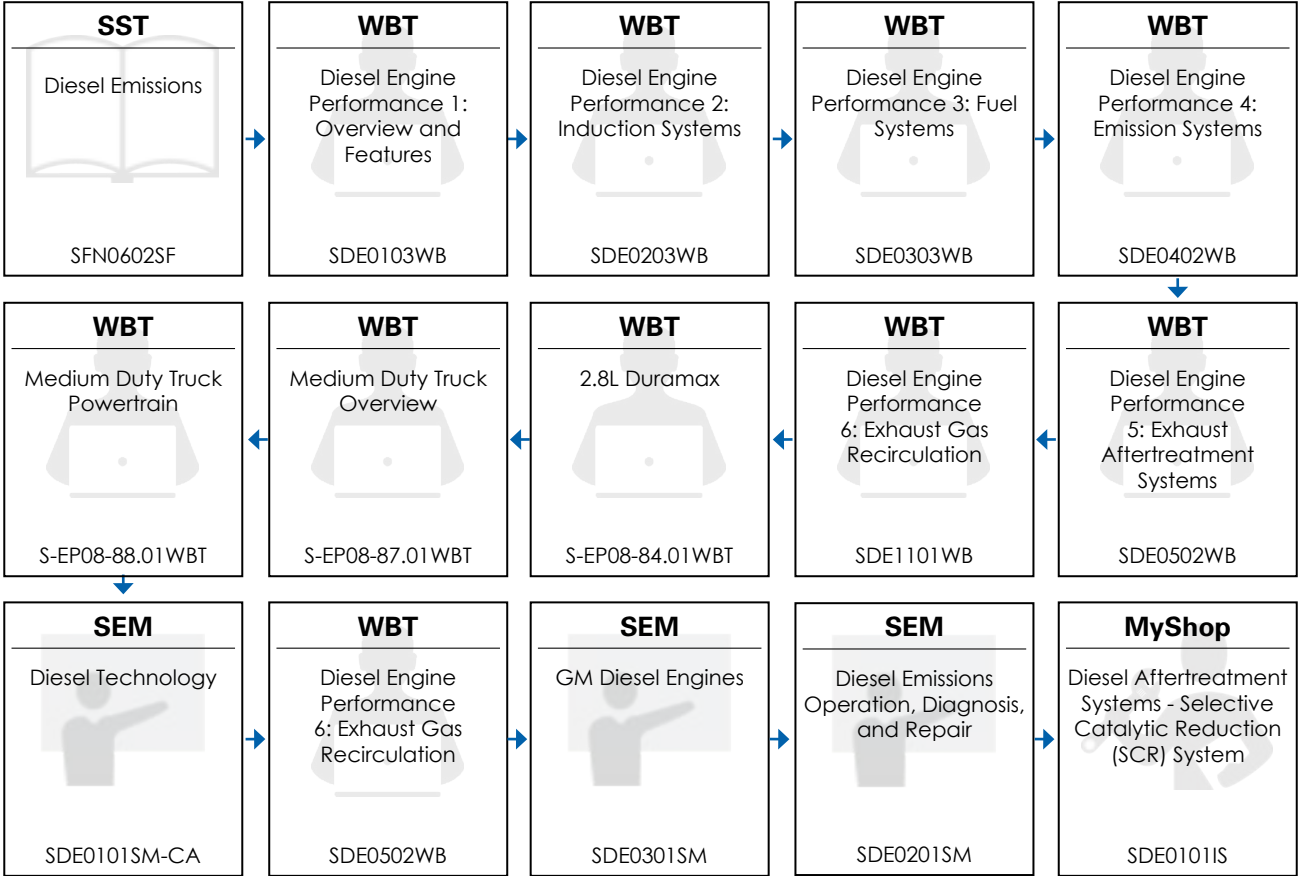
S-EP08-19.01VID

This video will demonstrate the proper way to install the updated fuel pump connector that is required with some ACDelco replacement fuel pumps. This procedure can be used with other ACDelco replacement pigtailed.

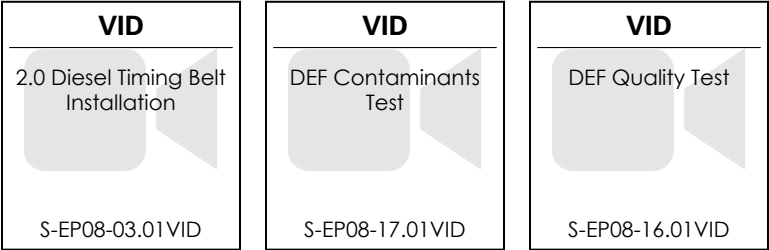
**Languages:** English

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 [Techconnectcanada.ca](http://Techconnectcanada.ca).

