BACCALAURÉAT PROFESSIONNEL
SECTION EUROPÉENNE
SESSION 2022

Maintenance des véhicules option A
Véhicules particuliers

Épreuve orale spécifique de langue vivante : ANGLAIS

Entretien :
Partie A – 10 minutes
(à partir du sujet ci-dessous)

Partie B – 10 minutes
(entretien à partir des travaux et activités effectués pendant l'année de terminale dans la discipline non linguistique et ouverture européenne)

Durée de l'épreuve : 20 minutes **Préparation : 20 minutes**

Corrigé SUJET n° 1

http://images.google.uk

Situation:

You are a mechanic working at DUBLIN CARTEK in Dublin, Ireland. You take charge of Mr. Richards who drives into the garage with his 308 SW Peugeot. The car is equipped with a 1,6 L engine, 92 HP.

He explains that, he could discern an overconsumption of gasoline and he noticed inconsistencies when he pressed the accelerator pedal.

He is worried and wonders if he can keep on driving his car. You ask Mr Richards to drive the vehicle into the workshop.
You explain what the problems are.

Tasks:

1) Say what the possible causes of powerless performance and overconsumption of fuel are. (Document 1-page 2/2)

Here are the possible causes of powerless performance and overconsumption:

- ***Clogged air filters:* If dust is blocking the air filter, a sufficient amount of air may not reach the cylinder. As a result, more fuel is burnt.**
- ***Damaged fuel injector:* if the injectors don't close in time or are clogged, too much fuel may be injected in a certain area called the car rich mixing zone.**

- ***<u>Pipe's leak:</u> A pipe's leak causes a loss of fuel and a pressure drop in the circuit.***
- ***<u>Failed sensors:</u> One of the different sensors gives wrong information.***
- ***<u>Damaged high-pressure pump:</u> Wrong pressure (higher or lower), leak, problems of lubrication.***

2) - Explain how the injection system works.
   You have checked the vehicle and now you know that there are 2 faulty injectors.
   - Tell what happens.

How: The engine will receive an air and fuel mixture inside the combustion chambers in order to operate.
This is therefore the function of injection. This mechanism amounts to route gasoline from the tank of your car to the engine.
This is achievable through the fuel pump. The fuel will also be filtered so that the dirt in the tank does not foul engine. The gasoline will then be sent under pressure in the common rail with the injection pump.
Finally, each injector placed on cylinder engine, will vaporize the mixture inside the combustion chambers. The injectors will provide the precise fuel amount required that will be under high pressure in order to maximize combustion.

Not efficient: poor carburization, loss of power, heavy and opaque smoke, piston damage.

3) Use the document 2 on page 2/2 and explain:
   - what parts must be changed
   - how you will proceed.

You need to change 2 injectors but if you have enough money, it is recommended to change four.

- ***Make sure the engine is cold enough to touch. Disconnect the battery***
- ***Remove plastic engine covers using an appropriate tool and disconnect the electrical connector***
- ***Fit the high-pressure fuel pipe***
- ***Remove the injector***
- ***Install the new injector into the throttle body***
- ***Refit the high-pressure fuel pipe***
- ***Connect the electrical connector and the battery***
- ***Turn the key on, but do not start the engine. Listen for the fuel pump to activate for a couple of seconds to pressurize the system. Check the fuel rail and all connections for leaks. Start the engine and check for leaks again.***