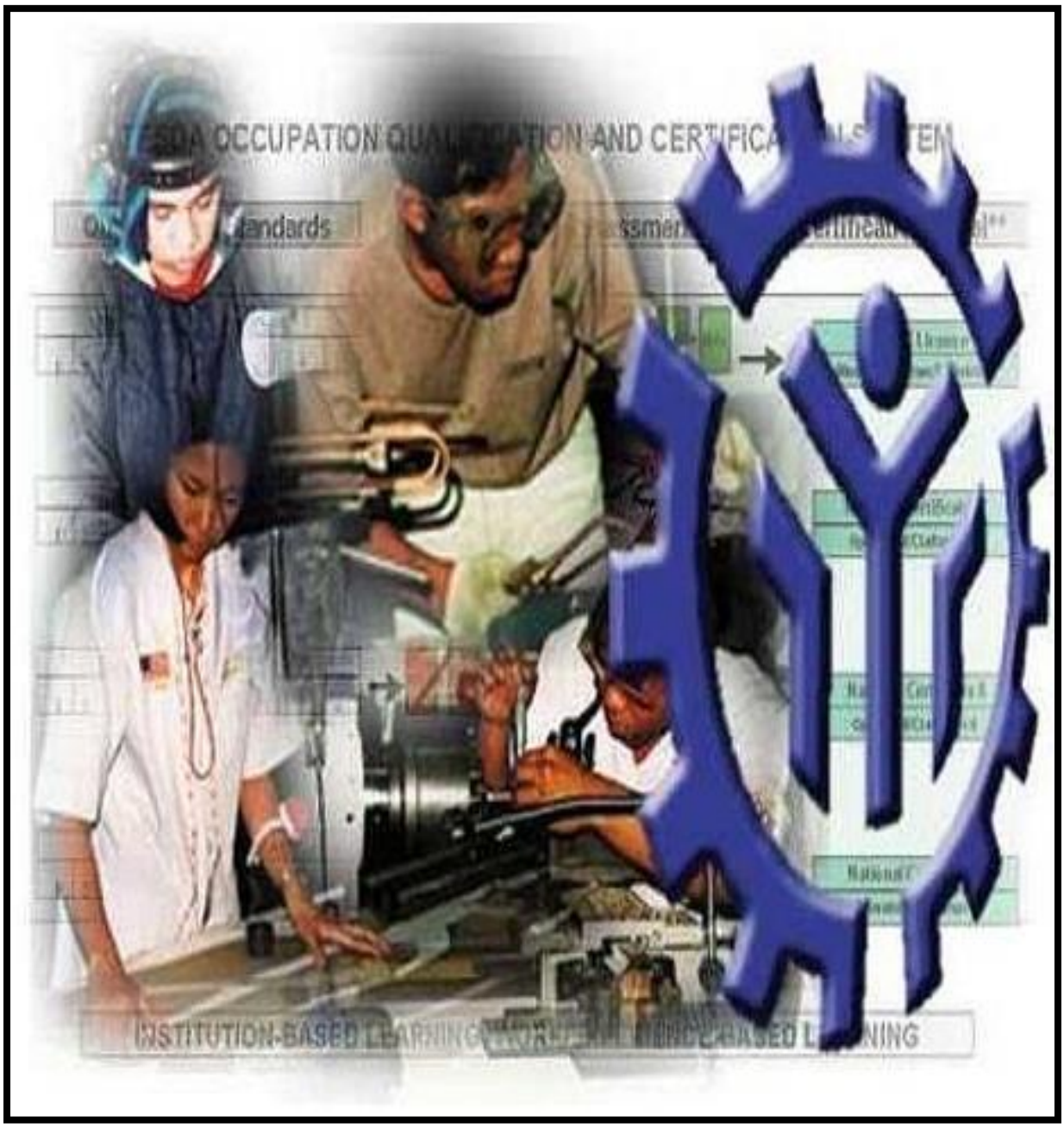
TRAINING REGULATIONS

SPEED LIMITATION DEVICE SERVICING NC II



AUTOMOTIVE AND LAND TRANSPORT SECTOR

TECHNICAL EDUCATION AND SKILLS DEVELOPMENT AUTHORITY
TESDA Complex East Service Road, South Luzon Expressway (SLEX),
Fort Bonifacio, Taguig City

Technical Education and Skills Development Act of 1994
(Republic Act No. 7796)

Section 22, “Establishment and Administration of the National Trade Skills Standards” of the RA 7796 known as the TESDA Act mandates TESDA to establish national occupational skill standards. The Authority shall develop and implement a certification and accreditation program in which private industry group and trade associations are accredited to conduct approved trade tests, and the local government units to promote such trade testing activities in their respective areas in accordance with the guidelines to be set by the Authority.

The Training Regulations (TR) serve as basis for the:

1. Competency assessment and certification;
2. Registration and delivery of training programs; and
3. Development of curriculum and assessment instruments.

Each TR has four sections:

Section 1 **Definition of Qualification** - describes the qualification and defines the competencies that comprise the qualification.

Section 2 **Competency Standards** - was revised to include the Required Knowledge and Required Skills per element. These fields explicitly state the required knowledge and skills for competent performance of a unit of competency in an informed and effective manner. These also emphasize the application of knowledge and skills to situations where understanding is converted into a workplace outcome.

Section 3 **Training Arrangements** - contain the information and requirements which serve as bases for training providers in designing and delivering competency-based curriculum for the qualification. The revisions to Section 3 entail identifying the Learning Activities leading to achievement of the identified Learning Outcome.

Section 4 **Assessment and Certification Arrangements** - describe the policies governing assessment and certification procedures for the qualification.

TABLE OF CONTENTS

AUTOMOTIVE AND LAND TRANSPORT SECTOR
SPEED LIMITATION DEVICE SERVICING NC II

		Page/s
Section 1	**SPEED LIMITATION DEVICE SERVICING NC II**	**1**
Section 2	**COMPETENCY STANDARDS**	**2 – 80**
	• Basic Competencies	2
	• Common Competencies	36
	• Core Competencies	63
Section 3	**TRAINING ARRANGEMENTS**	**81 – 114**
	3.1 Curriculum Design	81
	3.2 Training Delivery	110
	3.3 Trainee Entry Requirements	112
	3.4 List of Tools, Equipment and Materials	112
	3.5 Training Facilities	114
	3.6 Trainers' Qualifications	114
	3.7 Institutional Assessment	114
Section 4	**ASSESSMENT AND CERTIFICATION ARRANGEMENT**	**115 – 116**
COMPETENCY MAP		**117**
GLOSSARY OF TERMS		**121**
TRAINING REGULATIONS DOCUMENT REVISION HISTORY		**123**
ACKNOWLEDGEMENTS		**124**

TRAINING REGULATIONS FOR

SPEED LIMITATION DEVICE NC II

SECTION 1 SPEED LIMITATION DEVICE SERVICING NC II QUALIFICATION

The **SPEED LIMITATION DEVICE SERVICING NC II** Qualification consists of competencies that a person must achieve to conduct basic inspection of engine and other electrical components; install, repair, and maintain Speed Limitation Device. It covers both manufactured and second-hand vehicles: closed van, covered vehicle, hauler or cargo truck, motor vehicle, public utility vehicle (PUV), shuttle service, and tanker truck.

This Qualification is packaged from the competency map of the Automotive and Land Transport Sector as shown in Annex A.

The Units of Competency comprising this Qualification include the following:

CODE NO.	BASIC COMPETENCIES
400311210	Participate in workplace communication
400311211	Work in team environment
400311212	Solve/address general workplace problems
400311213	Develop career and life decisions
400311214	Contribute to workplace innovation
400311215	Present relevant information
400311216	Practice occupational safety and health policies and procedures
400311217	Exercise efficient and effective sustainable practices in the workplace
400311218	Practice entrepreneurial skills in the workplace
CODE NO.	**COMMON COMPETENCIES**
ALT723211	Validate vehicle specification
ALT723214	Utilize automotive tools
ALT723215	Perform mensuration and calculation
ALT723216	Utilize workshop facilities and equipment
ALT723217	Prepare servicing parts and consumables
ALT723218	Prepare vehicle for servicing and releasing
CODE NO.	**CORE COMPETENCIES**
ALT723382	Conduct basic inspection of engine and other electrical components
ALT723383	Perform installation of Speed Limitation Device
ALT723384	Maintain Speed Limitation Device

A person who has achieved this Qualification is competent to be:

- Speed Limitation Device Installer
- Speed Limitation Device Installation Technician

SECTION 2 COMPETENCY STANDARDS

This section gives the details of the contents of the basic, common and core units of competency required in **SPEED LIMITATION DEVICE SERVICING NC II**.

BASIC COMPETENCIES

UNIT OF COMPETENCY : PARTICIPATE IN WORKPLACE COMMUNICATION

UNIT CODE : 400311210

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes required to gather, interpret and convey information in response to workplace requirements.

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Obtain and convey workplace information	1.1 Specific and relevant information is accessed from ***appropriate sources***. 1.2 Effective questioning, active listening and speaking skills are used to gather and convey information. 1.3 Appropriate ***medium*** is used to transfer information and ideas. 1.4 Appropriate non-verbal communication is used. 1.5 Appropriate lines of communication with supervisors and colleagues are identified and followed. 1.6 Defined workplace procedures for the location and ***storage*** of information are used.	1.1 Effective verbal and nonverbal communication 1.2 Different modes of communication 1.3 Medium of communication in the workplace 1.4 Organizational policies 1.5 Communication procedures and systems 1.6 Lines of Communication 1.7 Technology relevant to the enterprise and the individual's work responsibilities 1.8 Workplace etiquette	1.1 Following simple spoken language 1.2 Performing routine workplace duties following simple written notices 1.3 Participating in workplace meetings and discussions 1.4 Preparing work-related documents 1.5 Estimating, calculating and recording routine workplace measures 1.6 Relating/ Interacting with people of various levels in the workplace 1.7 Gathering and providing basic information in response to workplace requirements

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	1.7 Personal interaction is carried out clearly and concisely.		1.8 Basic business writing skills 1.9 Interpersonal skills in the workplace 1.10 Active-listening skills
2. Perform duties following workplace instructions	2.1 Written notices and instructions are read and interpreted in accordance with organizational guidelines. 2.2 Routine written instruction are followed based on established procedures. 2.3 Feedback is given to workplace supervisor based instructions/ information received. 2.4 ***Workplace interactions*** are conducted in a courteous manner. 2.5 Where necessary, clarifications about routine workplace procedures and matters concerning conditions of employment are sought and asked from ***appropriate sources***. 2.6 Meetings outcomes are interpreted and implemented.	2.1 Effective verbal and non-verbal communication 2.2 Different modes of communication 2.3 Medium of communication in the workplace 2.4 Organizational/ Workplace policies 2.5 Communication procedures and systems 2.6 Lines of communication 2.7 Technology relevant to the enterprise and the individual's work responsibilities 2.8 Effective questioning techniques (clarifying and probing) 2.9 Workplace etiquette	2.1 Following simple spoken instructions 2.2 Performing routine workplace duties following simple written notices 2.3 Participating in workplace meetings and discussions 2.4 Completing work- related documents 2.5 Estimating, calculating and recording routine workplace measures 2.6 Relating/ Responding to people of various levels in the workplace 2.7 Gathering and providing information in response to workplace requirements 2.8 Basic questioning/ querying 2.9 Skills in reading for information 2.10 Skills in locating
3. Complete relevant work-related documents	3.1 Range of ***forms*** relating to conditions of employment are completed	3.1 Effective verbal and non-verbal communication 3.2 Different modes of communication	3.1 Completing work-related documents 3.2 Applying operations of

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	accurately and legibly. 3.2 Workplace data is recorded on standard workplace forms and documents. 3.3 Errors in recording information on forms/ documents are identified and acted upon. 3.4 Reporting requirements to supervisor are completed according to organizational guidelines.	3.3 Workplace forms and documents 3.4 Organizational/ Workplace policies 3.5 Communication procedures and systems 3.6 Technology relevant to the enterprise and the individual's work responsibilities	addition, subtraction, division and multiplication 3.3 Gathering and providing information in response to workplace requirements 3.4 Effective record keeping skills

RANGE OF VARIABLES

VARIABLE	RANGE
1. Appropriate sources	May include: 1.1 Team members 1.2 Supervisor/Department Head 1.3 Suppliers 1.4 Trade personnel 1.5 Local government 1.6 Industry bodies
2. Medium	May include: 2.1 Memorandum 2.2 Circular 2.3 Notice 2.4 Information dissemination 2.5 Follow-up or verbal instructions 2.6 Face-to-face communication 2.7 Electronic media (disk files, cyberspace)
3. Storage	May include: 3.1 Manual filing system 3.2 Computer-based filing system
4. Workplace interactions	May include: 4.1 Face-to-face 4.2 Telephone 4.3 Electronic and two-way radio 4.4 Written including electronic means, memos, instruction and forms 4.5 Non-verbal including gestures, signals, signs and diagrams
5. Forms	May include: 5.1 HR/Personnel forms, telephone message forms, safety reports

EVIDENCE GUIDE

1. Critical aspects of Competency	**Assessment requires evidence that the candidate:** 1.1 Prepared written communication following standard format of the organization 1.2 Accessed information using workplace communication equipment/systems 1.3 Made use of relevant terms as an aid to transfer information effectively 1.4 Conveyed information effectively adopting formal or informal communication
2. Resource Implications	**The following resources should be provided:** 2.1 Fax machine 2.2 Telephone 2.3 Notebook 2.4 Writing materials 2.5 Computer with Internet connection
3. Methods of Assessment	**Competency in this unit may be assessed through:** 3.1 Demonstration with oral questioning 3.2 Interview 3.3 Written test 3.4 Third-party report
4. Context for Assessment	4.1 Competency may be assessed individually in the actual workplace or through an accredited institution

UNIT OF COMPETENCY : WORK IN TEAM ENVIRONMENT

UNIT CODE : 400311211

UNIT DESCRIPTOR : This unit covers the skills, knowledge and attitudes to identify one's roles and responsibilities as a member of a team.

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Describe team role and scope	1.1 The ***role and objective of the team*** is identified from available ***sources of information***. 1.2 Team parameters, reporting relationships and responsibilities are identified from team discussions and appropriate external sources.	1.1 Group structure 1.2 Group development 1.3 Sources of information	1.1 Communicating with others, appropriately consistent with the culture of the workplace 1.2 Developing ways in improving work structure and performing respective roles in the group or organization
2. Identify one's role and responsibility within a team	2.1 Individual roles and responsibilities within the team environment are identified. 2.2 Roles and objectives of the team is identified from available ***sources of information***. 2.3 Team parameters, reporting relationships and responsibilities are identified based on team discussions and appropriate external sources.	2.1 Team roles and objectives 2.2 Team structure and parameters 2.3 Team development 2.4 Sources of information	2.1 Communicating with others, appropriately consistent with the culture of the workplace 2.2 Developing ways in improving work structure and performing respective roles in the group or organization
3. Work as a team member	3.1 Effective and appropriate forms of communications are used and interactions undertaken with	3.1 Communication Process 3.2 Workplace communication protocol	3.1 Communicating appropriately, consistent with the culture of the workplace

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	team members based on company practices. 3.2 Effective and appropriate contributions made to complement team activities and objectives, based on ***workplace context***. 3.3 Protocols in reporting are observed based on standard company practices. 3.4 Contribute to the development of team work plans based on an understanding of team's role and objectives.	3.3 Team planning and decision making 3.4 Team thinking 3.5 Team roles 3.6 Process of team development 3.7 Workplace context	3.2 Interacting effectively with others 3.3 Deciding as an individual and as a group using group think strategies and techniques 3.4 Contributing to Resolution of issues and concerns

RANGE OF VARIABLES

VARIABLE	RANGE
1. Role and objective of team	May include: 1.1 Work activities in a team environment with enterprise or specific sector 1.2 Limited discretion, initiative and judgement maybe demonstrated on the job, either individually or in a team environment
2. Sources of information	May include: 2.1 Standard operating and/or other workplace procedures 2.2 Job procedures 2.3 Machine/equipment manufacturer's specifications and instructions 2.4 Organizational or external personnel 2.5 Client/supplier instructions 2.6 Quality standards 2.7 OHS and environmental standards
3. Workplace context	May include: 3.1 Work procedures and practices 3.2 Conditions of work environments 3.3 Legislation and industrial agreements 3.4 Standard work practice including the storage, safe handling and disposal of chemicals 3.5 Safety, environmental, housekeeping and quality guidelines

EVIDENCE GUIDE

1. Critical aspects of Competency	**Assessment requires evidence that the candidate:** 1.1 Worked in a team to complete workplace activity 1.2 Worked effectively with others 1.3 Conveyed information in written or oral form 1.4 Selected and used appropriate workplace language 1.5 Followed designated work plan for the job
2. Resource Implications	**The following resources should be provided:** 2.1 Access to relevant workplace or appropriately simulated environment where assessment can take place 2.2 Materials relevant to the proposed activity or tasks
3. Methods of Assessment	**Competency in this unit may be assessed through:** 3.1 Role play involving the participation of individual member to the attainment of organizational goal 3.2 Case studies and scenarios as a basis for discussion of issues and strategies in teamwork 3.3 Socio-drama and socio-metric methods 3.4 Sensitivity techniques 3.5 Written Test
4. Context for Assessment	4.1 Competency may be assessed in workplace or in a simulated workplace setting 4.2 Assessment shall be observed while task are being undertaken whether individually or in group

UNIT OF COMPETENCY : SOLVE/ADDRESS GENERAL WORKPLACE PROBLEMS

UNIT CODE : 400311212

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes required to apply problem-solving techniques to determine the origin of problems and plan for their resolution. It also includes addressing procedural problems through documentation, and referral.

