

PREPARATION KIT



AUTOMOBILE MECHANIC ADVANCED

23
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VERSION 11-2023

qualifying exam

WHY THE QUALIFICATION?

The professional qualification exam is an assessment tool that aims to certify that your knowledge and skills meet standards.

The exam is identical throughout Quebec. The qualification certificate obtained following successful completion is recognized in the other provinces of Canada and in France.



→ **For the mechanic**

it is the recognition of their skills and the improvement of their working conditions.

→ **For the employer**

it is the certification of the qualification of its staff.

→ **For the public**

it is a guarantee of confidence and security.

SUGGESTED ROUTE TOWARDS QUALIFICATION



Training



Link: www.cpcpa.ca/qualification-et-formation/formations

Description: Training is available depending on the skills to be worked on. With the help of the CPA training advisor in your region, it is possible to put together a training plan adapted to the needs of each candidate.



Qualifying exam

Exam: Automotive mechanics - advanced

Location: CPA in your region

Card: Class B, Class B/A, Class A (depending on region)

Description: The qualification exam is made up of a single **theoretical component**.

Prerequisite: Journeyman (Class C)



THE BLIND THEORETICAL



CPA in your region



150 minutes

Number of questions: 70 from a bank (random)

Distribution of questions:

10 % knowledge

35 % understanding

55 % diagnosis

Passing grade :

60% → Class B

67% → Class A/B *(depending on region)*

75% → Class A

Right to retake exam: 3 months

Questions similar to the ones found in the exam can be found

here: [CLICK HERE](#)





Process

- ➔ A computer is assigned to each candidate upon arrival.
- ➔ The supervisor will remind you of the rules to follow while doing the exam.
- ➔ It is possible to raise your hand to ask questions relating to the use of the software or the computer only.
- ➔ The software allows you to navigate between questions, allowing for revision at the end.
- ➔ Cell phones, lighters, and other computer devices must be given to the supervisor upon arrival.
- ➔ You have the right to use your personal headphones if you wish (the software allows automated reading of questions).

SKILLS



Engine and engine operating system

Know and recognize roles and functions

Understand how it works

Diagnose and understand problems

Cooling systems



Lubrication systems



Engine assemblies



Drive systems



Fuel delivery systems and fuel



Injection systems



Ignition systems



Intake systems and exhaust systems



Emission control system



Diesel engine systems





SKILLS



Communication between modules

DTCs

Data

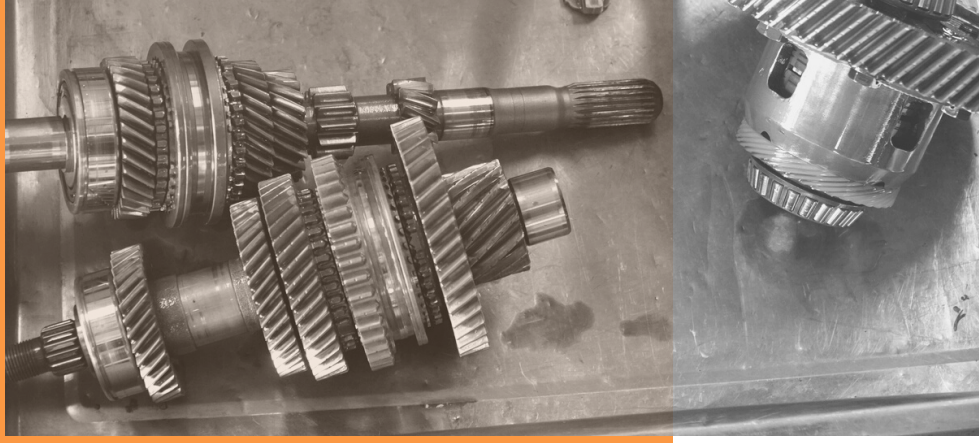
Know and recognize roles and functions

Understand how it works

Diagnose and understand problems



SKILLS



Driveshaft lines

*Know and recognize
roles and functions*

*Understand how it
works*

*Diagnose and
understand problems*

Automatic transmissions
and transaxles

Driveshafts and axles

Transfer cases

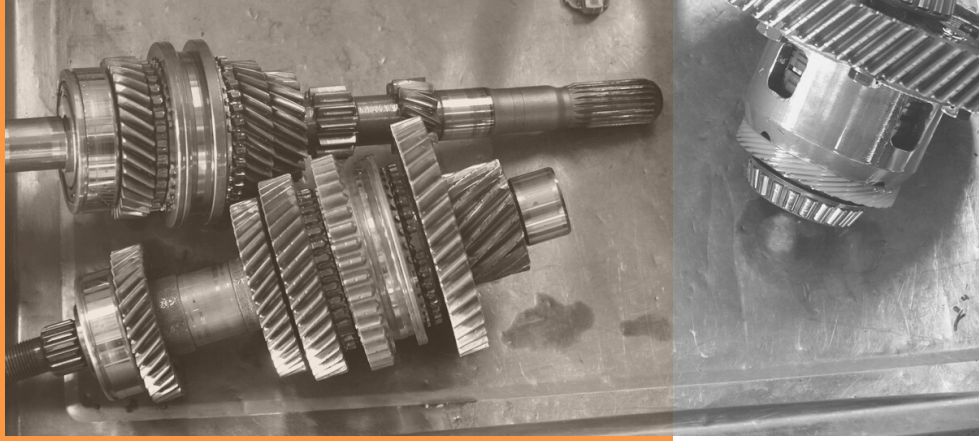
Final drives

Clutches

Manual transmissions and
transaxles



SKILLS



Steering, suspension, braking system, control systems, tires, hubs and wheel bearing

Know and recognize roles and functions

Understand how it works

Diagnose and understand problems

Steering, suspension and control systems



Brake systems and control systems



Tires, wheels, hubs, wheel bearings



SKILLS



Electrical systems and comfort thermostats

Starting systems, charging systems and batteries
Basic wiring and electrical systems
Lighting systems and windshield wiper systems
Entertainment Systems
Optional electrical accessories
Display instruments
Electrical accessories
Air Flow Control Systems
Refrigerant system

Know and recognize roles and functions

Understand how it works

Diagnose and understand problems





SKILLS



Hybrid vehicles and electric vehicles

Hyb and electric vehicle systems

Know and recognize roles and functions

Understand how it works

Diagnose and understand problems



SKILLS



Restraint systems, body components, accessories and trim

*Know and recognize
roles and functions*

*Understand how it
works*

*Diagnose and
understand problems*

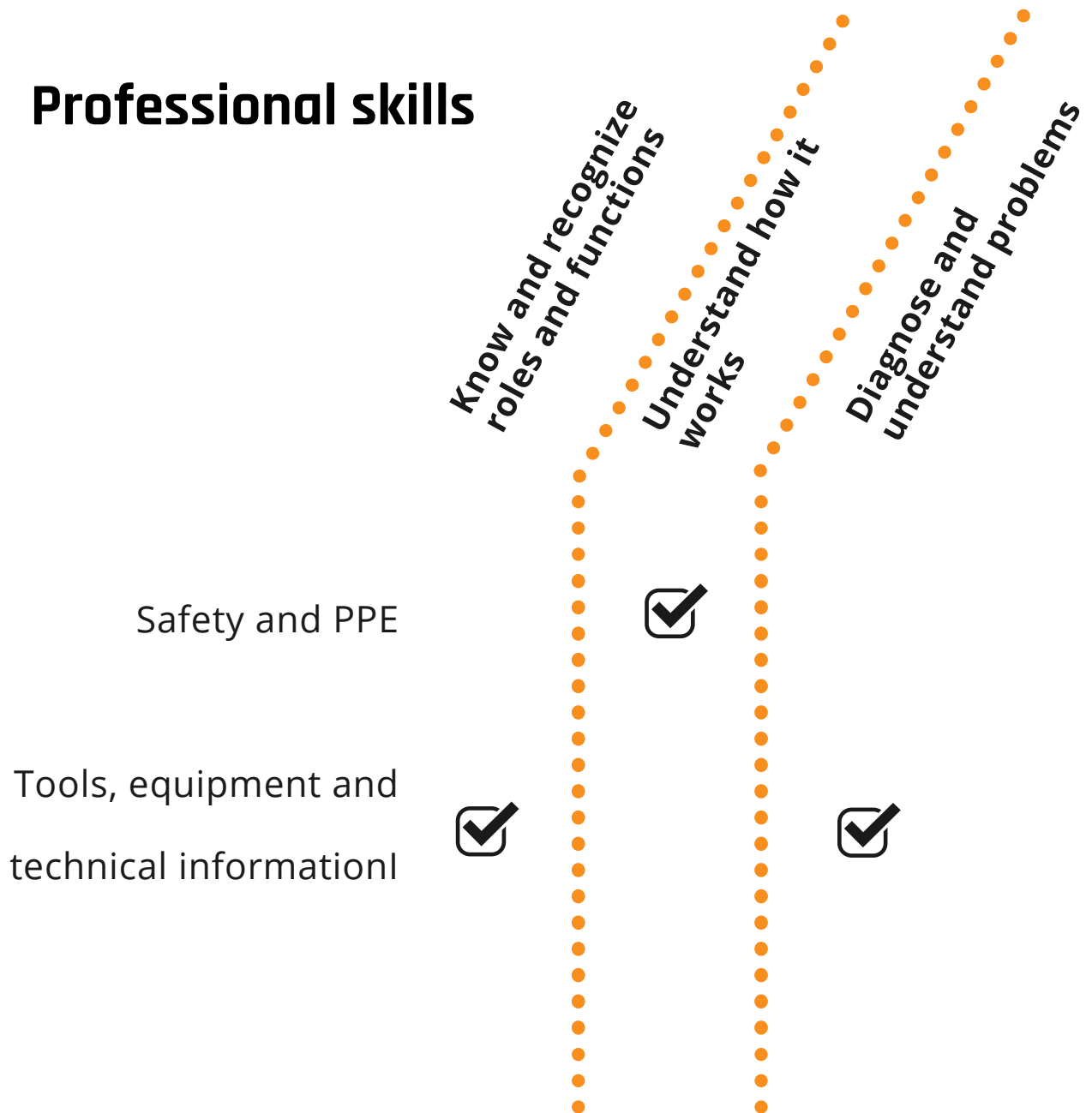
- Restraint systems
- Causes of wind noise,
rattling, water infiltration
- Latches, locks and moving
windows



SKILLS



Professional skills



TRAINING



Electricity

Description

At the end of this training, the participant will be able to properly use, among other things, their multimeter in order to establish precise diagnoses of electrical problems.

