NATIONAL COUNCIL FOR TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING

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PROPOSED OCCUPATIONAL STANDARDS

OCCUPATION: NEW-ENERGY VEHICLE TECHNICIAN

LEVEL: NTA 4

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ABBREVIATIONS

ABS	Anti-lock Braking System
BMS	Power Battery Management System
CBET	Competency Based Education and Training
CNG	Compressed Natural Gas
DMA	Driving Motor Assembly
ESP	Electronic Stability Program
EV	Electric Vehicle
HEV	Hybrid Electric Vehicle
LNG	Liquefied Natural Gas
MCU	Motor Control Unit
NACTVET	National Council for Technical and Vocational Education and Training
NOS	National Occupational Standards
OS	Occupational Standards
PHEV	Plug-in Hybrid Electric Vehicle
TET	Technical Education and Training
TVET	Technical and Vocational Education and Training

GLOSSARY OF TERMS

Circumstantial Knowledge:	Detailed knowledge, which allows the decision-making in regard to different circumstances and cross cutting issues.
Competence:	The ability to use knowledge, understanding, practical, and thinking skills to perform effectively to the workplace standards required in employment.
Competency:	A description of the ability one possesses when able to perform a given occupational task effectively and efficiently.
Competency-based Education:	An instructional programme that derives its content from validated tasks and bases assessment on the learner's performance.
Curriculum:	A description or composite of statements about "what is to be learned" by the trainee/student in a particular instructional programme; a product that states the "intended learning outcomes".
Educational/Training Programme:	The complete curriculum and instruction (what and how) that is designed to prepare a person for employment in a job or other particular performance situation.
Occupation:	A specific position requiring the performance of specific tasks – essentially the same tasks are performed by all employees having the same title. (Example: baker)
Occupational Area:	This is a broad grouping of related jobs. (Example: food service)
Occupational Competence:	The application of knowledge and skills that consistently meet the standards required by the work context.
Occupational Standards:	Specific requirements of competences people are expected to demonstrate in a particular occupational area, including knowledge and relevant attitudes. They also act as a performance tool of assessment of the prescribed outcomes.
Occupational/Job Analysis:	A process used to identify the tasks that are important to employees in any given occupation**.**
Performance	Indicate expected end results or outcomes in the form of evaluative

Criteria:	statements.
Skills:	The ability to perform occupational tasks with a high degree of proficiency within a given occupation. Skill is conceived of as a composite of three completely interdependent components: cognitive, affective, and psychomotor.
Standards:	A set of statements, which if proved true under working conditions, means that an individual is meeting an expected level and type of performance.
Task Analysis:	The process of analysing each task to determine the steps, circumstantial knowledge, attitudes, performance standards, tools and materials needed, as well as safety concerns required for the employees performing it.
Task:	A work activity that has a definite beginning and ending, is observable or measurable, and consists of two or more definite steps that leads to a product, service, or decision.
Underpinning Knowledge:	Crucial knowledge that an individual must acquire in order to demonstrate competences that are associated in performing a given task.
Verification Process:	The process of having experts review and confirm the importance of the task (competency) statements identified through occupational analysis. Other questions, such as the degree of task learning difficulty are also frequently asked. This process is also sometimes referred to as validation.

1.0. INTRODUCTION

Technical Education and Training (TET) is one of the most important education sub-sectors in Tanzania, responsible for developing a skilled workforce to support the country's industrialization economic agenda. Tanzania's *Development Vision 2025* intends to raise the country's economy to a middle-income status. This requires a skilled workforce that is aligned with the needs of the public and private sectors of the economy. The National Council for Technical Education has begun the job of drafting Occupational Standards that will eventually be adopted as National Occupational Standards for TET in order to ensure that it meets the needs of the labour market and the country's economic agenda.

National Occupational Standards (NOS) are performance criteria that are matched with labour market demands. Each National Occupation Standard describes functions, performance standards, and knowledge/understanding for one important function or task. They combine skills, knowledge, and attitudes to describe best practice. They are useful tools for establishing job roles, personnel recruiting, supervision, and appraisal, as well as TET standards. They're also helpful for benchmarking and harmonizing qualifications on a national and international level. Standards, in general, provide a solid framework for high-quality TET that is labour market-relevant, current, and consistent in delivery across all public and private institutions.

However, it must be noted that, Occupational Standards and Training standards/qualifications standards are different. Occupational standards are defined in terms of activities performed by a person in a selected occupation (e.g., an electrical engineer designs electrical wiring circuits, performs troubleshooting in electrical wiring, etc.) and they are usually defined by employers following procedures agreed upon by all stakeholders. Education and training standards are developed from the activities defined in occupational standards, and they include learning objectives to ensure that the necessary skills and knowledge are developed by a person to enable him or her to function at an agreed level in an occupation. Education and Training standards are used to define curricula in training institutions. It is however critical that there must be a direct link between the occupational standards and the training standards to respond to the demands of the labour market.

In TET delivery, Tanzania adopted the Competence Based Education and Training (CBET) approach. The CBET approach focuses on providing learners with the skills and knowledge required to meet

the occupational standards. Occupational standards are thus the starting point for developing competency-based training (CBET) programmes. TET institutions will be required to benchmark their curricula with relevant occupational standards.

Occupational Standards are developed based on a given occupation's current and future demands. As a result, they serve as a means of bridging the gap between the worlds of employment and technical education and training (TET).

The New-Energy Vehicle Technician Occupation has its own set of occupational standards. The document explains how the occupational standards were developed, as well as the scope, the occupational profile in the form of DACUM charts, and the Occupational Standards.

2.0. OCCUPATIONAL STANDARD DEVELOPMENT PROCESS

The Occupational standards development process began with an examination of major documents that guide Tanzanian skill development. The 10-year National Skills Development Strategy (2016-2026) was one of the documents reviewed, and it outlined six (6) economic sectors that should be prioritized when developing skills development programmes.

These sectors include: Transport and Logistics, Tourism and Hospitality, Agribusiness, Construction, Energy and ICT. NACTE labour market reports were also used in the literature review to determine the skills demand in the Tanzanian labour market as a whole.

After the literature review, a workshop comprised of expert workers and educators with substantial knowledge and experience in the occupation conducted an occupational analysis utilizing the DACUM approach to produce the occupational profile. The analysis resulted in DACUM Charts, which are attached as **Appendix 1** to this document.

