

Unit Standard **30435**

Demonstrate knowledge of vehicle emissions

Level 3 Credit 4 v1

Student Name:

School:

Date:

Marked By: _____ **Mark** _____ **%**

Feedback: **Excellent work**

Good work

Please attempt all questions

Please resubmit

USEFUL WEBLINKS

Greenhouse Effect

<http://youtu.be/5zLuqSYF68E>
<http://youtu.be/RHrFBOU16-8>
<http://youtu.be/T-sy6rPJBj4>
<http://youtu.be/jRIsDer17Zo>
<http://youtu.be/XLY8m-dXOxo>
<http://youtu.be/jakJ-Tf79ac>

Evaporative Systems

<http://youtu.be/nIZ4EGknw2Q>
<http://youtu.be/IzfR84T6pBY>

Positive Crankcase Systems

<http://youtu.be/EPIfI9aZHt4>
<http://youtu.be/5Kt5ubcQaK0>

Exhaust Emission Systems

<http://youtu.be/F13aD1qJrEg>
<http://youtu.be/9ifz8YdN2kM>
<http://youtu.be/ud60NZuma-A>
http://youtu.be/IL_EIXQVJo8
http://youtu.be/W6dIsC_eGBI
<http://youtu.be/v9ju2rZ8YmM>

Air Intake System

<http://youtu.be/dLIFSIPmQxY>
<http://youtu.be/dM4zUa9-Ib4>
<http://youtu.be/3tLtbI9OfYc>
http://youtu.be/GvXh1MH_KHQ
http://youtu.be/_vAtjLi5Y0
<http://youtu.be/onUX7QezA68>

Exhaust Gas Analyser

<http://youtu.be/R4gMfgt78e0>
<http://youtu.be/oIdVc1pxq70>

REVIEW QUESTIONS ONE

1. Name three harmful gases that may be emitted from exhaust systems.
2. List two harmful effects that NO_x has on the environment.
3. List three harmful effects that HC has on people.
4. Provide two reasons why it is important that the ozone layer is protected.
5. Name the current European Emissions Standard.
6. Name the Emissions Standard(s) that a New Zealand new light vehicle built in 2010 must comply with.

13. Provide an advantage and a disadvantage associated with bio-diesel.

Advantage:

Disadvantage:

14. Provide two advantages and two disadvantages that can be associated with electric fuelled vehicles.

Advantages:

Disadvantages:

15. List three vehicle performance problems that may be created by excessive NOx.

16. List two typical causes of high CO readings.
17. List three typical causes of high HC readings.
18. Why is the O₂ reading useful when diagnosing engine condition?
19. List the five gases that can be measured by an exhaust gas analyser
20. Complete the following sentence.
- An EGO _____ operates on the principle that some materials, under
certain conditions attract _____ charged _____ to
their surface. The _____ sensor is usually mounted in the exhaust
_____ or close to it in the engine _____ as it operates
more _____ at _____ temperatures.