## RECOMMENDED PATH



## ADDITIONAL TRAINING



## Product Lite Technical Training



### DIESEL EMISSIONS

SFN0602SF

This 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

SDE0103WB

This course covers diesel engine performance, including an introduction to diesel engines, models, features, vehicle applications, operational components, and control systems. Upon completing this course, technicians will be able to describe diesel engine operation, diesel engine features, and identify the diesel engine control system.

**Languages:** English



### DIESEL ENGINE PERFORMANCE 2: INDUCTION SYSTEMS

SDE0203WB

This course covers the diesel engine induction system, including induction system components, turbochargers, and exhaust gas recirculation. Upon completion of this course, participants will be able to describe the diesel engine induction system, diesel engine turbochargers, and identify characteristics of diesel exhaust gas recirculation.

**Languages:** English



### DIESEL ENGINE PERFORMANCE 3: FUEL SYSTEMS

SDE0303WB

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. Upon completion of this course, participants will be able to recall the diesel engine fuel supply, diesel engine high pressure fuel injection, and diesel engine fuel system testing procedures. They will be able to identify the diesel engine fuel return system.

**Languages:** English



### DIESEL ENGINE PERFORMANCE 4: EMISSION SYSTEMS

SDE0402WB

This course covers the diesel engine's aftertreatment emission system as well as crankcase ventilation systems. Upon completion of this course, technicians will be able to identify the components and configurations of the diesel engine's aftertreatment emission system. Identify the regeneration process of the diesel emission aftertreatment system. Recall methods of diagnosing the diesel emission system, and recognize components and configurations of the crankcase ventilation system.

**Languages:** English



### DIESEL ENGINE PERFORMANCE 5: EXHAUST AFTERTREATMENT SYSTEMS

SDE0502WB

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. Upon completion of this course, participants will be able to recall correct diesel exhaust fluid handling procedures. Identify reductant systems and components. Recall the selective catalytic reduction aftertreatment operation and service considerations.

**Languages:** English



### DIESEL ENGINE PERFORMANCE 6: EXHAUST GAS RECIRCULATION

SDE1101WB

This course covers the overview, operation, and diagnosis of the Cylinder Set Strategy (CSS) diesel engine Exhaust Gas Recirculation (EGR) system. Upon completing this course, participants will be able to: recall the purpose and components of the CSS diesel engine Exhaust Gas Recirculation system, identify the stages of operation of the CSS diesel engine Exhaust Gas Recirculation system, and identify diagnostic strategies for the CSS diesel engine Exhaust Gas Recirculation system.

**Languages:** English



### 2.8L DURAMAX

S-EP08-84.01WBT

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

S-EP08-87.01WBT

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

### DIESEL TECHNOLOGY

SDE0101SM-CA

This seminar will cover important tips and procedures related to diesel engines. Key topics include engine features and operations, with a focus on the diagnosis and service of diesel engines.

**Languages:** English



### DIESEL EMISSIONS OPERATION, DIAGNOSIS, AND REPAIR

SDE0201SM

This instructor-led training seminar will increase your awareness and understanding of the operation, diagnosis, and repair of diesel engine emission and exhaust aftertreatment systems found in modern passenger cars and light trucks. The course also covers the importance of service programming, and best practices for reset and learn functions during aftertreatment diagnosis and service.

**Languages:** English



### GM DIESEL ENGINES

SDE0301SM

This 3-hour Seminar prepares technicians to diagnose and service General Motors turbocharged diesel engines. The engines covered in this course are the 6.6L L5P, 3.0L LM2 and LZ0, and 2.8L LWN engines. The course includes an overview of the DENSO fuel system used on these diesel engines. The course also covers the components, operation, and diagnosis and service procedures for each diesel engine.

**Languages:** English



## MyShop Training

### DIESEL AFTERTREATMENT SYSTEMS - SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM




SDE0101IS

This 1-hour Seminar session covers the purpose, operation, and diagnosis of the Selective Catalyst Reduction (SCR) system, as well as components associated with the SCR system. Additionally, this course covers characteristics and testing of Diesel Exhaust Fluid (DEF).