The occupational standards were then developed. Experts in Occupational Analysis and the Development of Occupational Standards facilitated the workshop. Interviews, online surveys, and a stakeholder forum were used to validate the Occupational Standards. Engineers, supervisory technicians on the job, and experienced New-Energy Vehicle Technicians were key informants in the survey to discover occupational trends. This information was used to gain insight from the workplaces regarding trends and changes in the profession, including how well graduates are prepared for working in the occupation. A total of ... online surveys were completed by experts from the labour

market across the country. Apart from the surveys aiding in defining the scope for the occupational analysis, they also served to engage a wide cross-section of experts in the occupation. Apart from this, the stakeholders' forum was attended by ... participants from different parts of the country representing various companies.

3.0. THE SCOPE AND OVERVIEW OF THE OCCUPATION STANDARDS FOR NEW-ENERGY VEHICLE TECHNICIANS

The standards cover a broad range of duties and tasks that can be performed by a New-Energy Vehicle Technician. However, the occupational standards are not meant to replace individual job descriptions. Instead, they are to be used for guidance in defining skill levels and knowledge for the technician in specific settings or positions. The New-Energy Vehicle Technician may perform tasks in a number of key areas of the occupational standards, but not necessarily in all areas. For example, in large operations, other individuals may be employed or designated to perform specific tasks.

The New-Energy Vehicle Technician may work under the supervision of engineers to inspect, repair, and maintain electric vehicles and alternative-fueled internal combustion locomotives. In the workshop, technicians complete a variety of maintenance work, such as high voltage system inspections, as well as dismantling, maintaining and rebuilding work on complete power system and electrical systems of new energy vehicles.

Generally, the New-Energy Vehicle Technician performs the following responsibilities:

a) New energy vehicle high voltage system inspection

b) New energy vehicle body electrical system inspection

c) New energy vehicle chassis system inspection

d) New energy vehicle high voltage power system maintenance

e) New energy vehicle braking system maintenance

f) New energy vehicle suspension system maintenance

g) New energy vehicle steering system maintenance

h) New energy vehicle high voltage power system overhaul

i) New energy vehicle body electrical system overhaul

j) New energy vehicle chassis system overhaul

k) Multi-fuel power system overhaul for new energy vehicles

The Occupational Standards have been clustered into NTA qualification levels, i.e. NTA level 4, 5 and 6.

4.0. VALIDITY PERIOD

Due to the rapid development of technology, the validity period of occupational standards is 3-5 years. The review will proceed in the same manner as the one before it, with new occupational standards being developed based on current trends of the labour market.

5.0. OCCUPATIONAL STANDARDS

5.1 OCCUPATIONAL STANDARDS FOR NEW-ENERGY VEHICLE TECHNICIAN - NTA 4

OCCUPATION	NEW-ENERGY VEHICLE TECHNICIAN	**OCCUPATION CODE**	
DUTY TITLE	CHECK OF HIGH VOLTAGE SYSTEM	**DUTY NO.**	401
TASK TITLE	IMPLEMENTATION OF SAFETY PROTECTION MEASURES FOR HIGH VOLTAGE SYSTEM INSPECTION	**TASK NO.**	4011
PERFORMANCE CRITERIA	The person performing this task must be able to complete the implementation of safety protection measures for high voltage system inspection in accordance with technical requirements and manufacturer's maintenance manual.		
RANGE STATEMENT	The task can be performed in an automotive maintenance workshop under the supervision of senior technicians or new-energy vehicle engineers. The tools and equipment to be used include: 1. Personal protective equipment, such as work clothes, safety shoes, helmets, goggles, and insulating gloves; 2. Quarantine strips, safety signs, and fire extinguishers; 3. Inside and outside protective kits.		

EVIDENCE REQUIREMENT	
PRACTICAL PERFORMANCE	**UNDERPINNING KNOWLEDGE**
The person performing this task must be able to do the following: 1. Comply with safety and health regulations; 2. Select safety protection equipment; 3. Wear safety protection equipment; 4. Set up equipment of site safety protection; 5. Clean protective equipment; 6. Recycle safety protection equipment; 7. Store safety protection equipment and instruments.	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Wear safety protection equipment; 1.2 Set up equipment of site safety protection. **2.0 Principles** The person performing this task must be able to explain the following principles: 2.1 Principle of using safety warning signs; 2.2 Principle of high voltage electric shock; 2.3 Principle of first aid for electric shock; 2.4 Principle of maintenance and storage of safety protection equipment. **3.0 Theories**

	The person performing this task must be able to explain the following: 3.1 Hazards of high voltage; 3.2 Safety protection equipment; 3.3 Setting of site safety protection equipment. **4.0 Essential Skills** The person performing this task must have the following skills: 4.1 Safety protection skills; 4.2 Teamwork skills; 4.3 Report writing skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	The safety protection measures for high voltage system inspection are implemented in accordance with the requirements of the vehicle maintenance manual and vehicle user manual.
CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. Occupational health and safety; 2. Site safety protection equipment; 3. Waste disposal methods.

OCCUPATION	NEW-ENERGY VEHICLE TECHNICIAN	**OCCUPATION CODE**	
DUTY TITLE	CHECK OF HIGH VOLTAGE SYSTEM	**DUTY NO.**	401
TASK TITLE	CHECK OF INSTRUMENT HIGH VOLTAGE SYSTEM INFORMATION	**TASK NO.**	4012
PERFORMANCE CRITERIA	The person performing this task must be able to check the instrument high voltage system information in accordance with technical requirements and manufacturer's maintenance manual.		
RANGE STATEMENT	The task can be performed in an automotive maintenance workshop under the supervision of senior technicians or new-energy vehicle engineers. The tools and equipment to be used include: 1. Vehicle user manuals and maintenance manuals; 2. Work lights; 3. Commonly-used insulation tool kits for disassembly and assembly; 4. Inside and outside protective kits.		

EVIDENCE REQUIREMENT

PRACTICAL PERFORMANCE	**UNDERPINNING KNOWLEDGE**
The person performing this task must be able to do the following: 1. Comply with safety and health regulations; 2. Choose appropriate operating tools; 3. Prepare for driving new energy vehicles; 4. Check the connected indicator light of the high voltage system; 5. Check the power meter; 6. Check the electricity meter; 7. Check the fault indicator light of the power battery management system; 8. Check the fault indicator light of the driving motor control system; 9. Check the charging connection display; 10. Check the charging instrument display;	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Check the connected indicator light of the high voltage system; 1.2 Check the gear information of the instrument; 1.3 Check the power meter; 1.4 Check the electricity meter; 1.5 Check the fault warning light of the power system; 1.6 Check the low battery warning light, overheat warning light, and fault warning light of the power battery; 1.7 Check the limit indicator light for driving power; 1.8 Check the overheat warning light and coolant overtemperature indicator light of the driving motor; 1.9 Check the charging connection display; 1.10 Check the charging voltage, current, temperature, and charging duration; 1.11 Check the instrument gear display.

