



Technical, Entrepreneurship and Vocational Education and Training Authority (TEVETA)

TRADE TEST IN AUTOMOTIVE ELECTRICAL- LEVEL I

Record of Practical Assessment

Learner`s name:_____

Learner`s NRC no.:_____

Learner`s TEVETA No.:_____

Institution Name:_____

Institution TVA No.:_____

Assessment Period:_____

PREFACE

The Technical Education, Vocational and Entrepreneurship Training Authority (TEVETA) is an institution created under the Technical Education, Vocational and Entrepreneurship Training Act Number 13 of 1998, as amended by the Technical Education, Vocational and Entrepreneurship Training (Amendment) Act Number 11 of 2005.

The Act among other things provides that TEVETA shall:

- (a) regulate and conduct national examinations and assessments relating to technical education, vocational and entrepreneurship training;
- (b) charge and collect fees in respect of examinations, assessments and other services provided by the Authority;
- (c) award certificates to persons who succeed in examinations and assessments undertaken under this Act
- (d) do all such things connected with or incidental to the functions of the Authority under this Act.

Through this mandate, the Assessment and Qualifications Division of TEVETA has developed Practical Assessment Tool Kits to enable learners achieve the competences that are congruent with the demand of the workplace tasks. These tool kits in part are also intended to ensure that similar conditions under which all students in TEVET are assessed and examined apply wherever the course is undertaken in Zambia.

The Trainers shall work with the Learners to collect evidence of competence, using the benchmarks provided by the unit standards. During the year, the Learners shall be required to undertake a series of practical assessment tasks. It is the sum of all these assessments tasks that deems a Learner to be competent (or not).

This approach to assessment is not a one-off event but one that gives learners many opportunities to demonstrate skill and allow for the capturing and recording of these demonstrations.

For the Learner to be deemed competent, they must demonstrate competency in every aspect of the practical tasks being undertaken. It must however be understood by the Trainer that Competency does not mean expert. It means that the candidate has attained sufficient skill and knowledge to perform the activity or service to a degree and quality that is acceptable to the industry and the customer in a time within which a competent person at the level could reasonably be expected to perform the task.

While this will be undertaken at institutional level, it is therefore envisaged that the Assessment principles of VALIDITY, RELIABILITY, FAIRENESS and FLEXIBILITY shall at all times be adhered to.

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TASK 1: IDENTIFYING ELECTRICAL COMPONENTS ON THE VEHICLE

Activity	Satisfactory			Not Satisfactory		
	1	2	3	1	2	3
During observation of work activities, the candidate demonstrated the they can:						
a) Observe safety This could include: <ul style="list-style-type: none"> • Wearing safety shoes/boots • Wearing work suit • Opening the bonnet and ensuring that the bonnet catch is well secured. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Identify the engine electrical components This could include: <ul style="list-style-type: none"> • Battery • Starter motor • Alternator • Distributor (Convention / Electronic) • Ignition Coil (Convention / Electronic) • Spark plugs • High Tension Cables (Convention / Electronic) • Horn 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Identify the body electrical accessories These could include: <ul style="list-style-type: none"> • Flasher Units • Bulbs • Wiper Blades • Switches • Fuses 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner`s comments:

Signed:

Examiner Name/Sign:

Learner`s Name/sign:

Date:

Date:

TASK 2: REMOVING AND REFITTING THE BATTERY ON THE VEHICLE

Activity	Satisfactory			Not Satisfactory		
	1	2	3	1	2	3
During observation of work activities, the candidate demonstrated the they can:						
a) Observe Safety This could include: <ul style="list-style-type: none"> ○ Wearing safety shoes /boots. ○ Wearing acid proof work suit. ○ Open the bonnet and ensure that the Bonnet Catch is well secured 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Prepare required tools/materials This should include: <ul style="list-style-type: none"> ○ 10mm , 12mm, 13mm combination spanner ○ Emery cloth ○ Electric Kettle ○ Mutton Cloth 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Remove the battery from the vehicle This could include: <ul style="list-style-type: none"> ○ Removing the battery ○ Cleaning the battery ○ Carrying out the visual inspection on the battery ○ Cleaning the battery 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Fit the battery on the vehicle This could include: <ul style="list-style-type: none"> ○ Fitting the battery tray ○ Replacing the battery. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner`s comments:

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Learner`s Name/sign:

Date:

Date:

TASK 3: REMOVING AND FITTING THE STARTER MOTOR ON THE VEHICLE

Activity	Satisfactory			Not Satisfactory		
	1	2	3	1	2	3
During observation of work activities, the candidate demonstrated the they can:						
a) Observe Safety This could include: <ul style="list-style-type: none"> ○ Wearing safety shoes /boots. ○ Wearing acid proof work suit. ○ Open the bonnet and ensure that the Bonnet Catch is well secured 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Prepare required tools/materials This should include: <ul style="list-style-type: none"> ○ 10mm , 12mm, 13mm, 14mm combination spanner ○ Emery cloth ○ Electrical cleaner ○ Mutton Cloth 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Remove the Starter Motor from the vehicle This could include: <ul style="list-style-type: none"> ○ Removing the starter motor ○ Cleaning the starter motor ○ Visually inspecting the starter motor 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Fit the starter motor to the engine This could include: <ul style="list-style-type: none"> ○ Fitting the starter motor 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner`s comments:

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Examiner Name/Sign:

Learner`s Name/sign:

Date:

Date:

TASK 4: REMOVING AND FITTING THE ALTERNATOR ON THE VEHICLE

Activity	Satisfactory			Not Satisfactory		
	1	2	3	1	2	3
During observation of work activities, the candidate demonstrated the they can:						
a) Observe Safety This could include: <ul style="list-style-type: none"> ○ Wearing safety shoes /boots. ○ Wearing acid proof work suit. ○ Open the bonnet and ensure that the Bonnet Catch is well secured 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Prepare required tools/materials This should include: <ul style="list-style-type: none"> ○ 10mm , 12mm, 13mm, 14mm combination spanner ○ Emery cloth ○ Electrical cleaner ○ Mutton Cloth 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Remove the alternator from the vehicle This could include: <ul style="list-style-type: none"> ○ Removing the alternator ○ Cleaning the alternator. ○ Visually inspecting the alternator. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Fit the alternator to the engine This could include: <ul style="list-style-type: none"> ○ Fitting the alternator. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner`s comments:

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Examiner Name/Sign:

Learner`s Name/sign:

Date:

Date:

TASK 5: REMOVE AND FIT THE SPARK PLUGS FROM THE ENGINE

Activity	Satisfactory			Not Satisfactory		
	1	2	3	1	2	3
During observation of work activities, the candidate demonstrated the they can:						
a) Observe Safety This could include: <ul style="list-style-type: none"> ○ Wearing safety shoes /boots. ○ Wearing acid proof work suit. ○ Opening the bonnet and ensuring that the Bonnet Catch is well secured 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Prepare required tools This should include: <ul style="list-style-type: none"> ○ 10mm, 12mm, 13mm Combination Spanner ○ Spark plug Spanner ○ Compressor (Compressed Air) 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Remove the spark plugs/high tension cables This could include: <ul style="list-style-type: none"> ○ Removing the High tension cables ○ Removing the spark plugs ○ Cleaning the spark plug ○ Inspecting the spark plug condition 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Fit the spark plugs This could include: <ul style="list-style-type: none"> ○ Fitting the spark plugs ○ Fitting the high tension cables 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner`s comments:

Signed: Examiner Name/Sign:

Learner`s Name/sign:

Date:

Date:

TASK 6: REMOVE AND REFIT THE CONVENTION DISTRIBUTOR FROM THE ENGINE

Activity	Satisfactory			Not Satisfactory		
	1	2	3	1	2	3
During observation of work activities, the candidate demonstrated the they can:						
a) Observe Safety This could include: <ul style="list-style-type: none"> ○ Wearing safety shoes/boots ○ Wearing working suit. ○ Opening the bonnet and ensuring that the Bonnet Catch is well secured ○ Blocking the Vehicle 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Prepare required tools/materials This should include: <ul style="list-style-type: none"> ○ Correct tools ○ Mutton Cloth ○ Electrical Cleaner 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Remove the Distributor from the engine This could include: <ul style="list-style-type: none"> ○ Removing the distributor ○ Cleaning the distributor ○ Visually inspecting the distributor for physical damage 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Fit the Distributor to the engine This could include: <ul style="list-style-type: none"> ○ Fitting the distributor ○ Connecting the high tension cables 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner`s comments:

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Examiner Name/Sign:

Learner`s Name/sign:

Date:

Date:

TASK 7: REMOVE AND REFIT THE ELECTRONIC DISTRIBUTOR FROM THE ENGINE

Activity	Satisfactory			Not Satisfactory		
	1	2	3	1	2	3
During observation of work activities, the candidate demonstrated the they can:						
a) Observe Safety This could include: <ul style="list-style-type: none"> ○ Wearing safety shoes/boots ○ Wearing work suit. ○ Opening the bonnet and ensuring that the Bonnet Catch is well secured ○ Blocking the Vehicle 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Prepare required tools/materials This should include: <ul style="list-style-type: none"> ○ Correct tools ○ Mutton Cloth ○ Electrical Cleaner 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Remove the electronic Distributor from the engine This could include: <ul style="list-style-type: none"> ○ Removing the electronic distributor. ○ Cleaning the electronic distributor ○ Visually inspecting the distributor for physical damage 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Fit the Distributor to the engine This could include: <ul style="list-style-type: none"> ○ Fitting the distributor ○ Fitting the high tension cables 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner`s comments:

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Examiner Name/Sign:

Learner`s Name/sign:

Date:

Date:

TASK 8: REMOVE AND REFIT CONVENTION IGNITION COIL FROM THE ENGINE

Activity	Satisfactory			Not Satisfactory		
	1	2	3	1	2	3
During observation of work activities, the candidate demonstrated the they can:						
a) Observe Safety This could include: <ul style="list-style-type: none"> ○ Wearing safety shoes/boots ○ Wearing work suit ○ Opening the bonnet and ensuring that the Bonnet Catch is well secured ○ Blocking the Vehicle 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Prepare required tools/materials This should include: <ul style="list-style-type: none"> ○ Correct tools ○ Mutton Cloth ○ Electrical Cleaner 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Remove the convention ignition coil This could include: <ul style="list-style-type: none"> ○ Removing the ignition coil ○ Cleaning the ignition coil ○ Visually inspecting the ignition coil 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Fit the convention ignition coil This could include: <ul style="list-style-type: none"> ○ Fitting the ignition coil ○ Connecting the high tension cables 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner`s comments:

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Examiner Name/Sign:

Learner`s Name/sign:

Date:

Date:

TASK 9: REMOVE AND REFIT ELECTRONIC IGNITION COILS FROM THE DISTRIBUTERLESS ENGINE

Activity	Satisfactory			Not Satisfactory		
	1	2	3	1	2	3
During observation of work activities, the candidate demonstrated the they can:						
a) Observe safety This could include: <ul style="list-style-type: none"> ○ Wearing safety shoes/boots ○ Wearing work suit. ○ Opening the bonnet and ensuring that the Bonnet Catch is well secured ○ Blocking the Vehicle 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Prepare required tools/materials This should include: <ul style="list-style-type: none"> ○ Correct tools ○ Mutton Cloth ○ Electrical Cleaner 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Remove the ignition coils This could include: <ul style="list-style-type: none"> ○ Removing the ignition Coils ○ Cleaning the ignition coils ○ Visually inspecting the ignition coil for physical damage 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Fit the ignition coils This could include: <ul style="list-style-type: none"> ○ Fitting the ignition coils ○ Connecting the connectors to the ignition coils 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner`s comments:

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Examiner Name/Sign:

Learner`s Name/sign:

Date:

Date:

TASK 10: REMOVING AND REPLACING THE WIPER BLADES

Activity	Satisfactory			Not Satisfactory		
	1	2	3	1	2	3
During observation of work activities, the candidate demonstrated the they can:						
a) Observe safety This could include: <ul style="list-style-type: none"> ○ Avoiding scratching the screen 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Prepare required tools / materials This could include: <ul style="list-style-type: none"> ○ Correct tools ○ New wiper blades 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Remove the wiper blades This could include: <ul style="list-style-type: none"> ○ Removing the old wiper blades 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Fit the wiper blades This could include: <ul style="list-style-type: none"> ○ Fitting new wiper blades 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner`s comments:

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Examiner Name/Sign:

Learner`s Name/sign:

Date:

Date:

TASK11: BATTERY SERVICE

Activity	Satisfactory			Not Satisfactory		
	1	2	3	1	2	3
During observation of work activities, the candidate demonstrated that they can:						
a) Observe safety This could include: <ul style="list-style-type: none"> ○ Wearing safety shoes/boots, safety goggles, gloves, mask and apron. ○ Wearing acid proof work suit 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Prepare required tools/materials This should include: <ul style="list-style-type: none"> ○ Hydrometer ○ Emery cloth ○ Electric Kettle ○ Mutton Cloth ○ Voltmeter ○ Load tester ○ Battery charger ○ Battery water and battery acid 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Carry out battery service This could include: <ul style="list-style-type: none"> ○ Cleaning the battery. ○ Visually inspecting the battery. ○ Carrying out the open-circuit test. ○ Carrying out the specific gravity test. ○ Carrying out battery load test 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner`s comments:

Signed:

Examiner Name/Sign:

Learner`s Name/sign:

Date:

Date:

TASK 12: STARTER MOTOR SERVICE

Activity	Satisfactory			Not Satisfactory		
	1	2	3	1	2	3
During observation of work activities, the candidate demonstrated that they can:						
a) Observe safety This could include: <ul style="list-style-type: none"> • Wearing safety shoes/boots • Wearing work suit 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Prepare required tools/materials This should include: <ul style="list-style-type: none"> • Correct tools • Mutton Cloth • Electrical Cleaner • Multimeter • Fine emery cloth / Sand paper • Growler 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Dismantle the Starter Motor This could include: <ul style="list-style-type: none"> ○ Cleaning the starter motor ○ Visually inspecting the starter motor. ○ Dismantling the starter motor ○ Cleaning starter motor components. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Test Starter motor Components This could include: <ul style="list-style-type: none"> ○ Visually inspecting the components. ○ Testing starter motor components. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Assemble the Starter Motor This could include: <ul style="list-style-type: none"> • Assembling the starter motor 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Bench test the Starter Motor This could include: <ul style="list-style-type: none"> • Testing the motor • Testing the solenoid • Light load testing the starter motor • Load testing the starter motor 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner`s comments:

Signed:

Examiner Name/Sign:

Learner`s Name/sign:

Date:

Date:

TASK 13: ALTERNATOR SERVICE

Activity	Satisfactory			Not Satisfactory		
	1	2	3	1	2	3
During observation of work activities, the candidate demonstrated that they can:						
a) Observe safety This could include: <ul style="list-style-type: none"> • Wearing safety shoes/boots • Wearing work suit 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Prepare required tools/materials This should include: <ul style="list-style-type: none"> • Correct tools • Mutton Cloth • Electrical Cleaner • Multimeter • Fine emery cloth / Sand paper • Growler 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Dismantle the Alternator This could include: <ul style="list-style-type: none"> ○ Cleaning the alternator. ○ Visually inspecting the alternator. ○ Dismantling the alternator. ○ Cleaning alternator components. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Test Alternator Components This could include: <ul style="list-style-type: none"> ○ Visually inspecting the components. ○ Testing alternator components. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Assemble the Alternator This could include: <ul style="list-style-type: none"> • Assembling the alternator. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Bench test the Alternator This could include: <ul style="list-style-type: none"> • Testing the alternator output 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner`s comments:

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Examiner Name/Sign:

Learner`s Name/sign:

Date:

Date:

TASK 14: TESTING ELECTRONIC IGNITION COILS AND INDUCTIVE SENSOR

Activity	Satisfactory			Not Satisfactory		
	1	2	3	1	2	3
During observation of work activities, the candidate demonstrated that they can:						
a) Observe safety This could include: <ul style="list-style-type: none"> ○ Wearing safety shoes/boots ○ Wearing work suit 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Prepare required tools/materials This should include: <ul style="list-style-type: none"> ○ Correct tools ○ Mutton Cloth ○ Multimeter ○ Fine emery cloth / Sand paper ○ Complete distributor 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Test the ignition coil This could include: <ul style="list-style-type: none"> ○ Testing the Primary winding ○ Testing the Secondary winding 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Test the inductive sensor This could include: <ul style="list-style-type: none"> • Checking the air gap • Testing the inductive coil 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner`s comments:

Signed:

Examiner Name/Sign:

Learner`s Name/sign:

Date:

Date:

TASK 15: REMOVAL AND TESTING OF SPARK PLUGS AND TENSION CABLES

Activity	Satisfactory			Not Satisfactory		
	1	2	3	1	2	3
During observation of work activities, the candidate demonstrated that they can:						
a) Observe safety This could include: <ul style="list-style-type: none"> ○ Wearing safety shoes/boots ○ Opening the bonnet and ensuring the Bonnet catch. ○ Blocking the Vehicle 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Prepare required tools This should include: <ul style="list-style-type: none"> ○ 10mm, 12mm, 13mm Combination Spanner ○ Spark plug Spanner ○ Compressor (Compressed Air) ○ Ohmmeter ○ Flat screw driver (small) 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Removal of the spark plugs/high tension cables This could include: <ul style="list-style-type: none"> ○ Removing the high tension cables ○ Removing the spark plugs ○ Cleaning the spark plugs 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Test spark plug / high tension cables This could include: <ul style="list-style-type: none"> ○ Cleaning the spark plugs ○ Testing the spark plugs ○ Testing the high tension cables 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) fit the spark plug/High tension cables this could include: <ul style="list-style-type: none"> ○ Fitting the spark plugs. ○ Fitting the high tension cables. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner`s comments:

Signed:

Examiner Name/Sign:

Learner`s Name/sign:

Date:

Date:

TASK16: REMOVE AND TEST THE FUSES AND RELAYS ON THE VEHICLE

Activity	Satisfactory			Not Satisfactory		
	1	2	3	1	2	3
During observation of work activities, the candidate demonstrated that they can:						
a) Observe Safety This could include: <ul style="list-style-type: none"> ○ Wearing safety shoes/boots. ○ Wearing work suit. ○ Opening the bonnet and ensuring catch ○ Blocking the Vehicle 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Prepare required tools This should include: <ul style="list-style-type: none"> ○ Correct tools ○ Multi meter ○ Fuse puller ○ Electrical cleaner 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Remove, test and fit the fuses and relays for parking lights This could include: <ul style="list-style-type: none"> ○ Removing the fuses. ○ Testing the fuses. ○ Fit the fuse. ○ Removing the relays. ○ Testing the relays. ○ Fit the relay 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner`s comments:

Signed:

Examiner Name/Sign:

Learner`s Name/sign:

Date:

Date:

TASK 17: HORN CIRCUIT CONSTRUCTION

Activity	Satisfactory			Not Satisfactory		
	1	2	3	1	2	3
During observation of work activities, the candidate demonstrated that they can:						
a) Observe Safety This could include: <ul style="list-style-type: none"> ○ Wearing safety shoes/boots. ○ Wearing work suit. ○ Avoiding dropping the components. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Prepare required tools/materials This could include: <ul style="list-style-type: none"> ○ Correct tools ○ Horn, 4pin relay, push button, female push-on terminals, 10A fuse. ○ 2m x 1.5mm Auto-cables each: red, black, brown, green and white. ○ Ignition switch ○ 12V Automotive battery ○ 2 insulating tapes 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Construct a horn circuit This could include: <ul style="list-style-type: none"> ○ Using the right cable size and colour code. ○ Using the correct materials. ○ Using the correct cable layout. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Carry out the Horn Circuit testing This could include: <ul style="list-style-type: none"> ○ Turning the ignition switch to "ON" position. ○ Continuity testing on all components. ○ Press the push button to sound the horn. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner's comments:

Signed:

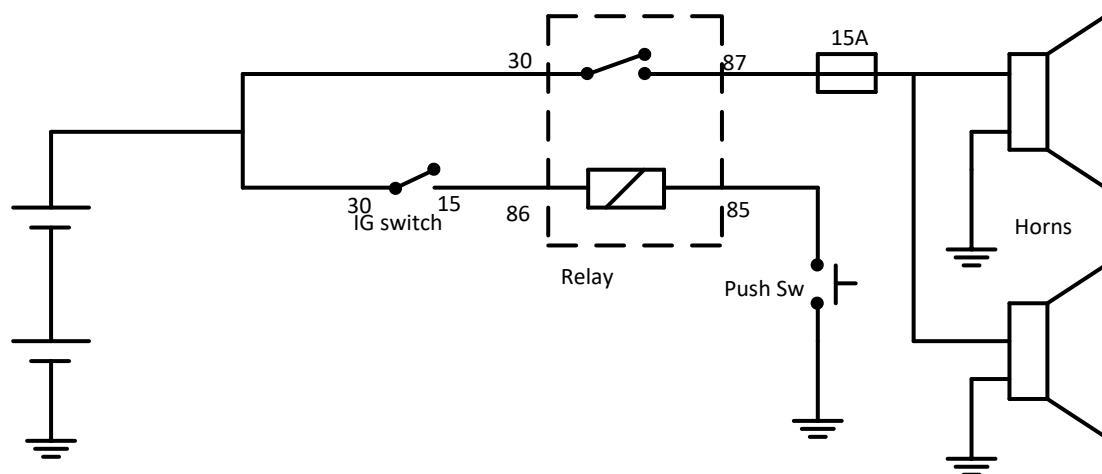
Examiner Name/Sign:

Learner's Name/sign:

Date:

Date:

TASK 17:HORN CIRCUIT



TASK 18: INDICATOR CIRCUIT CONSTRUCTION

Activity	Satisfactory			Not Satisfactory		
	1	2	3	1	2	3
During observation of work activities, the candidate demonstrated that they can:						
a) Observe Safety This could include: <ul style="list-style-type: none"> ○ Wearing safety shoes/boots ○ Wearing the work suit. ○ Avoiding dropping of the components. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Prepare required tools/materials This should include: <ul style="list-style-type: none"> ○ Correct tools ○ 15A fuse, electronic flasher unit, indicator switch, 12V x 6 single contact bulbs, 6 x single contact bulb holders, female push-on terminals. ○ 2m x 1.5mm Auto-cables each: red, black, yellow, blue, green and white. ○ Ignition switch ○ 12V Automotive battery ○ 3 insulating tapes 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Construct Indicator Circuit This could include: <ul style="list-style-type: none"> ○ Using the right cable size and colour code. ○ Using the correct materials. ○ Using the correct cable layout. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Test Indicator Circuit This could include: <ul style="list-style-type: none"> ○ Turning the ignition switch to "ON" position. ○ Carrying out continuity test on all components. ○ Activating the indicator switch to the left and right respectively. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner`s comments:

Signed:

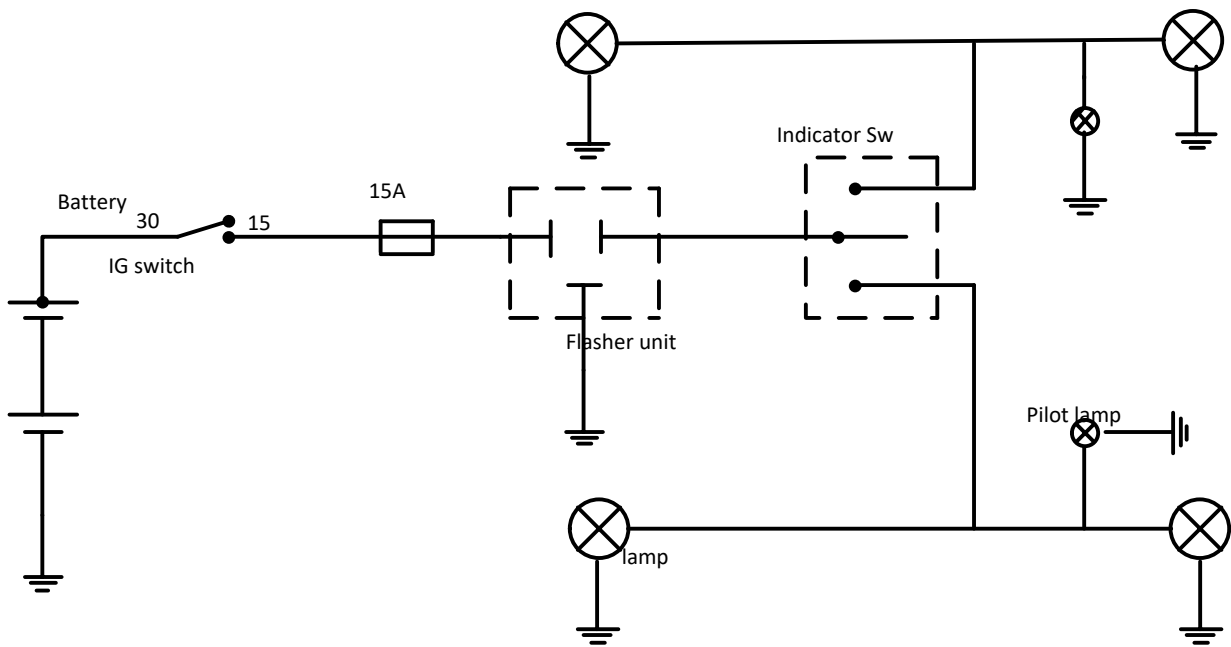
Examiner Name/Sign:

Learner`s Name/sign:

Date:

Date:

TASK 18:INDICATOR CIRCUIT



TASK 19: HEADLIGHT CIRCUIT CONSTRUCTION

Activity	Satisfactory			Not Satisfactory		
	1	2	3	1	2	3
During observation of work activities, the candidate demonstrated that they can:						
a) Observe Safety This could include: <ul style="list-style-type: none"> ○ Wearing safety shoes/boots ○ Wearing work suit. ○ Avoiding dropping of the components. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Prepare required tools/materials This should include: <ul style="list-style-type: none"> ○ Correct tools ○ 15A fuses, 4pin relay, 2 headlamp units, Headlamp connectors, Headlight switch, headlight dimmer switch, female push-on terminals. ○ 2m x 1.5mm Auto-cables each: red, grey, black, yellow, blue, green and white. ○ Ignition switch ○ 12V Automotive battery ○ 3 insulating tapes 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Construct the Headlight Circuit This could include: <ul style="list-style-type: none"> ○ Using the right cable size and colour code. ○ Using the correct materials. ○ Using the correct cable layout. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Test the Headlight Circuit This could include: <ul style="list-style-type: none"> ○ Turning the ignition switch to "ON" position. ○ Carrying out continuity test on all components. ○ Activating the headlight switch. ○ Activating the dimmer switch for low/high beam. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner`s comments:

Signed:

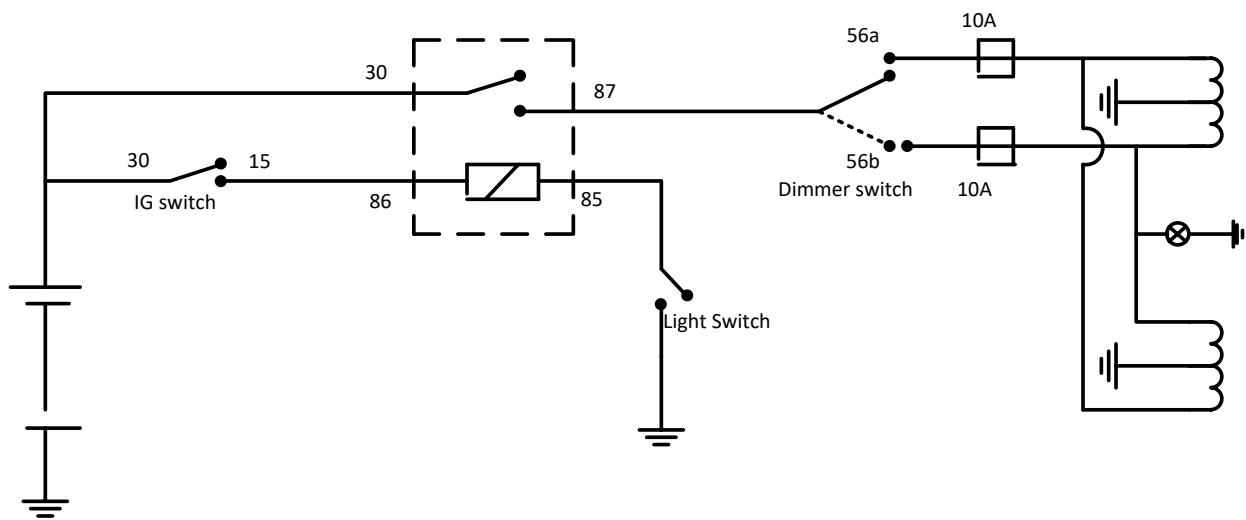
Examiner Name/Sign:

Learner`s Name/sign:

Date:

Date:

TASK 19: HEADLIGHT CIRCUIT



TASK 20: WIPER MOTOR SERVICE

Activity	Satisfactory			Not Satisfactory		
	1	2	3	1	2	3
During observation of work activities, the candidate demonstrated that they can:						
a) Observe Safety This could include: <ul style="list-style-type: none"> ○ Wear safety shoes/boots. ○ Wear work suit. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Prepare required tools/materials This should include: <ul style="list-style-type: none"> ○ 6mm,8mm,10mm and 12mm combination spanners. ○ Flat and star screw driver. ○ Mutton Cloth ○ Electrical Cleaner ○ Multimeter ○ Fine emery cloth / Sand paper ○ Growler 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Dismantle Wiper motor This could include: <ul style="list-style-type: none"> ○ Visually inspecting the wiper motor. ○ Disassembling the motor. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Test the Component This could include: <ul style="list-style-type: none"> • Cleaning the wiper motor components. • Testing the armature windings for open, short and insulation tests using a growler. • Carrying out the visual inspection on the gears for wear. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Assemble the Wiper motor This could include: <ul style="list-style-type: none"> ○ Fitting all the components correctly. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Test the Wiper motor This could include: <ul style="list-style-type: none"> ○ Connecting the battery positive terminal to wiper live cable 53. ○ Connecting the battery negative terminal to 53a (low speed) and 53b (high speed) respectively ○ Activating the dimmer switch for low/high beam. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner's comments:

Signed:

Examiner Name/Sign:

Learner's Name/sign:

Date:

Date:

TASK 21: CHARGING OF TWO 12V DC DISCHARGED BATTERIES.

Activity	Satisfactory			Not Satisfactory		
	Attempts			Attempts		
During observation of work activities, the candidate demonstrated that they can:	1	2	3	1	2	3
a) Observe safety This could include wearing: <ul style="list-style-type: none"> • Correct safety shoes/boots • Acid-proof attire. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Prepare required tools/materials This should include: <ul style="list-style-type: none"> • Emery cloth • Mutton Cloth • Voltmeter • Battery charger • Battery water and battery acid 						
c) Carryout the constant current charging of two 12V DC discharged batteries in series. This could include: <ul style="list-style-type: none"> • Servicing two 12v DC discharged batteries • Connecting two 12v DC discharged batteries in series to the battery charger. • Set the battery charger to the series charge mode. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Carryout the constant voltage charging of two 12V DC discharged batteries in series. This could include: <ul style="list-style-type: none"> • Servicing two 12v DC discharged batteries • Connecting two 12v DC discharged batteries in parallel to the battery charger. • Set the battery charger to the parallel charge mode. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner`s comments:

Signed:

Examiner Name/Sign:

Learner`s Name/sign:

Date:

Date:

TASK 22: BATTERY DRAIN TEST USING AN AMMETER

Activity	Satisfactory			Not Satisfactory		
	1	2	3	1	2	3
During observation of work activities, the candidate demonstrated that they can:						
a) Observe safety This could include <ul style="list-style-type: none"> ○ Wearing correct safety shoes/boots ○ Wearing Acid-proof attire). 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Prepare required tools/materials This should include: <ul style="list-style-type: none"> ○ Ammeter ○ Fuse puller ○ 10mm, 12mm and 13mm combination spanners. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Carryout the battery drain test. This could include: <ul style="list-style-type: none"> ○ Testing for the drain ○ Locating the fault. ○ Rectifying the fault <ul style="list-style-type: none"> • During testing: <ul style="list-style-type: none"> ○ Identifying the fault. ○ Connecting the ammeter correctly. ○ Setting of the meter correctly. ○ Checking the cause of the current drain. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner`s comments:

Signed:

Examiner Name/Sign:

Learner`s Name/sign:

Date:

Date:

TASK 23: STARTING SYSTEM CIRCUIT VOLTAGE DROP TESTING

Activity	Satisfactory			Not Satisfactory		
	1	2	3	1	2	3
During observation of work activities, the candidate demonstrated that they can:						
a) Observe safety This could include wearing <ul style="list-style-type: none"> • Safety shoes/boots • Work suit 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Prepare required tools/materials This should include: <ul style="list-style-type: none"> • Voltmeter • Long nose pliers • Star and flat screw drivers • 10mm, 12mm and 13mm combination spanners 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Carryout the starting system circuit voltage drop test This could include: <ul style="list-style-type: none"> • Checking the battery voltage live supply (30) . • Whilst cranking the engine check the battery voltage solenoid supply (50). • Whilst cranking the engine check the battery voltage solenoid motor supply (50M). • Whilst cranking the engine check the ground supply 31. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner`s comments:

Signed:

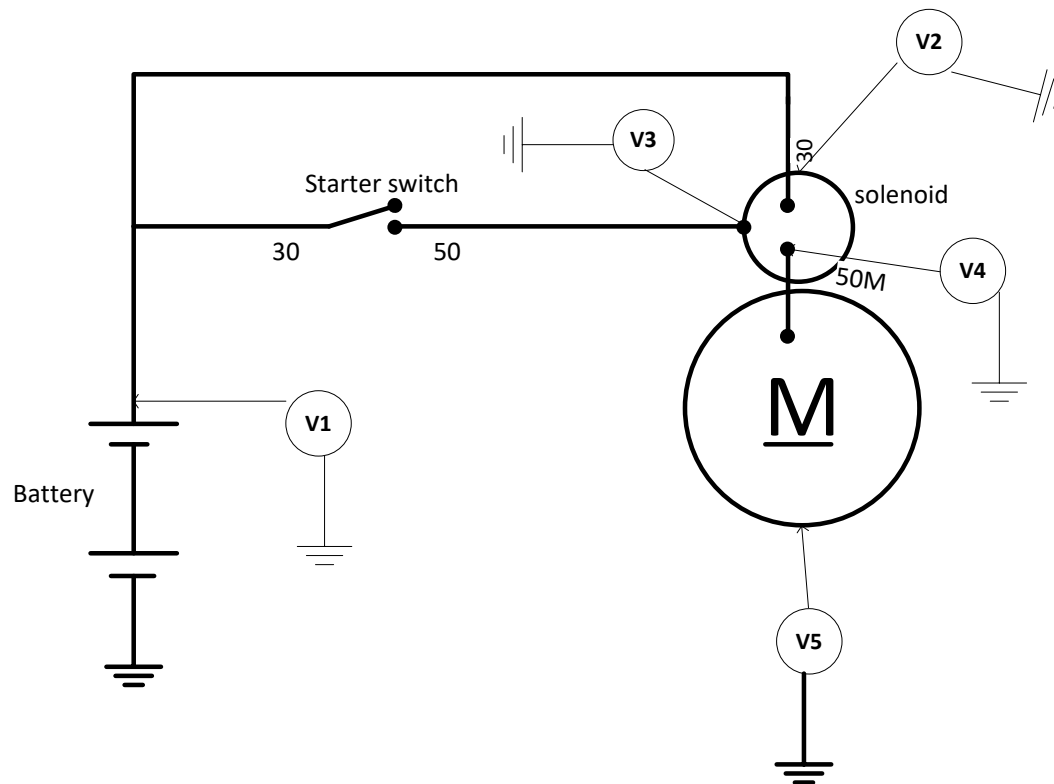
Examiner Name/Sign:

Learner`s Name/sign:

Date:

Date:

TASK 23: TASK STARTING SYSTEM VOLTAGE DROP TEST



TASK24: TESTING THE OUTPUT VOLTAGE OF CHARGING SYSTEM

Activity	Satisfactory			Not Satisfactory		
	1	2	3	1	2	3
During observation of work activities, the candidate demonstrated that they can:						
a) Observe safety This could include wearing <ul style="list-style-type: none"> • Safety shoes/boots • Work suit 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Prepare required tools/materials This should include: <ul style="list-style-type: none"> • Voltmeter • Long nose pliers • Star and flat screw drivers • 10mm, 12mm and 13mm combination spanners 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Carry out the test of the charging system output voltage. This could include: <ul style="list-style-type: none"> ○ Starting the vehicle and revving the engine to 2000 rpm. ○ Switching on the major circuits. ○ Testing the alternator output voltage. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner`s comments:

Signed:

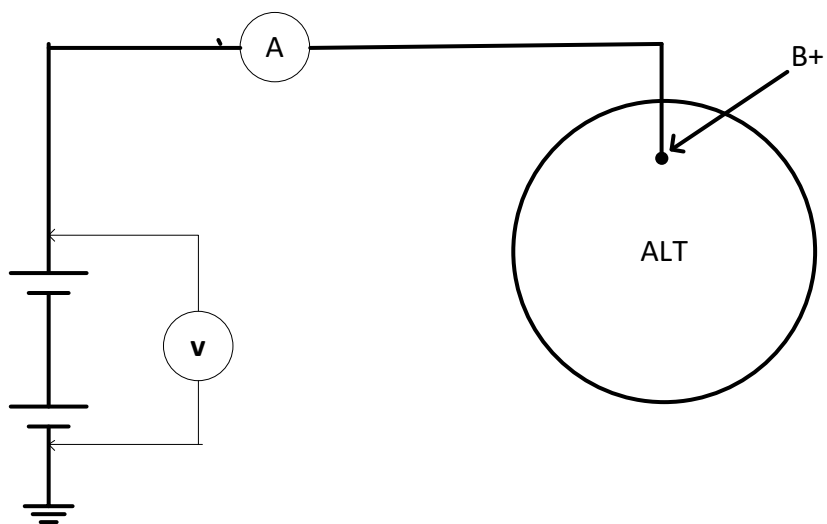
Examiner Name/Sign:

Learner`s Name/sign:

Date:

Date:

TASK 24: ALTERNATOR CURRENT AND VOLTAGE OUTPUT TEST



TASK 25: TESTING THE INTERGRATED IGNITION ASSEMBLY (IIA) ELECTRONIC IGNITION

Activity	Satisfactory			Not Satisfactory		
	1	2	3	1	2	3
During observation of work activities, the candidate demonstrated that they can:						
a) Observe safety This could include <ul style="list-style-type: none"> • Wearing Safety shoes/boots • Wearing Work suit • Chocking the wheels 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Prepare required tools/materials This should include: <ul style="list-style-type: none"> • Voltmeter • Ohmmeter • 8mm,10mm, 12mm and 13mm combination spanners 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Carry out tests on the IIA electronic ignition coil This could include: <ul style="list-style-type: none"> ○ Testing the Primary winding ○ Testing the Secondary winding 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Carry out the resistance test on the igniter. This could include: <ul style="list-style-type: none"> ○ Carrying out the resistance test on the igniter for short circuit. ○ Carrying out the resistance test on the igniter for open circuit. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Carry out the resistance test on the pick-up coil. This could include: <ul style="list-style-type: none"> ○ Carrying out the resistance test on the pick-up coil for short circuit. ○ Carrying out the resistance test on the pick-up coil for open circuit. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner`s comments:

Signed:

Examiner Name/Sign:

Learner`s Name/sign:

Date:

Date:

TASK 26: IDENTIFICATION OF COMPONENTS OF EFI SUBSYSTEMS

Activity	Satisfactory			Not Satisfactory		
	1	2	3	1	2	3
During observation of work activities, the candidate demonstrated that they can:						
a) Observe safety This could include <ul style="list-style-type: none"> • Wearing Safety shoes/boots • Wearing Work suit • Chocking the wheels 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Prepare required tools/materials This should include: <ul style="list-style-type: none"> • 8mm and 10mm combination spanners. • Flat and star screw drivers • Mutton cloth 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Carry out the identification of components of EFI subsystems. This could include: <ul style="list-style-type: none"> • Fuel delivery system: <ul style="list-style-type: none"> ○ Fuel tank ○ Fuel pump ○ Fuel filter ○ Fuel rail ○ Fuel injectors ○ Fuel pressure regulator ○ Fuel return pipe ○ Fuel pipes • Air induction system <ul style="list-style-type: none"> ○ Air cleaner ○ Throttle valve ○ Air intake chamber ○ Air intake manifold runner ○ Air intake valve • Electronic control system <ul style="list-style-type: none"> ○ Sensors <ul style="list-style-type: none"> ✓ Manifold absolute pressure sensor (MAP) ✓ Coolant temperature sensor (THW) ✓ Crankshaft position sensor (NE) ✓ Camshaft position sensor (G) ✓ Knock sensor (KS) ✓ Oxygen sensor (Ox) ✓ Throttle position sensor (TPS) ✓ Air temperature sensor (THA) ✓ Vehicle speed sensor (VSS) 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<ul style="list-style-type: none"> ✓ Air flow sensor ○ Electronic Control Unit (ECU) ○ Actuators <ul style="list-style-type: none"> ✓ Injectors ✓ Igniter ✓ Idle speed control valve ✓ Stepper motor ✓ Fuel pump relay ✓ Open circuit relay 						
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Examiner`s comments:

Signed:

Examiner Name/Sign:

Learner`s Name/sign:

Date:

Date:

TASK 27: DIAGNOSING A TOYOTA CAR USING OBDI/SST

Activity	Satisfactory			Not Satisfactory		
	1	2	3	1	2	3
During observation of work activities, the candidate demonstrated that they can:						
a) Observe safety This could include <ul style="list-style-type: none"> • Wearing safety shoes/boots • Wearing full working suit. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Carry out the fault diagnosis using OBDI This could include: <ul style="list-style-type: none"> • Locating the OBDI diagnostic socket • Identifying terminal E1 and TE1/TC/ TS (these are labelled inside the diagnostic socket cover). • Bridging the SST cable between E1 and either TE1/TC/TS. • Switching the ignition ON and observing the flashing of the engine check light. • Taking note of the engine check flashing intervals. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner`s comments:

Signed:

Examiner Name/Sign:

Learner`s Name/sign:

Date:

Date:

TASK 28: VOLTAGE TEST OF THE ECU AND SELECTED SENSORS

Activity	Satisfactory			Not Satisfactory		
	1	2	3	1	2	3
During observation of work activities, the candidate demonstrated that they can:						
a) Observe safety This could include <ul style="list-style-type: none"> • Wearing safety shoes/boots • Wearing working suit • Not dropping the Sensors and ECU. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Prepare required tools/materials This should include: <ul style="list-style-type: none"> • Ohmmeter • ECU • Voltmeter • Flat and star screw drivers • SST cable 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Carryout the voltage test on the ECU. This could include: <ul style="list-style-type: none"> • Disconnecting the ECU connector from the main ECU. • Carrying out the voltage test on the BAT (30). • Carrying out the voltage test on the B+ (15). • Carrying out Voltage test on E1 (31) of the ECU. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Carrying out Voltage test on Selected sensors (MAP, THA, THW) This could include: <ul style="list-style-type: none"> ○ Carrying out the voltage test on the MAP sensor PIM terminal to ground. a. Carrying out the voltage test on the THA sensor input terminal to ground. b. Carrying out the voltage test on the THW sensor input terminal to ground. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner`s comments:

Signed:

Examiner Name/Sign:

Learner`s Name/sign:

Date:

Date:

TASK 29: IDENTIFICATION OF ANTI-LOCK BRAKING SYSTEM COMPONENTS AND TESTING OF WHEEL SPEED SENSORS

Activity	Satisfactory			Not Satisfactory		
	1	2	3	1	2	3
During observation of work activities, the candidate demonstrated that they can:						
a) Observe safety This could include <ul style="list-style-type: none"> • Wearing Safety shoes/boots • Wearing Work suit • Chocking the wheels 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Prepare required tools/materials This should include: <ul style="list-style-type: none"> • 8mm,10mm and16mm combination spanners. • Flat and star screw drivers • Mutton cloth • Multimeter 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Identify components of Anti-lock braking system. This could include: <ul style="list-style-type: none"> • Identifying Wheel speed sensors • Identifying Electronic control unit • Identifying Hydraulic modulator • ABS relays 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Test the wheel speed sensors. This could include: <ul style="list-style-type: none"> • Locating the harness for the wheel speed sensor. • Disconnecting the connector in the ABS line. • Identifying the sensor side of the connector. • Testing the sensors using the ohmmeter. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner`s comments:

Signed:

Examiner Name/Sign:

Learner`s Name/sign:

Date:

Date:

TASK 30: HAZARD AND INDICATOR CIRCUIT CONSTRUCTION

Activity	Satisfactory			Not Satisfactory		
	1	2	3	1	2	3
During observation of work activities, the candidate demonstrated that they can:						
a) Observe safety This could include: <ul style="list-style-type: none"> • Wearing of safety shoes/boots • Wearing of work suit • Avoiding dropping of components • Avoiding causing short circuits during testing of some components. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Preparation of required tools/materials This could include: <ul style="list-style-type: none"> ○ Correct tools ○ 15A fuse, 10A, fuse, electronic flasher unit, hazard indicator switch, 12V x 6 single contact bulbs, 6 x single contact bulb holders, female push-on terminals. ○ 2m x 1.5mm Auto-cables each: red, black, yellow, blue, green and white. ○ Ignition switch ○ 12V Automotive battery ○ 3 insulating tapes 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Construct the hazard- indicator circuit This could include: <ul style="list-style-type: none"> ○ Using the right cable size and colour code. ○ Using the correct materials. ○ Using the correct cable layout. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Testing of the hazard- Indicator Circuit This could include: <ul style="list-style-type: none"> ○ Turning the hazard switch to "ON" position. ○ Turning the hazard switch to "OFF" position. ○ Turning the ignition switch to "ON" position. ○ Activating the indicator switch to the left and right respectively. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Examiner's comments:

Signed:

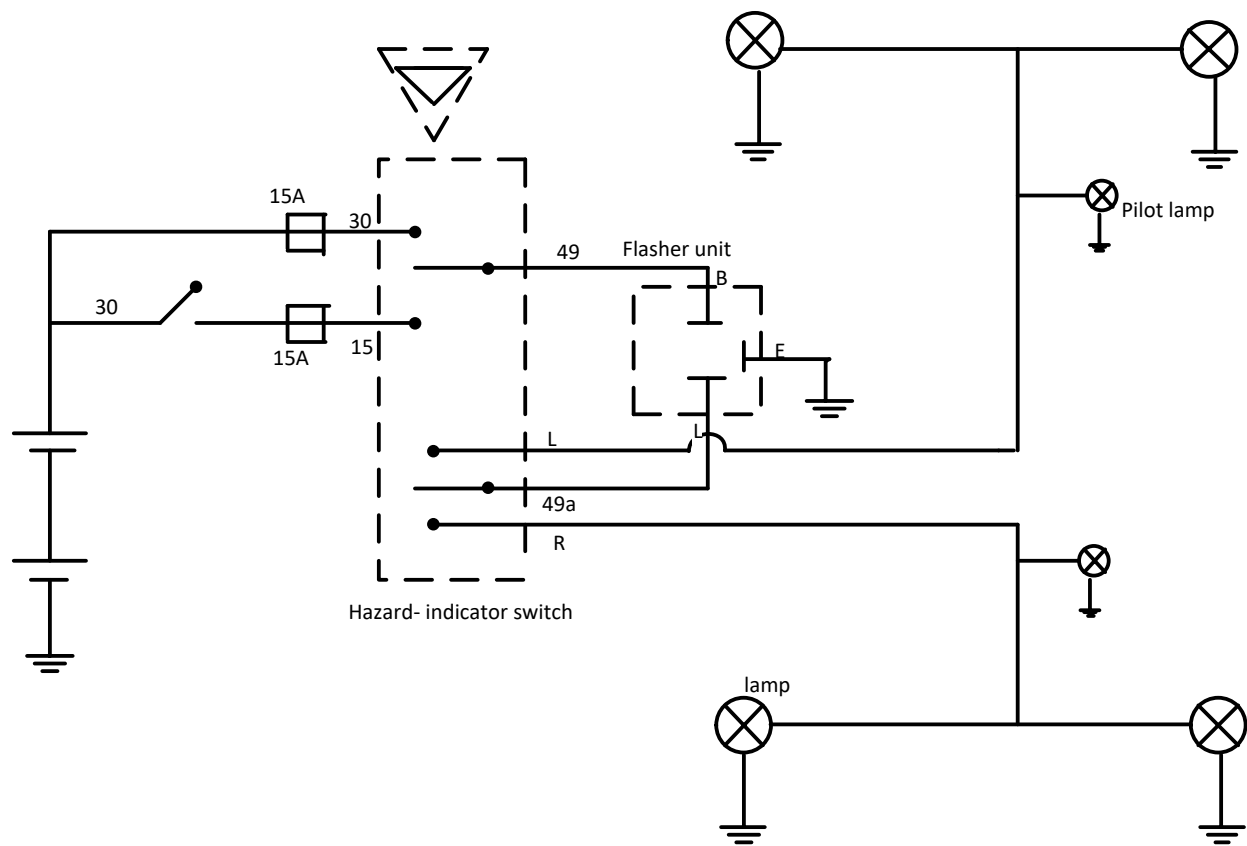
Examiner Name/Sign:

Learner's Name/sign:

Date:

Date:

TASK 30: HAZARD-INDICATOR CIRCUIT



FINAL PRACTICAL ASSESSMENT SUMMARY

Practical assessment summary		Satisfactory	Not Satisfactory
1.	IDENTIFYING ELECTRICAL COMPONENTS ON THE VEHICLE	<input type="checkbox"/>	<input type="checkbox"/>
2.	REMOVING AND REFITTING THE BATTERY ON THE VEHICLE	<input type="checkbox"/>	<input type="checkbox"/>
3.	REMOVE AND FIT THE STARTER MOTOR ON THE VEHICLE	<input type="checkbox"/>	<input type="checkbox"/>
4.	REMOVE AND FIT THE ALTERNATOR ON THE VEHICLE	<input type="checkbox"/>	<input type="checkbox"/>
5.	REMOVE AND FIT THE SPARK PLUGS FROM THE ENGINE IN THE PRESENCE OF THE EXAMINER	<input type="checkbox"/>	<input type="checkbox"/>
6.	REMOVE AND REFIT THE CONVENTION DISTRIBUTOR	<input type="checkbox"/>	<input type="checkbox"/>
7.	REMOVE AND FIT THE ELECTRONIC DISTRIBUTOR	<input type="checkbox"/>	<input type="checkbox"/>
8.	REMOVE AND REFIT CONVENTION IGNITION COILS	<input type="checkbox"/>	<input type="checkbox"/>
9.	REMOVE AND REFIT ELECTRONIC IGNITION COILS	<input type="checkbox"/>	<input type="checkbox"/>
10.	REMOVING AND REPLACING THE WIPER BLADES	<input type="checkbox"/>	<input type="checkbox"/>
11.	BATTERY SERVICE	<input type="checkbox"/>	<input type="checkbox"/>

12.	STARTER MOTOR SERVICE	<input type="checkbox"/>	<input type="checkbox"/>
13.	ALTERNATOR SERVICE	<input type="checkbox"/>	<input type="checkbox"/>
14.	TESTING ELECTRONIC IGNITION COILS AND INDUCTIVE SENSOR	<input type="checkbox"/>	<input type="checkbox"/>
15.	REMOVAL AND TESTING OF SPARK PLUGS AND TENSION CABLES	<input type="checkbox"/>	<input type="checkbox"/>
16.	REMOVE AND TEST THE FUSES AND RELAYS ON THE VEHICLE	<input type="checkbox"/>	<input type="checkbox"/>
17.	HORN CIRCUIT CONSTRUCTION	<input type="checkbox"/>	<input type="checkbox"/>
18.	INDICATOR CIRCUIT CONSTRUCTION	<input type="checkbox"/>	<input type="checkbox"/>
19.	HEADLIGHT CIRCUIT CONSTRUCTION	<input type="checkbox"/>	<input type="checkbox"/>
20.	WIPER MOTOR SERVICE	<input type="checkbox"/>	<input type="checkbox"/>
21.	CHARGING OF TWO 12V DC DISCHARGED BATTERIES	<input type="checkbox"/>	<input type="checkbox"/>
22.	BATTERY DRAIN TEST USING AN AMMETER	<input type="checkbox"/>	<input type="checkbox"/>
23.	STARTING SYSTEM CIRCUIT VOLTAGE DROP TESTING	<input type="checkbox"/>	<input type="checkbox"/>
24.	TESTING THE OUTPUT VOLTAGE OF CHARGING SYSTEM	<input type="checkbox"/>	<input type="checkbox"/>
25.	TESTING THE INTERGRATED IGNITION ASSEMBLY (IIA) ELECTRONIC IGNITION	<input type="checkbox"/>	<input type="checkbox"/>
26.	IDENTIFICATION OF COMPONENTS OF EFI SUBSYSTEMS	<input type="checkbox"/>	<input type="checkbox"/>

ASSESSMENT OUTCOME

Competent



Not Competent

Learner/Trainee	Assessor/Examiner
Learner/Trainee name: _____ (Print)	Assessor/Examiner name: _____ (Print)
Learner/Trainee comments:	Assessor/Examiner comments:
Signature: _____ Date: _____	Signature: _____ Date: _____

VALIDATION OF THE ASSESSMENT

NAME:.....

DATE:.....

POSITION: **PRINCIPAL/HEAD OF INSTITUTION** SIGNATURE:.....

NAME INSTITUTION:.....

STAMP:

