## *Are you ready to acquire advanced-level qualification in automobile mechanics?*

With this kit, you have all you need to reach your goal, while reducing the stress related to the qualification exam.

Remember your goal: your success at obtaining an advanced-level qualification certificate will help you to have better working conditions and take you on more stimulating tasks.

- ➔ This exam is entirely theoretical and performed on a computer.
- ➔ You will be evaluated based on your understanding of various automobile systems.

Read carefully **all the documents** that are included in your exam preparation kit. They are the key to your success.

The qualification team at your CPA is there to help you and to accompany you in this process.

Good luck!

# WHY SHOULD YOU OBTAIN ADVANCED-LEVEL QUALIFICATION IN AUTOMOBILE MECHANICS?

The *Advanced automobile mechanics* exam is an evaluation tool used to certify that your knowledge respects the standards for an advanced-level journeyman. The exam is identical everywhere in Québec.

Obtaining an advanced-level qualification certificate confirms that you have acquired the knowledge and competence needed to work in conformity with the regulations of the automobile-mechanics industry.

The *Advanced automobile mechanics* exam gives prestige to the industry because:

- For businesses, it is proof that their staff is qualified;
- For the mechanic, it is proof of their competence and helps to improve their working conditions;
- For the public, it helps build confidence.

# HOW TO PREPARE FOR THE *ADVANCED AUTOMOBILE MECHANICS* EXAM

## IN 4 STEPS

**STEP A**
**OVERVIEW**

- A.1- Exam format
- A.2- What you should do
- A.3- Types of questions
- A.4- Multiple-choice questions

**STEP B**
**GETTING READY**

- B.1- Elements to review
- B.2- Reviewing

**STEP C**
**MANAGING YOUR STRESS**

- C.1- During the exam

**STEP D**
**YOUR RESULTS**

- D.1- Success
- D.2- Resumption the exam

# A-1

# EXAM FORMAT

➔ Every exam is unique in that it is made up of 70 multiple-choice questions that are chosen at random from a bank of 195 questions.

➔ There is only one right answer to each question.

The questions are used to evaluate your understanding of automotive systems and your ability to diagnose and repair automobiles.

➔ Topics covered:

- Brakes
- Powertrain
- Steering and suspension
- Engine
- Electricity
- HVAC system
- Supplemental Restraint System (SRS)

➔ Exam time limit: 150 minutes

➔ This exam is performed on a computer.

The questions were written by high-level automobile mechanics. A technical committee approved each of the questions.

All comments and suggestions made by candidates are collected in a report that is given periodically to the technical committee for review.

**A-2**

# WHAT YOU SHOULD DO:

Read carefully all of the documents that you receive with your written notice. They contain useful information that will help you avoid unnecessary stress.

- Make note of where your exam will take place.
- Arrive a few minutes before the time of the exam.
- An exam monitor will greet you and explain the exam process.

**When you arrive, you must hand over your cap, lighter, cell phone, tablet and any other electronic equipment you might have with you. They will be given back to you at the end of the exam.**

- You will be assigned a computer by the exam monitor.
- After you confirm your name on the computer screen, you can click on "START." Then, you will have access to the exam.
- The exam software allows you to answer the questions in any order you wish and even to come back and revise your answers.
- If you have any difficulties using the software or the computer, raise your hand and discretely ask the exam monitor for help.
- Once you have checked all of your answers, raise your hand to inform the monitor that you have finished.

After the exam, we ask you to complete a satisfaction survey. It is essential for us to know your opinion concerning the exam so that the exam will satisfy its role in providing advanced-level certification.

# A-3

# TYPES OF QUESTIONS

**1-** Multiple-choice questions

- ✓ one question;
- ✓ only one correct answer;
- ✓ three trick answers that are wrong.

**EXAMPLE**:

A technician notices that bluish smoke comes out of the exhaust pipe of a car he is working on when the car is started, but only when the car has been stopped for a long time. What could be the cause of the problem?

- Worn piston rings
- Defective cylinder head gasket
- Worn valve seal
- Consumption of antifreeze

Be careful!

There is only one right answer to every question.

**2-** Scenarios that describe an interaction between various people.

**EXAMPLE:**

Two technicians are discussing how a digital wheel speed sensor works. Technician A claims that the electrical tension produced by the sensor increases with the speed of the wheel. Technician B says that the frequency of the signal remains constant. Who is right?

- Technician B only
- They are both right
- Technician A only
- Neither one is right.