11. Check the instrument gear display; 12. Record the checking results; 13. Clean the tools and workplaces; 14. Recycle and store tools and equipment.	**2.0 Principles** The person performing this task must be able to explain the following principles: 2.1 The principle of instrument display for new energy vehicles; 2.2 The control principle of instrument indicator lights; 2.3 The control principle of AC charging; 2.4 The structural principle of charging guns. **3.0 Theories** The person performing this task must be able to explain the following: 3.1 The process of checking the high voltage system information of vehicle instruments; 3.2 Use of commonly-used tools and equipment; 3.3 The meaning of the information displayed on the instrument during charging of the high voltage system; 3.4 The meaning of the fault indicator light of the power battery management system; 3.5 The meaning of the fault indicator light of the driving motor control system. **4.0 Essential Skills** The person performing this task must have the following skills: 4.1 Safety protection skills; 4.2 Communication skills; 4.3 Customer service skills; 4.4 Teamwork skills; 4.5 Report writing skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	The high voltage system information of instruments is checked in accordance with the vehicle maintenance manual and vehicle user manual.
CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. Occupational health and safety; 2. Safety operation of operating tools; 3. Query of vehicle user manual; 4. Query of vehicle maintenance manual.

OCCUPATION	NEW-ENERGY VEHICLE TECHNICIAN	**OCCUPATION CODE**	
DUTY TITLE	CHECK OF HIGH VOLTAGE SYSTEM	**DUTY NO.**	401
TASK TITLE	CHECK OF ALL HIGH VOLTAGE SYSTEM FUNCTIONS	**TASK NO.**	4013
PERFORMANCE CRITERIA	The person performing this task must be able to check all the high voltage system functions in accordance with technical requirements and manufacturer's maintenance manual.		
RANGE STATEMENT	The task can be performed in an automotive maintenance workshop under the supervision of senior technicians or new-energy vehicle engineers. The tools and equipment to be used include: 1. Vehicle user manuals and maintenance manuals; 2. Work lights; 3. Commonly-used insulation tool kits for disassembly and assembly; 4. Inside and outside protective kits; 5. Double-column lifting machine.		

EVIDENCE REQUIREMENT

PRACTICAL PERFORMANCE	**UNDERPINNING KNOWLEDGE**
The person performing this task must be able to do the following: 1. Comply with safety and health regulations; 2. Choose appropriate operating tools; 3. Check the charging of the 12V power supply system; 4. Check the power battery level information; 5. Check the cooling function of the air conditioning; 6. Check the heating function of the vehicle; 7. Check the gear shift of the vehicle; 8. Check the recovery of vehicle braking energy; 9. Record the checking results; 10. Clean the tools and workplaces;	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Check the charging of the 12V power supply system; 1.2 Check the power battery level information; 1.3 Check the cooling function of the air conditioning; 1.4 Check the heating function of the vehicle; 1.5 Check the gear shift of the vehicle; 1.6 Check the recovery of vehicle braking energy. **2.0 Principles** The person performing this task must be able to explain the following principles: 2.1 Principle of voltage and current detection; 2.2 Principle of power-on and power-off of high voltage system; 2.3 Principle of air conditioning refrigeration; 2.4 Braking energy recovery and control principle.

11. Recycle and store tools and equipment.	**3.0 Theories** The person performing this task must be able to explain the following: 3.1 The process of checking all high voltage system functions of vehicles; 3.2 Use of commonly-used tools and equipment; 3.3 Charging principle of 12V power supply system; 3.4 Refrigeration and heating principle of heating and cooling air conditioning; 3.5 Structural principle of high voltage system. **4.0 Essential Skills** The person performing this task must have the following skills: 4.1 Safety protection skills; 4.2 Communication skills; 4.3 Customer service skills; 4.4 Teamwork skills; 4.5 Report writing skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	The high voltage system functions are checked in accordance with the vehicle maintenance manual and vehicle user manual.
CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. Occupational health and safety; 2. Safety operation of operating tools; 3. Query of vehicle user manual; 4. Query of vehicle maintenance manual.

OCCUPATION	NEW-ENERGY VEHICLE TECHNICIAN	**OCCUPATION CODE**	
DUTY TITLE	CHECK OF HIGH VOLTAGE SYSTEM	**DUTY NO.**	401
TASK TITLE	CHECK OF HIGH VOLTAGE SYSTEM COMPONENTS	**TASK NO.**	4014
PERFORMANCE CRITERIA	The person performing this task must be able to check the high voltage system components in accordance with technical requirements and manufacturer's maintenance manual.		
RANGE STATEMENT	The task can be performed in an automotive maintenance workshop under the supervision of senior technicians or new-energy vehicle engineers. The tools and equipment to be used include: 1. Personal protective equipment, such as work clothes, safety shoes, helmets, goggles, and insulating gloves; 2. Quarantine strips, safety signs, and fire extinguishers; 3. Vehicle user manuals and maintenance manuals; 4. Commonly-used insulation tool kits for disassembly and assembly; 5. Inside and outside protective kits; 6. Double-column lifting machine.		

EVIDENCE REQUIREMENT	
PRACTICAL PERFORMANCE	**UNDERPINNING KNOWLEDGE**
The person performing this task must be able to do the following: 1. Comply with safety and health regulations; 2. Choose appropriate operating tools; 3. Perform a safe power outage of the high voltage system; 4. Check the high voltage charging interface; 5. Check the appearance of the power battery, and the wiring harness connector; 6. Check the appearance of the driving motor, and the wiring harness connector; 7. Check the appearance of the high voltage electronic control	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Check the high voltage charging interface; 1.2 Check the appearance of the power battery, and the wiring harness connector; 1.3 Check the appearance of the driving motor, and the wiring harness connector; 1.4 Check the appearance of the high voltage electronic control assembly, and the wiring harness connector; 1.5 Check the appearance of the air conditioning compressor, the pipeline, and the wiring harness connector; 1.6 Check the appearance of the PTC heater, and the wiring harness connector; 1.7 Check the appearance of the on-board charger, and the wiring harness connector.