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Identify routine problems	1.1 Routine **problems or procedural problem** areas are identified. 1.2 Problems to be investigated are defined and determined. 1.3 Current conditions of the problem are identified and documented.	1.1 Current industry hardware and software products and services 1.2 Industry maintenance, service and helpdesk practices, processes and procedures 1.3 Industry standard diagnostic tools 1.4 Malfunctions and resolutions	1.1 Identifying current industry hardware and software products and services 1.2 Identifying current industry maintenance, services and helpdesk practices, processes and procedures. 1.3 Identifying current industry standard diagnostic tools 1.4 Describing common malfunctions and resolutions. 1.5 Determining the root cause of a routine malfunction
2. Look for solutions to routine problems	2.1 Potential solutions to problem are identified. 2.2 Recommendations about possible solutions are developed, **documented**, ranked and presented to	2.1 Current industry hardware and software products and services 2.2 Industry service and helpdesk practices, processes and procedures	2.1 Identifying current industry hardware and software products and services 2.2 Identifying services and helpdesk practices,

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	appropriate person for decision.	2.3 Operating systems 2.4 Industry standard diagnostic tools 2.5 Malfunctions and resolutions. 2.6 Root cause analysis	processes and procedures. 2.3 Identifying operating system 2.4 Identifying current industry standard diagnostic tools 2.5 Describing common malfunctions and resolutions. 2.6 Determining the root cause of a routine malfunction
3. Recommend solutions to problems	3.1 Implementation of solutions are **planned**. 3.2 Evaluation of implemented solutions are planned. 3.3 Recommended solutions are documented and submit to appropriate person for confirmation.	3.1 Standard procedures 3.2 Documentation produce	3.1 Producing documentation that recommends solutions to problems 3.2 Following established procedures

RANGE OF VARIABLES

VARIABLE	RANGE
1. Problems/Procedural Problem	May include: 1.1 Routine/non – routine processes and quality problems 1.2 Equipment selection, availability and failure 1.3 Teamwork and work allocation problem 1.4 Safety and emergency situations and incidents 1.5 Work-related problems outside of own work area
2. Appropriate person	May include: 2.1 Supervisor or manager 2.2 Peers/work colleagues 2.3 Other members of the organization
3. Document	May include: 3.1 Electronic mail 3.2 Briefing notes 3.3 Written report 3.4 Evaluation report
4. Plan	May include: 4.1 Priority requirements 4.2 Co-ordination and feedback requirements 4.3 Safety requirements 4.4 Risk assessment 4.5 Environmental requirements

EVIDENCE GUIDE

1. Critical aspects of Competency	**Assessment requires evidence that the candidate:** 1.1 Determined the root cause of a routine problem 1.2 Identified solutions to procedural problems. 1.3 Produced documentation that recommends solutions to problems. 1.4 Followed established procedures. 1.5 Referred unresolved problems to support persons.
2. Resource Implications	2.1 Assessment will require access to a workplace over an extended period, or a suitable method of gathering evidence of operating ability over a range of situations.
3. Methods of Assessment	**Competency in this unit may be assessed through:** 3.1 Case Formulation 3.2 Life Narrative Inquiry 3.3 Standardized test The unit will be assessed in a holistic manner as is practical and may be integrated with the assessment of other relevant units of competency. Assessment will occur over a range of situations, which will include disruptions to normal, smooth operation. Simulation may be required to allow for timely assessment of parts of this unit of competency. Simulation should be based on the actual workplace and will include walk through of the relevant competency components.
4. Context for Assessment	4.1 Competency may be assessed individually in the actual workplace or simulation environment in TESDA accredited institutions.

UNIT OF COMPETENCY : DEVELOP CAREER AND LIFE DECISIONS

UNIT CODE : 400311213

UNIT DESCRIPTOR : This unit covers the knowledge, skills, and attitudes in managing one's emotions, developing reflective practice, and boosting self-confidence and developing self-regulation.

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Manage one's emotion	1.1 **Self-management strategies** are identified. 1.2 Skills to work independently and to show initiative, to be conscientious, and persevering in the face of setbacks and frustrations are developed. 1.3 Techniques for effectively handling negative emotions and **unpleasant situation i**n the workplace are examined.	1.1 Self-management strategies that assist in regulating behavior and achieving personal and learning goals (e.g. Nine self-management strategies according to Robert Kelley) 1.2 Enablers and barriers in achieving personal and career goals 1.3 Techniques in handling negative emotions and unpleasant situation in the workplace such as frustration, anger, worry, anxiety, etc.	1.1 Managing properly one's emotions and recognizing situations that cannot be changed and accept them and remain professional 1.2 Developing self-discipline, working independently and showing initiative to achieve personal and career goals 1.3 Showing confidence, and resilience in the face of setbacks and frustrations and other negative emotions and unpleasant situations in the workplace
2. Develop reflective practice	2.1 Personal strengths and achievements, based on self-assessment strategies and teacher feedback are contemplated. 2.2 Progress when seeking and	2.1 Basic SWOT analysis 2.2 Strategies to improve one's attitude in the workplace 2.3 Gibbs' Reflective Cycle/Model (Description,	2.1 Using the basic SWOT analysis as self-assessment strategy 2.2 Developing reflective practice through realization of

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	responding to feedback from teachers to assist them in consolidating strengths, addressing weaknesses and fulfilling their potential are monitored. 2.3 Outcomes of personal and academic challenges by reflecting on previous problem solving and decision making strategies and feedback from peers and teachers are predicted.	Feelings, Evaluation, Analysis, Conclusion, and Action plan)	limitations, likes/ dislikes; through showing of self-confidence 2.3 Demonstrating self-acceptance and being able to accept challenges
3. Boost self-confidence and develop self-regulation	3.1 Efforts for continuous self-improvement are demonstrated. 3.2 Counter-productive tendencies at work are eliminated. 3.3 Positive outlook in life are maintained.	3.1 Four components of self-regulation based on Self-Regulation Theory (SRT) 3.2 Personality development concepts 3.3 Self-help concepts (e. g., 7 Habits by Stephen Covey, transactional analysis, psycho-spiritual concepts)	3.1 Performing effective communication skills – reading, writing, conversing skills 3.2 Showing affective skills – flexibility, adaptability, etc. 3.3 Self-assessment for determining one's strengths and weaknesses

RANGE OF VARIABLES

VARIABLE	RANGE
1. Self-management strategies	May include: 1.1 Seeking assistance in the form of job coaching or mentoring 1.2 Continuing dialogue to tackle workplace grievances 1.3 Collective negotiation/bargaining for better working conditions 1.4 Share your goals to improve with a trusted co-worker or supervisor 1.5 Make a negativity log of every instance when you catch yourself complaining to others 1.6 Make lists and schedules for necessary activities
2. Unpleasant situation	May include: 2.1 Job burn-out 2.2 Drug dependence 2.3 Sulking

EVIDENCE GUIDE

1. Critical aspects of Competency	**Assessment requires evidence that the candidate:** 1.1 Express emotions appropriately 1.2 Work independently and show initiative 1.3 Consistently demonstrate self-confidence and self-discipline
2. Resource Implications	**The following resources should be provided:** 2.1 Access to workplace and resources 2.2 Case studies
3. Methods of Assessment	**Competency in this unit may be assessed through:** 3.1 Demonstration or simulation with oral questioning 3.2 Case problems involving work improvement and sustainability issues 3.3 Third-party report
4. Context for Assessment	4.1 Competency assessment may occur in workplace or any appropriately simulated environment

UNIT OF COMPETENCY : CONTRIBUTE TO WORKPLACE INNOVATION

UNIT CODE : 400311214

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes required to make a pro-active and positive contribution to workplace innovation.

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Identify opportunities to do things better	1.1 ***Opportunities for improvement*** are identified proactively in own area of work. 1.2 ***Information*** are gathered and reviewed which may be relevant to ideas and which might assist in gaining support for idea.	1.1 Roles of individuals in suggesting and making improvements. 1.2 Positive impacts and challenges in innovation. 1.3 Types of changes and responsibility. 1.4 Seven habits of highly effective people.	1.1 Identifying opportunities to improve and to do things better. Involvement 1.2 Identifying the positive impacts and the challenges of change and innovation 1.3 Identifying examples of the types of changes that are within and outside own scope of responsibility
2. Discuss and develop ideas with others	2.1 ***People who could provide input*** to ideas for improvements are identified. 2.2 Ways of approaching people to begin sharing ideas are selected. 2.3 Meeting is set with relevant people. 2.4 Ideas for follow up are review and selected based on feedback. 2.5 ***Critical inquiry method*** is used to discuss and develop ideas with others.	2.1 Roles of individuals in suggesting and making improvements 2.2 Positive impacts and challenges in innovation 2.3 Types of changes and responsibility. 2.4 Seven habits of highly effective people	2.1 Identifying opportunities to improve and to do things better. Involvement 2.2 Identifying the positive impacts and the challenges of change and innovation 2.3 Providing examples of the types of changes that are within and outside own scope of responsibility 2.4 Communicating ideas for change through small

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
			group discussions and meetings
3. Integrate ideas for change in the workplace	3.1 Critical inquiry method is used to integrate different ideas for change of key people. 3.2 Summarizing, analyzing and generalizing skills are used to extract salient points in the pool of ideas. 3.3 ***Reporting skills*** are likewise used to communicate results. 3.4 ***Current Issues and concerns*** on the systems, processes and procedures, as well as the need for simple innovative practices are identified.	3.1 Roles of individuals in suggesting and making improvements 3.2 Positive impacts and challenges in innovation 3.3 Types of changes and responsibility 3.4 Seven habits of highly effective people 3.5 Basic research skills	3.1 Identifying opportunities to improve and to do things better. Involvement 3.2 Identifying the positive impacts and the challenges of change and innovation 3.3 Providing examples of the types of changes that are within and outside own scope of responsibility 3.4 Communicating ideas for change through small group discussions and meetings 3.5 Demonstrating skills in analysis and interpretation of data

RANGE OF VARIABLES

VARIABLE	RANGE
1. Opportunities for improvement	May include: 1.1 Systems 1.2 Processes 1.3 Procedures 1.4 Protocols 1.5 Codes 1.6 Practices
2. Information	May include: 2.1 Workplace communication problems 2.2 Performance evaluation results 2.3 Team dynamics issues and concerns 2.4 Challenges on return of investment 2.5 New tools, processes and procedures 2.6 New people in the organization
3. People who could provide input	May include: 3.1 Leaders 3.2 Managers 3.3 Specialists 3.4 Associates 3.5 Researchers 3.6 Supervisors 3.7 Staff 3.8 Consultants (external) 3.9 People outside the organization in the same field or similar expertise/industry 3.10 Clients
4. Critical inquiry method	May include: 4.1 Preparation 4.2 Discussion 4.3 Clarification of goals 4.4 Negotiate towards a Win-Win outcome 4.5 Agreement 4.6 Implementation of a course of action 4.7 Effective verbal communication. See our pages: Verbal Communication and Effective Speaking 4.8 Listening 4.9 Reducing misunderstandings is a key part of effective negotiation 4.10 Rapport Building 4.11 Problem Solving 4.12 Decision Making 4.13 Assertiveness 4.14 Dealing with Difficult Situations
5. Reporting skills	May include: 5.1 Data management 5.2 Coding 5.3 Data analysis and interpretation

VARIABLE	RANGE
	5.4 Coherent writing 5.5 Speaking

EVIDENCE GUIDE

1. Critical aspects of Competency	**Assessment requires evidence that the candidate:** 1.1 Identified opportunities to do things better. 1.2 Discussed and developed ideas with others on how to contribute to workplace innovation. 1.3 Integrated ideas for change in the workplace. 1.4 Analyzed and reported rooms for innovation and learning in the workplace.
2. Resource Implications	**The following resources should be provided:** 2.1 Pens, papers and writing implements 2.2 Cartolina 2.3 Manila papers
3. Methods of Assessment	**Competency in this unit may be assessed through:** 3.1 Psychological and behavioral Interviews 3.2 Performance Evaluation 3.3 Life Narrative Inquiry 3.4 Review of portfolios of evidence and third-party workplace reports of on-the-job performance 3.5 Sensitivity analysis 3.6 Organizational analysis 3.7 Standardized assessment of character strengths and virtues applied
4. Context for Assessment	4.1 Competency may be assessed individually in the actual workplace or simulation environment in TESDA accredited institutions.

UNIT OF COMPETENCY : PRESENT RELEVANT INFORMATION

UNIT CODE : 400311215

UNIT DESCRIPTOR : This unit of covers the knowledge, skills and attitudes required to present data/information appropriately.

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Gather data/ information	1.1 Evidence, facts and information are collected. 1.2 Evaluation, terms of reference and conditions are reviewed to determine whether data/information falls within project scope.	1.1 Organisational protocols 1.2 Confidentiality 1.3 Accuracy 1.4 Business mathematics and statistics 1.5 Data analysis techniques/procedures 1.6 Reporting requirements to a range of audiences 1.7 Legislation, policy and procedures relating to the conduct of evaluations 1.8 Organisational values, ethics and codes of conduct	1.1 Describing organisational protocols relating to client liaison 1.2 Protecting confidentiality 1.3 Describing accuracy 1.4 Computing business mathematics and statistics 1.5 Describing data analysis techniques/ procedures 1.6 Reporting requirements to a range of audiences 1.7 Stating legislation, policy and procedures relating to the conduct of evaluations 1.8 Stating organisational values, ethics and codes of conduct
2. Assess gathered data/ information	2.1 Validity of data/ information is assessed.	2.1 Business mathematics and statistics	2.1 Computing business mathematics and statistics

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	2.2 Analysis techniques are applied to assess data/ information. 2.3 Trends and anomalies are identified. 2.4 ***Data analysis techniques*** and procedures are documented. 2.5 Recommendations are made on areas of possible improvement.	2.2 Data analysis techniques/ procedures 2.3 Reporting requirements to a range of audiences 2.4 Legislation, policy and procedures relating to the conduct of evaluations 2.5 Organisational values, ethics and codes of conduct	2.2 Describing data analysis techniques/ procedures 2.3 Reporting requirements to a range of audiences 2.4 Stating legislation, policy and procedures relating to the conduct of evaluations 2.5 Stating organisational values, ethics and codes of conduct
3. Record and present information	3.1 Studied data/ information are recorded. 3.2 Recommendations are analysed for action to ensure they are compatible with the project's scope and terms of reference. 3.3 Interim and final reports are analysed and outcomes are compared to the criteria established at the outset. 3.4 Findings are presented to stakeholders.	3.1 Data analysis techniques/ procedures 3.2 Reporting requirements to a range of audiences 3.3 Legislation, policy and procedures relating to the conduct of evaluations 3.4 Organisational values, ethics and codes of conduct	3.1 Describing data analysis techniques/ procedures 3.2 Reporting requirements to a range of audiences 3.3 Stating legislation, policy and procedures relating to the conduct of evaluations 3.4 Stating organisational values, ethics and codes of conduct practices

RANGE OF VARIABLES

VARIABLE	RANGE
1. Data analysis techniques	May include: 1.1 Domain analysis 1.2 Content analysis 1.3 Comparison technique

EVIDENCE GUIDE

1. Critical aspects of Competency	**Assessment requires evidence that the candidate:** 1.1 Determine data / information 1.2 Studied and applied gathered data/information 1.3 Recorded and studied data/information These aspects may be best assessed using a range of scenarios what ifs as a stimulus with a walk through forming part of the response. These assessment activities should include a range of problems, including new, unusual and improbable situations that may have happened.
2. Resource Implications	**Specific resources for assessment** 2.1 Evidence of competent performance should be obtained by observing an individual in an information management role within the workplace or operational or simulated environment.
3. Methods of Assessment	**Competency in this unit may be assessed through:** 3.1 Written Test 3.2 Interview 3.3 Portfolio The unit will be assessed in a holistic manner as is practical and may be integrated with the assessment of other relevant units of competency. Assessment will occur over a range of situations, which will include disruptions to normal, smooth operation. Simulation may be required to allow for timely assessment of parts of this unit of competency. Simulation should be based on the actual workplace and will include walk through of the relevant competency components.
4. Context for Assessment	4.1 In all workplace, it may be appropriate to assess this unit concurrently with relevant teamwork or operation units.

UNIT OF COMPETENCY : **PRACTICE OCCUPATIONAL SAFETY AND HEALTH POLICIES AND PROCEDURES**

UNIT CODE : **400311216**

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes required to identify OSH compliance requirements, prepare OSH requirements for compliance, perform tasks in accordance with relevant OSH policies and procedures.

