LEVEL 4 TECHNICAL WRITE-UP (LEVEL 4 – Master Technician Level).

LEARNER WORK SHEET Level 4 Diagnosis and Repair Write-up - Health and Safety Preamble

Learner Name:	Date work carried out:
	L
Write up of key aspects (continue on separate sheet if requi	ired):
Section A: Identify the injuries associated with electric s	shock;
Section B: Describe the first aid to be carried out in the	event of an injury caused by electric shock;
Section C: State the procedure to be taken when report	ing accidents involving electric shock;



Section E: Explain the appropriate procedure/s to be taken in the event of a fire when working on a High Voltage vehicle system
Section F: Identify the relevant legislation and regulations associated with working on high voltage vehicle systems
Section G: Identify the relevant vehicle safety standards for working on High Voltage systems on vehicles



Section H: State who is permitted to carry out work on high voltage vehicle systems State who is				
permitted to carry out	work on high voltage vehicle s	ystems		
Section I: Describe the	responsibilities of managemer	nt and skilled workers when co	onsidering the work	
to be carried out on hig	gh voltage vehicle systems			
Costion Is Evaluin the or	riteria for authorisation to allow	wan individual to work on a liv	o high voltage	
vehicle system	iteria for authorisation to allow	w an individual to work on a liv	e nign voitage	
vernoic system				
I confirm that the work	Assessor Name:	Assessor PIN:	Date:	
carried out on this data collection sheet was of the				
required standard				



Learner Name) :		Date work	carried out:
Description of system/component/device being examined/diagnosed. MOTOR GENERATOR CABLE ANALYSIS				
Vehicle Details (where applicable)				
Make:		Model:		
Registration No:		VIN/Eng No:		
		ue on separate sheet if required):		
Section 1: Ide vehicle system		nufacturer's repair procedures ass	sociated wit	th working on high voltage
	ite the correct method oltage vehicle systems	l of communication when identify : .	ing risks an	d/or procedures to be carried



Section 3: Describe the mode of operation for the different types of alternative drives. Include the energy flows in your description.
and your descriptions



Section 4: Explain the MG1 operation in engine starting mode and compare it against a traditional 12 v starter motor. Be sure to explain the principles of voltage, current and resistance in series and parallel circuits. Calculate current, resistance, voltage and power in series and parallel circuits using Ohm's Law. Describe the difference between Alternating Current (AC); Direct Current (DC) and Three Phase Current.



Section 5: Describe the wiring diagram, circuit design and function of the system Motor Generator Cable.
Explain the construction, function and operation of electrical components and cables including insulation.
Section 6: Describe the methods used to evaluate the function of the system/component/device under test
Section 6: Describe the methods used to evaluate the function of the system/component/device under test (include test results, key measurements and tools used). Describe how to take and interpret readings using
(include test results, key measurements and tools used). Describe how to take and interpret readings using
Section 6: Describe the methods used to evaluate the function of the system/component/device under test (include test results, key measurements and tools used). Describe how to take and interpret readings using electrical measuring devices and instruments.
(include test results, key measurements and tools used). Describe how to take and interpret readings using
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(include test results, key measurements and tools used). Describe how to take and interpret readings using
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Section 8: Carry out a functional check on the high voltage systems to confirm successful completion of repairs. PPE worn: Special tools used: Details of technical data used: State source of technical data e.g. Autodata or manufacturer's Note the maximum operating voltage for this high energy electrical system. What is the safe voltage for the system prior to carrying out work on the system? Loonfirm that the work carried out on this data collection sheet was of the required standard or required stand	Section 7: Describe the key data which would differentiate a good system/component/device from a bad one. Include data, measurement and all calculations				
PPE worn: Special tools used: Details of technical data used: State source of technical data e.g. Autodata or manufacturer's Note the maximum operating voltage for this high energy electrical system. What is the safe voltage for the system prior to carrying out work on the system? I confirm that the work carried out on this data collection sheet was of the					
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	carried out on this data collection sheet was of the	Assessor Name:	Assessor PIN	l:	Date:



Learner Name: Date work carried out:		carried out:		
Description of system/component/device being examined/diagnosed.				
Vehicle Detail	s (where applicable)			
Make:		Model:		
Registration No:		VIN/Eng No:		
		ue on separate sheet if required):		
Section 1: Reclaration to sa	cord the key steps had afe working practices.	d to be undertaken to prepare to	carry out th	ie diagnosis. Pay special
	.			



Section 2: Describe the wiring diagram, circuit design and function of the system/component/device being examined/diagnosed.
examinedy diagnosed.