**A-3**

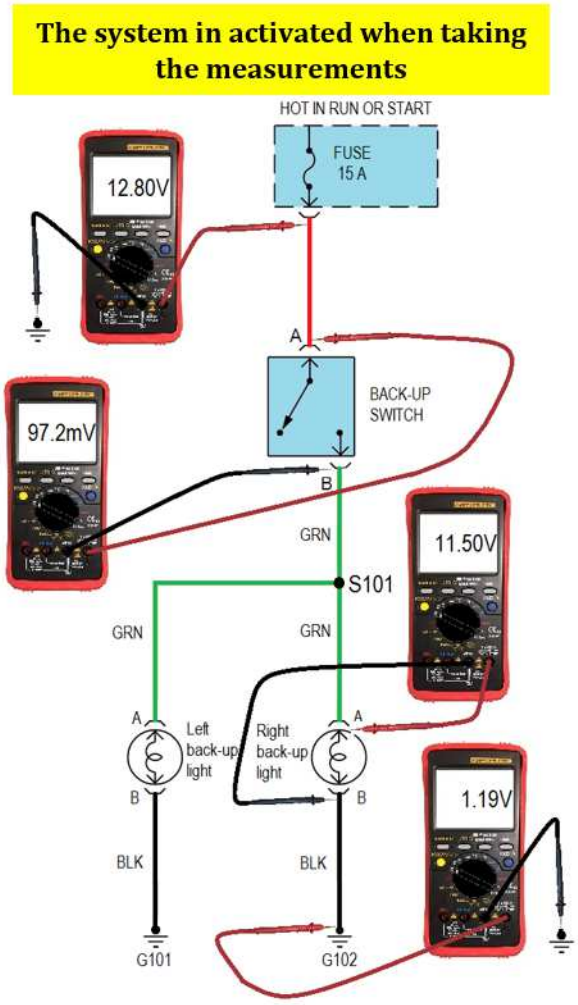
# TYPES OF QUESTIONS (continued)

**3-** Analysis of measurements and of oscillogram

**EXAMPLE:**

During an inspection, a technician notices that the two back-up lights DO NOT light up with the same intensity. After testing, she notes the following readings on the diagram. Identify what is wrong.

- Back-up light switch is defective
- 101 Splice is defective
- Lightbulb socket is corroded
- Ground G102 is defective



**A-4**

# MULTIPLE-CHOICE QUESTIONS
# ADVICE FOR ANSWERING

- Read carefully, from start to finish, every question and the choice of answers.
- Avoid jumping to conclusions about the meaning of the question.
- First, answer the questions for which you are sure to know the answer. Then come back to the questions you find more difficult.
- For the difficult questions, first eliminate the answers that are obviously wrong.
- Take note of words such as every, completely, all, always, never, none, and only. They indicate something absolute. This means that the answer must be an unquestionable fact.
- Don't reject an answer because it seems too simple or obvious.
- Don't imagine that there is a pattern to the answers. For example, don't reject answer "C" just because you chose answer "C" for the three previous questions.
- Don't try to determine if the good answers follow any sort of pattern. There is no pattern to the answers.

**B-1**

# ELEMENTS TO REVIEW

BE CAREFUL!
Here are the themes on which you could be tested:

| DO YOU KNOW… | TRAINING COURSES | SELF STUDY | INTERNET RESEARCH |
|---|---|---|---|
| • **Explain**<br>❖ The function and characteristics of the:<br>• Engine and its sub-systems;<br>• Fuel-injection system;<br>• Ignition system;<br>• Antipollution system;<br>• Components of the powertrain;<br>• Road-handling systems;<br>• Brake system;<br>• HVAC system;<br>• Active and passive safety systems;<br>• Electric and optional accessories. | | | |
| • **Use**<br>❖ Diagnostic equipment and interpret readings from the following systems:<br>• Injection<br>• Ignition<br>• Antipollution<br>• Engine efficiency<br>• Air conditioning<br>• ABS brakes<br>• Air bags<br>• Ignition and electricity | | | |

**B-1**

# ELEMENTS TO REVIEW (continued)

| DO YOU KNOW… | TRAINING COURSES | SELF STUDY | INTERNET RESEARCH |
|---|---|---|---|
| • **Analyse and interpret**<br>  • Measurements taken with a multimeter and interpret the results;<br>  • Readings taken with measuring instruments;<br>  • Results from tests and functional inspections;<br>  • The source of noises and vibrations. | | | |
| • **Read and interpret**<br>  • Plans and electrical diagrams. | | | |
| • **Determine**<br>  • Which tests to perform on systems in respect to the manufacturers' recommendations;<br>  • The impact of an anomaly on a system;<br>  • The impact of an anomaly on the handling of the vehicle; | | | |
| • **Perform**<br>  • Basic tasks on hybrid and electric cars safely. | | | |

**B-2**

# REVIEWING

Take action

Choose the type of training you need.