assembly and the wiring harness connector; 8. Check the appearance of the air conditioning compressor, the pipeline, and the wiring harness connector; 9. Check the appearance of the PTC heater, and the wiring harness connector; 10. Check the appearance of the on-board charger, and the wiring harness connector; 11. Record the checking results; 12. Clean the tools and workplaces; 13. Recycle and store tools and equipment.	**2.0 Principles** The person performing this task must be able to explain the following principles: 2.1 Structural characteristics of high voltage cables; 2.2 Structural characteristics of high voltage plugs; 2.3 Principle of power-on and power-off of high voltage system; 2.4 Principle of closed-loop monitoring circuit for high voltage system; 2.5 Principle of insulation monitoring for high voltage system. **3.0 Theories** The person performing this task must be able to explain the following: 3.1 The process of checking all high voltage system components of vehicles; 3.2 Standardized use of commonly-used tools and equipment; 3.3 Name, function, and installation location of high voltage system components; 3.4 High voltage power transmission path; 3.5 The working principle of compressors and PTC heaters. **4.0 Essential Skills** The person performing this task must have the following skills: 4.1 Safety protection skills; 4.2 Communication skills; 4.3 Customer service skills; 4.4 Teamwork skills; 4.5 Report writing skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	The high voltage system components are checked in accordance with the vehicle maintenance manual and vehicle user manual.
CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. Occupational health and safety;

	2. Safety operation of operating tools; 3. Query of vehicle user manual; 4. Query of vehicle maintenance manual.

OCCUPATION	NEW-ENERGY VEHICLE TECHNICIAN	**OCCUPATION CODE**	
DUTY TITLE	CHECK OF HIGH VOLTAGE SYSTEM	**DUTY NO.**	401
TASK TITLE	OPERATION OF POWER-ON, POWER-OFF AND CHARGING OF NEW ENERGY VEHICLES	**TASK NO.**	4015
PERFORMANCE CRITERIA	The person performing this task must be able to complete the operation of power-on, power-off and charging of new energy vehicles in accordance with technical requirements and manufacturer's maintenance manual.		
RANGE STATEMENT	The task can be performed in an automotive maintenance workshop under the supervision of senior technicians or new-energy vehicle engineers. The tools and equipment to be used include: 1. Personal protective equipment, such as work clothes, safety shoes, helmets, goggles, and insulating gloves; 2. Quarantine strips, safety signs, and fire extinguishers; 3. Vehicle user manuals and maintenance manuals; 4. Commonly-used insulation tool kits for disassembly and assembly; 5. Inside and outside protective kits; 6. Charge piles; 7. Double-column lifting machine.		

EVIDENCE REQUIREMENT

PRACTICAL PERFORMANCE	**UNDERPINNING KNOWLEDGE**
The person performing this task must be able to do the following: 1. Comply with safety and health regulations; 2. Perform a safe power outage of the high voltage system; 3. Perform electricity testing after power outage of the high voltage system; 4. Perform the power-on operation of the high voltage system; 5. Perform a functional check of the high voltage system after power on; 6. Check the charging equipment; 7. Perform charging connection; 8. Set the charging parameters;	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Implement the preventive measures for health and safety; 1.2 Check the appearance, wiring harness, and indicator light of the portable charger; 1.3 Check the safety connection and locking/unlocking function of the charging gun; 1.4 Set up immediate charging and appointment charging; 1.5 Check the charging indicator light; 1.6 Perform a safe power outage of the high voltage system;

9. Check the charging indicator light; 10. Clean the tools and workplaces; 11. Recycle and store tools and equipment.	1.7 Perform electricity testing after power outage of the high voltage system; 1.8 Perform the power-on operation of the high voltage system; 1.9 Perform a functional check of the high voltage system after power on. **2.0 Principles** The person performing this task must be able to explain the following principles: 2.1 Control principle of ower-on and power-off; 2.2 Principles for setting charging parameters; 2.3 Control principle of high voltage charging system; 2.4 The structural principle of charging guns. **3.0 Theories** The person performing this task must be able to explain the following: 3.1 Procedures of power-on, power-off and charging of new energy vehicles; 3.2 Standardized use of commonly-used tools and equipment; 3.3 Hazards of high voltage; 3.4 High voltage monitoring principle; 3.5 High voltage system charging principle; 3.6 The meaning of different colors of charging indicator lights. **4.0 Essential Skills** The person performing this task must have the following skills: 4.1 Safety protection skills; 4.2 Communication skills; 4.3 Customer service skills; 4.4 Teamwork skills; 4.5 Report writing skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	The operation of power-on, power-off and charging of new energy vehicles is completed in accordance with the vehicle maintenance manual and vehicle user manual.

CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. Occupational health and safety; 2. Safety operation of operating tools; 3. Query of vehicle user manual; 4. Query of vehicle maintenance manual.

OCCUPATION	NEW-ENERGY VEHICLE TECHNICIAN	**OCCUPATION CODE**	
DUTY TITLE	CHECK OF VEHICLE ELECTRICAL SYSTEMS	**DUTY NO.**	402
TASK TITLE	IMPLEMENTATION OF SAFETY PROTECTION MEASURES FOR VEHICLE BODY ELECTRICAL SYSTEM INSPECTION	**TASK NO.**	4021
PERFORMANCE CRITERIA	The person performing this task must be able to complete the implementation of safety protection measures for vehicle body electrical system inspection in accordance with technical requirements and manufacturer's maintenance manual.		
RANGE STATEMENT	The task can be performed in an automotive maintenance workshop under the supervision of senior technicians or new-energy vehicle engineers. The tools and equipment to be used include: 1. Personal protective equipment, such as work clothes, safety shoes, and helmets; 2. Quarantine strips, safety signs, and fire extinguishers; 3. Vehicle user manuals and maintenance manuals; 4. Inside and outside protective kits.		

EVIDENCE REQUIREMENT	
PRACTICAL PERFORMANCE	**UNDERPINNING KNOWLEDGE**
The person performing this task must be able to do the following: 1. Comply with safety and health regulations; 2. Select safety protection equipment; 3. Wear safety protection equipment; 4. Set up equipment of site safety protection; 5. Clean protective equipment; 6. Recycle safety protection equipment; 7. Store safety protection equipment and instruments.	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Wear safety protection equipment; 1.2 Set up equipment of site safety protection. **2.0 Principles** The person performing this task must be able to explain the following principles: 2.1 Principle of using safety warning signs; 2.2 Principle of high voltage electric shock; 2.3 Principle of first aid for electric shock; 2.4 Principle of maintenance and storage of safety protection equipment.

	3.0 Theories The person performing this task must be able to explain the following: 3.1 Use of safety protection equipment and instruments; 3.2 Setting of site safety protection equipment. **4.0 Essential Skills** The person performing this task must have the following skills: 4.1 Safety protection skills; 4.2 Teamwork skills; 4.3 Report writing skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	The safety protection measures for vehicle body electrical system inspection are implemented in accordance with the requirements of the vehicle maintenance manual and vehicle user manual.
CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. Occupational health and safety; 2. Site safety protection equipment; 3. Waste disposal methods.

