Republic of the Philippines
TECHNICAL EDUCATION AND SKILLS DEVELOPMENT AUTHORITY
East Service Road, South Luzon Expressway, Taguig City

122nd TESDA BOARD MEETING
11 August 2020, Tuesday, 9:00 a.m.
Teleconference Via Zoom Platform

Resolution No. 2020 - 34
(Page 1 of 4 pages)

APPROVING AND PROMULGATING THE TRAINING REGULATIONS FOR AUTOMOTIVE SERVICING (ELECTRICAL REPAIR) NC II

WHEREAS, TESDA Board Resolution No. 2013-11 was issued "Approving and Promulgating the Amendments of the Training Regulations for Automotive Servicing NCI, Automotive Servicing NC II, Automotive Servicing NC III and Automotive Servicing NC IV" last 17 December 2013 during the 87th TESDA Board Meeting;

WHEREAS, it is the policy of TESDA to review after three (3) years any Training Regulations (TRs) promulgated by the TESDA Board;

WHEREAS, there is a need to review the existing Training Regulations in view of the developments in technology and current trends and practices in the industry;

WHEREAS, the **Chamber of Automotive Manufacturers of the Philippines, Inc. (CAMPI) with** the assistance of Qualifications and Standards Office (QSO) of TESDA have reviewed the existing Training Regulations in Automotive Servicing NC II to response to the current skills requirements of the industry with its new technologies and industry manpower set-up and, recommended amendments;

WHEREAS, industry experts and partners, headed by the **President of the Chamber of Automotive Manufacturers of the Philippines, Inc. (CAMPI)**, with the technical assistance of the Qualifications and Standards Office (QSO) of TESDA endorsed the proposed revisions of the Training Regulations. The existing Training Regulations shall be replaced with three (3) different Training Regulations, based on the current skills requirements of the industry with its new technologies and industry manpower set-up;

WHEREAS, during the 125th Standards-Setting and Systems Development (SSSD) Committee Meeting held on 03 August 2020, the Committee deliberated upon and agreed to favorably recommend the approval and promulgation of the

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APPROVING AND PROMULGATING THE TRAINING REGULATIONS FOR AUTOMOTIVE SERVICING (ELECTRICAL REPAIR) NC II

Training Regulations for Automotive Servicing (Electrical Repair) NC II as attached in Annex "A" and made an integral part of this Resolution;

WHEREAS, during the 122nd TESDA Board Meeting on 11 August 2020, the TESDA Board deliberated and considered the proposed Training Regulations for Automotive Servicing (Electrical Repair) NC II;

NOW, THEREFORE, BE IT RESOLVED AS IT IS HEREBY RESOLVED, that the aforementioned Automotive Servicing (Electrical Repair) NC II as herein appended is hereby approved and promulgated;

BE IT RESOLVED, FINALLY, that:

(1) Copies of this Resolution and the abovementioned Training Regulations be published in the Official Gazette or in a newspaper of general circulation, and disseminated to all concerned, and the same shall be effective fifteen (15) days upon publication;

(2) All programs registered under the current Automotive Servicing NC II must comply with the requirements of the abovementioned Training Regulations. The one-year period of re-registration under this Training Regulations shall commence on the date of effectivity as indicated in the Implementing Guidelines/ TESDA Circular for the deployment of the Training Regulations to be issued by the TESDA Secretariat; and

(3) Graduates of TVET programs covered by the aforementioned Training Regulations shall be required to undergo mandatory assessment under the national assessment and certification program.

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APPROVING AND PROMULGATING THE TRAINING REGULATIONS FOR AUTOMOTIVE SERVICING (ELECTRICAL REPAIR) NC II

Adopted this 11th day of August 2020.

ATTY. MARICHELLE D. DE GUZMAN
Board Secretary VI

Attested by:

SEC. ISIDRO S LAPEÑA, PhD, CSEE
Designated Chairperson, TESDA Board
Director General, TESDA

(Original Signed)
USEC. RENATO L. EBARLE
Department of Labor and Employment

(Original Signed)
USEC. EPIMACO V. DENSING
Department of Interior & Local Government

(Original Signed)
USEC. BRENDA L. NAZARETH-MANZANO
Department of Science & Technology

(Original Signed)
MR. ISIDRO ANTONIO C. ASPER
Board Member, Labor Sector

Republic of the Philippines
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Resolution No. 2020 - 34
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APPROVING AND PROMULGATING THE TRAINING REGULATIONS FOR AUTOMOTIVE SERVICING (ELECTRICAL REPAIR) NC II

