

## Unit Standard 24093/21719

### Rectify simple vehicle lighting faults and adjust vehicle lamps

Level 3 Credit 3 v1

### Remove and replace motor vehicle vehicle lamps

Level 2 Credit 3 v2

**Student Name:**

**School:**

**Date:**

**Marked By:** \_\_\_\_\_ **Mark** \_\_\_\_\_ **%**

**Feedback:**      **Excellent work**

**Good work**

**Please attempt all questions**

**Please resubmit**

## **USEFUL WEBLINKS**

### **Car Lighting**

<https://youtu.be/PxvJQ5wjM10>

<https://youtu.be/r1bJXQffzWo>

<https://youtu.be/dRKRZW6yX14>

### **Car Lamps**

<https://youtu.be/QnTx3ZwAUCk>

<https://youtu.be/0OJjvYPV3oc>

### **Replacing lamps**

<https://youtu.be/qYVHjnmMmTw>

<https://youtu.be/HO3IXM3XkUU>

<https://youtu.be/8YELn24WZ5U>

<https://youtu.be/jk1kFc56dww>

<https://youtu.be/xw48-Ne5RPA>

<https://youtu.be/10WuNCtw3Yo>

<https://youtu.be/JDIcRWrfvY>

<https://youtu.be/Rwj74yo2knY>

## REVIEW QUESTIONS ONE

- Q1 List four safety points to be considered when working on vehicles.
- Q2 List 3 requirements of the Land Transport Rule- Vehicle Lighting 2004
- Q3 Explain how each lamp is classified for use in a motor vehicle.
- Q4 Explain why a light bulb must be handled by its base only.

- Q5 List 3 types of bulbs that might be used in a vehicle head lamp.
- Q6 Which bulb type requires a ballast module?
- Q7 List 3 exterior lights that may be checked during a routine inspection.
- Q8 Outline the procedure to replace a head light bulb.
- Q9 Why is it important to refer to the workshop manual before changing a light bulb?

- Q10 Why is it important to check the whole lighting system before replacing a bulb?
- Q11 Which light bulb has offset bayonet pins?
- Q12 Why is it important to seal tail lamp units when refitting?
- Q13 List 3 interior lights that may be checked during a routine inspection.
- Q14 Outline the procedure to replace an interior light bulb.
- Q15 How should blown bulbs be disposed of?

## REVIEW QUESTIONS TWO

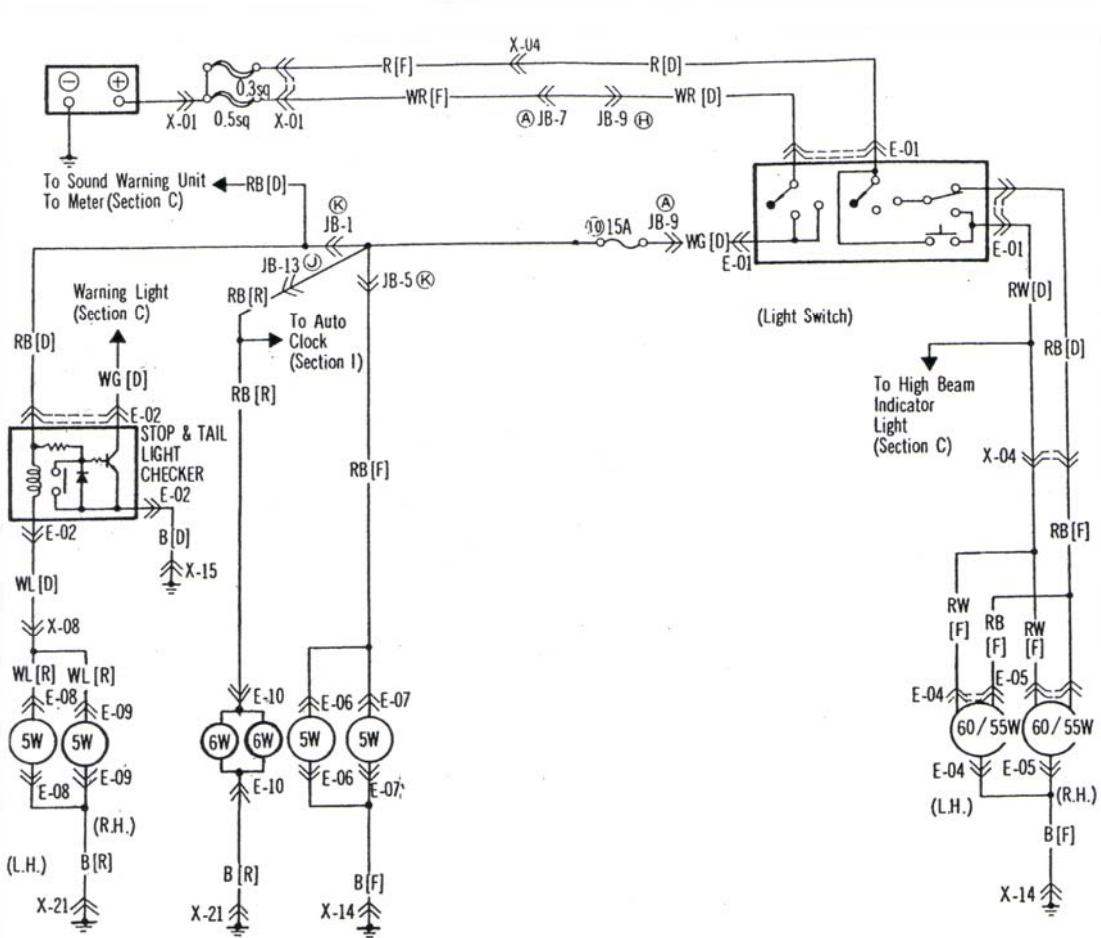
Q16 List the three main items of information contained within wiring diagrams.