OCCUPATION	NEW-ENERGY VEHICLE TECHNICIAN	**OCCUPATION CODE**	
DUTY TITLE	CHECK OF VEHICLE ELECTRICAL SYSTEMS	**DUTY NO.**	402
TASK TITLE	CHECK OF VEHICLE BODY ELECTRICAL SYSTEM INFORMATION	**TASK NO.**	4022
PERFORMANCE CRITERIA	The person performing this task must be able to check the instrument electrical system information of vehicle body in accordance with technical requirements and manufacturer's maintenance manual.		
RANGE STATEMENT	The task can be performed in an automotive maintenance workshop under the supervision of senior technicians or new-energy vehicle engineers. The tools and equipment to be used include: 1. Personal protective equipment, such as work clothes, safety shoes, and helmets; 2. Quarantine strips, safety signs, and fire extinguishers; 3. Vehicle user manuals and maintenance manuals; 4. Inside and outside protective kits, and wheel chocks; 5. Flashlight, test pencil, and multimeter.		

EVIDENCE REQUIREMENT	
PRACTICAL PERFORMANCE	**UNDERPINNING KNOWLEDGE**
The person performing this task must be able to do the following: 1. Comply with safety and health regulations; 2. Choose appropriate operating tools; 3. Check the indicator light of the lighting system; 4. Check the turn signal control lamp; 5. Check the indicator light of the operation mode; 6. Check the indicator light of the braking system; 7. Check the fault warning light; 8. Check the operating state indicator light; 9. Check the indicator light for the open vehicle door;	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Implement the safety and health prevention measures; 1.2 Check the lamplet indicator light; 1.3 Check the low beam headlight indicator light; 1.4 Check the high beam headlight indicator light; 1.5 Check the fog light indicator light; 1.6 Check the turn signal control lamp; 1.7 Check the indicator light of the operation mode; 1.8 Check the indicator light of the braking system; 1.9 Check the fault warning light of the intelligent key system; 1.10 Check the ESP OFF warning light;

10. Record the checking results; 11. Clean the tools and workplaces; 12. Recycle and store tools and equipment.	1.11 Check the warning light for low power battery voltage; 1.12 Check the warning light of the battery charging system; 1.13 Check the limit indicator light for driving power; 1.14 Check the indicator light for the open vehicle door; 1.15 Check the indicator light for the driver's safety belt without being fastened. **2.0 Principles** The person performing this task must be able to explain the following principles: 2.1 The principle of instrument display for new energy vehicles; 2.2 The control principle of instrument indicator lights. **3.0 Theories** The person performing this task must be able to explain the following: 3.1 Use of safety protection equipment and instruments; 3.2 Setting of site safety protection equipment; 3.3 The information inspection process of battery charging system warning light, lamplet indicator light, low beam headlight indicator light, high beam headlight indicator light, fog light indicator light, turn signal control lamp, indicator light for the open vehicle door, indicator light for the driver's safety belt without being fastened, economy mode and other operation mode indicators, and braking system warning light, intelligent key system fault warning light, low power battery voltage indicator light, battery charging system indicator light, driving power limit indicator light and other instrument lights. **4.0 Essential Skills** The person performing this task must have the following skills: 4.1 Safety protection skills; 4.2 Teamwork skills;

	4.3 Inspection skills of motormeter body electrical system information; 4.4 Information recording and report writing skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	The electrical system information of vehicle body is checked in accordance with the vehicle maintenance manual and vehicle user manual.
CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. Occupational health and safety; 2. Site safety protection equipment; 3. Explanation of indicator lights, warning lights, and fault lights on the combination instrument.

OCCUPATION	NEW-ENERGY VEHICLE TECHNICIAN	**OCCUPATION CODE**	
DUTY TITLE	CHECK OF VEHICLE ELECTRICAL SYSTEMS	**DUTY NO.**	402
TASK TITLE	CHECK OF ALL ELECTRICAL SYSTEM FUNCTIONS OF VEHICLE BODY	**TASK NO.**	4023
PERFORMANCE CRITERIA	The person performing this task must be able to check all electrical system functions of vehicle body in accordance with technical requirements and manufacturer's maintenance manual.		
RANGE STATEMENT	The task can be performed in an automotive maintenance workshop under the supervision of senior technicians or new-energy vehicle engineers. The tools and equipment to be used include: 1. Personal protective equipment, such as work clothes, safety shoes, and helmets; 2. Quarantine strips, safety signs, and fire extinguishers; 3. Vehicle user manuals and maintenance manuals; 4. Inside and outside protective kits, and wheel chocks; 5. Flashlight, test pencil, and multimeter.		

EVIDENCE REQUIREMENT	
PRACTICAL PERFORMANCE	**UNDERPINNING KNOWLEDGE**
The person performing this task must be able to do the following: 1. Comply with safety and health regulations; 2. Choose appropriate operating tools; 3. Check the functions of the center-control door lock system; 4. Check the lighting system functions; 5. Check the wiper system functions; 6. Check the power window system functions; 7. Check the electric seat functions; 8. Check the skylight system functions; 9. Check the power mirror system functions; 10. Check the mode switch;	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Check the functions of the center-control door lock system; 1.2 Check the functions of lamplet, low beam headlight, high beam headlight, fog light, and other lighting systems; 1.3 Check the brake light functions; 1.4 Check the turn signal light functions; 1.5 Check the wiper system functions; 1.6 Check the power window system functions; 1.7 Check the electric seat functions; 1.8 Check the skylight system functions; 1.9 Check the functions of the center-control door lock system;

11. Check the loudspeaker system functions; 12. Check the audio and video system functions; 13. Record the checking results; 14. Clean the tools and workplaces; 15. Recycle and store tools and equipment.	1.10 Check the power mirror system functions; 1.11 Check the indoor light switch; 1.12 Check the mode switch; 1.13 Check the loudspeaker system functions; 1.14 Check the audio and video system functions. **2.0 Principles** The person performing this task must be able to explain the following principles: 2.1 Working principles of lighting systems; 2.2 Working principles of power window systems; 2.3 Working principles of skylight systems; 2.4 Working principles of power mirror systems; 2.5 Working principles of center-control door lock systems; 2.6 Working principles of loudspeaker systems; 2.7 Working principles of radio sound systems; 2.8 Working principles of automobile power supply; 2.9 Working principles of wiper systems; 3.0 Working principles of electric seats. **3.0 Theories** The person performing this task must be able to explain the following: 3.1 Use of safety protection equipment and instruments; 3.2 Setting of site safety protection equipment; 3.3 The function inspection process of lighting system, power window system, skylight system, power mirror system, center-control door lock system, loudspeaker system, radio sound system, automobile power supply, wiper system and other systems. **4.0 Essential Skills** The person performing this task must have the following skills: 4.1 Safety protection skills;

	4.2 Teamwork skills; 4.3 Inspection skills of motormeter body electrical system functions; 4.4 Report writing skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	All electrical system functions of vehicle body are checked in accordance with vehicle maintenance manual.
CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. Occupational health and safety; 2. Site safety protection equipment; 3. Operation of functional components and controllers of body electrical systems.