(Original Signed)
ATTY. BAYANI G. DIWA
Board Member, Labor Sector

(Original Signed)
MR. RENE LUIS M. TADLE
Board Member, Labor Sector

(Original Signed)
MR. RAMON R. DE LEON
Board Member, Labor Sector

(Original Signed)
MR. ROGELIO J. CHAVEZ, JR.
Board Member, Labor Sector

(Original Signed)
DR. LEONIDA BAYANI-ORTIZ
Board Member, Employer Sector

(Original Signed)
PROF. RANDOLPH I. NONATO
Board Member, Employer Sector

(Original Signed)
MS. MARY G. NG
Board Member, Business & Investment Sector

(Original Signed)
MR. ARTURO M. MILAN
Board Member, Business & Investment Sector

AMENDMENT ON TRAINING REGULATIONS FOR AUTOMOTIVE (ELECTRICAL REPAIR) NC II

Existing Promulgated Training Regulation (Board Resolution No. 2013-11)	Amendments
Qualification Title	
Automotive Servicing NC II	Automotive Servicing (Electrical Repair) NC II
SECTION 1 – Definition of the Qualification	
The AUTOMOTIVE SERVICING NC II Qualification consists of competencies that a person must achieve to inspect, clean and repair mechanical or electrical parts, components, assemblies and sub-assemblies of light and heavy-duty automotive vehicle with diesel or gas engine in accordance with manufacturer's specification. It also covers servicing of engine mechanical components such as cooling and lubricating system; performing power train and underchassis servicing and repair.	The **AUTOMOTIVE SERVICING (ELECTRICAL OPERATION) NC II** Qualification consists of competencies that a person must achieve to service manual air-conditioner system, diagnose and repair manual air- conditioner system, repair manual air-conditioner compressor magnetic clutch, diagnose and repair ignition system, diagnose and repair starting system, diagnose and repair charging system and diagnose and repair body electrical system.
Job Title	
• Automotive Mechanic • Automotive Service Technician	• Electrical Technician (Automotive) • Aircon Technician (Automotive)
SECTION 2: Competency Standards	
Basic Competencies 1. Participate in workplace communication 2. Work in a team environment 3. Practice career professionalism 4. Practice occupational health and safety procedures	**Basic Competencies** 1. Participate in workplace communication 2. Work in team environment 3. Solve/address general workplace problems 4. Develop career and life decisions 5. Contribute to workplace innovation 6. Present relevant information 7. Practice occupational safety and health policies and procedures 8. Exercise efficient and effective sustainable practices in the workplace 9. Practice entrepreneurial skills in the workplace
Common Competencies 1. Apply appropriate sealant/adhesive 2. Move and position vehicle 3. Perform mensuration and calculation 4. Read, interpret and apply specifications and manuals 5. Use and apply lubricants/coolants 6. Perform shop maintenance 7. Perform job estimates 8. Interpret/ draw technical drawing 9. Practice health, safety and environment procedures 10. Inspect technical quality of work 11. Maintain quality systems 12. Provide work skill instructions	**Common Competencies** 1. Validate vehicle specification 2. Move and position vehicle 3. Utilize automotive tools 4. Perform mensuration and calculation 5. Utilize workshop facilities and equipment 6. Prepare servicing parts and consumables 7. Prepare vehicle for servicing and releasing

AMENDMENT ON TRAINING REGULATIONS FOR AUTOMOTIVE (ELECTRICAL REPAIR) NC II

Existing Promulgated Training Regulation (Board Resolution No. 2013-11)	Amendments
13. Identify and select original automotive parts and products	
Core Competencies 1. Service Automotive Battery 2. Service Ignition System 3. Test and Repair Wiring/Lighting System 4. Service Starting System 5. Service Charging System 6. Service Engine Mechanical System 7. Service Clutch System 8. Service Differential and Front Axle 9. Service Steering System 10. Service Brake System 11. Service Suspension System 12. Perform Underchassis Preventive Maintenance 13. Overhaul Manual Transmission	**Core Competencies** 1. Service manual air-conditioner system 2. Diagnose and repair manual air-conditioner system 3. Repair manual air-conditioner compressor magnetic clutch 4. Diagnose and repair ignition system 5. Diagnose and repair starting system 6. Diagnose and repair charging system 7. Diagnose and repair body electrical system
SECTION 3: Training Standards	
3.1 Curriculum Design: Nominal Training Duration: 18 Hours (Basic Competencies) 40 Hours (Common Competencies) 618 Hours (Core Competencies) 676 Hours	Nominal Training Duration: 37 Hours (Basic Competencies) 162 Hours (Common Competencies) 213 Hours (Core Competencies) **412** 176 SIL **588 TOTAL HOURS**
Course Description	
This course is designed to enhance the knowledge, skills and attitudes of an individual in the field of automotive servicing in accordance with industry standards. It covers specialized competencies such as service automotive battery, service ignition system, Test and Repair Wiring/ Lighting System, Perform Under Chassis Preventive Maintenance, Perform Shop Maintenance, repair charging and starting system, service engine mechanical system, service and repair clutch system, service and repair differential and front axle, Service steering system, Overhaul Manual Transmission, Service Brake System, Repair Suspension System	This course is designed to enhance the knowledge, skills and attitudes of an individual in the field of automotive servicing in accordance with industry standards. It covers specialized competencies such as inspecting and repairing drive lines; diagnosing and repairing clutch system, brake system, steering system, suspension system; and diagnosing and overhauling manual transmission/transaxle, and differential. Upon completion of the course, the learners are expected to demonstrate the above-mentioned competencies to be employed. To obtain this,