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Identify OSH compliance requirements	1.1 Relevant ***OSH requirements, regulations, policies and procedures*** are identified in accordance with workplace policies and procedures. 1.2 OSH activity non-conformities are conveyed to ***appropriate personnel***. 1.3 ***OSH preventive and control requirements*** are identified in accordance with OSH work policies and procedures.	1.1 OSH preventive and control requirements 1.2 Hierarchy of Controls 1.3 Hazard Prevention and Control 1.4 General OSH principles 1.5 Work standards and procedures 1.6 Safe handling procedures of tools, equipment and materials 1.7 Standard emergency plan and procedures in the workplace	1.1 Communication skills 1.2 Interpersonal skills 1.3 Critical thinking skills 1.4 Observation skills
2. Prepare OSH requirements for compliance	2.1 OSH work activity material, tools and equipment requirements are identified in accordance with workplace policies and procedures. 2.2 Required OSH materials, tools and equipment are acquired in accordance with workplace policies and procedures.	2.1 Resources necessary to execute hierarchy of controls 2.2 General OSH principles 2.3 Work standards and procedures 2.4 Safe handling procedures of tools, equipment and materials 2.5 Different OSH control measures	2.1 Communication skills 2.2 Estimation skills 2.3 Interpersonal skills 2.4 Critical thinking skills 2.5 Observation skills 2.6 Material, tool and equipment identification skills

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	2.3 Required OSH materials, tools and equipment are arranged/ placed in accordance with OSH work standards.		
3. Perform tasks in accordance with relevant OSH policies and procedures	3.1 Relevant OSH work procedures are identified in accordance with workplace policies and procedures. 3.2 Work Activities are executed in accordance with OSH work standards. 3.3 ***Non-compliance work activities*** are reported to *appropriate personnel*.	3.1 OSH work standards 3.2 Industry related work activities 3.3 General OSH principles 3.4 OSH Violations Non-compliance work activities	3.1 Communication skills 3.2 Interpersonal skills 3.3 Troubleshooting skills 3.4 Critical thinking skills 3.5 Observation skills

RANGE OF VARIABLES

VARIABLE	RANGE
1. OSH Requirements, Regulations, Policies and Procedures	May include: 1.1 Clean Air Act 1.2 Building code 1.3 National Electrical and Fire Safety Codes 1.4 Waste management statutes and rules 1.5 Permit to Operate 1.6 Philippine Occupational Safety and Health Standards 1.7 Department Order No. 13 (Construction Safety and Health) 1.8 ECC regulations
2. Appropriate Personnel	May include: 2.1 Manager 2.2 Safety Officer 2.3 EHS Offices 2.4 Supervisors 2.5 Team Leaders 2.6 Administrators 2.7 Stakeholders 2.8 Government Official 2.9 Key Personnel 2.10 Specialists 2.11 Himself
3. OSH Preventive and Control Requirements	May include: 3.1 Resources needed for removing hazard effectively 3.2 Resources needed for substitution or replacement 3.3 Resources needed to establishing engineering controls 3.4 Resources needed for enforcing administrative controls 3.5 Personal Protective equipment
4. Non OSH-Compliance Work Activities	May include non-compliance or observance of the following safety measures: 4.1 Violations that may lead to serious physical harm or death 4.2 Fall Protection 4.3 Hazard Communication 4.4 Respiratory Protection 4.5 Power Industrial Trucks 4.6 Lockout/Tag-out 4.7 Working at heights (use of ladder, scaffolding) 4.8 Electrical Wiring Methods 4.9 Machine Guarding 4.10 Electrical General Requirements 4.11 Asbestos work requirements 4.12 Excavations work requirements

EVIDENCE GUIDE

1. Critical aspects of Competency	**Assessment requires evidence that the candidate:** 1.1 Convey OSH work non-conformities to appropriate personnel 1.2 Identify OSH preventive and control requirements in accordance with OSH work policies and procedures 1.3 Identify OSH work activity material, tools and equipment requirements in accordance with workplace policies and procedures 1.4 Arrange/Place required OSH materials, tools and equipment in accordance with OSH work standards 1.5 Execute work activities in accordance with OSH work standards 1.6 Report OSH activity non-compliance work activities to appropriate personnel
2. Resource Implications	**The following resources should be provided:** 2.1 Facilities, materials tools and equipment necessary for the activity
3. Methods of Assessment	**Competency in this unit may be assessed through:** 3.1 Observation/Demonstration with oral questioning 3.2 Third party report
4. Context for Assessment	4.1 Competency may be assessed in the work place or in a simulated work place setting

UNIT OF COMPETENCY : **EXERCISE EFFICIENT AND EFFECTIVE SUSTAINABLE PRACTICES IN THE WORKPLACE**

UNIT CODE : **400311217**

UNIT DESCRIPTOR : This unit covers knowledge, skills and attitude to identify the efficiency and effectiveness of resource utilization, determine causes of inefficiency and/or ineffectiveness of resource utilization and Convey inefficient and ineffective environmental practices.

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Identify the efficiency and effectiveness of resource utilization	1.1 Required resource utilization in the workplace is measured using appropriate techniques. 1.2 Data are recorded in accordance with workplace protocol. 1.3 Recorded data are compared to determine the efficiency and effectiveness of resource utilization according to established ***environmental work procedures***.	1.1 Importance of Environmental Literacy 1.2 Environmental Work Procedures 1.3 Waste Minimization 1.4 Efficient Energy Consumptions	1.1 Recording Skills 1.2 Writing Skills 1.3 Innovation Skills
2. Determine causes of inefficiency and/or ineffectiveness of resource utilization	2.1 Potential causes of inefficiency and/or ineffectiveness are listed. 2.2 Causes of inefficiency and/or ineffectiveness are identified through deductive reasoning. 2.3 Identified causes of inefficiency and/or ineffectiveness are validated thru established	2.1 Causes of environmental inefficiencies and ineffective-ness	2.1 Deductive Reasoning Skills 2.2 Critical thinking 2.3 Problem Solving 2.4 Observation Skills

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	environmental procedures.		
3. Convey inefficient and ineffective environmental practices	3.1 Efficiency and effectiveness of resource utilization are reported to *appropriate personnel*. 3.2 Concerns related resource utilization are discussed with appropriate personnel. 3.3 Feedback on information/ concerns raised are clarified with appropriate personnel.	3.1 Appropriate Personnel to address the environmental hazards 3.2 Environmental corrective actions	3.1 Written and Oral Communication Skills 3.2 Critical thinking 3.3 Problem Solving 3.4 Observation Skills 3.5 Practice Environmental Awareness

RANGE OF VARIABLES

VARIABLE	RANGE
1. Environmental Work Procedures	May include: 1.1 Utilization of Energy, Water, Fuel Procedures 1.2 Waster Segregation Procedures 1.3 Waste Disposal and Reuse Procedures 1.4 Waste Collection Procedures 1.5 Usage of Hazardous Materials Procedures 1.6 Chemical Application Procedures 1.7 Labeling Procedures
2. Appropriate Personnel	May include: 2.1 Manager 2.2 Safety Officer 2.3 EHS Offices 2.4 Supervisors 2.5 Team Leaders 2.6 Administrators 2.7 Stakeholders 2.8 Government Official 2.9 Key Personnel 2.10 Specialists 2.11 Himself

EVIDENCE GUIDE

1. Critical aspects of Competency	**Assessment requires evidence that the candidate:** 1.1 Measured required resource utilization in the workplace using appropriate techniques 1.2 Recorded data in accordance with workplace protocol 1.3 Identified causes of inefficiency and/or ineffectiveness through deductive reasoning 1.4 Validate the identified causes of inefficiency and/or ineffectiveness thru established environmental procedures 1.5 Report efficiency and effectives of resource utilization to appropriate personnel 1.6 Clarify feedback on information/concerns raised with appropriate personnel
2. Resource Implications	**The following resources should be provided:** 2.1 Workplace 2.2 Tools, materials and equipment relevant to the tasks 2.3 PPE 2.4 Manuals and references
3. Methods of Assessment	**Competency in this unit may be assessed through:** 3.1 Demonstration 3.2 Oral questioning 3.3 Written examination
4. Context for Assessment	4.1 Competency assessment may occur in workplace or any appropriately simulated environment 4.2 Assessment shall be observed while task are being undertaken whether individually or in-group

UNIT OF COMPETENCY : PRACTICE ENTREPRENEURIAL SKILLS IN THE WORKPLACE

UNIT CODE : 400311218

UNIT DESCRIPTOR : This unit covers the outcomes required to apply entrepreneurial workplace best practices and implement cost-effective operations.

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Apply entrepreneurial workplace best practices	1.1 ***Good practices*** relating to workplace operations are observed and selected following workplace policy. 1.2 Quality procedures and practices are complied with according to workplace requirements. 1.3 Cost-conscious habits in ***resource utilization*** are applied based on industry standards.	1.1 Workplace best practices, policies and criteria 1.2 Resource utilization 1.3 Ways in fostering entrepreneurial attitudes: • Patience • Honesty • Quality-consciousness • Safety-consciousness • Resourceful-ness	1.1 Communication skills 1.2 Complying with quality procedures
2. Communicate entrepreneurial workplace best practices	2.1 Observed good practices relating to workplace operations are communicated to **appropriate person**. 2.2 Observed quality procedures and practices are communicated to appropriate person.	2.1 Workplace best practices, policies and criteria 2.2 Resource utilization 2.3 Ways in fostering entrepreneurial attitudes: • Patience • Honesty • Quality-consciousness	2.1 Communication skills 2.2 Complying with quality procedures 2.3 Following workplace communication protocol

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	2.3 Cost-conscious habits in resource utilization are communicated based on industry standards.	• Safety-consciousness • Resourceful-ness	
3. Implement cost-effective operations	3.1 Preservation and optimization of workplace resources is implemented in accordance with enterprise policy. 3.2 Judicious use of workplace tools, equipment and materials are observed according to manual and work requirements. 3.3 Constructive contributions to office operations are made according to enterprise requirements. 3.4 Ability to work within one's allotted time and finances is sustained.	3.1 Optimization of workplace resources 3.2 5S procedures and concepts 3.3 Criteria for cost-effectiveness 3.4 Workplace productivity 3.5 Impact of entrepreneurial mindset to workplace productivity 3.6 Ways in fostering entrepreneurial attitudes: • Quality-consciousness • Safety-consciousness	3.1 Implementing preservation and optimizing workplace resources 3.2 Observing judicious use of workplace tools, equipment and materials 3.3 Making constructive contributions to office operations 3.4 Sustaining ability to work within allotted time and finances

RANGE OF VARIABLES

VARIABLE	RANGE
1. Good practices	May include: 1.1 Economy in use of resources 1.2 Documentation of quality practices
2. Resources utilization	May include: 2.1 Consumption/ use of consumables 2.2 Use/Maintenance of assigned equipment and furniture 2.3 Optimum use of allotted /available time

EVIDENCE GUIDE

1. Critical aspects of Competency	**Assessment requires evidence that the candidate:** 1.1 Demonstrated ability to identify and sustain cost-effective activities in the workplace 1.2 Demonstrated ability to practice entrepreneurial knowledge, skills and attitudes in the workplace.
2. Resource Implications	**The following resources should be provided:** 2.1 Simulated or actual workplace 2.2 Tools, materials and supplies needed to demonstrate the required tasks 2.3 References and manuals 2.3.1 Enterprise procedures manuals 2.3.2 Company quality policy
3. Methods of Assessment	**Competency in this unit should be assessed through:** 3.1 Interview 3.2 Third-party report
4. Context for Assessment	4.1 Competency may be assessed in workplace or in a simulated workplace setting 4.2 Assessment shall be observed while tasks are being undertaken whether individually or in-group

COMMON COMPETENCIES

UNIT OF COMPETENCY : VALIDATE VEHICLE SPECIFICATION

UNIT CODE : ALT723211

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitude to check body type of the vehicle, check vehicle engine type, check vehicle specifications and complete validation of vehicle specification.

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Check body type of the vehicle	1.1 ***Kind of vehicle*** is determined according to job order. 1.2 ***Vehicle dimensions*** is determined according to manual. 1.3 ***Vehicle weight*** is determined according to the manual. 1.4 ***Body shape*** is determined according to the manual. 1.6 ***Power train*** is determined according to the manual. 1.7 Safety practices are applied following OSHS.	1.1 Kind of vehicle 1.1.1 Aerodyna-mics 1.1.2 Vehicle Dynamics 1.1.3 Body shapes 1.1.4 Power train 1.1.5 Major dimensions 1.2 Vehicle specifications 1.2.1 Vehicle performance 1.2.2 Weight & Measureme nts 1.3 Automotive history 1.4 Documentation/ Accomplishing checklist 1.5 Resources information 1.5.1 Bulletin 1.5.2 Shop manual 1.6 OSHS 1.7 PPEs 1.8 Attitude: 1.8.1 Patience 1.8.2 Attention to details	1.1 Identifying kind of vehicle, dimensions, weight, body shape, and power train 1.2 Accomplishing checklist 1.3 Estimating visually dimensions and masses 1.4 Utilizing resource information 1.5 Wearing PPEs 1.6 Applying safety practices
2. Check vehicle engine type	2.1 ***Engine type*** is identified according	2.1 Principles of internal combustions	2.1 Identifying engine type,

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	to industry standards. 2.2 Engine ***fuel/energy system*** is identified according to manual. 2.3 ***Engine components*** are identified following manual.	2.2 Principles of Electricity and motors 2.3 History of engines 2.4 Hybrid technology 2.5 Resources information 2.5.1 Bulletin 2.5.2 Shop manual	parts & components 2.2 Identifying fuel systems or energy systems 2.3 Utilizing resource information
3. Check vehicle specifications	3.1 VIN plate is inspected for specification of vehicle according to manual. 3.2 Vehicle specification is verified according to ***vehicle reference materials***. 3.3 Vehicle modifications and conversions are checked following the manual. 3.3 Vehicle conversions are inspected following the manual.	3.1 Fundamentals of Automotive engineering: 3.1.1 Understanding of power & torque 3.1.2 Gear Ratios 3.1.3 Vehicle Regulations 3.1.4 Knowledge of vehicle performance 3.1.5 Knowledge in Vehicle manufacturing process 3.1.6 Knowledge of vehicle use 3.1.7 Automotive history 3.2 Knowledge in specifications 3.3 Reading of brochure, owner's manuals 3.4 Reading of Resources information 3.4.1 Bulletin 3.4.2 Shop manual	3.1 Reading vehicle reference materials 3.2 Conducting vehicle inspection for modification and conversion 3.3 Comparing actual vehicle and specification sheets 3.4 Utilizing resource information
4. Complete validation of vehicle specification	4.1 Vehicle ownership is verified using repair order and vehicle reference materials.	4.1 Reporting to immediate superior 4.2 Documentation/ Accomplishing checklist	4.1 Verifying vehicle ownership 4.2 Accomplishing dealers check sheet 4.3 Reporting skills

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	4.2 ***Dealers check sheet*** is accomplished following industry standards. 4.3 ***Dealers check sheet*** is submitted to immediate superior following industry standards.	4.3 Attitude: 4.3.1 Accuracy	

RANGE OF VARIABLES

VARIABLE	RANGE
1. Kind of Vehicle	May include: 1.1 Motorized 1.2 Not Motorized 1.3 On-Road 1.4 Off-Road 1.5 Passenger 1.6 Commercial 1.7 Utility 1.8 Manned 1.9 Unmanned 1.10 Remote control 1.11 Automated/Self Driving 1.12 Guided
2. Vehicle Dimensions	May include: 2.1 Overall length 2.2 Overall width 2.3 Overall height 2.4 Wheelbase 2.5 Tread 2.6 Minimum running ground clearance 2.7 Room Length 2.8 Room Width 2.9 Room Height 2.10 Overhang front 2.11 Overhang rear 2.12 Angle of approach 2.13 Angle of departure
3. Vehicle Weight	May include: 3.1 Gross weight 3.2 Curb weight 3.3 Tare weight 3.4 Net weight
4. Body Shape	May include: 4.1 Sedan 4.2 Coupe 4.3 Hardtop 4.4 Convertible 4.5 Multipurpose vehicle (MPV) 4.6 Sports utility vehicle (SUV) 4.7 Truck 4.8 Tractor Head 4.9 Trailer 4.10 Special Utility Truck 4.11 Bus 4.12 Mini Bus 4.13 Articulated bus 4.14 Asian Utility Vehicle (AUV)

VARIABLE	RANGE
5. Power Train	May include: 5.1 Front Wheel Drive 5.2 Rear Wheel Drive 5.3 4x2 5.4 4x4 5.5 Limited Slip Differential (LSD) 5.6 Manual Transmission 5.7 Automatic Transmission 5.8 Continuously Variable Transmission
6. Engine Type	May include: 6.1 Internal Combustion Engine 6.2 Electric Motor
7. Fuel/Energy System	May include: 7.1 Diesel Fuel 7.2 Gasoline Fuel 7.3 Compressed Natural Gas (CNG) 7.4 Liquefied Petroleum Gas (LPG) 7.5 Methanol 7.6 Hydrogen 7.7 Biodiesel 7.8 Solar Cell 7.9 Fuel Cell
8. Engine Components	May include: 8.1 Intake System 8.2 Electrical System 8.3 Cooling System 8.4 Exhaust System 8.5 Valve Train System 8.6 Cylinder Head 8.7 Engine Block 8.8 Lubricating System
9. Vehicle reference materials	May include: 9.1 Warranty booklet 9.2 Brochure of the vehicle 9.3 Vehicle registration
10. Dealers check sheet	May include: 10.1 Vehicle mileage 10.2 Owner's information 10.3 Damage

EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1 Checked body type of the vehicle 1.2 Checked vehicle engine type 1.3 Checked vehicle specifications 1.4 Completed validation of vehicle specification
2. Resource Implications	The following resources should be provided: 2.1 Workplace: Real or simulated work area 2.2 Appropriate vehicle or model equivalent 2.3 Materials relevant to the activity 2.4 Resource information, references, and manual
3. Method of Assessment	Competency in this unit may be assessed through: 3.1 Direct Observation 3.2 Interview 3.3 Third Party Report 3.4 Written exam 3.5 Demonstration with Oral questioning
4. Context of Assessment	4.1 Competency may be assessed individually in the actual workplace or through accredited institution.

UNIT OF COMPETENCY : UTILIZE AUTOMOTIVE TOOLS

UNIT CODE : ALT723214

UNIT DESCRIPTOR : This unit covers the knowledge and skills in selecting and using automotive power tools, hand tools and tool keeping.

