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

Learner Name:	Date work carried out:

Write up of key aspects (continue on separate sheet if required):

Section A: Identify the injuries associated with electric 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 reporting 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 systems
Section I: Describe the responsibilities of management and skilled workers when considering the work to be carried out on high voltage vehicle systems
Section J: Explain the criteria for authorisation to allow an individual to work on a live high voltage vehicle system

I confirm that the work carried out on this data collection sheet was of the required standard	Assessor Name:	Assessor PIN:	Date:

Learner Name (please print)_____

LEARNER WORK SHEET
Level 4 Diagnosis and Repair Write-up TASK 1

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:	
Write up of work carried out (continue on separate sheet if required):			
Section 1: Identify the relevant manufacturer's repair procedures associated with working on high voltage vehicle systems.			
Section 2: State the correct method of communication when identifying risks and/or procedures to be carried out on high voltage vehicle systems .			

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

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 (include test results, key measurements and tools used). Describe how to take and interpret readings using electrical measuring devices and instruments.

Section 7: Describe the key data which would differentiate a good system/component/device from a bad one. Include data, measurement and all calculations

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?	

I confirm that the work carried out on this data collection sheet was of the required standard	Assessor Name:	Assessor PIN:	Date:

Learner Name (please print)_____

LEARNER WORK SHEET Level 4 Diagnosis and Repair Write-up TASK 2

Learner Name:	Date work carried out:
Description of system/component/device being examined/diagnosed.	

Vehicle Details (where applicable)			
Make:		Model:	
Registration No:		VIN/Eng No:	

Write up of work carried out (continue 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.

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 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 required standard	Assessor Name:	Assessor PIN:	Date:

Learner Name (please print)_____

LEARNER WORK SHEET Level 4 Diagnosis and Repair Write-up TASK 3	
Learner Name:	Date work carried out:
Description of system/component/device being examined/diagnosed.	

Vehicle Details (where applicable)			
Make:		Model:	
Registration No:		VIN/Eng No:	

Write up of work carried out (continue 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.

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 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 required standard	Assessor Name:	Assessor PIN:	Date:

Learner Name (please print)_____

LEARNER WORK SHEET Level 4 Diagnosis and Repair Write-up TASK 4			
Learner Name:		Date work carried out:	
Description of system/component/device being examined/diagnosed.			
Vehicle Details (where applicable)			
Make:		Model:	
Registration No:		VIN/Eng No:	
Write up of work carried out (continue 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.			
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 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 required standard	Assessor Name:	Assessor PIN:	Date:

Learner Name (please print)_____

LEARNER WORK SHEET
Level 4 Diagnosis and Repair Write-up TASK 5

Learner Name:		Date work carried out:	
Description of system/component/device being examined/diagnosed.			
Vehicle Details (where applicable)			
Make:		Model:	
Registration No:		VIN/Eng No:	
Write up of work carried out (continue 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.			
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 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 required standard	Assessor Name:	Assessor PIN:	Date:

Learner Name (please print)_____

PROFESSIONAL DISCUSSION WORK SHEET
Level 4 Diagnosis and Repair

Learner Name:	Date work carried out:
Discussion Subject Matter:	
Outline Professional Discussion Points:	
Professional Discussion Record – Page 1	

I confirm that the professional discussion record provides a true reflection of the professional discussion	Assessor Name:	Assessor PIN:	Date:

Learner Name (please print)_____

Professional Discussion Record – Page 2 (if required)

I confirm that the professional discussion record provides a true reflection of the professional discussion	Assessor Name:	Assessor PIN:	Date:

Learner Name (please print)_____