AMENDMENT ON TRAINING REGULATIONS FOR AUTOMOTIVE (ELECTRICAL REPAIR) NC II

Existing Promulgated Training Regulation (Board Resolution No. 2013-11)	Amendments
Repair Suspension System. It covers the basic, common and core competencies. This course is also designed to enhance the basic and common knowledge, skills and attitudes of an individual in the field of automotive servicing.	all units prescribed for this qualification must be achieve.
3.2 Training Delivery	
The delivery of training should adhere to the design of the curriculum. Delivery should be guided by the 10 basic principles of competency-based TVET. • The training is based on curriculum developed from the competency standards; • Learning is modular in its structure; • Training delivery is individualized and self-paced; • Training is based on work that must be performed; • Training materials are directly related to the competency standards and the curriculum modules; • Assessment is based in the collection of evidence of the performance of work to the industry required standard; • Training is based both on and off-the-job components; • Allows for recognition of prior learning (RPL) or current competencies; • Training allows for multiple entry and exit; and • Approved training programs are nationally accredited. The competency-based TVET system recognizes various types of delivery modes, both on and off-the-job as long as the learning is driven by the competency standards specified by the industry. The following training modalities may be adopted when designing training programs: • The dualized mode of training delivery is preferred and recommended. Thus programs would contain both in school and in-industry training or fieldwork components. Details can be referred to the Dual Training System (DTS) Implementing Rules and Regulations.	**1. The delivery of training shall adhere to the design of the curriculum. Delivery shall be guided by the principles of competency-based TVET.** a. Course design is based on competency standards set by the industry or recognized industry sector; (Learning system is driven by competencies written to industry standards) Training delivery is learner-centered and should accommodate individualized and self-paced learning strategies; b. Training can be done on an actual workplace setting, simulation of a workplace and/or through adoption of modern technology. c. Assessment is based in the collection of evidence of the performance of work to the industry required standards; d. Assessment of competency takes the trainee's knowledge and attitude into account but requires evidence of actual performance of the competency as the primary source of evidence. e. Training program allows for recognition of prior learning (RPL) or current competencies; f. Training completion is based on satisfactory performance of all specified competencies. **2. The competency-based TVET system recognizes various types of delivery modes, both on-and off-the-job as long as the learning is driven by the competency standards specified by the industry. The following training modalities and their variations/components may be adopted singly or in combination with other modalities when designing and delivering training programs:**

AMENDMENT ON TRAINING REGULATIONS FOR AUTOMOTIVE (ELECTRICAL REPAIR) NC II

Existing Promulgated Training Regulation (Board Resolution No. 2013-11)	Amendments
• Modular/self-paced learning is a competency-based training modality wherein the trainee is allowed to progress at his own pace. The trainer facilitates the training delivery • Peer teaching/mentoring is a training modality wherein fast learners are given the opportunity to assist the slow learners. • Supervised industry training or on-the-job training is an approach in training designed to enhance the knowledge and skills of the trainee through actual experience in the workplace to acquire specific competencies prescribed in the training regulations. Distance learning is a formal education process in which majority of the instruction occurs when the students and instructor are not in the same place. Distance learning may employ correspondence study, or audio, video or computer technologies.	**2.1 School/Institution- Based:** • Dual Training System (DTS)/Dualized Training Program (DTP) which contain both in-school and in-industry training or fieldwork components. Details can be referred to the Implementing Rules and Regulations of the DTS Law and the TESDA Guidelines on the DTP; • Distance learning is a formal education process in which majority of the instruction occurs when the students and instructor are not in the same place. Distance learning may employ correspondence study, audio, video, computer technologies or other modern technology that can be used to facilitate learning and formal and non-formal training. Specific guidelines on this mode shall be issued by the TESDA Secretariat. • Supervised Industry Training (SIT) or on-the-job training (OJT) is an approach in training designed to enhance the knowledge and skills of the trainee through actual experience in the workplace to acquire specific competencies as prescribed in the training regulations. It is imperative that the deployment of trainees in the workplace is adhered to training programs agreed by the institution and enterprise and status and progress of trainees are closely monitored by the training institutions to prevent opportunity for work exploitation. • The classroom-based or in-center instruction uses of learner-centered methods as well as laboratory or field-work components. **2.2 Enterprise-Based:** • Formal Apprenticeship – Training within employment involving a contract between an apprentice and an