**Are preparation courses the best way for you to review theory elements?**

**Do you prefer to learn on your own about concepts that you have difficulty understanding?**

To find out more about training courses and manuals, see **www.carbure.ca** or contact your CPA.

**The CPA has training manuals that are specially made to help you prepare for the *Advanced automobile mechanics* exam.** They deal with the following subjects:

1- **Diagnosing and repairing Supplemental Restraint Systems (SRS)**
2- **Drivetrain components**
3- **Engine**
4- **Electric and electronic systems**
5- **Steering, suspension**

The CPAs also offer basic and advanced training

that can help you to master various exam themes.

**You can enrich your training by researching subjects that you are less familiar with on specialized websites.**

INFORMATION ABOUT TRAINING MANUALS
See the next page

## PREPARATION MANUALS FOR

## THE *ADVANCED AUTOMOBILE MECHANICS* EXAM (in French only)

***1) Organes de transmission***
Carbure code: MAE-211
To come


***2) Moteur***
Carbure code: MAE-224
To come


***3) Diagnostic et réparation des systèmes de protection supplémentaires***
Carbure code: MAE-
To come

***4) Systèmes électriques et électroniques***
Carbure code: MAE-
To come

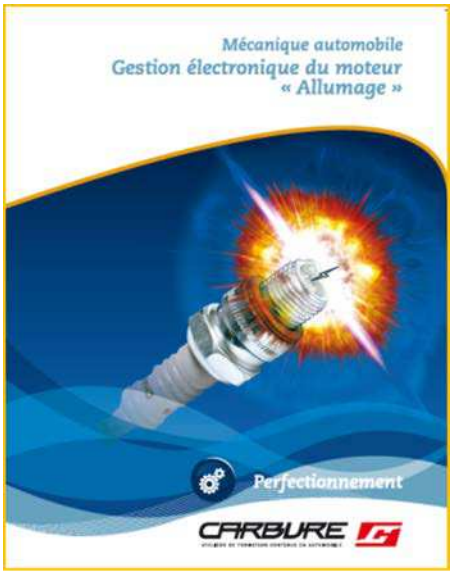
***5) Direction, suspension***
Carbure code: MAE-
To come

### Online training

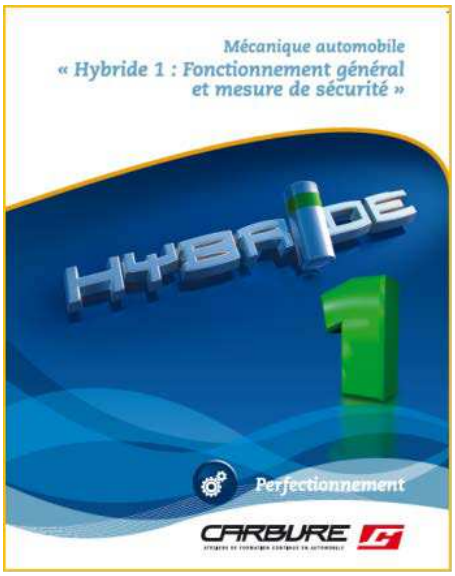
Don't hesitate to contact your regional CPA to access online traning modules.

## AUTOMOBILE MECHANICS TRAINING MANUALS (in French only)

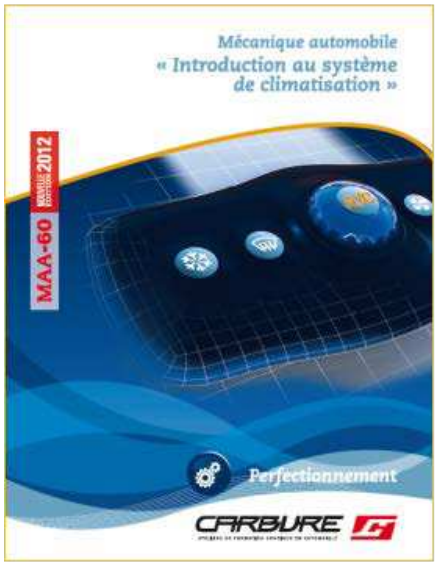
***Gestion électronique du moteur « Allumage »***
Carbure code: MAA-6
Length: 30 hours