**Languages:** English / French



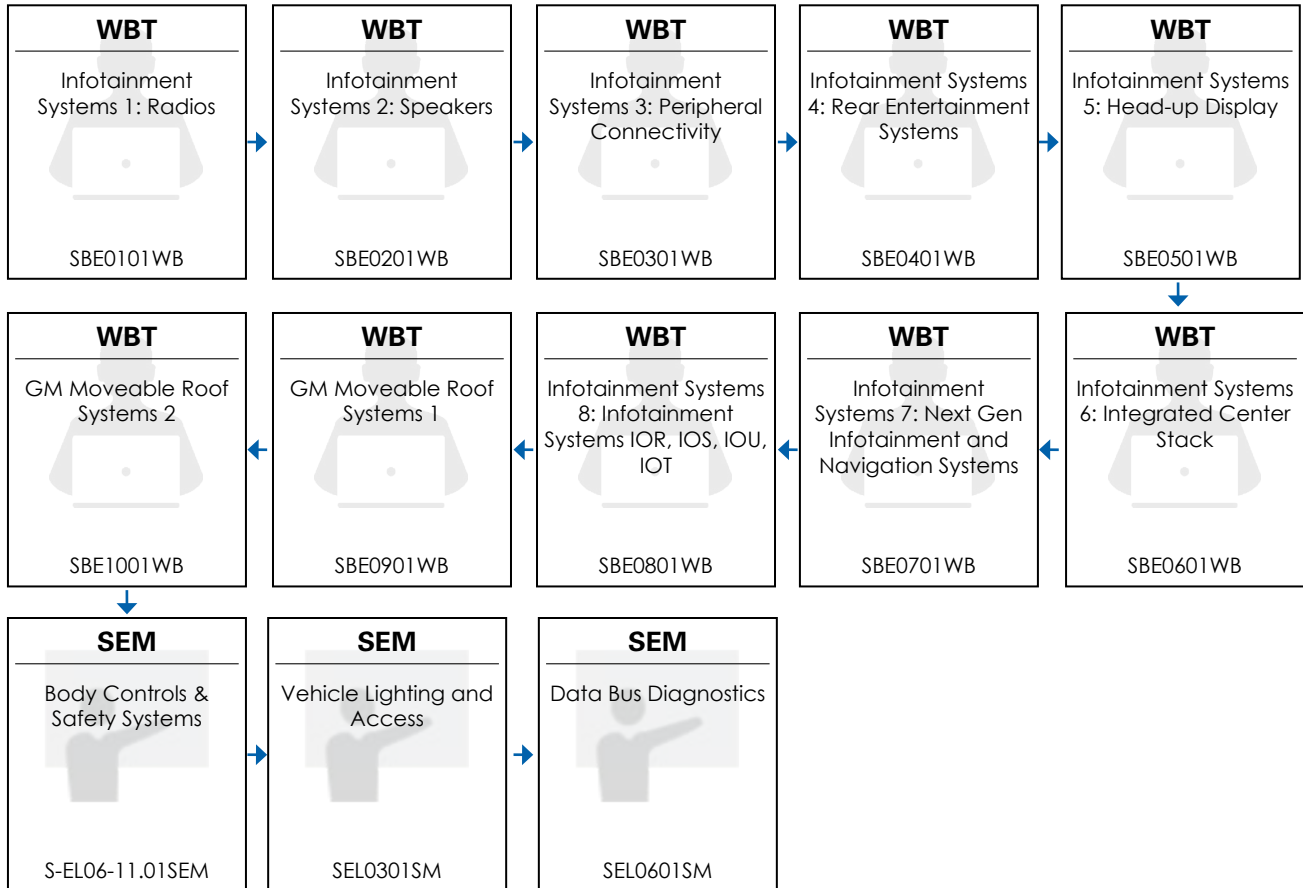
## TechTube Videos

-  **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

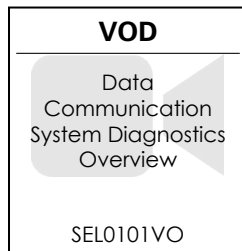
# BODY ELECTRICAL AND COMMUNICATIONS

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 [Techconnectcanada.ca](http://Techconnectcanada.ca).