AMENDMENT ON TRAINING REGULATIONS FOR AUTOMOTIVE (ELECTRICAL REPAIR) NC II

Existing Promulgated Training Regulation (Board Resolution No. 2013-11)	Amendments
	enterprise on an approved apprenticeable occupation. • Informal Apprenticeship - is based on a training (and working) agreement between an apprentice and a master craftsperson wherein the agreement may be written or oral and the master craftsperson commits to training the apprentice in all the skills relevant to his or her trade over a significant period of time, usually between one and four years, while the apprentice commits to contributing productively to the work of the business. Training is integrated into the production process and apprentices learn by working alongside the experienced craftsperson. • Enterprise-based Training- where training is implemented within the company in accordance with the requirements of the specific company. Specific guidelines on this mode shall be issued by the TESDA Secretariat. **2.3 Community-Based** – short term program conducted by non-government organizations (NGOs), LGUs, training centers and other TVET providers which are intended to address the specific needs of a community. Such programs can be conducted in informal settings such as barangay hall, basketball courts, etc. These programs can also be mobile training program (MTP).
3.3 Trainee Entry Requirements	
Trainees or students should possess the following requirements: • Can communicate both oral and written; • Can perform basic mathematical computation. This list does not include specific institutional requirements such as educational attainment, appropriate work experience, and others that may be required of the trainees by the school or training center delivering the TVET program.	Trainees or students who would like to enroll in this program must possess the following requirements: • A holder of National Certificate in Automotive Servicing NC I; • Basic communication skills; • Basic mathematical skills; • Basic computer skills This list does not include specific institutional requirements such as educational attainment,

AMENDMENT ON TRAINING REGULATIONS FOR AUTOMOTIVE (ELECTRICAL REPAIR) NC II

<table>
<tr><th>Existing Promulgated Training Regulation (Board Resolution No. 2013-11)</th><th>Amendments</th></tr>
<tr><td></td><td>appropriate work experience, and others that may be required of the trainees by the school or training center delivering the TVET program.</td></tr>
<tr><td colspan="2">3.4 List of Tools, Equipment and Materials</td></tr>
<tr><td>Recommended list of tools, equipment and materials for the training of 20 trainees for Automotive Servicing – NC II

<table>
<tr><th colspan="2">TOOLS</th><th colspan="2">EQUIPMENT</th><th colspan="2">MATERIALS</th></tr>
<tr><th>QTY</th><th></th><th>QTY</th><th></th><th>QTY</th><th></th></tr>
<tr><td>4 sets</td><td>• Box wrench</td><td>2 units</td><td>• Motor Vehicle</td><td>50 ltrs.</td><td>• Engine oil</td></tr>
<tr><td>4 sets</td><td>• Socket wrench</td><td>2 units</td><td>• Engine</td><td>10 ltrs.</td><td>• Grease</td></tr>
<tr><td>4 sets</td><td>• Pliers</td><td>2 units</td><td>• Hydraulic jack/lift</td><td>10 ltrs.</td><td>• Sealant /adhesive</td></tr>
<tr><td>4 sets</td><td>• Screw driver</td><td>4 units</td><td>• Growler tester</td><td>50 ltrs.</td><td>• Hydraulic oils/gear oil</td></tr>
<tr><td>4 sets</td><td>• Wire stripper</td><td>4 units</td><td>• Ignition timing light</td><td>50 ltrs.</td><td>• Automatic transmission fluid</td></tr>
<tr><td>4 sets</td><td>• Mechanic's hammer</td><td>4 units</td><td>• Tachometer</td><td>10 pcs.</td><td>• Wheel wedges</td></tr>
<tr><td>20 pcs.</td><td>• Apron</td><td>4 units</td><td>• Differential and front axle</td><td>10 pcs.</td><td>• Test lamp</td></tr>
<tr><td>20 pcs.</td><td>• Goggle</td><td>4 units</td><td>• Multimeter</td><td></td><td></td></tr>
<tr><td>20 pcs.</td><td>• Glove</td><td></td><td></td><td></td><td></td></tr>
<tr><td>4 sets</td><td>• Torque wrench</td><td></td><td></td><td></td><td></td></tr>
<tr><td>4 sets</td><td>• Feeler gauge</td><td></td><td></td><td></td><td></td></tr>
<tr><td>4 sets</td><td>• Battery tester</td><td></td><td></td><td></td><td></td></tr>
<tr><td>4 sets</td><td>• Hydrometer</td><td></td><td></td><td></td><td></td></tr>
<tr><td>4 sets</td><td>• Dial gauge</td><td></td><td></td><td></td><td></td></tr>
<tr><td>4 sets</td><td>• Bore gauge</td><td></td><td></td><td></td><td></td></tr>
<tr><td>4 sets</td><td>• Micrometer caliper</td><td></td><td></td><td></td><td></td></tr>
</table>
</td><td>Recommended list of tools, equipment and materials for the training of 25 trainees for Automotive Servicing (Electrical Repair) NC II.

Up-to-date tools, materials, and equipment of equivalent functions can be used as alternatives. This also applies in consideration of community practices and their availability in the local market.