He will be able to carry out the necessary repairs according to the methods recommended by the manufacturers.

Développé par le CPCPA,
les CPA et nos partenaires



Mécanique automobile avancée
Électricité



Avec la contribution financière de :
Commission
du développement
du travail et de l'énergie
Québec

Training duration

In person **28 hours**

Course Objectives

- Perfectly master the basic concepts of electricity.
- Be familiar with electrical signals such as frequency, duty cycle, peak value and others.
- Develop the skills necessary to perform diagnostics using appropriate tools such as a multimeter, current clamp, test light, oscilloscope and others on electrical systems.
- Read and interpret wiring diagrams.
- Conduct tests on charging and starting systems.
- Study heated seat systems.

TRAINING



Steering, suspension, brakes

Description

At the end of this training, the participant will be able to identify the components and elements of the suspension, steering and brake systems.

He will be able to understand how it works, make diagnoses and repairs in accordance with manufacturers' specifications.

Developed by the CPCPA,
the CPA and our partners



Advanced Automobile Mechanics
Steering, Suspension, Brakes



Course Objectives

- Reminder on the operation of the steering and suspension systems
- Research on different anti-lock brake systems, stability control systems, wheel hubs, and bearings
- Inspection and verification of all systems
- Updating practical skills for diagnosis and repair
- Selection of appropriate products
- Interpretation and analysis of results following operational tests

Training duration

In person **14 hours**

TRAINING



Engine

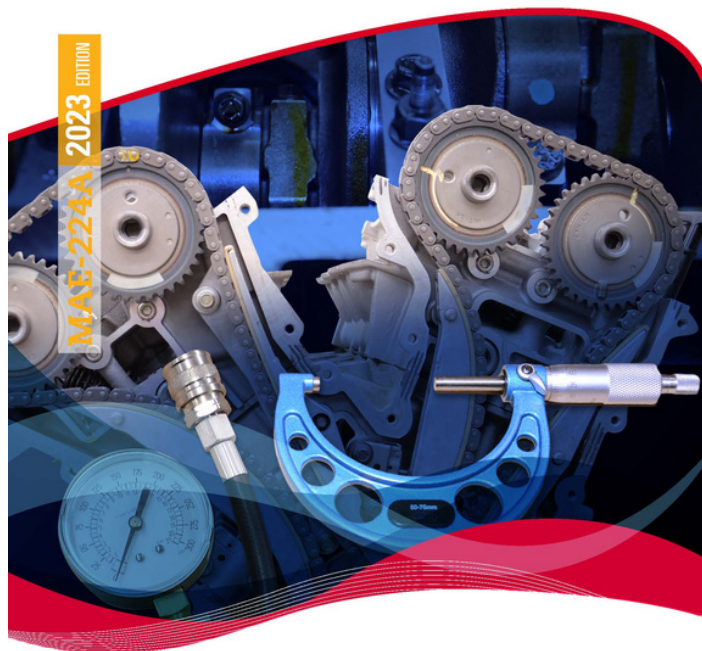
Description

At the end of this training, the participant will be able to identify the components of the different systems connected to the gasoline engine and the diesel engine as well as to carry out repair, maintenance, and diagnosis.

Developed by the CPCPA,
the CPA and our partners



Advanced Automobile Mechanics
Engine



Course Objectives

- Define the operating principle of the engine and identify its components.
- Be able to diagnose the different functions of the combustion engine.
- Define the operating principle of the gasoline engine emission control system.
- Analyze and diagnose a lubrication system.
- Analyze and diagnose an engine cooling system.
- Analyze and diagnose a heating and air conditioning system.
- Define basic principle of diesel engine.
- Define the operating principle of the diesel engine emission control system.

Training duration

In person **14 hours**

TRAINING



Drivetrain Components

Description

At the end of this training, the participant will be able to identify transmission and differential components, as well as perform repair, maintenance, and diagnosis.

Developed by the CFCPA,
the CFA and our partners



**Advanced Automobile Mechanics
Drivetrain Components**



Course Objectives

- Define the main roles of a clutch and identify its components.
- Be able to diagnose a clutch.
- Be familiar with operating principle as well as the components of a manual transaxle and a automatic transaxle.
- Be able to diagnose a manual transaxle and a automatic transaxle.
- Be able to diagnose transmission shafts.
- Identify transfer case failures and diagnostic methods.
- Identify differential failures and symptoms.
- Identify limited slip and torque vectoring systems.

Training duration

In person **14 hours**

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