## RECOMMENDED PATH



## ADDITIONAL TRAINING



# BODY ELECTRICAL AND COMMUNICATIONS

## Web-Based Training



### INFOTAINMENT SYSTEMS 1: RADIOS

**SBE0101WB**

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 / French



### INFOTAINMENT SYSTEMS 2: SPEAKERS

**SBE0201WB**

This course is intended for GM dealership service technicians who will be servicing GM entertainment systems and 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 / French



### INFOTAINMENT SYSTEMS 3: PERIPHERAL CONNECTIVITY

**SBE0301WB**

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 / French



### INFOTAINMENT SYSTEMS 4: REAR ENTERTAINMENT SYSTEMS

**SBE0401WB**

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 / French



### INFOTAINMENT SYSTEMS 5: HEAD-UP DISPLAY

**SBE0501WB**

Upon completion of this course, the participant will be able to describe the head-up Display characteristics and components.

**Languages:** English / French



### INFOTAINMENT SYSTEMS 6: INTEGRATED CENTER STACK

**SBE0601WB**

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 / French



### INFOTAINMENT SYSTEMS 7: NEXT GEN INFOTAINMENT AND NAVIGATION SYSTEMS

**SBE0701WB**

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 / French



### 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 / French



### GM MOVEABLE ROOF SYSTEMS 1

**SBE0901WB**

This course introduces the technician to the various types of moveable roofs, along with the components and operation of the electrical/motorized power-folding top. This course will cover service implications of the electrical/motorized power-folding top, as well as any implications it has for other vehicle systems.

**Languages:** English

# BODY ELECTRICAL AND COMMUNICATIONS

## GM MOVEABLE ROOF SYSTEMS 2

SBE1001WB

This course covers electrical/hydraulic power-folding top systems, along with sunroofs, and how to diagnose and service them. It will identify the components of the electrical/hydraulic power-folding top and general diagnosis procedures. The course will also identify the various types of sunroofs and panoramic roofs, along with their components and operation.

**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 / French



### DATA BUS DIAGNOSTICS

SEL0601SM

This course is designed to help the technician understand the differences in bus communication protocols, how to effectively use a network topology, and understand the purpose of a secure gateway and how to gain access to it. This course will also help the technician to better understand how to perform network diagnosis and the proper procedures to repair wires used in a bus network. The course will also cover key aspects of vehicle programming.

**Languages:** English / French



### BODY CONTROLS AND SAFETY SYSTEMS

S-EL06-11.01SEM

What do you do when a customer brings you a vehicle with one of more of the body control or safety systems disabled or inoperative? The Body Control and Safety Systems course uses real world scenarios based on vehicles from several manufactures to focus on identifying and diagnosis of the various body control and safety systems.

**Languages:** English



## Video On Demand

### DATA COMMUNICATION SYSTEM DIAGNOSTICS OVERVIEW

SEL0101VO

This video covers (at a high level) the tests commonly found under Circuit System Verification and Circuit System Testing in many Service Information data communication diagnostic procedures. Upon completing this video, participants will be able to explain the purpose of each test, demonstrate how the test is performed, and describe the possible outcomes.