OCCUPATION	NEW-ENERGY VEHICLE TECHNICIAN	**OCCUPATION CODE**	
DUTY TITLE	CHECK OF VEHICLE ELECTRICAL SYSTEMS	**DUTY NO.**	402
TASK TITLE	CHECK OF ALL ELECTRICAL SYSTEM COMPONENTS OF VEHICLE BODY.	**TASK NO.**	4024
PERFORMANCE CRITERIA	The person performing this task must be able to check all electrical system components of vehicle body in accordance with technical requirements and manufacturer's maintenance manual.		
RANGE STATEMENT	The task can be performed in an automotive maintenance workshop under the supervision of senior technicians or new-energy vehicle engineers. The tools and equipment to be used include: 1. Personal protective equipment, such as work clothes, safety shoes, and helmets; 2. Quarantine strips, safety signs, and fire extinguishers; 3. Vehicle user manuals and maintenance manuals; 4. Inside and outside protective kits, and wheel chocks; 5. Flashlight, test pencil, and multimeter.		

EVIDENCE REQUIREMENT

PRACTICAL PERFORMANCE	**UNDERPINNING KNOWLEDGE**
The person performing this task must be able to do the following: 1. Comply with safety and health regulations; 2. Choose appropriate operating tools; 3. Check the components of the center-control door lock system; 4. Check the lighting system components; 5. Check the wiper system components; 6. Check the power window system components; 7. Check the electric seat components; 8. Check the skylight system components; 9. Check the power mirror system components;	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Check the components of the center-control door lock system; 1.2 Check the lamplet system components; 1.3 Check the low beam headlight system components; 1.4 Check the high beam headlight system components; 1.5 Check the turn signal light system components; 1.6 Check the brake light system components; 1.7 Check the wiper system components; 1.8 Check the power window system components; 1.9 Check the electric seat system components; 1.10 Check the skylight system components;

10. Check the loudspeaker system components; 11. Check the audio and video system components; 12. Clean the tools and workplaces; 13. Recycle and store tools and equipment.	1.11 Check the power mirror system components; 1.12 Check the loudspeaker system components; 1.13 Check the audio and video system components. **2.0 Principles** The person performing this task must be able to explain the following principles: 2.1 Structural principles of lighting system switch components; 2.2 Structural principles of wiper system switch components; 2.3 Structural principles of power window system switch components; 2.4 Structural principles of skylight system switch components; 2.5 Structural principles of power mirror system switch components; 2.6 Structural principles of center-control door lock system switch components; 2.7 Structural principles of loudspeaker system switch components; 2.8 Structural principles of radio sound system switch components; 2.9 Structural principles of electric seat system switch components. **3.0 Theories** The person performing this task must be able to explain the following: 3.1 Use of safety protection equipment and instruments; 3.2 Setting of site safety protection equipment; 3.3 Inspection methods of all electrical system components of vehicle body, such as switch components of lighting system, wiper system, power window system, skylight system, power mirror system, center-control door lock system, loudspeaker system, and radio sound system. **4.0 Essential Skills** The person performing this task must have the

	following skills: 4.1 Safety protection skills; 4.2 Teamwork skills; 4.3 Inspection skills of motormeter body electrical system components; 4.4 Report writing skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	All electrical system components of vehicle body are checked in accordance with vehicle maintenance manual.
CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. Occupational health and safety; 2. Site safety protection equipment; 3. Inspection methods of all electrical system components of vehicle body.

OCCUPATION	NEW-ENERGY VEHICLE TECHNICIAN	**OCCUPATION CODE**	
DUTY TITLE	OVERHAUL OF CHASSIS SYSTEMS	**DUTY NO.**	403
TASK TITLE	IMPLEMENTATION OF SAFETY PROTECTION MEASURES FOR CHASSIS SYSTEM INSPECTION	**TASK NO.**	4031
PERFORMANCE CRITERIA	The person performing this task must be able to complete the implementation of safety protection measures for chassis system inspection in accordance with technical requirements and manufacturer's maintenance manual.		
RANGE STATEMENT	The task can be performed in an automotive maintenance workshop under the supervision of senior technicians or new-energy vehicle engineers. The tools and equipment to be used include: 1. Personal protective equipment, such as work clothes, safety shoes, and helmets; 2. Quarantine strips, safety signs, and fire extinguishers; 3. Vehicle user manuals and maintenance manuals.		

EVIDENCE REQUIREMENT	
PRACTICAL PERFORMANCE	**UNDERPINNING KNOWLEDGE**
The person performing this task must be able to do the following: 1. Comply with safety and health regulations; 2. Select safety protection equipment; 3. Wear safety protection equipment; 4. Set up equipment of site safety protection; 5. Clean protective equipment; 6. Recycle safety protection equipment; 7. Store safety protection equipment and instruments.	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Wear safety protection equipment; 1.2 Set up equipment of site safety protection. **2.0 Principles** The person performing this task must be able to explain the following principles: 2.1 Principle of using safety warning signs; 2.2 Principle of high voltage electric shock; 2.3 Principle of first aid for electric shock; 2.4 Principle of maintenance and storage of safety protection equipment. **3.0 Theories** The person performing this task must be able to explain the following:

	3.1 Use methods of safety protection equipment and instruments; 3.2 Setting procedures of site safety protection equipment. **4.0 Essential Skills** 4.1 Safety protection skills; 4.2 Teamwork skills; 4.3 Report writing skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	The safety protection measures for chassis system inspection are implemented in accordance with the requirements of the vehicle maintenance manual.
CIRCUMSTANTIAL KNOWLEDGE	Detailed knowledge about: 1. Occupational health and safety; 2. Site safety protection equipment; 3. Waste disposal methods.