Q17 Explain the meaning of each of the following wiring diagrams terms:

**Base colour**

**Trace**

Q18 Refer to the diagram on page 32 to identify the components below:



Q19 Complete the following sentence.

Connectors are \_\_\_\_\_ to wiring to \_\_\_\_\_  
of assembly, \_\_\_\_\_ and \_\_\_\_\_ of electrical circuits  
and \_\_\_\_\_. Each is composed of \_\_\_\_\_ or more pairs of  
terminal \_\_\_\_\_ moulded into \_\_\_\_\_ connector halves, which  
are called \_\_\_\_\_ and \_\_\_\_\_ connectors.

Q20 What are the three main steps to follow when selecting wiring diagrams?

Q21 Complete the following wire colour code table.

Colour	Code	Colour	Code
	O		G
BLACK		RED	
	LB		GY
SKY BLUE		WHITE	
	N		DG
PINK		TAN	
	L		LG
PURPLE		YELLOW	
	BR		DL
VIOLET		RED/WHITE	

Q22 For each of the following connectors, what information can be derived?

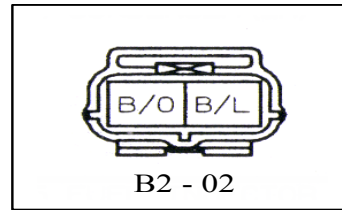
**Connector 1**

**B =**

**02 =**

**BO =**

**BL =**



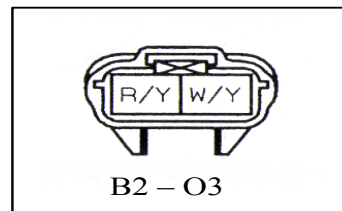
**Connector 2**

**B =**

**03 =**

**RY =**

**WY =**



Q23 Using the headlight fault diagnosis chart on page 26 describe the action that should be taken if there is no power at LH E-04.

Q24 Explain the term closed circuit.



Q25 What happens to current flow in an open circuit?

Q26 List three checks that should be carried out before using electrical equipment?

Q27 Explain why technicians should avoid opening ECUs.

Q28 Explain why technicians should avoid using a test light on a vehicle equipped with ECUs

Q29 List three components/systems that can be checked using a multimeter.

Q30 Why is soldering used in the automotive industry?

Q31 What is used to remove oxides from the surface to be joined?

Q32 Provide one advantage and one disadvantage of using a simple soldering iron?

Advantage:

Disadvantage:

Q33 Why is it important to remove flux residue.

Q34 List three health hazards that are associated with soldering

Q35 What safety checks should be carried out before using an electric operated soldering iron?

Q36 List two types of insulation used when completing soldering on a vehicles wiring?

Q37 Why is it important to refer to the relevant wiring diagram when carrying out wiring repairs?

Q38 Outline the procedure to follow when using a LED test lamp to check a repaired circuit.

Q39 What should be referred to ensure the correct placement of terminals in a connector after a soldering task?



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