Full Qualification:
<table>
<tr><th colspan="2">TOOLS</th></tr>
<tr><th>QTY</th><th>DESCRIPTION</th></tr>
<tr><td>5 sets</td><td>Basic hand tools (Mechanical pliers, Screw driver, socket wrench, spanner, hammer)</td></tr>
<tr><td>1 set</td><td>AC clutch coil puller</td></tr>
<tr><td>1 set</td><td>Alternator bearing puller</td></tr>
<tr><td>5 pc</td><td>Snap ring plier</td></tr>
<tr><td>5 pc</td><td>Straight hexagon wrench</td></tr>
<tr><td>5 pcs.</td><td>Torque wrench</td></tr>
<tr><td>5 pcs.</td><td>Feeler gauge</td></tr>
<tr><td>2 pcs</td><td>Service type Thermometer (10 to 100 degrees C)</td></tr>
<tr><td>1 pc</td><td>hygrometer</td></tr>
<tr><td>2 pcs</td><td>Timing light</td></tr>
<tr><td>1 pc</td><td>Bench vice</td></tr>
<tr><td>2 pcs</td><td>Belt tension gauge</td></tr>
<tr><td>2 pcs</td><td>Wire splicer</td></tr>
<tr><td>5 sets</td><td>Feeler gauge</td></tr>
<tr><td>2 sets</td><td>Spark plug wrench (14mm,16mm,21mm)</td></tr>
<tr><td>1 pc</td><td>Vernier Caliper</td></tr>
<tr><td>1 pc</td><td>Bench vice (6")</td></tr>
<tr><td>1 set</td><td>Jumper cable (400amph)</td></tr>
<tr><td>2 pcs</td><td>Trouble light LED (15w)</td></tr>
<tr><td>1 unit</td><td>Battery/Load tester</td></tr>
<tr><td>1 pc</td><td>Soldering iron (60-100w)</td></tr>
<tr><td>4 pc</td><td>Extension/power cable (10m)</td></tr>
<tr><td>1 pc</td><td>Impact wrench</td></tr>
<tr><td>1 roll per size</td><td>Electrical wire(gauge10,12,14,16)</td></tr>
<tr><td>1 pc</td><td>Clamp Type Ammeter</td></tr>
</table>

<table>
<tr><th colspan="2">EQUIPMENT</th></tr>
<tr><th>QTY</th><th>DESCRIPTION</th></tr>
<tr><td>2 units 1 gasoline type and 1 diesel type</td><td>Training vehicle with manual air-conditioning system (model 90's and up)</td></tr>
<tr><td>5 units</td><td>Alternator assembly</td></tr>
</table>
</td></tr>
</table>

AMENDMENT ON TRAINING REGULATIONS FOR AUTOMOTIVE (ELECTRICAL REPAIR) NC II

Existing Promulgated Training Regulation (Board Resolution No. 2013-11)	Amendments

5 units	AC compressor assembly
1 set	AC Refrigerant recovery, recharging and recycling machine
5 pcs.	Digital multitester
5 pcs	Soldering iron
2 pcs.	Crocodile jack (or equivalent)
5 pcs.	Trouble light (or equivalent)
1 pc.	Belt tension gauge
2 pcs.	Vernier caliper
2 pcs.	Dial gauge w/ magnetic stand
2 pcs.	Spring scale
5 sets	Manifold charging gauge with hose
2 sets	Halogen leak detector
1 unit	Vacuum pump
8 units	Jack stand
2 pcs	Creeper
2 units	Working table (4ft x 2ft- wood)
2 units	Wheel wedge
1 unit	Graduated cylinder
5 pcs	Soldering stand
1 unit	Vehicle lifter
1 unit	Battery charger

MATERIALS	
QTY	**DESCRIPTION**
25 pairs	Cotton gloves
50 pc	Cotton rags
1 roll	Soldering lead
5 cans	Non-conductive electrical connector spray cleaner
50 pc	Eye terminal
50 pc	Male terminal
50 pc	Female terminal
5 rolls	Electrical tape
10m/type	Automotive wire ▪ #10 awg ▪ #12 awg ▪ #14 awg ▪ #16awg
20 pc	Alligator clip - Medium
20 pc	O- ring (assorted sizes and thickness)
50 pc	Cotton Rags
40 kg	Refrigerant, 134A
1 L	Compressor oil
5 pc	Shaft seal (assorted)
1 can	Nitrogen gas
1 pc	Desiccant materials
2 rolls	Butyl tape
25 pc	**PPEs** - Face mask - Face shield* - Goggles - Gloves - Coverall suit - Safety shoes
1 gallon	70% Alcohol*

AMENDMENT ON TRAINING REGULATIONS FOR AUTOMOTIVE (ELECTRICAL REPAIR) NC II

Existing Promulgated Training Regulation (Board Resolution No. 2013-11)	Amendments