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Prepare automotive tools	1.1 ***Automotive tools*** are identified according to their classification and specification. 1.2 ***Automotive tools and attachments*** are selected according to job requirements. 1.3 ***Automotive tools and attachments*** are inspected for ***defects and damages*** according to manufacturers and work place procedures. 1.4 Safety practices are applied following OSHS.	1.1 Understanding power to size ratio 1.2 Leverage 1.3 Types of power tools and hand tools 1.4 Uses of automotive power tools and hand tools 1.5 Defects and damages of automotive tools and attachments 1.6 Handling of tools 1.7 Interpretation of contents of users manuals 1.8 Safety procedures 1.9 Wearing of PPE	1.1 Identifying defects or damages of tools before use 1.2 Knowledgeable in proper handling of tools 1.3 Identifying tools required for the job 1.4 Inspecting the area were power tools will be use
2. Use automotive tools	2.1 ***Attachments*** are mounted to ***automotive tools*** according to job requirements. 2.2 Power tools are connected to ***power sources*** according to operation's manual. 2.3 Power tools are operated according to operation's manual. 2.4 ***Hand tools*** are utilized according to operation's manual.	2.1 Use of automotive tools 2.2 Application of Torque and pressure 2.3 Unit conversion of torque 2.4 English and metric system 2.5 Types of hand tools 2.6 Types of power tools 2.7 Fundamentals of automotive hand tools and power tools	2.1 Analytical skills 2.2 Technical literacy 2.3 Mounting attachments to automotive tools 2.4 Connecting power tools to power sources 2.5 Operating power tools 2.6 Utilizing hand tools 2.7 Wearing PPEs 2.8 Applying safety practices

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	2.5 ***PPEs*** are worn in accordance to OSHS.	2.8 Interpretation of contents of users manuals 2.9 OSHS 2.10 Resources information 2.10.1 Bulletin 2.10.2 Shop manual	2.9 Following manuals
3. Maintain automotive tools	3.1 ***Automotive tools and attachments*** are cleaned according to user's manual. 3.2 ***Automotive tools and attachments*** are checked for serviceability according to workplace and manufacturers procedures. 3.3 ***Defects and damages*** are reported to immediate superior following industry standards. 3.4 ***Automotive tools and attachments*** are stored according to workplace procedures. 3.5 Safety practices are applied following OSHS. 3.6 ***Wastes*** are disposed following environmental law and regulations.	3.1 Different types of power tools and hand tools 3.2 Techniques in tool Arrangement 3.3 Fundamentals of automotive tools 3.4 Cleaning of automotive tools 3.5 Labeling and arranging of power tools and hand tools 3.6 Safety practices 3.7 Procedures in maintaining of power tools and hand tools 3.8 Tagging of damaged/ worn power tools and hand tools 3.9 Reporting damage power tools and hand tools 3.10 Proper disposal of damaged tools 3.11 Proper disposal of chemicals used for cleaning 3.12 OSHS 3.13 Environmental law and regulations 3.14 5S of good housekeeping 3.15 3Rs	3.1 Sorting of tools 3.2 Skills in creating reports 3.3 Cleaning of tools 3.4 Checking, cleaning and storing automotive tools and attachments 3.5 Reporting defects and damages 3.6 Disposing wastes 3.7 Practicing safety procedures

RANGE OF VARIABLES

VARIABLE	RANGE
1. Automotive tools	May include: 1.1 Power tools 1.1.1 Electric power tools 1.1.1.1 Electric drill 1.1.2 Pneumatic tools 1.2 Basic tools 1.3 Special service tools (SST)
2. Power sources	May include: 2.1 Electric source 2.2 Pneumatic or air 2.3 Hydraulic
3. Basic tools	May include: 3.1 Wrenches 3.2 Pliers 3.3 Screw drivers 3.4 Power handle 3.5 Ratchet 3.6 Multitester 3.7 Flash light 3.8 Rubber mallet 3.9 Hammer 3.10 Jack 3.11 Jack stand 3.12 Choke
4. Attachments	May include: 4.1 Bits 4.2 Sockets 4.3 Extension
5. Defects and damages	May include: 5.1 Tools 5.1.1 Cracks 5.1.2 Breakage 5.1.3 Deformity 5.1.4 Looseness 5.1.5 Corrosions 5.1.6 Leaks 5.2 Attachments 5.2.1 Cracks 5.2.2 Breakage 5.2.3 Deformity 5.2.4 Looseness 5.2.5 Corrosions
6. Personal protective equipment (PPEs)	May include: 6.1 Goggles 6.2 Gloves 6.3 Hard hat 6.4 Safety shoes

VARIABLE	RANGE
	6.5 Dust mask
7. Wastes	May include: 7.1 Dead batteries 7.2 Deformed, cracked, broken bits/sockets/extensions 7.3 Used cleaning chemicals 7.4 Used oil 7.5 Contaminated cleaning materials

EVIDENCE GUIDE

1. Critical aspects of competency	Assessment require evidence that the candidate understands the applications and guidelines specified by the manufacturer. 1.1 Prepared automotive tools 1.2 Used Power tools 1.3 Used Hand tools 1.4 Maintained and stored automotive tools 1.5 Disposed wastes 1.6 Applied safety measures
2. Resource implication	The following resource MUST be provided: 2.1 Appropriate power tools and hand tools 2.2 Tools and materials relevant for training 2.3 Proper place for storage and disposal 2.4 Work shop manuals
3. Method of assessment	Competency MUST be assessed through: 3.1 Written examination 3.2 Demonstrations with oral questioning 3.3 Direct observation 3.4 Third party report 3.5 Interview
4. Context of assessment	4.1 Competency may be assessed individually in the actual workplace or through accredited institution

UNIT OF COMPETENCY : PERFORM MENSURATION AND CALCULATION

UNIT CODE : ALT723215

UNIT DESCRIPTOR : This unit covers the knowledge and skills on how to use automotive measuring tools.

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Select measuring instruments	1.1 Component to be measured is identified based on job requirements. 1.2 ***Automotive measuring instrument*** is identified based on job requirements. 1.3 Correct specifications are obtained from repair manual. 1.4 Measuring tools are calibrated in line with job requirements. 1.5 Measuring instruments are checked for accuracy and adjusted according to manufacturer's manual. 1.6 Defective measuring instruments are reported and returned to toolkeeper following industry standards. 1.7 Safety practices are applied following OSHS.	1.1 Category of measuring instruments 1.2 Types and uses of measuring instruments 1.3 Shapes and Dimensions 1.4 Use of user's manual 1.5 Workshop procedures in reporting defective instruments 1.6 Characteristics of defective measuring instruments 1.7 Procedure in preparing report 1.8 OSHS in calibrating measuring instruments 1.9 Calibration of measuring tools 1.10 Inspection of measuring tools 1.11 Segregation and reporting of defective measuring instruments	1.1 Identifying and selecting measuring instruments 1.2 Visualizing objects and shapes 1.3 Calibration skills 1.4 Identifying defective measuring instruments 1.5 Reporting skills 1.6 Applying safety practices 1.7 Obtaining correct specifications 1.8 Checking measuring instruments for accuracy 1.9 Reporting and segregating defective measuring instruments
2. Carry out measurements and calculation	2.1 ***Automotive measuring instrument*** is selected to achieve required outcome in	2.1 Formulas for volume, areas, perimeters of plane and geometric figures	2.1 Performing calculation 2.2 Applying formulas for volume, areas, perimeters of

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	line with job requirements. 2.2 Accurate measurements are obtained in line with job requirements. 2.3 ***Calculation*** needed to complete work tasks are performed using ***mathematical operations***. 2.4 Numerical computation is self-checked and corrected for accuracy following manufacturer's workshop manual. 2.3 Tools' limit of accuracy are read following manufacturer's workshop manual. 2.4 Report is submitted to immediate supervisor following industry standard operating procedure. 2.5 Safety practices are applied following OSHS.	2.2 Different automotive measuring instruments 2.3 Calculation & measurement 2.4 Four fundamental operation 2.5 Linear measurement 2.6 Dimensions 2.7 Unit conversion 2.8 Ratio and proportion 2.9 Handling of measuring instruments 2.10 Tools' limit of accuracy 2.11 OSHS 2.12 PPEs	plane and geometric figures 2.3 Handling measuring instruments 2.4 Selecting automotive measuring instruments 2.5 Obtaining accurate measurements 2.6 Performing calculation 2.7 Self-checking and correcting numerical computation 2.8 Reading tools' limit of accuracy 2.9 Applying OSHS 2.10 Wearing of PPEs
3. Maintain measuring instruments	3.1 Measuring instruments are handled following manufacturer's manual. 3.2 Measuring instruments are cleaned following manufacturer's manual. 3.3 Instruments are stored according to manufacturer's specifications and standard operating procedures.	3.1 Types of measuring instruments and their uses 3.2 Safe handling procedures in using measuring instruments 3.3 Four fundamental operation of mathematics 3.4 Formula for volume, area, perimeter and other geometric figures	3.1 Handling and maintaining measuring instruments 3.2 Disposing wastes 3.3 Practicing good housekeeping 3.4 Applying safety practices

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	3.4 Safety practices are applied.	3.5 5S of good housekeeping 3.6 Waste management 3.7 Storing of measuring instruments 3.8 OSHS	

RANGE OF VARIABLES

VARIABLE	RANGE
1. Automotive measuring instruments	May include: 1.1 Torque wrench 1.2 Vernier caliper 1.3 Micrometer (inside and outside) 1.4 Dial gauge 1.5 Feeler gauge 1.7 Pitch/thread gauge 1.8 Multi-tester (analog/digital) 1.9 Vacuum Gauge 1.10 Tire depth gauge 1.11 Battery tester 1.12 Steel tape 1.13 Ruler
2. Calculation	May include: 2.1 Volume 2.2 Area 2.3 Displacement 2.4 Inside diameter 2.5 Circumference 2.6 Length 2.7 Thickness 2.8 Outside diameter 2.9 Taper 2.10 Out of roundness 2.11 Voltage 2.12 Resistance 2.13 Current 2.14 Pressure 2.15 Clearance 2.16 Distortion/run-out 2.17 Torque conversion 2.18 Temperature
3. Mathematical operations	Includes: 3.1 Addition 3.2 Subtraction 3.3 Multiplication 3.4 Division 3.5 Fractions 3.6 Percentages 3.7 Mixed numbers

EVIDENCE GUIDE

1. Critical aspects of competency	Assessment requires evidence that the candidate perform the following: 1.1 Selected measuring instruments 1.2 Performed measurements and calculation 1.3 Maintained measuring instruments 1.4 Applied safety practices
2. Resource implications	The following resources MUST be provided: 2.1 Workplace: Real or simulated work area 2.2 Appropriate Automotive Measuring Tools & equipment 2.3 Materials relevant to the activity 2.4 Training vehicle or simulators 2.5 User's manual 2.6 Repair manual
3. Method of assessment	Competency MUST be assessed through: 3.1 Written exam 3.2 Demonstration with oral questioning 3.3 Third party report 3.4 Interview
4. Context of assessment	4.1 Competency may be assessed individually in the actual workplace or through accredited institution.

UNIT OF COMPETENCY : **UTILIZE WORKSHOP FACILITIES AND EQUIPMENT**

UNIT CODE : **ALT723216**

UNIT DESCRIPTOR : This unit deals with inspecting and cleaning of work area including tools, equipment and facilities. Storage of equipment, including operating of basic workshop equipment.

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Perform pre-operation activities	1.1 ***Workshop facilities*** are prepared according to work requirements. 1.2 ***Equipment*** are prepared according to work requirements. 1.3 ***Equipment*** are calibrated following users' manual. 1.4 ***Minor repairs*** are carried out based on users' ***manual***. 1.5 Defective equipment are reported to immediate supervisor following company procedures. 1.6 Safety practices are applied following OSHS.	1.1 Different areas of an automotive service facilities 1.2 Preparation procedures of automotive service facilities 1.3 Different equipment in the automotive service facilities 1.4 Preparation procedures of automotive equipment 1.5 Minor repairs of automotive equipment 1.6 Report of defective equipment 1.7 Reporting procedures for defective equipment 1.8 OSHS practices related to the preparation of facilities and equipment 1.9 Workshop facilities and equipment	1.1 Preparing work area 1.2 Preparing equipment 1.3 Calibrating equipment 1.4 Repairing minor equipment issues 1.5 Reporting defective equipment 1.6 Applying safety practice 1.7 Following manuals

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
2. Use facilities and equipment	2.1 Equipment is operated according to operation ***manual***. 2.2 Facilities are utilized according to workshop procedures. 2.3 Equipment performance is monitored following users' ***manual***. 2.4 Facilities functionalities are monitored following workplace procedures. 2.5 Safety practices are applied following OSHS.	2.1 Operate Equipment 2.2 Identify facilities required for task 2.3 Evaluate equipment operation 2.4 Inspect facility functionalities 2.5 OSHS practices related to operation of facilities and equipment 2.6 Manuals in utilizing facility and equipment 2.7 Monitoring procedure of equipment's performance 2.8 Evaluate equipment operation 2.9 Inspection of facility functionalities	2.1 Operating equipment 2.2 Utilizing facility 2.3 Monitoring equipment performance 2.4 Monitoring functionalities of facility 2.5 Practicing safety 2.6 Following manual
3. Conduct post-operation activities	3.1 Workshop facilities are restored according to 5S of good housekeeping. 3.2 ***Equipment*** are cleaned and stored according to good housekeeping. 3.3 Wastes are disposed following waste management procedure and OSHS. 3.4 ***PPEs*** and Safety practices are applied following OSHS. 3.5 Report is prepared based on workshop procedure.	3.1 5S of Good housekeeping 3.2 3Rs/ Waste segregation and disposal 3.3 Restoration of the facilities 3.4 Maintenance and storage of Equipment 3.5 OSHS 3.6 Preparation of report	3.1 Restoring workshop facilities properly 3.2 Cleaning Equipment 3.3 Storing equipment in proper location 3.4 Disposing waste materials 3.5 Reporting facilities and equipment condition 3.6 Practicing safety 3.7 Practicing 5S and 3Rs

RANGE OF VARIABLES

VARIABLE	RANGE
1. Equipment	May include: 1.1 Lifter (Two Post Lifter / Four Post Lifter/ Scissor type) 1.2 Crocodile Jack 1.3 Jack Stand 1.4 Air Compressor 1.5 Oil drain
2. Workshop facilities	May include: 2.1 Service Stall / Working Bay / Workshop areas for servicing/repairing light and/or heavy vehicle and/or plant transmissions and/or outdoor power equipment 2.2 Overhauling Room 2.3 Electrical / Air-con Room 2.4 Inspection Area 2.5 Open workshop/garage and enclosed, ventilated office area 2.6 Car wash area 2.7 Other variables may include workshop with: 2.7.1 Mess hall 2.7.2 Wash room 2.7.3 Comfort room 2.7.4 Storage Room 2.7.5 Training Room
3. Manuals	May include: 3.1 Vehicle/plant manufacturer specifications 3.2 Company operating procedures 3.3 Industry/Workplace Codes of Practice 3.4 Product manufacturer specifications 3.5 Industry Occupational Health &Safety 3.6 Equipment Operation Guidelines 3.7 Service/workshop/repair manual
4. PPEs	May include: 4.1 Gloves 4.2 Apron 4.3 Goggles 4.4 Safety shoes 4.5 Uniforms 4.6 Cap 4.7 Safety helmet
5. Minor repairs	May include: 5.1 Lubrication 5.2 Bolt tightening 5.3 Worn-out parts replacement

EVIDENCE GUIDE

1. Critical aspects of competency	Assessment requires evidence that the candidate: 1.1 Performed pre-operation activities 1.2 Used facilities and equipment 1.3 Conducted post-operation activities 1.4 Applied safety practices and good housekeeping 1.5 Disposed wastes
2. Resource implications	The following resources should be provided: 2.1 Workplace: Real or simulated work area 2.2 Appropriate Equipment 2.3 Materials relevant to the activity 2.4 Manuals/references 2.5 PPEs 2.6 Fire Extinguishers
3. Method of assessment	Competency in this unit may be assessed through: 3.1 Written exam 3.2 Demonstration with oral questioning 3.3 Direct observation
4. Context of assessment	4.1 Competency may be assessed individually in the actual workplace or through accredited institution.

UNIT OF COMPETENCY : PREPARE SERVICING PARTS AND CONSUMABLES

UNIT CODE : ALT723217

UNIT DESCRIPTOR : This unit of competency covers the ability to prepare parts and consumables for gasoline and diesel engines in conducting preventive maintenance.

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Identify parts and consumables	1.1 ***Parts and consumables*** are ***determined*** according to job requirements. 1.2 Availability of parts and consumables are confirmed based on stock. 1.3 ***Indirect materials*** are identified according to job requirements. 1.4 ***Hazardous parts and consumables*** are identified according International standards. 1.5 Safety practices are applied according to OSHS.	1.1 Job requirements 1.2 Safety practices 1.3 Understanding manuals 1.4 Hazardous parts and consumables 1.5 Solid waste management act (RA 6969) 1.6 Wearing of PPE's 1.7 OSHS 1.8 Proper storage of materials 1.9 Chemical contents of consumables 1.10 Composition of consumables 1.11 Quality of parts and consumables 1.12 Computation for quantity of parts and consumables 1.13 Vehicle specifications 1.14 Identifying Part no. 1.15 Awareness in part number 1.16 Updated type of parts and consumables	1.1 Determining parts and consumables 1.2 Reading and interpreting job requirements 1.3 Identifying required parts & consumables 1.4 Understanding safety practices 1.5 Determining quantity and quality of parts and consumables 1.6 Confirming availability of parts and consumables 1.7 Identifying indirect materials 1.8 Identifying hazardous parts and consumables 1.9 Applying safety practices 1.10 Understanding safety practices 1.11 Following manuals
2. Retrieve and withdraw parts and consumables	2.1 Requisition slip is prepared according to identified parts and consumables.	2.1 Job requirements 2.2 Safety practices 2.3 Understanding manuals	2.1 Reading and interpreting requisition slip

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	2.2 Withdrawal of parts and materials are recorded. 2.3 Quantity of parts and consumables are validated according to job requirements. 2.4 Parts and materials are handled following safety procedures.	2.4 Hazardous parts and consumables 2.5 Solid waste management act (RA 6969) 2.6 Wearing of PPE's 2.7 Updated types of parts & consumables for proper usage	2.2 Validating quantity of parts and materials 2.3 Handling parts and consumables
3. Complete work process	3.1 Used parts and consumables are labeled and segregated. 3.2 Used parts are packed and returned to customers. 3.3 Consumables are collected for recycling. 3.4 PPEs are worn following OSHS. 3.5 ***Wastes*** are disposed according to RA 6969.	3.1 Labeling and segregation of used parts and consumables 3.2 Job requirements 3.3 Safety practices 3.4 3Rs 3.5 Solid waste management act (RA 6969) 3.6 Wearing of PPE's	3.1 Waste segregation and disposal of parts & consumables according to RA 6969

RANGE OF VARIABLES

VARIABLE	RANGE
1. Parts and consumables	May include: 1.1 Engine oil 1.2 Clutch fluid 1.3 Transmission oil 1.4 Differential oil 1.5 Power steering fluid 1.6 Brake fluid 1.7 Engine coolant 1.8 Engine oil filter 1.9 Fuel filter 1.10 Air cleaner element 1.11 Feed pump strainer 1.12 Sparkplugs (Gasoline engine) 1.13 Battery 1.14 Air cleaner 1.15 Tire 1.16 Wiper blade 1.17 A/C pollen filter 1.18 Bulb 1.19 Brake pad/brake shoe 1.20 Clutch lining
2. Determining parts and consumables	May include: 2.1 Quantity 2.2 Quality
3. Indirect materials	May include: 3.1 Rags 3.2 Saw dust 3.3 Cleaning fluids 3.4 Sand paper
4. Hazardous parts consumables	May include: 4.1 Batteries 4.2 Used oil 4.3 Used fluids 4.4 Used coolant 4.5 Used parts 4.6 Used oil filter
5. Wastes	May include: 5.1 Contaminated consumables 5.2 Contaminated parts

EVIDENCE GUIDE

1. Critical aspects of competency	Assessment requires evidence that the candidate: 1.1 Identified parts and consumables 1.2 Retrieved and withdrawn parts and consumables 1.3 Completed work process 1.4 Applied safety practices
2. Resource implications	The following resources should be provided: 2.1 Workplace: Real or simulated work area 2.2 Materials relevant to the activity 2.3 Repair manuals and related reference materials
3. Method of assessment	Competency in this unit may be assessed through: 3.1 Direct observation 3.2 Interview 3.3 Written examination 3.4 Demonstration with oral questioning 3.5 Third party report
4. Context of Assessment	4.1 Competency may be assessed individually in the actual workplace or through accredited institution.