Section 3: Describe the methods used to evaluate the function of the system/component/device under test (include test results, waveforms, key measurements)
(



Section 4: Describe the key data which would differentiate a good system/component/device from a bad one. Include data, measurement and all calculations					
PPE worn:		Special tools used:			
Details of technical data used:					
State source of technical data e.g. Autodata or manufacturer's					
Note the maximum operating voltage for this high energy electrical system.					
What is the safe voltage for the system prior to carrying out work on the system?					
I confirm that the work	Assessor Name:	Assessor PIN	l:	Date:	
carried out on this data collection sheet was of the required standard					



Learner Name:			Date work carried out:		
Description of system/component/device being examined/diagnosed.					
Vehicle Detail	s (where applicable)				
Vernole Detail	з (жисте аррисавіе)				
Make:		Model:			
Registration No:		VIN/Eng No:			
Write up of wo	ork carried out (contin	ue on separate sheet if required):			
Section 1: Recattention to sa	cord the key steps had afe working practices.	to be undertaken to prepare to	carry out th	e diagnosis. Pay special	



Section 2: Describe the wiring diagram, circuit design and function of the system/component/device being examined/diagnosed.



Section 3: Describe the methods used to evaluate the function of the system/component/device under test				
(include test results, waveforms, key measurements)				



Section 4: Describe the Include data, measurem	key data which would differer ent and all calculations	ntiate a good system/com	ponent/dev	vice from a bad one.		
,						
PPE worn:		Special tools used:				
Details of technical data used:						
State source of technical data e.g. Autodata or manufacturer's						
Note the maximum operating voltage for this high energy electrical system.						
What is the safe voltage for	What is the safe voltage for the system prior to carrying out work on the system?					
I confirm that the work	Assessor Name:	Assessor PII	\:	Date:		
carried out on this data collection sheet was of the required standard						



Learner Name: Date work carried out:				carried out:	
Description of system/component/device being examined/diagnosed.					
Vehicle Detail	s (where applicable)				
Make:		Model:			
Registration No:		VIN/Eng No:			
		ue on separate sheet if required)			
Section 1: Record the key steps had to be undertaken to prepare to carry out the diagnosis. Pay special attention to safe working practices.					
examined/dia		ram, circuit design and function o	i trie syster	ny componenty device being	



	methods used to evaluate the reforms, key measurements)	e function of the system/o	omponent/device under test					
Section 4: Describe the I		itiate a good system/comp	ponent/device from a bad one.					
PPE worn:		Special tools used:						
Details of technical data	Details of technical data used:							
State source of technical data e.g. Autodata or manufacturer's								
Note the maximum operating voltage for this high energy electrical system.								
What is the safe voltage for the system prior to carrying out work on the system?								
I confirm that the work carried out on this data collection sheet was of the required standard	Assessor Name:	Assessor PIN	l: Date:					

Learner Name:		Date work carried out:		
	system/component/	device		
being examin	ed/diagnosed.			
Vehicle Detail	s (where applicable)			
Make:		Model:		
Registration No:		VIN/Eng No:		
		ue on separate sheet if required):		
	cord the key steps had afe working practices.	d to be undertaken to prepare to	carry out th	e diagnosis. Pay special
	<u>.</u>			
Section 2: De	scribe the wiring diagr	ram, circuit design and function o	f the syster	m/component/device being
examined/dia		am, on our doorgin and ranousin o		ny dempendiny device being



	methods used to evaluate the veforms, key measurements)		omponent/device under test				
Section 4: Describe the I		ntiate a good system/com	ponent/device from a bad one.				
PPE worn:		Special tools used:					
Details of technical data used:							
State source of technical data e.g. Autodata or manufacturer's							
Note the maximum operating voltage for this high energy electrical system.							
What is the safe voltage for the system prior to carrying out work on the system?							
I confirm that the work carried out on this data collection sheet was of the required standard	Assessor Name:	Assessor PIN	: Date:				



PROFESSIONAL DISCUSSION WORK SHEET Level 4 Diagnosis and Repair

Learner Name:		Date work carried out	:		
Discussion Subject Matter:					
Outline Professional Discussion Points	<u>S:</u>				
Professional Discussion Record - Pag	e 1				
i commit that the	sessor Name:	Assessor PIN:	Date:		
professional discussion record provides a true reflection of the professional discussion					



Professional Discussion R	ecord - Page 2	(if required)		
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I confirm that the	Assess	or Name:	Assessor PIN:	Date:
professional discussion record				
provides a true reflection of the professional discussion				
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