OCCUPATION	NEW-ENERGY VEHICLE TECHNICIAN	**OCCUPATION CODE**	
DUTY TITLE	OVERHAUL OF CHASSIS SYSTEMS	**DUTY NO.**	403
TASK TITLE	CHECK OF INSTRUMENT CHASSIS SYSTEM INFORMATION	**TASK NO.**	4032
PERFORMANCE CRITERIA	The person performing this task must be able to check the instrument chassis system information in accordance with technical requirements and manufacturer's maintenance manual.		
RANGE STATEMENT	The task can be performed in an automotive maintenance workshop under the supervision of senior technicians or new-energy vehicle engineers. The tools and equipment to be used include: 1. Personal protective equipment, such as work clothes, safety shoes, and helmets; 2. Quarantine strips, safety signs, and fire extinguishers; 3. Vehicle user manuals and maintenance manuals; 4. In-vehicle five-piece set, and wheel chock.		

EVIDENCE REQUIREMENT	
PRACTICAL PERFORMANCE	**UNDERPINNING KNOWLEDGE**
The person performing this task must be able to do the following: 1. Comply with safety and health regulations; 2. Select safety protection equipment; 3. Set up equipment of site safety protection; 4. Check the ABS fault warning light; 5. Check the ESP fault warning light; 6. Check the fault warning light of the parking system; 7. Check the electronic parking indicator light; 8. Check the pedal indicator light; 9. Check the ESP OFF warning light; 10. Check the fault indicator light of the electric power steering system; 11. Check the decelerator fault indicator light;	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Check the ABS fault warning light; 1.2 Check the ESP fault warning light; 1.3 Check the fault warning light of the parking system; 1.4 Check the electronic parking indicator light; 1.5 Check the pedal indicator light; 1.6 Check the ESP OFF warning light; 1.7 Check the fault indicator light of the electric power steering system; 1.8 Check the decelerator fault indicator light; 1.9 Check the fault indicator light of the braking system; 1.10 Check the fault indicator light of the tire pressure monitoring system. **2.0 Principles**

12. Check the fault indicator light of the braking system; 13. Check the fault indicator light of the tire pressure monitoring system; 14. Clean protective equipment; 15. Recycle safety protection equipment; 16. Store safety protection equipment and instruments.	The person performing this task must be able to explain the following principles: 2.1 The operating principle of information inspection of the instrument chassis system; 2.2 The working principle of the fault light of the instrument chassis system. **3.0 Theories** The person performing this task must be able to explain the following: 3.1 ABS fault warning light; 3.2 ESP fault warning light; 3.3 Parking system fault warning light; 3.4 Electronic parking indicator light; 3.5 Pedal indicator light; 3.6 ESP OFF warning light; 3.7 Fault indicator light of the electric power steering system; 3.8 Decelerator fault indicator light; 3.9 Braking system fault indicator light; 3.10 Fault indicator light of the tire pressure monitoring system. **4.0 Essential Skills** The person performing this task must have the following skills: 4.1 Safety protection skills; 4.2 Teamwork skills; 4.3 Report writing skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	The instrument chassis system information is checked in accordance with vehicle maintenance manuals.
CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. Occupational health and safety; 2. Site safety protection equipment; 3. Waste disposal methods; 4. Use of vehicle maintenance manuals; 5. Inspection methods of instrument chassis system.

OCCUPATION	NEW-ENERGY VEHICLE TECHNICIAN	**OCCUPATION CODE**	
DUTY TITLE	OVERHAUL OF CHASSIS SYSTEMS	**DUTY NO.**	403
TASK TITLE	CHASSIS SYSTEM FUNCTION INSPECTION	**TASK NO.**	4033
PERFORMANCE CRITERIA	The person performing this task must be able to complete the implementation of chassis system function inspection in accordance with technical requirements and manufacturer's maintenance manual.		
RANGE STATEMENT	The task can be performed in an automotive maintenance workshop under the supervision of senior technicians or new-energy vehicle engineers. The tools and equipment to be used include: 1. Personal protective equipment, such as work clothes, safety shoes, and helmets; 2. Quarantine strips, safety signs, and fire extinguishers; 3. Vehicle user manuals and maintenance manuals; 4. In-vehicle five-piece set, and wheel chock; 5. Tool cart (equipped with insulation tools); 6. Double-column lifting machine.		

EVIDENCE REQUIREMENT

PRACTICAL PERFORMANCE	**UNDERPINNING KNOWLEDGE**
The person performing this task must be able to do the following: 1. Comply with safety and health regulations; 2. Select safety protection equipment; 3. Set up equipment of site safety protection; 4. Check the parking system functions; 5. Check the braking system functions; 6. Check the electronic gearing system functions; 7. Check the ESP OFF switch functions; 8. Check the electric power steering system functions; 9. Check the ABS system functions; 10. Check the decelerator system functions;	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Check the parking system functions; 1.2 Check the braking system functions; 1.3 Check the electronic gearing system functions; 1.4 Check the ESP OFF switch functions; 1.5 Check the electric power steering system functions; 1.6 Check the ABS system functions; 1.7 Check the decelerator system functions; 1.8 Check the tire pressure monitoring system functions. **2.0 Principles** The person performing this task must be able to explain the following principles:

11. Check the tire pressure monitoring system functions; 12. Clean protective equipment; 13. Recycle safety protection equipment; 14. Store safety protection equipment and instruments.	2.1 Working principle of the parking system; 2.2 Working principle of the brake pedal switch; 2.3 Working principle of the electronic gearing system; 2.4 Working principle of ESP OFF; 2.5 Working principle of the electric power steering system; 2.6 Working principle of the ABS system; 2.7 Working principle of the decelerator system; 2.8 Working principle of the tire pressure monitoring system. **3.0. Theories** The person performing this task must be able to explain the following: 3.1 Parking system functions; 3.2 Brake pedal switch functions; 3.3 Electronic gearing system functions; 3.4 ESP OFF functions; 3.5 Electric power steering system functions; 3.6 ABS system functions; 3.7 Decelerator system functions; 3.8 Tire pressure monitoring system functions. **4.0 Essential Skills** The person performing this task must have the following skills: 4.1 Safety protection skills; 4.2 Teamwork skills; 4.3 Report writing skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	The chassis system functions are checked in accordance with vehicle maintenance manuals.

CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. Occupational health and safety; 2. Site safety protection equipment; 3. Waste disposal methods; 4. Use of maintenance manuals; 5. Use of lifting machine; 6. Use of diagnostic equipment; 7. Inspection methods of chassis system functions.