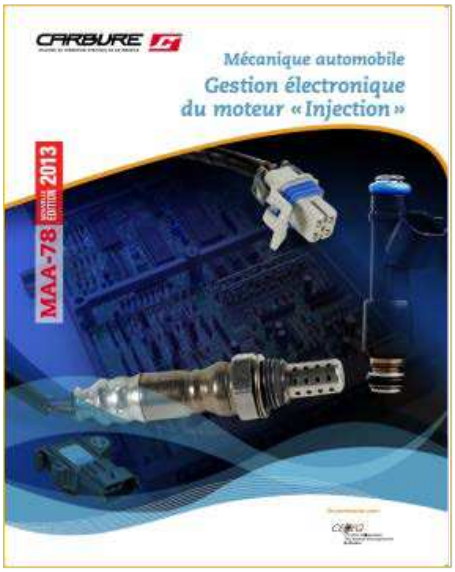

***Hybride 1 : Fonctionnement général et mesure de sécurité***
Carbure code: MAA-10
Length: 12 hours




***Introduction au système de climatisation***
Carbure code: MAA-60
Length: 21 hours




***Gestion électronique du moteur « Injection »***
Carbure code: MAA-78
Length: 27 hours



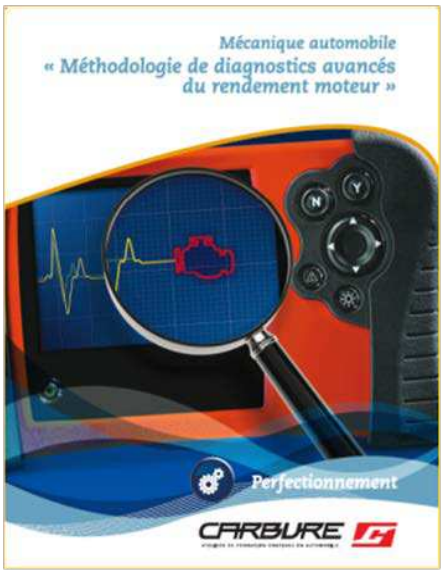
## AUTOMOBILE MECHANICS TRAINING MANUALS (in French only)

***Utilisation du lecteur analyseur et interprétation des paramètres***
Carbure code: MAA-79
Length: 27 hours


***Système de freinage antiblocage***

Carbure code: MAP-23
Length: 24 hours


***Méthodologie de diagnostics avancés du rendement moteur***
Carbure code: MAP-24
Length: 24 hours




***Analyse du rendement volumétrique moteur***
Carbure code: MAP-59
Length: 21 hours

C-1

# DURING THE EXAM

Take your time to read each of the questions carefully.

- Listen carefully to the exam supervisor's instructions.
- Don't let yourself be distracted.
- First, answer the questions that you know the answer.
- Don't waste time on a question if you are not sure. You can come back to it later.
- The average time to finish the exam is 120 minutes.
- Take your time to check over your answers.

**D-1**

SUCCESS


You have passed the *Advanced automobile mechanics* exam.

You will receive your new journeyman certification card by mail.

## PASSING MARK

| Results | Class acheived |
|---|---|
| + than 675 points | Class "A" or First class journeyman |
| from 605 to 670 points | Class "A/B" journeyman (in Québec only) |
| from 540 to 600 points | Class "B" journeyman (in Québec only) |
| from 540 to 670 points | Class "B" or Second class journeyman |

**D-2**

# RESUMPTION THE EXAM

You have not passed the exam with enough points to obtain the advanced-level qualification certificate.

After having analyzed your exam, the CPA certification service informs you of the points you need to study in order to prepare to take your exam again.

The wait period for resumption the exam varies depending on your result and the certification that you already have. This varies from 6 months to 1 year.

## WAIT PERIOD

| Class aimed for | Result obtained | Wait period |
|---|---|---|
| **Class "A" or First class** | **630 to 670 points** | **Six months from the date of the exam** |
| | **Lower scores** | **One year from the date of the exam** |
| **Class "B" or Second class** | **495 to 535 points** | **Six months from the date of the exam** |
| | **Lower scores** | **One year from the date of the exam** |