1 tube (100g)	Grease
250 ml	Penetrating oil
250 ml	Contact cleaner
1 m	Shrinkable tube (5 mm)
1 can	Soldering paste
1 L	Cleaning agent
1 L	Distilled water
1 pc	Heat gun
5 pc/grit	Sand paper Grit- 600,1000
1 pack	Cable tie (8")
1 box	Carbon brush
5 pcs/ type	Switches ▪ Toggle switch (6 terminal) ▪ Push pull switch ▪ Push button switch
2 pc	Relays (30-60 Amp)12 volts
2 pc	Fusible link for battery
2 pcs/type	Bulbs (12 volts) ▪ Double contact ▪ Single contact ▪ Headlight bulb ▪ Peanut bulb
5pcs/ amp	Fuses ▪ 7.5 Amp ▪ 10 Amp ▪ 15 Amp ▪ 20 Amp ▪ 30 Amp
2 sets	Car protective equipment (CPE)- all UCs and 3 Qualifications • Steering wheel cover • Fender cover • Shift knob cover • Floor mat • Seat cover

PER COC

COC 1 – SERVICE AUTOMOTIVE MANUAL AIR-CONDITIONING SYSTEM

TOOLS	
QTY	**DESCRIPTION**
2 sets	Basic hand tools
2 pcs	Straight hexagon wrench
2 pcs	Torque wrench (Required torque 100kg cm)
2 pcs	Feeler gauge
2 pcs	Service type thermometer
2 pcs	Multi-tester

AMENDMENT ON TRAINING REGULATIONS FOR AUTOMOTIVE (ELECTRICAL REPAIR) NC II

Existing Promulgated Training Regulation (Board Resolution No. 2013-11)	Amendments

EQUIPMENT

QTY	DESCRIPTION
1 set	Recovery and recycling machine
2 pcs	Manifold charging gauge with hose
1 set	Halogen leak detector
1 pc	Hygrometer
1 unit	Pressure washer
1 unit	Vacuum pump
2 pcs	Service trouble lamp
1 set	Refrigerant charging gauge with hose
1 unit	Graduated cylinder

MATERIALS

QTY	DESCRIPTION
10 pcs	O- ring (assorted sizes and thickness)
25 pcs	Rags
20 kg	Refrigerant
0.5 L	Compressor oil
5 pcs	Shaft seal
1 cylinder	Nitrogen gas
1 pc	Desiccant materials
1 roll	Butyl tape
1 set	Car Protective Equipment (CPE)
2 rolls	Insulation tape
1 can	Penetrating oil
5 sets	Cleaning agent ▪ Cleaning solution ▪ Water ▪ Brush ▪ Soap suds
25 pc	**PPEs** - Face mask - Face shield* - Goggles - Gloves - Coverall suit - Safety shoes
1 gallon	70% Alcohol*

COC 2 - SERVICE AUTOMOTIVE ELECTRICAL SYSTEM

AMENDMENT ON TRAINING REGULATIONS FOR AUTOMOTIVE (ELECTRICAL REPAIR) NC II

Existing Promulgated Training Regulation (Board Resolution No. 2013-11)	Amendments

TOOLS

QTY	DESCRIPTION
3 set	Basic hand tools
3 pc	Feeler or thickness gauge
3 pc	Multi-tester (analog and digital)
2 set	Spark-plug wrench
3 pc	Torque wrench
5 pc	Digital multitester
1 pc	Bench vice
1 pc	Clamp Type Ammeter (60-100Amp) (digital and analog)
1 set	Jumper cable
5 pc	Soldering iron
5 pc	Soldering stand
4 pc	Extension/power cable (10m)
1 pc	Desoldering tool
1 pc	Vernier caliper
1pc/type	Special Service Tools (SST) - Pulley removal - Belt tension gauge - Alternator bearing puller
1 pc	Impact wrench
1 roll/size	Electrical wire(gauge10,12,14,16)
2 pc	Hydrometer
2 pc	Wire splicer
1 pc	Clamp Type Ammeter

EQUIPMENT

QTY	DESCRIPTION
2 pc	Timing light
3 pc	Service trouble light
1 unit	Vehicle lifter
2 pc	Crocodile jack
8 unit	Jack stand
2 pc	Creeper
1 unit	Battery charger
1 unit	Battery load tester
2 unit	Working table

AMENDMENT ON TRAINING REGULATIONS FOR AUTOMOTIVE (ELECTRICAL REPAIR) NC II

Existing Promulgated Training Regulation (Board Resolution No. 2013-11)	Amendments

MATERIALS

QTY	DESCRIPTION
25 pc	Cotton rags
1 tube (100g)	Grease
5 rolls	Electrical tape
250ml	Contact cleaner
1 roll	Soldering lead
1 can	Soldering paste
10m/type	Automotive wire ▪ #10 awg ▪ #12 awg ▪ #14 awg ▪ #16awg
1 pack	Cable tie (8")
1 box	Carbon brush
1 set	CPE
25 pc	**PPEs** - Face mask - Face shield* - Goggles - Gloves - Coverall suit - Safety shoes
1 gallon	70% Alcohol*
1 set	First-Aid Kit
1 m	Shrinkable tube fuse for bulbs
2 pc	Fusible link for battery
2 pc/type	Bulbs (12 volts) ▪ Double contact ▪ Single contact ▪ Headlight bulb ▪ Peanut bulb
5pcs/amp	Fuses ▪ 7.5 Amp ▪ 10 Amp ▪ 15 Amp ▪ 20 Amp ▪ 30 Amp
2 pc	Relays (30-60 Amp)12 volts
5 pc/type	Switches ▪ Toggle switch (6 terminal) ▪ Push pull switch ▪ Push button switch
50 pc	Eye terminal
50 pc	Female terminal
50 pc	Male terminal

Note: Access to and use of equipment/facilities can be provided through cooperative arrangements or MOA with other partner/companies.
*these materials will be required during the pandemic as mandated by the existing guidelines issued by the government in line with protection against virus and other infectious diseases for trainees and trainers

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3.5 Training Facilities

Existing Promulgated Training Regulation (Board Resolution No. 2013-11)

The automotive workshop must be made of reinforced concrete or steel structure. The size must be suited on the requirements of the competencies. The class size of 25 students/trainees is reserved for the lecture room and the practical demonstration area for carrying out servicing of minor automotive parts. Most of the learning activities such as on-vehicle servicing are performed in the workshop.

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METERS	TOTAL AREA IN SQ. METERS
• Building (permanent)	12.00 x 32.00	-	384.00
• Student/Trainee Working Space	2.50 x 2.50 per student/trainee	6.25 per student	156.25
• Contextual Learning Laboratory	4.00 x 5.00	20.00	20.00
• Lecture Room	4.00 x 7.00	28.00	28.00
• Learning Resource Center	4.00 x 5.00	20.00	20.00
• Facilities/Equipment /Circulation Area	-	-	159.75

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The automotive workshop must be made of reinforced concrete or steel structure. The size must be suited on the requirements of the competencies. The class size of 25 students/trainees is reserved for the lecture room and the practical demonstration area for carrying out servicing of minor automotive parts. Most of the learning activities such as on-vehicle servicing is performed in the workshop.

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METERS	GRAND TOTAL AREA IN SQ. METERS
A. Building (permanent)			**130.00**
Lecture Room	5x6	30	30.00
Laboratory/Work shop Area		2 per student	50.00
Tool room & S/M storage area		20	20.00
Learning resource area	5x4	20	20.00
Wash area/comfort room (male & female)		10	10.00
TOTAL			**130.00**

NOTE: Access to and use of equipment /facilities can be provided through cooperative arrangements or MOA with other partner- companies/institutions.

3.6 Trainer's Qualification

AUTOMOTIVE SERVICING – NC II

- Holder of National TVET Trainers Certificate (NTTC) Level 1 - Automotive Servicing NC II
- Must be computer literate
- *Must have at least 2 years job/industry experience

AUTOMOTIVE SERVICING (ELECTRICALREPAIR) NC II

NEW TRAINERS

- Holder of National TVET Trainers Certificate (NTTC) Level 1 in Automotive Servicing (Electrical Repair) NC II
- Must have at least 1-year industry experience in automotive servicing for the last 3 years

EXISTING TRAINERS

- Holder of National TVET Trainers Certificate (NTTC) Level 1 in Automotive Servicing (Electrical Repair) NC II
- Must have industry immersion of 40 hours annually (industry training which includes

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Existing Promulgated Training Regulation (Board Resolution No. 2013-11)	Amendments
	structured training program inclusive of hands-on activities and observation in a workshop, and training certificates with number of hours)
3.7 Institutional Assessment	
Institutional assessment is undertaken by trainees to determine their achievement of units of competency. A certificate of achievement is issued for each unit of competency.	Institutional Assessment is gathering of evidences to determine the achievements of the requirements of the qualification to enable the trainer make judgement whether the trainee is competent or not competent.
SECTION 4. National Assessment and Certification Arrangements	
4.1. To attain the National Qualification of Automotive Servicing NC II, the candidate must demonstrate competence in all the units listed in Section 1. Successful candidates shall be awarded a National Certificate signed by the TESDA Director General. 4.2. Individual aspiring to be awarded the qualification of Automotive Servicing NC II must acquire Certificates of Competency in all the following core units of the Qualification. Candidates may apply for assessment in any accredited assessment center. **4.2.1 Service Engine Component** • Service Engine Mechanical Components **4.2.2 Service Automotive Electrical** Components • Service Automotive Battery • Service Ignition System • Test and Repair Wiring/Lighting System • Service Starting System • Service Charging System **4.2.3 Service Underchassis Components** • Perform Underchassis Preventive Maintenance • Service Steering System • Service Brake System • Service Suspension System 4.2.4 **Service Powertrain Components** • Service Clutch System • Service Differential and Front Axle	Competency Assessment is the process of collecting evidence and making judgments whether competency has been achieved. The purpose of assessment is to confirm that an individual can perform to the standards expected at the workplace as expressed in relevant competency standards. The assessment process is based on evidence or information gathered to prove achievement of competencies. The process may be applied to a full qualification or employable unit(s) of competency in partial fulfillment of the requirements of the national qualification. **4.1. NATIONAL ASSESSMENT AND CERTIFICATION ARRANGEMENTS** 4.1.1 A National Certificate (NC) is issued when a candidate has demonstrated competence on all units of competency in a qualification with a promulgated Training Regulations. 4.1.2 A Certificate of Competency (COC) is issued by the Authority to individuals who were assessed as competent in a single unit or cluster of related units of competency. **COC1: SERVICE AUTOMOTIVE MANUAL AIR-CONDITIONING SYSTEM** • Service manual air-conditioner system • Diagnose and repair manual air-conditioner system