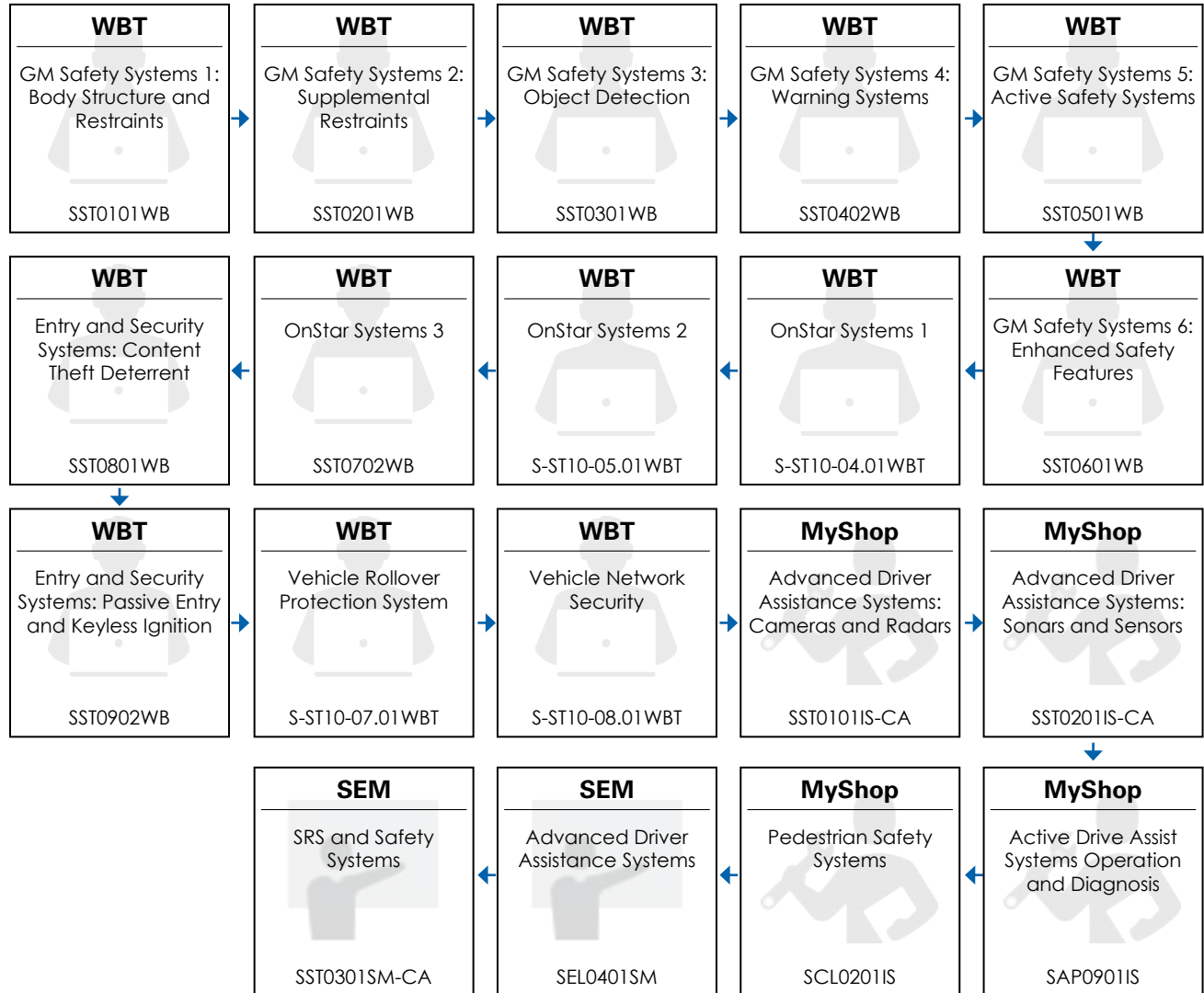
**Languages:** English



# SAFETY AND SECURITY

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 [Techconnectcanada.ca](http://Techconnectcanada.ca).

## RECOMMENDED PATH



## Web-Based Training

### 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

SST0402WB

This course covers GM vehicle warning systems, especially those using vehicle-mounted cameras. Upon completing this course, technicians will be able to distinguish between the components and operation of camera-based warning systems, identify the components and operation of the Lane Departure warning system, identify the components and operation of the vehicle performance data recorder, and identify the service procedures and diagnostic strategies of GM warning systems.

**Languages:** English



### GM SAFETY SYSTEMS 5: ACTIVE SAFETY SYSTEMS

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



### ONSTAR SYSTEMS 3

SST0702WB

This course provides a description of the Gen 11 and Gen 12 OnStar® system. The characteristics of various features are described in this course, including antennas and other components, Wi-Fi and aspects of connectivity, warnings, and diagnostics. Upon completing this course, participants will be able to identify the OnStar® Gen 11 and Gen 12 components, and describe the characteristics and diagnostics of OnStar® Gen 11 and Gen 12.

**Languages:** English



### 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

SST0902WB

This course covers the Passive Entry Passive Start (PEPS) system, content theft deterrent system and service considerations. Upon completing this course, the technician will be able to identify the Passive Entry Passive Start (PEPS) system characteristics, components, and operations, including the Passive Entry Passive Start (PEPS) Content Theft Deterrent System characteristics, components, operations, and diagnostic procedures. The technician will also be able to recall Passive Entry Passive Start (PEPS) service considerations.

**Languages:** English



# SAFETY AND SECURITY



## ONSTAR SYSTEMS 1

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



## ONSTAR SYSTEMS 2

S-ST10-05.01WBT

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



## VEHICLE ROLLOVER PROTECTION SYSTEM

S-ST10-07.01WBT

This WBT course presents a description of the vehicle rollover protection system. Topics cover the system components, operation and service considerations.

**Languages:** English / French



## VEHICLE NETWORK SECURITY

S-ST10-08.01WBT

This WBT course covers the characteristics of General Motors Local Area Network (GMLAN) network security. Topics include identifying isolated networks, how the Serial Data Gateway Module manages network traffic, and how isolated network faults are identified.

**Languages:** English / French

## Seminar



### ADVANCED DRIVER ASSISTANCE SYSTEMS

SEL0401SM

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



### SRS AND SAFETY SYSTEMS

SST0301SM-CA

This Instructor-led Training Seminar focuses on the operation and diagnostic procedures of Supplemental Restraint Systems (SRS). Course content includes SRS sub-systems and components, vehicle applications, and interrelated systems. Additionally, this course highlights SRS safety procedures and protocol for proper vehicle repairs, safe operation of a vehicle post-collision, diagnostic procedures, service tips, and special tools. Various Original Equipment Manufacturers (OEMs) will be highlighted.

**Languages:** English / French



## MyShop Training



### ADVANCED DRIVER ASSISTANCE SYSTEMS: CAMERAS AND RADARS

SST0101IS-CA

This course will cover the types of cameras and radars in Advanced Driver Assistance Systems (ADAS). There will be an overview of the types of ADAS that use these cameras and radars. Diagnostic, service and repair procedures will be discussed.

**Languages:** English / French



## ADVANCED DRIVER ASSISTANCE SYSTEMS: SONARS AND SENSORS

SST0201IS-CA

This course will cover the types of sonar and sensors used in Advanced Driver Assistance Systems (ADAS) including sonar, lidar, and antennas. There will be an overview of the types of ADAS that use these sensors. Diagnostic, service and repair procedures will be discussed.

**Languages:** English / French



## ACTIVE DRIVE ASSIST SYSTEMS OPERATION AND DIAGNOSIS

SAP0901IS

This 1-Hour training seminar will increase your awareness and understanding of active drive assist systems and their operation, active drive assist system components, and how to diagnose active drive assist system concerns.

**Languages:** English / French



## PEDESTRIAN SAFETY SYSTEMS

SCL0201IS

This 1-hour MyShop 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 / French



# FUNDAMENTALS

## Product Lite Technical Training



### FLUIDS AND CHEMICALS

SFN0902SF

This 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

## Web-Based Training



### AUTOMOTIVE FLUIDS

SFN0101WB

This course is intended for service technicians and covers unique principles and practices for the use of automotive fluids across the product line.

**Languages:** English



### FUNDAMENTAL HYDRAULIC THEORY AND OPERATION

SFN1301WB

This course 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 recall the origin, operation, and use of automotive hydraulic systems. The content covers the following topic areas: hydraulic theory; Pascal's Law and hydraulic variables; hydraulics and fluid properties; and hydraulic system types, components, and operation.

**Languages:** English



### SERVICE INFORMATION (SI) OVERVIEW

SFN1401WB

The Service Information (SI) Overview course gives a description of the characteristics, available publications, and navigation features of SI. This course also provides a description of how to view and manipulate graphics. Upon completion of this course, participants will be able to identify how to find service manuals and publications from the SI home page and recall how to view and manipulate schematics and other graphics in SI.

**Languages:** English



### TECHLINE CONNECT FUNCTIONALITY

SFN1501WB

This course covers the installation of Techline Connect. It also covers the functionality of Techline Connect, including vehicle connection, Service Information (SI), Global Diagnostic System (GDS) 2, and the Service Programming System (SPS). Upon completing this course, participants will be able to recall how to access Techline Connect and identify the components and functionality of the Techline Connect dashboard.

**Languages:** English



### SHOP SAFETY

SFN1901WB

Shop Safety is the technicians foundation for avoiding injury and damage during automotive repair. This WBT provides the general safety guidance for shop safety, personal protective equipment, fire prevention, tool and equipment safety, and electric vehicle safety. Upon completing this course, participants will be able to recall information pertaining to shop safety regulations, recall personal protection equipment, recall fire prevention procedures and equipment, recall tool and equipment safety, and recall electric vehicle safety information.

**Languages:** English



### MULTI-POINT VEHICLE INSPECTION (MPVI)

SFN2001WB

This course covers Multi-Point Vehicle Inspection (MPVI) procedures. The inspection topics covered include tire and underbody, underhood, vehicle exterior and interior, driver warning, and vehicle lighting.