OCCUPATION	NEW-ENERGY VEHICLE TECHNICIAN	**OCCUPATION CODE**	
DUTY TITLE	OVERHAUL OF CHASSIS SYSTEMS	**DUTY NO.**	403
TASK TITLE	CHECK OF CHASSIS SYSTEM COMPONENTS	**TASK NO.**	4034
PERFORMANCE CRITERIA	The person performing this task must be able to complete the implementation of chassis system component inspection in accordance with technical requirements and manufacturer's maintenance manual.		
RANGE STATEMENT	The task can be performed in an automotive maintenance workshop under the supervision of senior technicians or new-energy vehicle engineers. The tools and equipment to be used include: 1. Personal protective equipment, such as work clothes, safety shoes, and helmets; 2. Quarantine strips, safety signs, and fire extinguishers; 3. Vehicle user manuals and maintenance manuals; 4. In-vehicle five-piece set, and wheel chock; 5. Tool cart (equipped with insulation tools); 6. Double-column lifting machine.		

EVIDENCE REQUIREMENT

PRACTICAL PERFORMANCE	**UNDERPINNING KNOWLEDGE**
The person performing this task must be able to do the following: 1. Comply with safety and health regulations; 2. Select safety protection equipment; 3. Set up equipment of site safety protection; 4. Check the parking brake switch; 5. Check the brake pedal height; 6. Check the braking system sound; 7. Check the electronic gearing switch; 8. Check the ESP OFF switch; 9. Check the electric power steering dustproof cover; 10. Check the steering rod and ball head; 11. Check the braking system oil; 12. Check the shock absorber dustproof cover;	**Detailed knowledge about:** **1.0 Methods** The person performing this task must be able to explain how to: 1.1 Check the parking brake switch; 1.2 Check the brake pedal height; 1.3 Check the braking system sound; 1.4 Check the electronic gearing switch; 1.5 Check the ESP OFF switch; 1.6 Check the electric power steering dustproof cover; 1.7 Check the steering rod and ball head; 1.8 Check the braking system oil; 1.9 Check the shock absorber dustproof cover; 1.10 Check the decelerator oil leakage; 1.11 Check the tire appearance and tire pressure. **2.0 Principles**

13. Check the decelerator oil leakage; 14. Check the tire appearance and tire pressure; 15. Clean protective equipment; 16. Recycle safety protection equipment; 17. Store safety protection equipment and instruments.	The person performing this task must be able to explain the following principles: 2.1 Working principle of the parking system; 2.2 Working principle of the braking system; 2.3 Working principle of the electronic gearing system; 2.4 Working principle of the ESP system; 2.5 Working principle of electric power steering system; 2.6 Working principle of the suspension system; 2.7 Working principle of the decelerator system; 2.8 Working principle of the tire pressure monitoring system. **3.0 Theories** The person performing this task must be able to explain the following: 3.1 Inspection steps for the parking brake switch; 3.2 Inspection steps for the brake pedal height; 3.3 Inspection steps for the braking system sound; 3.4 Inspection steps for the electronic gearing switch; 3.5 Inspection steps for the ESP OFF switch; 3.6 Inspection steps for the electric power steering dustproof cover; 3.7 Inspection steps for the steering rod and ball head; 3.8 Inspection steps for the braking system oil; 3.9 Inspection steps for the shock absorber dustproof cover; 3.10 Inspection steps for the decelerator oil leakage; 3.11 Inspection steps for the tire appearance and tire pressure. **4.0 Essential Skills** The person performing this task must have the following skills: 4.1 Safety protection skills; 4.2 Teamwork skills;

	4.3 Report writing skills.
DESCRIPTION OF THE END PRODUCT / SERVICE	The chassis system components are checked in accordance with vehicle maintenance manuals.
CIRCUMSTANTIAL KNOWLEDGE	**Detailed knowledge about:** 1. Occupational health and safety; 2. Site safety protection equipment; 3. Waste disposal methods; 4. Use of maintenance manuals; 5. Use of lifting machine; 6. Use of diagnostic equipment; 7. Inspection methods of chassis system components.

TABLE 1: DACUM CHARTS FOR NEW-ENERGY VEHICLE TECHNICIAN- NTA 4

DUTIES	TASKS	ENABLERS
1.0 Check of high voltage system	1.1 Implementation of safety protection measures for high voltage system inspection. 1.2 Check of instrument high voltage system information. 1.3 Check of all high voltage system functions. 1.4 Check of high voltage system components. 1.5 Operation of power-on, power-off and charging of new energy vehicles.	**General skills and knowledge** · Cooperation with others using communication skills and submission of reports to the superiors · Use of the manufacturer's manual · Skills and knowledge in the inspection and use of high voltage protective equipment · Knowledge of the principles and components of new energy vehicles · Skills in vehicle functional operation · Underpinning knowledge of electricity **Tools and equipment** · Personal protective equipment, such as safety shoes, goggle, gloves. · Vehicle user manuals and maintenance manuals · Work lights · Commonly-used insulation tool kits for disassembly and assembly, and double-column lifting machine **Materials** · N/A **Requirements for employees** · Teamwork spirit, integrity, time management and commitment
2.0 Check of vehicle electrical systems	2.1 Implementation of safety protection measures for vehicle body electrical system inspection.	**General skills and knowledge** · Cooperation with others using communication skills and

DUTIES	TASKS	ENABLERS
	2.2 Check of vehicle body electrical system information. 2.3 Check of all electrical system functions of vehicle body. 2.4 Check of all electrical system components of vehicle body.	submission of reports to the superiors · Use of the manufacturer's manual · Skills and knowledge in operating vehicle electrical functions · Knowledge of the structural principles of electrical components · Underpinning knowledge of electricity **Tools and equipment** · Personal protective equipment, such as safety shoes, goggle, gloves. · Vehicle user manuals and maintenance manuals · Inside and outside protective kits, and wheel chocks **Materials** · N/A **Requirements for employees** · Teamwork spirit, integrity, time management and commitment
3.0 Overhaul of chassis systems	3.1 Implementation of safety protection measures for chassis system inspection. 3.2 Check of instrument chassis system information. 3.3 Chassis system function inspection. 3.4 Check of all electrical system functions of vehicle body. 3.5 Check of chassis system components.	**General skills and knowledge** · Cooperation with others using communication skills and submission of reports to the superiors · Use of vehicle user manuals and maintenance manuals · Safety protection knowledge and operation · Safety and regulations for lifting machine operation · Skills and knowledge in chassis system and its operation · Site cleaning and management

DUTIES	TASKS	ENABLERS
		Tools and equipment · Personal protective equipment, such as safety shoes, goggle, gloves. · Vehicle user manuals and maintenance manuals · Commonly-used insulation tool kits for disassembly and assembly · Chassis special tools that meet technical requirements · Double-column lifting machine **Materials** · N/A **Requirements for employees** · Teamwork spirit, integrity, time management and commitment