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Existing Promulgated Training Regulation (Board Resolution No. 2013-11)	Amendments
• Overhaul Manual Transmission Successful candidates shall be awarded Certificates of Competency (COCs) 4.3. Accumulation and submission of all COCs acquired for the relevant units of competency comprising a qualification, an individual shall be issued the corresponding National Certificate. 4.4. Assessment shall focus on the core units of competency. The basic and common units shall be integrated or assessed concurrently with the core units. 4.5. The following are qualified to apply for assessment and certification: 4.5.1 Graduates of formal, non-formal and informal including enterprise-based training programs 4.5.2 Experienced Workers (wage employed or self-employed) 4.6. The guidelines on assessment and certification are discussed in detail in the Procedures Manual on Assessment and Certification and Guidelines on the Implementation of the Philippine TVET Qualification and Certification System (PTQCS).	• Repair manual air-conditioner compressor magnetic clutch **COC2: SERVICE AUTOMOTIVE ELECTRICAL SYSTEM** • Diagnose and repair ignition system • Diagnose and repair starting system • Diagnose and repair charging system • Diagnose and repair body electrical system 4.1.3 Upon accumulation of the COCs acquired, an individual shall be issued the corresponding National Certificate for the Qualification. 4.1.4 Individuals wanting to be certified will have to be assessed in accordance with the requirements identified in the relevant unit/s of competency. 4.1.5 Current holders of National Certificate (NC) in **AUTOMOTIVE SERVICING NC II** shall have their certificates renewed and converted to the amended TR provided he/she has accumulated at least 2 years (for the last five years) work experience, practicing the competencies prescribed in his/her certificate. A Certificate of Employment and Job Description must be provided as proof. He/she must be a holder of National Certificate in the amended Automotive Servicing NC I. 4.1.6 Current holders of Certificate of Competency (COC) in **AUTOMOTIVE SERVICING NC II**, shall have to undergo assessment in the amended Training Regulations upon expiration of their Certificates. He or she must be

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	a holder of National Certificate in the amended Automotive Servicing NC I. 4.1.7 Current holders of NTTC Level I in **AUTOMOTIVE SERVICING NCII** shall have their NCII converted to the amended TR provided that they have forty-eight (48) hours industry immersion within the last two (2) years. He or she must be a holder of National Certificate in the amended Automotive Servicing NC I. 4.1.8 The industry shall determine assessment and certification requirements for each qualification with promulgated Training Regulations. It includes the following: a. Entry requirements for candidates b. Evidence gathering methods c. Qualification requirements of competency assessors d. Specific assessment and certification arrangements as identified by industry 4.1.9 Recognition of Prior Learning (RPL). Candidates who have gained competencies through informal training, previous work or life experiences may apply for recognition in a particular qualification through a recognition/assessment process. 4.1.10 A candidate who fails the assessment for two (2) consecutive times shall be advised to go through a refresher course before taking another assessment. **4.2. COMPETENCY ASSESSMENT REQUISITE** 4.2.1Self-Assessment Guide. The self-assessment guide (SAG) is

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Existing Promulgated Training Regulation (Board Resolution No. 2013-11)	Amendments
	accomplished by the candidate prior to actual competency assessment. SAG is a pre-assessment tool to help the candidate and the assessor determine what evidence is available, where gaps exist, including readiness for assessment. This document can: a. Identify the candidate's skills and knowledge b. Highlight gaps in candidate's skills and knowledge c. Provide critical guidance to the assessor and candidate on the evidence that need to be presented d. Assist the candidate to identify key areas in which practice is needed or additional information or skills that should be gained prior to assessment 4.2.2Accredited Assessment Center. Only Assessment Center accredited by TESDA is authorized to conduct competency assessment. Assessment centers undergo a quality assured procedure for accreditation before they are authorized by TESDA to manage the assessment for National Certification. 4.2.3 Accredited Competency Assessor. Only accredited competency assessor is authorized to conduct assessment of competence. Competency assessors undergo a quality assured system of accreditation procedure before they are authorized by TESDA to assess the competencies of candidates for National Certification.