**Languages:** English



### RIGGING AND LIFTING: ENGINES / TRANSMISSIONS

SFN2101WB

This course provides instruction on the overall safety of rigging and lifting engines and transmissions. Upon completing this course, technicians will be able to identify the definition of rigging and lifting, identify the safety precautions associated with rigging and lifting, identify the proper equipment for rigging and lifting, and identify the proper rigging and lifting procedures for engines and transmissions.

**Languages:** English

## RIGGING AND LIFTING SAFETY: HIGH VOLTAGE BATTERIES

SFN2201WB

Electric Vehicles require unique training, equipment, and tools to properly service them, including a forklift to assist in the safe handling of high voltage batteries. This course focuses on fundamentals related to forklift safety, special tools, and rigging and lifting procedures. Upon completing this course, technicians will be able to identify forklift safety practices, describe special tools used for rigging and lifting high voltage batteries, and describe high voltage battery rigging and lifting procedures.

**Languages:** English



## LIFTING AND JACKING SAFETY

SFN4701WB

This course provides instruction on the overall safety of lifting and jacking a GM vehicle when service is needed.

Upon completion of this course, technicians will be able to, identify the proper equipment to lift and jack a GM vehicle, identify the safe and proper way to lift a GM vehicle when being serviced, and identify the safe and proper way to jack a GM vehicle when being serviced.

**Languages:** English



## LUBRICATION INSPECTION AND MAINTENANCE

S-FN00-22.02WBT

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



## 2023 CHEVROLET CORVETTE NEW MODEL LAUNCH

10323.89W

This New Model Launch course provides an awareness of the unique and new technology related to the 2023 Chevrolet Corvette. By the end of this course, participants will be able to recall general information about the vehicle, associated engines, associated transmissions, driveline systems, power and signal distribution systems, and body systems.

**Languages:** English



## TechTube Videos

### PROPER TIRE INSPECTION

S-FN00-14.01VID

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

S-FN00-15.01VID

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



### DOOR HINGE PINS AND BUSHING KITS

S-SS04-11.01VID

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



## Video On Demand

### USING THE CONTROL MODULE REFERENCES CHART

SFN4801VO

This video highlights the Control Module References Chart within GM Service Information. The video demonstrates chart access and navigation while identifying the importance of its use during vehicle diagnosis, repair, component acquisition, and programming of Electronic Control Units.

**Languages:** English



## Web-Based Training



### NOISE, VIBRATION, AND HARSHNESS 1

SDS0201WB

Successfully diagnosing causes of Noise, Vibration, and Harshness (NVH) concerns identifies possible issues before they can escalate. NVH1 course covers vibration theory, as well as how to diagnose vibration concerns using the oscilloscope and noise concerns using the microphone.

**Languages:** English



### NOISE, VIBRATION, AND HARSHNESS 2

SDS0301WB

NVH2 course covers vibration diagnostic techniques, such as road tests, and test equipment used in diagnosing vibration concerns.

**Languages:** English



### MULTIPLE DIAGNOSTIC INTERFACE 2 (MDI 2) FAMILIARIZATION

SDS0401WB

This course presents a description of the Multiple Diagnostic Interface (MDI) 2. Upon completion of this course, technicians will be able to identify the key features and characteristics of the Multiple diagnostic Interface (MDI) 2 and recall the operation of the MDI Manager software.

**Languages:** English



### GLOBAL DIAGNOSTIC SYSTEM (GDS) 2: STORED DATA

SDS0501WB

This course covers aspects of the stored data functions and capabilities of Global Diagnostic System 2 (GDS2). Included in the course is how to navigate vehicle diagnostic screens and use the features of stored data. Upon completion of this course, participants will be able to recall GDS2 vehicle diagnostic screens and identify the features of stored data using GDS2.

**Languages:** English



### GLOBAL DIAGNOSTIC SYSTEM (GDS) 2: NAVIGATION

SDS0601WB

This course describes the Global Diagnostic System 2 (GDS2). This includes how to access GDS2 via Techline Connect, navigate the system, and perform diagnostics on vehicles.

**Languages:** English



### GLOBAL DIAGNOSTIC SYSTEM (GDS) 2: NAVIGATION

SDS0601WB

This course describes the Global Diagnostic System 2 (GDS2). This includes how to access GDS2 via Techline Connect, navigate the system, and perform diagnostics on vehicles.

**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 / French



### GLOBAL DIAGNOSTIC SYSTEM (GDS) 2

S-FN00-06.02WBT

This course presents a description of the Global Diagnostic System (GDS) 2. Topics include the function, installation, and navigation of the GDS 2 software; key screens; vehicle diagnostics; and the manipulation of stored data. Upon completing this course, participants will be able to recall how to install and operate the Global Diagnostic System 2 (GDS 2), describe how to use key screens in GDS 2, identify how to diagnose a vehicle using GDS 2, and recall how to manipulate stored data using GDS 2.

**Languages:** English



### MULTIPLE DIAGNOSTIC INTERFACE (MDI) FAMILIARIZATION

S-FN00-20.02WBT

This WBT course covers common characteristics of the MDI including MDI Setup Software, MDI / On Vehicle operation, and the Service Programming System Procedure. Upon completion of this course technicians will be able to identify common characteristics of the MDI, identify MDI Setup Software, identify MDI / On Vehicle operation, and identify the Service Programming System Procedure.

**Languages:** English / French



### INTRODUCTION TO THE DIGITAL OSCILLOSCOPE

SFN1902WB

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

## MyShop Training

### SERVICE PROGRAMMING AND TECHLINE CONNECT

SDS0201IS

This Instructor-led Training will explore service programming on GM vehicles and accessing GM's Techline Connect programming service. Service programming specific hardware will be discussed, including: Tech 2, MDI 2, and supported third-party J2534 interface devices. Common service programming procedures will be covered including module setup and service programming actions. Additional topics covered include service programming resources, successful programming techniques and practices, and recovering from programming issues or errors.

**Languages:** English



### AFTERMARKET SERVICE PROGRAMMING

SDS0401IS

This 1-hour course covers the fundamentals of aftermarket module programming, including when service programming is required, tools needed for programming, and procedures for programming.

**Languages:** English / French



## 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 MULTIMETER TO CHECK AMPERAGE

S-DS11-02.01VID

This video discusses what amperage is and the proper techniques for measuring amperage. The Fluke 87 digital multimeter 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 multimeter 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



# DIAGNOSTIC SYSTEMS

---



## **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

## Web-Based Training

### INTRODUCTION TO SELLING SERVICE

**BSC0401WB**

This course covers an overview of the selling process, who in the service center is a sales person and why, reasons customers buy, and reasons why a service advisor should sell. After completing this course, you will be able to recall why customers buy, who sells to the customers, and the process for service and selling

**Languages:** English



### BUILDING CUSTOMER LOYALTY

**BSC0501WB**

This course covers building customer loyalty, including how to conduct and process effective phone reservations; how to prepare for and greet customers; and how to obtain initial customer information, conduct a walk-around, and complete the write-up process on the repair order. After completing this course, you will be able to recall how to conduct and process effective phone reservations, recall how to prepare for and greet the customer, and recall how to obtain initial customer information, conduct a walk-around, and complete the write-up process on the repair order.

**Languages:** English



### MANAGING CUSTOMER OBJECTIONS

**BSC0601WB**

This course covers basic information of customer objections and negotiation strategies. After completing this course, you will be able to recall the basic information of customer objections, ways of managing customer objections, characteristics of a successful negotiation, as well as negotiation strategies.

**Languages:** English



### CLOSING THE SALE AND DELIVERY

**BSC0701WB**

This course covers the meaning of closing the sale, the different closing techniques, and when and how to close a sale. This course also covers the procedures that must be performed between closing the sale and the delivery of the vehicle, and how these procedures relate to the sales process. Finally, this course will explain the steps to follow in the actual delivery of the vehicle to the customer. After completing this course, you will be able to recall the meaning of closing the sale, the different closing techniques, and when and how to close the sale, recall the procedures that must be performed between closing the sale and the delivery of the vehicle, and how these procedures relate to the sales process, and recall which steps to follow in the actual delivery of the vehicle to the customer.

**Languages:** English



### CONFLICT RESOLUTION

**BSC0801WB**

This course covers various aspects of conflict resolution, ranging from identifying emotions and assertive behaviors to resolving conflict with customers, as well as employees. After completing this course, you will be able to identify conflict resolution strategies for customers and employees.

**Languages:** English













**GENUINE  
PARTS**

***ACDelco***



Contact us at 1-800-263-3526  
Visit us at [www.techconnectcanada.com](http://www.techconnectcanada.com)