UNIT OF COMPETENCY : PREPARE VEHICLE FOR SERVICING AND RELEASING

UNIT CODE : ALT723218

UNIT DESCRIPTOR : This unit covers the knowledge, skills, and attitudes needed in identifying and preparing the vehicle for servicing and releasing.

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Receive vehicle	1.1 Vehicle is located following company standard. 1.2 Checklist is validated for exterior and interior items in accordance with ***vehicle checklist***. 1.3 Job Order is checked for proper assignment according to ***work classification***. 1.4 ***Work bay*** for vehicle is designated based from Job Order. 1.5 Vehicle is moved on the designated ***work bay***.	1.1 Identification of basic vehicle components 1.2 Types of defects 1.3 Read & understand Job Order 1.4 Flat rate time 1.5 Use of PPEs 1.6 Adherence to safety procedures 1.7 Vehicle checklist 1.8 Work classification 1.9 Work bay 1.10 Attitudes 1.10.1 Patient 1.10.2 Attention to details 1.10.3 Honest 1.10.4 Time Conscious	1.1 Completing vehicle checklist 1.2 Classifying work to be performed 1.3 Assigning work bay 1.4 Validating checklist for exterior and interior items 1.5 Checking job order for proper assignment 1.6 Identifying vehicle 1.7 Moving vehicle to designated work bay
2. Prepare vehicle for servicing	2.1 ***Protective covers*** are installed prior to servicing based on workshop operating standards. 2.2 Vehicle is positioned and set-up for lifting according to repair order. 2.3 Vehicle is lifted for servicing following manufacturer's manual.	2.1 Familiarization on equipment & facilities 2.2 Time estimation of completion 2.3 Vehicle tagging 2.4 Types of protective covers 2.5 Setting-up of vehicle for lifting 2.6 Read & understand repair order 2.7 Use of PPEs 2.8 Use of safety gears	2.1 Understanding of vehicle status 2.2 Installation of protective covers 2.3 Positioning vehicle 2.4 Operating lifter 2.5 Moving vehicle 2.6 Setting-up vehicle for lifting 2.7 Practicing safety

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	2.4 Safety practices are applied following safety procedures.	2.9 OSHS 2.10 Adherence to safety procedures 2.11Attitudes: 2.11.1 Patient 2.11.2 Attention to details 2.11.3 Honest 2.11.4 Time Conscious	
3. Prepare vehicle for releasing	3.1 Job done is confirmed according to repair order. 3.2 Quality check is done based from repair order. 3.3 Transfer of vehicle to wash bay is coordinated according to SOP. 3.3 Vehicle is endorsed to quality control person following workplace procedure.	3.1 Familiarization of equipment & facilities 3.2 Read & understand repair order 3.3 Confirmation of job done 3.4 Quality standards checking 3.5 Coordination of transferring vehicle 3.6 Endorsement procedures for vehicle 3.7 Attitudes 3.7.1 Patient 3.7.2 Attention to details 3.7.3 Honest 3.7.4 Time Conscious	3.1 Confirming job done 3.2 Performing quality checking 3.3 Coordinating transfer of vehicle to wash bay 3.4 Endorsing and turning-over vehicle

RANGE OF VARIABLES

VARIABLE	RANGE
1. Vehicle checklist	May include: 1.1 External scratches, accessories, items, dents, damages and cracks 1.2 Internal items, scratches, noticeable damages, including spare tire, tools, and loose items 1.3 Standard items that are not present during inspection 1.4 Valuable/personal belongings
2. Work classification	May include: 2.1 Body and Paint repair 2.2 General Job repair 2.3 Periodic maintenance service (PMS)
3. Work bay	May include: 3.1 Service Stall / Working Bay / Workshop areas for servicing/repairing light and/or heavy vehicle and/or plant transmissions and/or outdoor power equipment 3.2 Overhauling Room 3.3 Electrical / Air-con Room 3.4 Inspection Area 3.5 Open workshop/garage and enclosed, ventilated office area
5. Protective covers	May include but not limited to: 5.1 Seat Cover 5.2 Steering Wheel Cover 5.3 Handbrake Cover 5.4 Shift Knob Cover 5.5 Fender Cover 5.6 Paper mat

EVIDENCE GUIDE

1. Critical aspects of competency	Assessment requires evidence that the candidate: 1.1 Received vehicle 1.2 Prepared vehicle for servicing 1.3 Prepared vehicle for releasing 1.4 Applied safety practices
2. Resource implications	The following resources MUST be provided: 2.1 Workplace: Real or simulated work area 2.2 Appropriate Tools & Equipment 2.3 Materials relevant to the activity 2.4 Manuals and references
3. Method of assessment	Competency may be assessed through: 3.1 Direct observation 3.2 Demonstration with Oral questioning 3.3 Interview 3.4 Written Evaluation 3.5 Third Party Report
4. Context of assessment	4.1 Competency may be assessed individually in the actual workplace or through accredited institution.

CORE COMPETENCY

UNIT OF COMPETENCY : CONDUCT BASIC INSPECTION OF ENGINE AND OTHER ELECTRICAL COMPONENTS

UNIT CODE : ALT723382

UNIT DESCRIPTOR : This unit covers the knowledge, skills, and attitude needed in conducting visual inspection of vehicle, making recommendation based on findings, determining tapping points and location for Speed Limitation Device, preparing installation plan, and performing documentation.

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Check vehicle	1.1 ***Job Order Form*** is secured from immediate superior based on standard operating procedure. 1.2 Electrical wiring diagram is interpreted in reference with ***vehicle workshop manual***. 1.3 ***Visual inspection*** is conducted following standard operating procedure. 1.4 Findings are reported to immediate superior based on standard operating procedure. 1.5 ***Recommenda-tions*** are made based on findings. 1.6 Safety practices are applied following Occupational Safety and Health Standards (OSHS).	1.1 Job order 1.2 Interpretation of Electrical Wiring Diagram 1.3 Procedure in checking vehicles 1.4 Visual inspection of vehicle 1.5 Types of Speed Limitation Device 1.6 RA 10916 Road Speed Limiter Act of 2016 1.7 Occupational Safety and Health Standards (OSHS) 1.8 RA 4136 Chapter 4 Article 1 (Exempted vehicle from Speed Limitation Device module installation) 1.9 Procedure in reporting findings 1.10 Speedometer 1.11 Communication 1.12 Basic mathematics	1.1 Securing job order 1.2 Interpreting Electrical Wiring Diagram 1.3 Conducting visual inspection 1.4 Securing inspection report 1.5 Reporting findings 1.6 Making recommend-dations 1.7 Applying safety practices 1.8 Communication skills 1.9 Presentation skills 1.10 Reading speedometer

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
2. Plan installation	2.1 Installation manual is interpreted based on work requirements. 2.2 Electrical wiring diagram is used in planning installation. 2.3 Tapping points are determined based on ***vehicle manufacturer's manual*** and recommendation of immediate superior. 2.4 Location for Speed Limitation Device is determined based on ***industry criteria***. 2.5 Location for placement of solenoid valve is determined based on the installation manual. 2.6 ***Tools, materials, equipment, and parts*** are selected based on standard operating procedure.	2.1 Work requirements 2.2 Electrical Wiring Diagram 2.3 Tapping points 2.4 Types of Speed Limitation Device 2.5 Location for Speed Limitation Device 2.6 Industry criteria 2.7 Vehicle workshop manual 2.8 Type of vehicle 2.8.1 Electrical throttle linkage 2.8.2 Mechanical throttle 2.9 Installation manual 2.10 Tools, materials, and equipment and their functions 2.11 Mensuration 2.12 Calculation 2.13 3Rs	2.1 Interpreting installation manual 2.2 Using Electrical Wiring Diagram 2.3 Determining tapping points 2.4 Determining locations for Speed Limitation Device and solenoid valve 2.5 Selecting tools, materials and equipment 2.6 Selecting Speed Limitation Device Kit 2.7 Use measuring devices 2.8 Identifying vehicle type 2.9 Use installation manual 2.10 Mensuration skills 2.11 Calculation skills 2.12 Practicing 3Rs
3. Perform documentation	3.1 Findings and recommendations are prepared based on standard operating procedure. 3.2 Installation plan is prepared based on standard operating procedure. 3.3 Documentations are submitted for archiving following workplace procedures. 3.4 Required output is completed as	3.1 Accomplishment of Job order form 3.2 Preparation of Installation plan 3.3 Documentation 3.3.1 Photo 3.4 Preparation of installation report 3.5 Procedure in accomplishing warranty card 3.6 Mensuration 3.7 Calculation 3.8 Presentation of report 3.9 IRR of RA 10916 Rule 4-	3.1 Preparing findings and recommen-dations 3.2 Preparing installation plan 3.3 Performing photo documentation 3.4 Accomplishing warranty card 3.5 Preparing installation report 3.6 Submitting documentations 3.7 Presentation skills

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	specified by immediate superior based on work.	Enforcement and adjudication 3.10 Factors affecting productivity 3.11 Productivity work measurements 3.12 Ways of improving productivity 3.13 Adherence to work requirements	3.8 Mensuration and calculation skills 3.9 Following IRR of RA 10916 Rule 4- Enforcement and adjudication

RANGE OF VARIABLES

VARIABLE	RANGE
1. Job Order Form	Job order form may include: 1.1 Vehicle details 1.1.1 Model 1.1.2 Mileage 1.2 Inspection of unit 1.3 Type of Speed Limitation Device to be installed 1.4 Set limit to a specific speed according to law and client 1.5 Set limit to a specific speed 1.6 Attached Electrical Wiring Diagram (EWD)
2. Visual inspection	Visual inspection may include: 2.1 Inspection of loose connections 2.2 Inspection burned wires 2.3 Inspection working condition of speedometer 2.4 Inspection fuel leaks 2.5 Inspection size of fuel line (mechanical) 2.6 Inspection size of wires
3. Recommendations	Recommendations may include: 3.1 Change speed limiter module 3.2 Replacement of fittings 3.3 Replacement of sockets 3.4 Relocation of tapping points electronic throttle linkage 3.5 Rejection of request due to defective vehicle wiring condition
4. Industry criteria	Industry criteria may include: 4.1 Beside computer box 4.2 Secured from unauthorized person 4.3 Protected from elements
5. Documentations	Documentations refers to: 5.1 Findings and recommendations 5.2 Installation plan 5.3 Installation and Repair report
6. Tools, materials, equipment, and parts	Tools, materials, equipment, and parts may include: 6.1 Tools 6.1.1 Measuring tape 6.1.2 Screw driver 6.2 Materials 6.2.1 Soldering lead 6.2.2 Soldering paste 6.2.3 Liquid gasket 6.2.4 T-fittings 6.2.5 Corrugated plastic hose 6.2.6 Fuel line hose 6.2.7 Stainless ear clamp

VARIABLE	RANGE
	6.2.8 Electrical tape 6.2.9 Teflon tape 6.2.10 Autowire 6.2.11 Soldering iron 6.2.12 Terminal eye 6.2.13 Garbage bin 6.2.14 Rags 6.2.15 PPEs: 6.2.15.1 Safety shoes 6.2.15.2 Hard hat 6.2.15.3 Arm sleeves 6.2.15.4 Safety gloves 6.2.15.5 Safety googles 6.2.15.6 Reflectorized vest 6.2.16 Sample Job Order Form 6.2.17 Installation manual 6.3 Equipment 6.3.1 Training vehicle 6.4 Parts 6.4.1 Speed Limitation Device Kit for Electronic Throttle Linkage 6.4.1.1 Speed Limitation Device 6.4.1.2 Wire for front engine 6.4.1.3 Cable ties 6.4.1.4 Sealing wire and lead seal 6.4.2 Speed Limitation Device Kit for Mechanical Throttle Linkage 6.4.2.1 Speed Limitation Device 6.4.2.2 Wire for front engine 6.4.2.3 Cable ties 6.4.2.4 Sealing wire and lead seal 6.4.2.5 Solenoid valve and fittings 6.4.3 Gear box sensor 6.4.4 Speed sensor
7. Vehicle manufacturer's manual	May include: 7.1 Repair manual 7.2 Workshop manual 7.3 Electrical wiring diagram 7.4 Speed Limitation Device Wiring Diagram

EVIDENCE GUIDE

1. Critical aspects of competency	Assessment requires evidence that the candidate: 1.1 Checked vehicle 1.1.1 Interpreted Electrical Wiring Diagram. 1.1.2 Conducted visual inspection. 1.1.3 Made recommendations. 1.1.4 Applied safety practices. 1.2 Planned installation 1.2.1 Interpreted installation manual. 1.2.2 Used electrical wiring diagram. 1.2.3 Determined tapping points. 1.2.4 Determined location for Speed Limitation Device. 1.2.5 Determined location for placement of solenoid valve. 1.2.6 Selected tools, materials, equipment and parts. 1.3 Performed documentation 1.3.1 Prepared Installation/ Repair report. 1.3.2 Submitted documentations for archiving. 1.3.3 Completed required output.
2. Resource implications	The following resources MUST be provided: 2.1 Workplace: Real or simulated work area 2.2 Tools, materials & equipment relevant to perform required tasks 2.3 Manufacturer's repair manual 2.4 PPEs 2.5 Training vehicle 2.6 First-aid kit
3. Method of assessment	Competency in this unit may be assessed through: 3.1 Demonstration with Oral questioning 3.2 Written exam 3.3 Direct Observation
4. Context for assessment	4.1 Competency may be assessed individually in the actual workplace or simulation environment in TESDA accredited institutions.

UNIT OF COMPETENCY : PERFORM INSTALLATION OF SPEED LIMITATION DEVICE

UNIT CODE : ALT723383

UNIT DESCRIPTOR : This unit covers the knowledge, skills, and attitudes needed in securing job order, identifying Speed Limitation Device Kit, using electrical wiring diagram, installing Speed Limitation Device, preparing and submitting workplace documents, and performing turn-over of vehicle.

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Prepare for installation	1.1 Accomplished ***Job Order Form*** is secured from immediate superior based on standard operating procedure. 1.2 Installation manual is used based on job request. 1.3 Electrical Wiring Diagram is used for installation. 1.4 ***Speed Limitation Device Kit*** is prepared according to job order. 1.5 ***Tools, materials, equipment, and parts*** are prepared based on job order. 1.6 Hazards associated with the work are identified and risks are managed.	1.1 Job Order Form 1.2 Installation manual 1.3 Electrical Wiring Diagram (EWD) 1.4 Vehicle models 1.5 Type of Speed Limitation Device Kit: 1.5.1 Mechanical 1.5.2 Electronic 1.6 Inspection of Speed Limitation Device Kit 1.7 Different installation tools, materials, equipment, parts and their functions 1.8 Mensuration 1.9 Calculation 1.10 Hazards associated with the operation 1.11 Awareness on PNS UNR 89:2016, part 3: Uniform provisions concerning the approval of Speed Limitation Devices and adjustable Speed	1.1 Securing Job Order Form 1.2 Use of installation manual 1.3 Use of electrical wiring diagram 1.4 Identifying Speed Limitation Device Kit 1.5 Checking Speed Limitation Device Kit 1.6 Preparing and selecting tools, materials, equipment, and parts 1.7 Identifying hazards 1.8 Managing risks 1.9 Identifying vehicle models 1.10 Mensuration skills 1.11 Computation skills

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
		Limitation Devices	
2. Install Speed Limitation Device	2.1 Gear box sensor is installed based on installation manual and vehicle manufacturer's manual. 2.2 Solenoid valve is installed based on installation manual and vehicle workshop manual. 2.3 Functionality of Speed Limitation Device is tested using test calibration unit (TCU) thru actual road test. 2.4 Calibration is performed based on installation manual. 2.5 ***Security features*** are installed based on installation manual. 2.6 Safety practices are applied based on Occupational Safety and Health Standards (OSHS).	2.1 Gear box sensor 2.2 Solenoid valve 2.3 Vehicle manufacturer's manual 2.4 Accessories, miscellaneous, and fittings 2.5 Road test (to determine the functionality of Speed Limitation Device) 2.5.1 Rolling road 2.5.2 Open road 2.6 Calibration (part of road test) 2.7 Checking of installed Speed Limitation Device (part of road test) 2.8 Security features 2.9 Installation manual 2.10 OSHS 2.11 Awareness in RA 4136 Chapter IV, Art. I Sec. 35 – Speed Limit 2.12 Estimation 2.13 Solid waste management	2.1 Installing of gear box sensor 2.2 Installing gear solenoid valve 2.3 Reading workshop manual and vehicle workshop manual 2.4 Performing road test 2.5 Performing calibration 2.6 Installing security features 2.7 Checking installed Speed Limitation Device 2.8 Estimation skills 2.9 Practicing OSHS 2.10 Practicing solid waste management
3. Perform post-activities	3.1 ***Workplace documents*** are prepared and submitted to immediate superior based on standard operating procedure. 3.2 Video documentation is performed based on standard operating procedure.	3.1 Preparation of workplace documents 3.2 Warranty card 3.3 Restoration of workplace 3.4 Waste management 3.5 Procedure to turn-over vehicle 3.6 Quality control procedures 3.7 Checking and storage of tools,	3.1 Preparing and submitting workplace documents 3.2 Signing and submitting warranty card 3.3 Restoring workplace 3.4 Disposing wastes 3.5 Turning-over vehicle 3.6 Checking and storing tools,

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	3.3 Photo documentation is performed based on standard operating procedure. 3.4 Warranty card is signed and submitted to immediate superior based on standard operating procedure. 3.5 Workplace is restored based on good housekeeping. 3.6 Wastes are disposed based on waste management. 3.7 Vehicle is turned-over to immediate superior for quality control following workplace procedure 3.8 ***Tools, materials, equipment, and parts*** are checked and stored according to workplace procedures. 3.9 Installation and Repair report is prepared based on standard operating procedure. 3.10 Required output is completed as specified by immediate superior based on work.	materials and equipment 3.8 Inventory report 3.9 3Rs 3.10 Factors affecting productivity 3.11 Productivity work measurements 3.12 Ways of improving productivity 3.13 Adherence to work requirements	materials and equipment 3.7 Preparing inventory report 3.8 Practicing 3Rs

RANGE OF VARIABLES

VARIABLE	RANGE
1. Job order form	Job order form includes: 1.1 Details of vehicle 1.2 Job request based on the recommendations 1.3 Approval of superior 1.4 Recalibration of module 1.5 Checking of product warranty card
2. Security features	Security features includes: 2.1 Sealing pliers with anvil 2.2 Sealing wire 2.3 Lead seals
3. Calibration	Calibration include: 3.1 Ensure speed limit meets the required regulation 3.2 Ensure there is no diagnostic trouble code (DTC) after installation
4. Tools, materials, equipment, and parts	Tools, materials, equipment, and parts may include: 4.1 Tools 4.1.1 Measuring tape 4.1.2 Test and calibration unit 4.1.3 Sealing pliers with anvil 4.1.4 Plier cutter 4.1.5 Combination wrench 4.1.6 Multi-tester 4.1.7 Seal grip 4.1.8 Adjustable wrench 4.1.9 Socket 4.1.10 Ratchet 4.1.11 T-wrench 4.1.12 Torx wrench 4.1.13 Wire stripper 4.1.14 Screw driver 4.2 Materials 4.2.1 Soldering lead 4.2.2 Soldering paste 4.2.3 Liquid gasket 4.2.4 T-fittings 4.2.5 Corrugated plastic hose 4.2.6 Fuel line hose 4.2.7 Stainless ear clamp 4.2.8 Electrical tape 4.2.9 Teflon tape 4.2.10 Autowire 4.2.11 Soldering iron 4.2.12 Terminal eye 4.2.13 Relief valve assy 4.2.14 Autowire for rear engine

VARIABLE	RANGE
	4.2.15 Removable adhesive tape 4.2.16 Garbage bin 4.2.17 Rags 4.2.18 PPEs: 4.2.18.1 Safety shoes 4.2.18.2 Hard hat 4.2.18.3 Arm sleeves 4.2.18.4 Safety gloves 4.2.18.5 Safety googles 4.2.18.6 Reflectorized vest 4.2.19 Sample job order 4.2.20 Installation manual 4.3 Equipment 4.3.1 Tool Caddy 4.3.2 Training vehicle 4.4 Parts 4.4.1 Speed Limitation Device Kit for Electronic Throttle Linkage 4.4.1.1 Speed Limitation Device 4.4.1.2 Wire for front engine 4.4.1.3 Cable ties 4.4.1.4 Sealing wire and lead seal 4.4.2 Speed Limitation Device Kit for Mechanical Throttle Linkage 4.4.2.1 Speed Limitation Device 4.4.2.2 Wire for front engine 4.4.2.3 Cable ties 4.4.2.4 Sealing wire and lead seal 4.4.2.5 Solenoid valve and fitting 4.4.3 Gear box sensor 4.4.4 Speed sensor
5. Speed Limitation Device Kit	Speed Limitation Device Kit includes: 5.1 Speed Limitation Device Kit for Electronic Throttle Linkage 5.1.1 Speed Limitation Device 5.1.2 Wire for front engine 5.1.3 Cable ties 5.1.4 Sealing wire and lead seal 5.2 Speed Limitation Device Kit for Mechanical Throttle Linkage 5.2.1 Speed Limitation Device 5.2.2 Wire for front engine 5.2.3 Cable ties 5.2.4 Sealing wire and lead seal 5.2.5 Solenoid valve and fitting

VARIABLE	RANGE
6. Workplace documents	May include: 6.1 Job order 6.1.1 Inspection form 6.2 Installation and Repair report

EVIDENCE GUIDE

1. Critical aspects of competency	Assessment requires evidence that the candidate: 1.1 Prepared for installation 1.1.1 Secured accomplished job order. 1.1.2 Used installation manual. 1.1.3 Used electrical wiring diagram. 1.1.4 Prepared Speed Limitation Device Kit. 1.1.5 Prepared tools, materials, equipment, and parts. 1.1.6 Identified hazards associated with the work and managed risks. 1.2 Installed Speed Limitation Device 1.2.1 Installed gear box sensor. 1.2.2 Installed gear solenoid valve. 1.2.3 Tested functionality of Speed Limitation Device. 1.2.4 Performed calibration. 1.2.5 Installed security features. 1.2.6 Applied safety practices. 1.3 Performed post-activities 1.3.1 Prepared and submitted workplace documents. 1.3.2 Signed and submitted warranty card. 1.3.3 Restored workplace. 1.3.4 Disposed wastes. 1.3.5 Turned-over vehicle. 1.3.6 Checked and stored tools, materials, and equipment. 1.3.7 Completed required output.
2. Resource implications	The following resources MUST be provided: 2.1 Workplace: Real or simulated work area 2.2 Appropriate Tools & Equipment 2.3 Materials relevant to the activity 2.4 Manufacturer's repair manual 2.5 PPEs 2.6 Training vehicle 2.7 First aid kit
3. Method of assessment	Competency in this unit may be assessed through: 3.1 Demonstration with Oral questioning 3.2 Written exam 3.3 Direct Observation
4. Context for assessment	4.1 Competency may be assessed individually in the actual workplace or simulation environment in TESDA accredited institutions.

UNIT OF COMPETENCY : MAINTAIN SPEED LIMITATION DEVICE

UNIT CODE : ALT723384

UNIT DESCRIPTOR : This unit covers the knowledge, skills, and attitudes needed in securing job order, reporting actual findings on vehicle, replacing and recalibrating Speed Limitation Device, conducting road test, performing turn-over of vehicle, and accomplishing workplace documents.

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Conduct preparation activities	1.1 Accomplished ***Job Order Form*** is secured from immediate superior based on standard operating procedure. 1.2 Close coordination with authorized vehicle technician is done based on workplace procedure. 1.3 Actual findings on vehicle is reported to immediate superior based on standard operating procedure. 1.4 Approval of immediate superior is sought prior to repair. 1.5 ***Tools, materials, equipment, and parts*** are prepared and checked based on work requirements 1.6 PPEs are worn following Occupational Safety and Health Standards (OSHS).	1.1 Securing job order 1.2 Reporting of actual findings on vehicle 1.3 Approval of immediate superior 1.4 Coordination with authorized vehicle technician 1.5 PPEs 1.6 Communication skills	1.1 Securing accomplished job order 1.2 Performing close coordination with authorized vehicle technician 1.3 Reporting actual findings on vehicle 1.4 Seeking approval of immediate superior prior to repair 1.5 Preparing tools, materials, equipment, and parts 1.6 Wearing PPEs

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
2. Perform maintenance	2.1 Replacement of Speed Limitation Device is done based on job order and standard operating procedure. 2.2 Recalibration of Speed Limitation Device is performed based on instruction of authority. 2.3 Video documentation is performed based on standard operating procedure. 2.4 Photo documentation is performed based on standard operating procedure. 2.5 Warranty card is accomplished for replacement SLD based on standard operating procedure. 2.6 ***Tools, materials, and parts*** are used based on work requirements. 2.7 Equipment is operated based on manufacturer's manual. 2.8 Safety measures are employed according to Occupational Safety and Health Standards (OSHS). 2.9 Installation and Repair report is prepared based on	2.1 Replacement of Speed Limitation Device 2.2 Recalibration of Speed Limitation Device 2.3 Tools, parts and materials 2.4 Communication skills 2.5 PPEs 2.6 IRR of RA 10916 "Road Speed Limiter Act of 2016" 2.7 RA 4136 "Land Transportation and Traffic Code" 2.8 RA 2000 "Limited Access Highway Act' 2.9 Awareness in operating rolling roads	2.1 Replacing Speed Limitation Device 2.2 Performing recalibration of Speed Limitation Device 2.3 Using tools, materials, and parts 2.4 Operating equipment 2.5 Employing safety measures

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	standard operating procedure.		
3. Complete work processes	3.1 Functionality of Speed Limitation Device is tested using test calibration unit (TCU) and road test. 3.2 Vehicle is turned-over to immediate superior for quality control following workplace procedure. 3.3 Work area is restored following 5S of good housekeeping. 3.4 Wastes are managed following environmental rules and regulations. 3.5 ***Tools, materials, equipment, and parts*** are checked and stored according to workplace procedures. 3.6 ***Workplace documents*** are accomplished according to workplace procedures. 3.7 Required output is completed as specified by immediate superior based on work.	3.1 Final inspection procedure 3.2 Turn-over of vehicle 3.3 Accomplishment of repair order and other forms 3.4 Job done 3.5 OSHS 3.6 Wearing of 4.6 PPEs 3.7 5S 3.8 Waste management 3.9 Checking and storage of tools 3.10 Workplace documents 3.11 IRR of RA 10916 "Road Speed Limiter Act of 2016" 3.12 RA 4136 "Land Transportation and Traffic Code" 3.13 RA 2000 "Limited Access Highway Act" 3.14 Factors affecting productivity 3.15 Productivity work measurements 3.16 Ways of improving productivity 3.17 Adherence to work requirements	3.1 Accomplishing workplace documentation. 3.2 Reporting diagnostic findings and make repair recommend-dations 3.3 Conducting final inspection 3.4 Performing vehicle turn-over 3.5 Restoring work area 3.6 Managing wastes 3.7 Checking and storing tools and equipment 3.8 Wearing of PPEs 3.9 Applying safety practices 3.10 Accomplishing workplace documents

RANGE OF VARIABLES

VARIABLE	RANGE
1. Job order form	Job order form includes: 1.1 Details of vehicle 1.2 Job request based on the recommendations 1.3 Approval of superior 1.4 Recalibration of SLD 1.5 Replacement of SLD 1.6 Checking of product warranty card
2. Tools, materials, equipment, and parts	Tools, materials, equipment, and parts may include: 2.1 Tools 2.1.1 Measuring tape 2.1.2 Test and calibration unit 2.1.3 Sealing pliers with anvil 2.1.4 Plier cutter 2.1.5 Combination wrench 2.1.6 Multi-tester 2.1.7 Seal grip 2.1.8 Adjustable wrench 2.1.9 Socket 2.1.10 Ratchet 2.1.11 T-wrench 2.1.12 Torx wrench 2.1.13 Wire stripper 2.1.14 Screw driver 2.2 Materials 2.2.1 Soldering lead 2.2.2 Soldering paste 2.2.3 Liquid gasket 2.2.4 T-fittings 2.2.5 Corrugated plastic hose 2.2.6 Fuel line hose 2.2.7 Stainless ear clamp 2.2.8 Electrical tape 2.2.9 Teflon tape 2.2.10 Autowire 2.2.11 Autowire for rear engine 2.2.12 Soldering iron 2.2.13 Terminal eye 2.2.14 Relief valve assy 2.2.15 Removable adhesive tape 2.2.16 Garbage bin 2.2.17 Rags 2.2.18 PPEs: 2.2.18.1 Safety shoes 2.2.18.2 Hard hat 2.2.18.3 Arm sleeves

VARIABLE	RANGE
	2.2.18.4 Safety gloves 2.2.18.5 Safety googles 2.2.18.6 Reflectorized vest 2.2.19 Sample job order 2.2.20 Installation manual 2.3 Equipment 2.3.1 Tool Caddy 2.3.2 Training vehicle 2.4 Parts 2.4.1 Speed Limitation Device Kit for Electronic Throttle Linkage 2.4.1.1 Speed Limitation Device 2.4.1.2 Wire for front engine 2.4.1.3 Cable ties 2.4.1.4 Sealing wire and lead seal 2.4.2 Speed Limitation Device Kit for Mechanical Throttle Linkage 2.4.2.1 Speed Limitation Device 2.4.2.2 Wire for front engine 2.4.2.3 Cable ties 2.4.2.4 Sealing wire and lead seal 2.4.2.5 Solenoid valve and fittings 2.4.3 Gear box sensor 2.4.4 Speed sensor
3. Workplace documents	May include: 3.1 Job order 3.1.1 Repair order 3.1.2 Inspection form 3.2 Installation report

EVIDENCE GUIDE

1. Critical aspects of competency	Assessment requires evidence that the candidate: 1.1 Conducted preparation activities 1.1.1 Secured accomplished job order form. 1.1.2 Made close coordination with authorized vehicle technician. 1.1.3 Reported actual findings on vehicle. 1.1.4 Sought approval of immediate superior. 1.1.5 Prepared and checked tools, materials, equipment, and parts. 1.1.6 Worn PPEs. 1.2 Performed repair and maintenance 1.2.1 Replaced Speed Limitation Device. 1.2.2 Performed recalibration of Speed Limitation Device. 1.2.3 Accomplished warranty card. 1.2.4 Used tools, materials, and parts. 1.2.5 Operated equipment. 1.2.6 Employed safety measures. 1.3 Completed work processes 1.3.1 Tested functionality of Speed Limitation Device. 1.3.2 Turned-over vehicle to immediate superior. 1.3.3 Restored work area. 1.3.4 Managed wastes. 1.3.5 Checked and stored tools, materials, equipment, and parts. 1.3.6 Accomplished workplace documents. 1.3.7 Completed required output.
2. Resource implications	The following resources MUST be provided: 2.1 Workplace: Real or simulated work area 2.2 Appropriate Tools & equipment 2.3 Materials relevant to the activity 2.4 Manufacturer's repair manual 2.5 PPEs 2.6 Training vehicle
3. Method of assessment	Competency in this unit may be assessed through: 3.1 Demonstration with Oral questioning 3.2 Written exam 3.3 Direct Observation
4. Context for assessment	4.1 Competency may be assessed individually in the actual workplace or simulation environment in TESDA accredited institutions.

SECTION 3 TRAINING ARRANGEMENTS

These standards are set to provide technical and vocational education and training (TVET) providers with information and other important requirements to consider when designing training programs for **SPEED LIMITATION DEVICE SERVICING NC II**.

3.1 CURRICULUM DESIGN

TESDA shall provide the training on the development of competency-based curricula to enable training providers develop their own curricula with the components mentioned below.

Delivery of knowledge requirements for the basic, common and core units of competency specifically in the areas of mathematics, science/technology, communication/language and other academic subjects shall be contextualized. To this end, TVET providers shall develop a Contextual Learning Matrix (CLM) to accompany the curricula.

Course Title: **SPEED LIMITATION DEVICE SERVICING** **NC Level** **NC II**

Nominal Training Duration:

37	Hours (Basic Competencies)
122	Hours (Common Competencies)
25	Hours (Core Competencies)
184	
93	**SIL**
277	**TOTAL HOURS**

Course Description:

This course is designed to enhance the knowledge, skills and attitudes of an individual in the field of Speed Limitation Device servicing in accordance with industry standards. It covers core competencies such as: conducting basic inspection of engine and other electrical components, performing installation, replacing, and recalibrating Speed Limitation Device.

Upon completion of the course, the learners are expected to demonstrate the above-mentioned competencies to be employed. To obtain this, all units prescribed for this qualification must be achieve.

BASIC COMPETENCIES
37 Hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration

1. Participate in workplace communication	1.1 Obtain and convey workplace information	• Describe Organizational policies
		• Read:
		  ○ Effective communication
		  ○ Written communication
		  ○ Communication procedures and systems
		• Identify:
		  ○ Different modes of communication
		  ○ Medium of communication
		  ○ Flow of communication
		  ○ Available technology relevant to the enterprise and the individual's work responsibilities
		• Prepare different Types of question
		• Gather different sources of information
		• Apply storage system in establishing workplace information
		• Demonstrate Telephone courtesy
			• Group discussion
			• Lecture
			• Demonstration
				• Oral evaluation
				• Written examination
				• Observation
					2 Hours

	1.2 Perform duties following workplace instructions	• Read:
		  ○ Written notices and instructions
		  ○ Workplace interactions and procedures
			• Group discussion
			• Lecture
			• Demonstration
				• Oral evaluation
				• Written examination
				• Observation
					2 Hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
		• Read instructions on work related forms/documents • Perform workplace duties scenario following workplace nstructions			
	1.3 Complete relevant work related documents	• Describe Communication procedures and systems • Read: ○ Meeting protocols ○ Nature of workplace meetings ○ Workplace interactions ○ Barriers of communication • Read instructions on work related forms/documents • Practice: ○ Estimate, calculate and record routine workplace measures ○ Basic mathematical processes of addition, subtraction, division and multiplication • Demonstrate office activities in: ○ workplace meetings and discussions scenario • Perform workplace duties scenario following simple written notices • Follow simple spoken language • Identify the different Non-verbal communication	• Group discussion • Lecture • Demonstration • Role play	• Oral evaluation • Written examination • Observation	2 Hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
		• Demonstrate ability to relate to people of social range in the workplace • Gather and provide information in response to workplace requirements • Complete work related documents			
2. Work in a team environment	2.1 Describe team role and scope	• Discussion on team roles and scope • Participate in the discussion: ○ Definition of Team ○ Difference between team and group ○ Objectives and goals of team • Locate needed information from the different sources of information	• Lecture/ Discussion • Group Work • Individual Work • Role Play	• Role Play • Case Study • Written Test	1 Hour
	2.2 Identify one's role and responsibility within team	• Role play: ○ individual role and responsibility • Role Play ○ Understanding Individual differences • Discussion on gender sensitivity	• Role Play • Lecture/ Discussion	• Role Play • Written Test	1 Hour
	2.3 Work as a team member	• Participate in group planning activities • Role play: Communication protocols • Participate in the discussion of standard work procedures and practices	• Group work • Role Play • Lecture/ Discussion	• Role Play • Written Test	1 Hour

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
3. Solve/address routine problems	3.1 Identify routine problems	• Review of the current industry hardware and software products and services • Identify correctly the industry maintenance, service and helpdesk practices, processes and procedures • Make use of the industry standard diagnostic tools • Share best practices in determining basic malfunctions and resolutions to general problems in the workplace • Analyze routine/procedural problems	• Group discussion • Lecture • Demonstration • Role playing	• Case Formulation • Life Narrative Inquiry (Interview) • Standardized test	1 Hour
	3.2 Look for solutions to routine problems	• Review of the current industry hardware and software products and services • Identify correctly the industry maintenance, service and helpdesk practices, processes and procedures • Make use of the industry standard diagnostic tools • Share best practices in determining basic malfunctions and resolutions to general problems in the workplace • Formulate possible solutions to problems and document procedures for reporting	• Group discussion • Lecture • Demonstration • Role playing	• Case Formulation • Life Narrative Inquiry (Interview) • Standardized test	1 Hour

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
	3.3 Recommend solutions to problems	• Discuss standard operating procedures and documentation processes	• Group discussion • Lecture • Demonstration • Role playing	• Case Formulation • Life Narrative Inquiry (Interview) • Standardized test	1 Hour
4. Develop Career and Life Decisions	4.1 Manage one's emotion	• Demonstrate self-management strategies that assist in regulating behavior and achieving personal and learning goals • Explain enablers and barriers in achieving personal and career goals • Identify techniques in handling negative emotions and unpleasant situation in the workplace such as frustration, anger, worry, anxiety, etc. • Manage properly one's emotions and recognize situations that cannot be changed and accept them and remain professional • Recall instances that demonstrate self- discipline, working independently and showing initiative to achieve personal and career goals	• Discussion • Interactive Lecture • Brainstorming • Demonstration • Role-playing	• Demonstration or simulation with oral questioning • Case problems involving workplace diversity issues	1 Hour

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
		• Share experiences that show confidence, and resilience in the face of setbacks and frustrations and other negative emotions and unpleasant situations in the workplace			
	4.2 Develop reflective practice	• Enumerate strategies to improve one's attitude in the workplace • Explain Gibbs' Reflective Cycle/Model (Description, Feelings, Evaluation, Analysis, Conclusion, and Action plan) • Use basic SWOT analysis as self-assessment strategy • Develop reflective practice through realization of limitations, likes/ dislikes; through showing of self-confidence • Demonstrate self-acceptance and being able to accept challenges	• Small Group Discussion • Interactive Lecture • Brainstorming • Demonstration • 5 Role-playing	• Demonstration or simulation with oral questioning • Case problems involving workplace diversity issues	1 Hour
	4.3 Boost self-confidence and develop self-regulation	• Describe the components of self-regulation based on Self-Regulation Theory (SRT) • Explain personality development concepts • Cite self-help concepts (e. g., 7 Habits by Stephen Covey, transactional analysis, psycho-spiritual concepts) • Perform effective communication skills – reading, writing, conversing skills	• Small Group Discussion • Interactive Lecture • Brainstorming • Demonstration • Role-playing	• Demonstration or simulation with oral questioning • Case problems involving workplace diversity issues	1 Hour

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
		• Show affective skills – flexibility, adaptability, etc. • Determine strengths and weaknesses			
5. Contribute to workplace innovation	5.1 Identify opportunities to do things better	• Identify different roles of individuals in contributing to doing things better in the workplace • Appreciate positive impacts and challenges in innovation • Show mastery of the different types of changes and levels of participation in the workplace • Discuss 7 habits of highly effective people	• Interactive Lecture • Appreciative Inquiry • Demonstration • Group work	• Psychological and behavioral Interviews • Performance Evaluation • Life Narrative Inquiry • Review of portfolios of evidence and third-party workplace reports of on-the-job performance. • Standardized assessment of character strengths and virtues applied	1 Hour
	5.2 Discuss and develop ideas with others	• Identify different roles of individuals in contributing to doing things better in the workplace • Appreciate positive impacts and challenges in innovation • Show mastery of the different types of changes and levels of participation in the workplace	• Interactive Lecture • Appreciative Inquiry • Demonstration • Group work	• Psychological and behavioral Interviews • Performance Evaluation • Life Narrative Inquiry	1 Hour

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
		• Discuss 7 habits of highly effective people • Communicate ideas through small group discussions and meetings		• Review of portfolios of evidence and third-party workplace reports of on-the-job performance. • Standardized assessment of character strengths and virtues applied	
	5.3 Integrate ideas for change in the workplace	• Identify different roles of individuals in contributing to doing things better in the workplace • Appreciate positive impacts and challenges in innovation • Show mastery of the different types of changes and levels of participation in the workplace • Discuss 7 habits of highly effective people • Communicate ideas through small group discussions and meetings • Demonstrate basic skills in data analysis	• Interactive Lecture • Appreciative Inquiry • Demonstration • Group work	• Psychological and behavioral Interviews • Performance Evaluation • Life Narrative Inquiry • Review of portfolios of evidence and third-party workplace reports of on-the-job performance. • Standardized assessment of character strengths and virtues applied	1 Hour

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
6. Present relevant information	6.1 Gather data/ information	• Lecture and discussion on: - Organisational protocols - Confidentiality and accuracy - Business mathematics and statistics - Legislation, policy and procedures relating to the conduct of evaluations • Reviewing data/ information	• Group discussion • Lecture • Demonstration • Role Play	• Oral evaluation • Written Test • Observation • Presentation	2 Hours
	6.2 Assess gathered data/ information	• Lecture and discussion on: - Data analysis techniques/ procedures - Organisational values, ethics and codes of conduct - Trends and anomalies • Computing business mathematics and statistics • Application of data analysis techniques	• Group discussion • Lecture • Demonstration • Role Play • Practical exercises	• Oral evaluation • Written Test • Observation • Presentation	3 Hours
	6.3 Record and present information	• Lecture and discussion on: - Reporting requirements to a range of audiences - Recommendations for possible improvements • Analysis and comparison of interim and final reports' outcomes • Reporting of data findings	• Group discussion • Lecture • Demonstration • Role Play • Practical exercises	• Oral evaluation • Written Test • Observation • Presentation	3 Hours
7. Practice Occupational Safety And Health Policies And Procedures	7.1 Identify OSH compliance requirements	• Discussion regarding: - Hierarchy of Controls - Hazard Prevention and Controls - Work Standards and Procedures - Personal Protective Equipment	• Lecture • Group Discussion	• Written Exam • Demonstration • Observation • Interviews / • Questioning	1 Hour

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
	7.2 Prepare OSH requirements for compliance	• Identification of required safety materials, tools and equipment • Handling of safety control resources	• Lecture • Group Discussion	• Written Exam • Demonstration • Observation • Interviews / • Questioning	1 Hour
	7.3 Perform tasks in accordance with relevant OSH policies and procedures	• Discussion of General OSH Standards and Principles • Performing industry related work activities in accordance with OSH Standards	• Lecture • Group Discussion	• Written Exam • Demonstration • Observation • Interviews / • Questioning	2 Hours
8. Exercise Efficient and Effective Sustainable Practices in the Workplace	8.1 Identify the efficiency and effectiveness of resource utilization	- Discussion on the process how Environmental Policies coherence is achieved • Discussion on Necessary Skills in response to changing environmental policies needs - Waste Skills - Energy Skills - Water Skills - Building Skills - Transport Skills - Material Skills	• Lecture • Group Discussion • Simulation • Demonstration	• Written Exam • Demonstration • Observation • Interviews / • Questioning	1 Hour
	8.2 Determine causes of inefficiency and/or ineffectiveness of resource utilization	• Discussion of Environmental Protection and Resource Efficiency Targets • Analysis on the Relevant Work Procedure	• Lecture • Group Discussion • Demonstration	• Written Exam • Demonstration • Observation • Interviews / • Questioning	1 Hour

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
	8.3 Convey inefficient and ineffective environmental practices	• Identification of (re)training needs and usage of environment friendly methods and technologies • Identification of environmental corrective actions • Practicing Environment Awareness	• Lecture • Group Discussion • Role Play • Demonstration	• Written Exam • Demonstration • Observation • Interviews / • Questioning	1 Hour
9. Practice Entrepreneurial Skills in the Workplace	9.1 Apply entrepreneurial workplace best practices	• Case studies on Best entrepreneurial practices • Discussion on Quality procedures and practices • Case studies on Cost consciousness in resource utilization	• Case Study • Lecture/Discussion	• Case Study • Written Test • Interview	1 Hour
	9.2 Communicate entrepreneurial workplace best practices	• Discussion on communicating entrepreneurial workplace best practices	• Lecture/Discussion	• Written Test • Interview	1 Hour
	9.3 Implement cost-effective operations	• Case studies on Preservation, optimization and judicious use of workplace resources	• Case Study • Lecture/Discussion	• Case Study • Written Test • Interview	2 Hours

COMMON COMPETENCIES
<u>122</u> Hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
1. Validate vehicle specification	1.1 Check body type of the vehicle	1.1.1 Enumerate the different kinds of vehicle 1.1.2 Explain the difference of each kind of vehicle 1.1.3 Identify the measuring points of the vehicle 1.1.4 Explain the procedures in measuring vehicle dimension and weight 1.1.5 Describe the different body shapes of the vehicle 1.1.6 Differentiate kinds of power train 1.1.7 Explain the function of each power train 1.1.8 Discuss occupational safety and health standard in checking the body type of a vehicle 1.1.9 Identify different kinds of vehicle 1.1.10 Measure vehicle dimensions and weight 1.1.11 Identify vehicle body shapes 1.1.12 Identify vehicle power train 1.1.13 Apply safety practices	• Lecture • Demonstration • Video presentation	• Written exam • Demonstrate	7 Hours
	1.2 Check vehicle engine type	1.2.1 Discuss the different kinds of engine 1.2.2 Enumerate the different kinds of fuel/energy system	• Lecture • Demonstration • Video presentation	• Written exam • Demonstrate	3 Hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
		1.2.3 Describe the different engine components 1.2.4 Identify different kinds of engine 1.2.5 Identify different types of fuel/energy system 1.2.6 Identify different engine components			
	1.3 Check vehicle specifications	1.3.1 Inspect VIN plate of the vehicle 1.3.2 Verify vehicle specification 1.3.3 Check vehicle modifications and conversions 1.3.4 Inspect vehicle conversions 1.3.5 Explain different vehicle related regulations in the Philippine	• Lecture • Demonstration • Video presentation	• Written exam • Demonstrate	4 Hours
	1.4 Complete validation of vehicle specification	1.4.1 Explain verification of vehicle ownership using repair order and vehicle reference materials 1.4.2 Discuss procedures in accomplishing check sheet 1.4.3 Discuss submission of check sheet	• Lecture • Demonstration • Video presentation	• Written exam • Demonstrate	3 Hours
2. Utilize automotive tools	2.1 Prepare automotive tools	2.1.1 Identify and select automotive tools and attachments 2.1.2 Discuss inspection and selection procedures 2.1.3 Describe the defects and damages of automotive tools and attachments 2.1.4 Discuss OSHS in preparation of automotive tools	• Lecture • Demonstration • Visual aids • Videos	• Written examination • Interview • Demonstration • Practical examination	6 Hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
		2.1.5 Prepare automotive tools and attachments			
	2.2 Use automotive tools	2.2.1 Discuss the procedure in mounting attachments to automotive tools 2.2.2 Discuss the procedure in connecting the power supply to power tools 2.2.3 Discuss the procedure in operating the power tools 2.2.4 Discuss the utilization of hand tools 2.2.5 Identify PPEs 2.2.6 Discuss OSHS in using automotive tools 2.2.7 Use automotive tools 2.2.8 Use PPEs	• Lecture • Demonstration • Visual aids • Videos	• Written examination • Interview • Demonstration • Practical examination	6 Hours
	2.3 Maintain automotive tools	2.3.1 Discuss the procedure in cleaning, checking for serviceability, and storing of automotive tools and attachments 2.3.2 Discuss the procedure in identifying and reporting defects and damages 2.3.3 Discuss the proper waste segregation 2.3.4 Demonstrate the proper maintenance of automotive tools 2.3.5 Demonstrate disposal of wastes	• Lecture • Visual aids • Videos	• Written examination • Demonstration	4 Hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
3. Perform mensuration and calculation	3.1 Select measuring instruments	3.1.1 Describe measuring instruments 3.1.2 Select measuring instruments 3.1.3 Inspect and calibrate measuring instruments 3.1.4 Report and return defective measuring instruments 3.1.5 Demonstrate safety practices	• Demonstration • Video presentation • Lecture Discussion • Workshop visit	• Demonstration • Written exam • Oral questioning	9 Hours
	3.2 Carry out measurements and calculation	3.2.1 Explain formulas for volume, areas, perimeters of plane and geometric figures 3.2.2 Explain the procedure in reading tools' limit of accuracy 3.2.3 Measure required automotive parts 3.2.4 Read tools' limit of accuracy 3.2.5 Inspect and calibrate measuring instruments	• Demonstration • Video presentation • Lecture Discussion • Workshop visit	• Demonstration • Written exam • Oral questioning	29 Hours
	3.3 Maintain measuring instruments	3.3.1 Identify PPEs 3.3.2 Discuss cleaning procedures of measuring instruments 3.3.3 Enumerate steps in storing instruments 3.3.4 Wear PPEs 3.3.5 Clean measuring instrument tools 3.3.6 Re-inspect and re-calibrate measuring instruments	• Demonstration • Video presentation • Lecture Discussion	• Demonstration • Written exam • Oral questioning	5 Hours
4. Utilize workshop facilities and equipment	4.1 Perform pre-operation activities	4.1.1 Identify different areas of an automotive service facilities 4.1.2 Explain the preparation procedures of automotive service facilities	• Lecture • Demonstration • Video presentation • Workshop visit	• Demonstration • Written exam • Interview	9 Hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
		4.1.3 Enumerate different equipment in the automotive service facilities 4.1.4 Discuss the preparation procedures of equipment 4.1.5 Describe minor repairs in automotive facilities and equipment 4.1.6 Describe defective equipment 4.1.7 Identify reporting procedures for defective equipment 4.1.8 Discuss OSHS practices related to the preparation of facilities and equipment 4.1.9 Prepare workshop facilities and equipment			
	4.2 Use facilities and equipment	4.2.1 Explain the operation of equipment according to operation manual 4.2.2 Describe how facilities are utilized according to workshop procedures 4.2.3 Explain how equipment performance is monitored following users' manual 4.2.4 Describe the monitoring of facilities functionalities following workplace procedures 4.2.5 Discuss how OSHS safety practices are applied	• Lecture • Demonstration • Video presentation • Workshop visit	• Demonstration • Written exam • Interview	5 Hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
	4.3 Conduct post-operation activities	4.3.1 Explain how workshop facilities are restored according to good housekeeping 4.3.2 Discuss tools and equipment are cleaned and stored according to good housekeeping 4.3.3 Explain wastes disposed following waste management procedure and OSHS 4.3.4 Enumerate the safety practices that are applied following OSHS 4.3.5 Demonstrate preparation of report based on workshop standard procedure	• Lecture • Demonstration • Video presentation • Workshop visit	• Demonstration • Written exam • Interview	5 Hours
5. Prepare servicing parts and consumables	5.1 Identify parts and consumables	5.1.1 Familiarize parts & consumables 5.1.2 Identify indirect materials 5.1.3 Identify hazardous parts and consumables	• Lecture • Video presentation • Actual training	• Demonstration • Written exam • Interview	6 Hours
	5.2 Retrieve and withdraw parts and consumables	5.2.1 Familiarize requisition slip 5.2.2 Perform parts withdrawal procedure & recording 5.2.3 Validate parts and consumables according to quantity & specification 5.2.4 Perform safety precautions	• Lecture • Video presentation • Actual training	• Demonstration • Written exam • Interview	4 Hours
	5.3 Complete work process	5.3.1 Segregate parts to be returned to customers 5.3.2 Segregate parts & consumables for proper	• Lecture • Video presentation • Actual training	• Demonstration • Written exam • Interview	3 Hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
		disposal or recycling according to 3Rs and RA 6969 5.3.3 Wear PPE's			
6. Prepare vehicle for servicing and releasing	6.1 Receive vehicle	6.1.1 Identify different areas of an automotive service facility 6.1.2 Explain the receiving procedures of automotive service facilities 6.1.3 Explain the checklisting procedures of automotive service facilities 6.1.4 Describe minor repairs in automotive facilities and equipment 6.1.5 Discuss OSHS practices related to the preparation of facilities and equipment 6.1.6 Prepare workshop facilities and equipment	• Lecture • Demonstration • Video presentation • Workshop visit	• Role-playing • Written exam • Interview	6 Hours
	6.2 Prepare vehicle for servicing	6.2.1 Prepare vehicle for servicing 6.2.2 Explain the preparation procedures of automotive service facilities 6.2.3 Demonstrate the procedure in installing protective covers 6.2.4 Explain the concept of the locator blocks 6.2.5 Classify the type of vehicle repair based on the Repair Order	• Lecture • Demonstration	• Role-playing • Written Exams • Oral Exams	5 Hours
	6.3 Prepare vehicle for releasing	6.3.1 Use the repair order to identify work performed	• Lecture • Demonstration	• Role-Playing • Written Exams • Oral Exams	3 Hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
		6.3.2 Apply quality control measures on work done 6.3.3 Operate vehicle for transfer and release			

CORE COMPETENCIES
25 Hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
1. Conduct basic inspection of engine and other electrical components	1.1 Check vehicle	1.1.1 Discuss and explain the following: • Job order • Interpretation of Electrical Wiring Diagram • Procedure in checking vehicles • Visual inspection of vehicle • Types of Speed Limitation Device • RA 10916 Road Speed Limiter Act of 2016 • Occupational Safety and Health Standards (OSHS) • RA 4136 Chapter 4 Article 1 (Exempted vehicle from speed limitation device module installation) • Procedure in reporting findings • Speedometer • Communication • Basic mathematics 1.1.2 Check vehicle	• Lecture • Video presentation • Demonstration	• Demonstration • Written exam • Interview	4 Hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration

	1.2 Plan installation	1.2.1 Discuss and explain the following:
		• Work requirements
		• Electrical Wiring Diagram
		• Tapping points
		• Types of Speed Limitation Device
		• Location for Speed Limitation Device
		• Industry criteria
		• Vehicle workshop manual
		• Type of vehicle
		  ○ Electrical throttle linkage
		  ○ Mechanical throttle
		• Installation manual
		• Tools, materials, and equipment and their functions
		• Mensuration
		• Calculation
		• 3Rs
		1.2.2 Plan installation
			• Lecture
			• Video presentation
			• Demonstration
				• Demonstration
				• Written exam
				• Interview
					4 Hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
	1.3 Perform documentation	1.3.1 Discuss and explain the following: • Accomplishment of Job order form • Preparation of Installation plan • Documentation ○ Photo • Preparation of installation report • Procedure in accomplishing warranty card • Mensuration • Calculation • Presentation of report • IRR of RA 10916 Rule 4- Enforcement and adjudication • Factors affecting productivity • Productivity work measurements • Ways of improving productivity • Adherence to work requirements 1.3.2 Perform documentation	• Lecture • Video presentation • Demonstration	• Demonstration • Written exam • Interview	2 Hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
2. Perform installation of Speed Limitation Device	2.1 Prepare for installation	2.1.1 Discuss and explain the following: • Job order • Installation manual • Electrical Wiring Diagram (EWD) • Vehicle models • Type of Speed Limitation Device Kit: o Mechanical o Electronic • Inspection of Speed Limitation Device Kit • Different installation tools, materials, equipment, parts and their functions • Mensuration • Calculation • Hazards associated with the operation • Awareness on PNS UNR 89:2016, part 3: Uniform provisions concerning the approval of Speed Limitation Devices and adjustable Speed Limitation Devices 2.1.2 Prepare for installation	• Lecture • Video presentation • Demonstration	• Demonstration • Written exam • Interview	2 Hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration

	2.2 Install Speed Limitation Device	2.2.1 Discuss and explain the following:
		• Gear box sensor
		• Gear solenoid valve
		• Vehicle manufacturer's manual
		• Accessories, miscellaneous, and fittings
		• Road test (to determine the functionality of Speed Limitation Device)
		  ○ Rolling road
		  ○ Open road
		• Calibration (part of road test)
		• Security features
		• Installation procedure
		• Checking of installed Speed Limitation Device
		• OSHS
		• Awareness in RA 4136 Chapter IV, Art. I Sec. 35 – Speed Limit
		• Estimation
		• DENR Hazardous wastes
		• Solid waste management
		2.2.2 Install Speed Limitation Device
			• Lecture
			• Video presentation
			• Demonstration
				• Demonstration
				• Written exam
				• Interview
					4 Hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
	2.3 Perform post-activities	2.3.1 Discuss and explain the following: • Preparation of workplace documents • Warranty card • Restoration of workplace • Waste management • Procedure to turn-over vehicle • Quality control procedures • Checking and storage of tools, materials and equipment • Inventory report • Waste management • 3Rs • Factors affecting productivity • Productivity work measurements • Ways of improving productivity • Adherence to work requirements 2.3.2 Perform post-activities	• Lecture • Video presentation • Demonstration	• Demonstration • Written exam • Interview	1 Hour

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
3. Maintain Speed Limitation Device	3.1 Conduct preparation activities	3.1.1 Discuss and explain the following: • Securing job order • Reporting of actual findings on vehicle • Approval of immediate superior • Coordination with authorized vehicle technician • PPEs • Communication skills • Factors affecting productivity • Productivity work measurements • Ways of improving productivity • Adherence to work requirements 3.1.2 Conduct preparation activities	• Lecture • Video presentation • Demonstration	• Demonstration • Written exam • Interview	2 Hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
	3.2 Perform maintenance	3.2.1 Discuss and explain the following: • Replacement of Speed Limitation Device • Recalibration of Speed Limitation Device • Tools, parts and materials • Communication skills • PPEs • IRR of RA 10916 “Road Speed Limiter Act of 2016” • RA 4136 “Land Transportation and Traffic Code” • RA 2000 “Limited Access Highway Act” • Awareness in operating rolling roads 3.2.2 Perform repair and maintenance	• Lecture • Video presentation • Demonstration	• Demonstration • Written exam • Interview	3 Hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
	3.3 Complete work processes	3.3.1 Discuss and explain the following: • Final inspection procedure • Turn-over of vehicle • Accomplishment of repair order and other forms • Job done • OSHS • Wearing of 4.6 PPEs • 5S • Waste management • Checking and storage of tools • Workplace documents • IRR of RA 10916 “Road Speed Limiter Act of 2016” • RA 4136 “Land Transportation and Traffic Code” • RA 2000 “Limited Access Highway Act” 3.3.2 Complete work processes	• Lecture • Video presentation • Demonstration	• Demonstration • Written exam • Interview	3 Hours

3.2 TRAINING DELIVERY

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)
b. Training delivery is learner-centered and should accommodate individualized and self-paced learning strategies;
c. Training can be done on an actual workplace setting, simulation of a workplace and/or through adoption of modern technology.
d. Assessment is based in the collection of evidence of the performance of work to the industry required standards;
e. 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.
f. Training program allows for recognition of prior learning (RPL) or current competencies;
g. 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:

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 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 who would like to enroll in this program must possess the following requirements:

- Holder of Certificate of Competency (COC) in Service Engine Component and Service Electrical Components OR Automotive Servicing (Engine Repair) NC II and Automotive Servicing (Electrical Repair) NC II
- Basic communication skills;
- Basic mathematical computation;
- Basic computer operation; and
- Certificate of Completion for completing 10 years of basic education or Alternative Learning System (ALS) with grade 10 equivalent holder.

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.

3.4 LIST OF TOOLS, EQUIPMENT, AND MATERIALS

SPEED LIMITATION DEVICE SERVICING NC II

Recommended list of tools, equipment and materials for the training of 25 trainees for Speed Limitation Device Servicing 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.

A. FULL QUALIFICATION

TOOLS	
QTY	**DESCRIPTION**
2 pcs	Measuring tape, steel, 5m
2 units	Test and calibration unit
2 units	Sealing pliers with anvil
2 pcs	Plier cutter
2 sets	Combination wrench, 6mm to 14mm
2 units	Multi-tester (digital)
2 pcs	Seal grip
2 pcs	Adjustable wrench
2 pcs	Socket, 3/8” drive
2 pcs	Ratchet, 3/8” drive
2 pcs	T-wrench, 12mm
2 pcs	T-wrench, 14mm
2 sets	Torx wrench
2 pcs	Wire stripper, 1mm to 3.2mm range
2 sets	Screw driver, Philips(+) and flat(-)

TOOLS	
QTY	**DESCRIPTION**
2 pcs	Trouble light, medium size

EQUIPMENT	
QTY	**DESCRIPTION**
1 unit	Tool caddy 727mm x 458mm x 685mm
1 unit	Training vehicle, mechanical
1 unit	Training vehicle, electronic
5 sets	Speed Limitation Device Kit for Electronic Throttle Linkage -Speed Limitation Device -Wire for front engine -Cable ties -Sealing wire and lead seal
5 sets	Speed Limitation Device Kit for Mechanical Throttle Linkage -Speed Limitation Device -Wire for front engine -Cable ties -Sealing wire and lead seal -Solenoid valve and fittings
5 units	Gear box sensor
5 units	Speed sensor

MATERIALS	
QTY	**DESCRIPTION**
1 roll	Soldering lead, 5mmx250g
1 can	Soldering paste, 50g/can
1 tube	Liquid gasket, 40ml/tube
2 pcs	T-fittings (according to the vehicle make)
5 m	Corrugated plastic hose, 5/16”
15 m	Fuel line hose, 3/8” (for mechanical only)
6 pcs	Stainless ear clamp (according to the vehicle make)
5 rolls	Electrical tape, large
1 roll	Teflon tape, any size
2 rolls	Autowire, 16”
2 pcs	Soldering iron, 50 watts
25 pcs	Terminal eye 8-6 (for mechanical only)
25 pcs	Terminal eye 8-8 (for mechanical and electronic)
2 pcs	Relief valve assy (according to the vehicle make)
1 roll	Autowire for rear engine, gauge 16
1 roll	Adhesive tape, removable, 1” x 1”
1 unit	Garbage bin, medium, green
1 unit	Garbage bin, medium, yellow
1 unit	Garbage bin, medium, black
1 K	Rags
6 pcs	Sample job order form
1 pc	Installation manual

MATERIALS	
QTY	**DESCRIPTION**
	PPEs:
25 pairs	Safety shoes
25 pcs	Hard hat
25 pairs	Arm sleeves
25 pairs	Safety gloves
25 pcs	Safety goggles
25 pcs	Reflectorized vest

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

3.5 TRAINING FACILITIES

SPEED LIMITATION DEVICE SERVICING NC II

Based on a class intake of 25 learners/trainees.

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METERS	GRAND TOTAL AREA IN SQ. METERS
A. Building (permanent)			**163.00**
Lecture Room		60	60
Laboratory/Workshop Area	4 x 15 (for 2 vehicles)	60	60
Tool room & S/M storage area			28
Learning resource area		5	5
Wash area/comfort room (male & female)	2.5 x 4	10	10
Total workshop area			**163.00**

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 QUALIFICATIONS SPEED LIMITATION DEVICE SERVICING NC II

- Holder of National TVET Trainers Certificate (NTTC) Level 1 in Speed Limitation Device Servicing NC II or Automotive Servicing NC III; and

- Must have at least 6 months industry experience in Speed Limitation Device Installation for the last 3 years

3.7 INSTITUTIONAL Assessment

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 ASSESSMENT AND CERTIFICATION ARRANGEMENT

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 Individuals wanting to be certified will have to be assessed in accordance with the requirements identified in the relevant unit/s of competency.

4.1.3 The following are qualified to apply for assessment and certification:

a. Graduates of WTR, NTR-registered programs or formal/non-formal/informal including enterprise-based trainings related to Speed Limitation Device Servicing; and holder of Certificate of Competency (COC) in Service Engine Component and Service Electrical Components OR Automotive Servicing (Engine Repair) NC II and Automotive Servicing (Electrical Repair) NC II; or

b. Experienced workers (wage employed or self-employed) who have at least two (2) years of experience in Speed Limitation Device Installation and Servicing. A Certificate of Employment and Job Description must be provided as proof.

4.1.4 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 by industry

4.1.5 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.

4.2. COMPETENCY ASSESSMENT REQUISITE

4.2.1 **Self-Assessment Guide**. The self-assessment guide (SAG) is 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

4.2.2 **Accredited 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.

COMPETENCY MAP
SPEED LIMITATION DEVICE SERVICING NC II

BASIC COMPETENCY

Receive and respond to workplace communication	Participate in workplace communication	Lead workplace communication	Utilize specialized communication skill	Manage and sustain effective communication strategies
Work with others	Work in a team environment	Lead small teams	Develop and lead teams	Manage and sustain high performing teams
Solve/address routine problems	Solve/address general workplace problems	Apply critical thinking and problem solving techniques in the workplace	Perform higher-order thinking processes and apply techniques in the workplace	Evaluate higher order thinking skills and adjust problem solving techniques
Enhance self-management skills	Develop career and life decisions	Work in a diverse environment	Contribute to the practice of social justice in the workplace	Advocate strategic thinking for global citizenship
Support innovation	Contribute to workplace innovation	Propose methods of applying learning and innovation in the organization	Manage innovative work instructions	Incorporate innovation into work procedures
Access and maintain information	Present relevant information	Use information systematically	Manage and evaluate usage of information	Develop systems in managing, and maintaining information
Follow occupational safety and health policies and procedures	Practice occupational safety and health policies and procedures	Evaluate occupational safety and health work practices	Lead in improvement of occupational safety and health program, policies and procedures	Manage implementation of OSH programs in the workplace
Apply environmental work standards	Exercise efficient and effective sustainable practices in the workplace	Evaluate environmental work practices	Lead towards improvement of environmental work programs, policies and procedures	Manage implementation of environmental programs in the workplace
Adopt entrepreneurial mindset in the workplace	Practice entrepreneurial skills in the workplace	Facilitate entrepreneurial skills for micro-small-medium enterprises (MSMEs)	Sustain entrepreneurial skills	Develop and sustain a high-performing enterprise

COMMON COMPETENCY

Apply appropriate sealant/adhesive	Move and position vehicle	Perform mensuration and calculation	Read, interpret and apply specifications and manuals	Perform Periodic Maintenance
Use and apply lubricants/coolants	Perform shop maintenance	Validate vehicle specification	Utilize automotive tools	
Utilize workshop facilities and equipment	Prepare servicing parts and consumables	Prepare vehicle for servicing and releasing	Perform job estimates	
Interpret/ draw technical drawing	Practice health, safety and environment procedures	Inspect technical quality of work	Maintain quality systems	
Provide work skill instructions	Identify and select original automotive parts and products	Read & Interpret Engineering Drawings	Observe Quality Systems	

CORE COMPETENCY

Prepare undamaged surface for painting	Apply and remove masking	Spray solid color paints	Perform polishing	Interpret Technical Manual Specification of Engine Components
Disassemble Engine Block and Sub-Assemblies, Checks Tolerances and Components	Disassemble Engine Sub-Assemblies/Cylinder Heads and Check Components	Carry Out Pre-Repair Operations on Engine Components	Inspect Engine Components and Determine Preferred Action	Carry Out Machining Operations
Set, Operate and monitor Specialized Machines	Use and Maintain Measuring Instrument	Assemble Engine Block and Sub-Assemblies, Check Tolerances and Carry Out Relevant Testing	Assemble Engine/Cylinder Heads, Check Tolerances and Carry Out Relevant Testing Procedures	Prepare Vehicle Body for Repair
Repair Body Panel	Replace Damaged Parts with Pre-Fabricated Parts	Service motorcycle/small engine system	Service Electrical System	Service Chassis
Overhaul Motorcycle/Small Engine	Perform Pearl Color Matching	Spray Three-Stage Pearl or Mica Color Paint	Manufacture and Develop Corebox for Shell Core Sand	Develop and Manufacture Gear, Conveyor Screw And Propeller Patterns
Develop Gravity Die Casting Mold	Operate Melting Furnaces (Non lectric)	Operate Cupola Melting Furnaces	Operate Electric Induction Melting Furnaces	Fettle and Trim Metal Castings/Forgings
Perform Refractory Installation and Repair	Prepare & Mix Sand for Metal Molding and Coremaking	Produce Molds by Hand (Jobbing)	Produce Cores by Hand (Jobbing)	Operate Sand Molding Machines
Operate Sand Core Making Machines	Pour Molten Metal to Molds	Assemble Mechanical Assemblies using Jigs/Fixtures	Mount/Install Brake and Fuel Systems	Mount/Install Power Drive System

Mount/Install Suspension Drive Train	Install/Fit out Trim Parts/ and Assemblies	Perform Final Engine Run	Perform Wheel Alignment Operations	Install/Fit Out Electrical Parts to Engine Assembly
Install/fit Out Electrical Parts and Electronic Units to Body Interior Compartment	Install/Fit Out Electrical Parts and Electronic Units to Dash Instrument Panel	Install/Fit Out Electrical Parts to Exterior and Engine Compartment	Install/Fit Out Audio and Video Systems	Perform Headlight Focus Aiming Operations
Prepare Molds for Composites Production	Prepare Materials for Formulae	Assemble Materials and Equipment for Production	Operate Injection Molding Equipment	Operate Blow Molding Equipment
Monitor Process Operations	Finish Products and Components	Perform Engineering Measurement	Perform Precision Mechanical Measurement	Calibrate Measuring Equipment
Select and Control Inspection Processes and Procedures	Perform Inspection	Perform Basic Statistical Quality Control	Use Improvement Processes in Team Activities	Perform Pre-treatment and Cathodic Electro-deposition Process Operation
Perform Gray Primer (2nd Primer) Application Procedures	Perform Top Coat Application Procedures	Weld and Braze Automotive Body Shell	Perform Tinsmith Operation	Melt Aluminum-Silicon Alloys for Safety Tested Castings
Melt Metals Using Coreless Induction Furnace	Melt Automotive Gray Iron Castings in Cupola	Prepare Sand Mixture for Heavy Casting	Perform Hand Molding To Produce Heavy Castings	Pour Molten Metal to Heavy Castings
Rectify Faults on Installed Electrical Parts to Engine Assembly	Rectify Faults on Installed Electrical Parts and Electronic Units to Body Interior Compartment	Rectify Faults on Installed Electrical Parts and Electronic Units to Dash Instrument Panel	Rectify Faults on Installed Electrical Parts to Exterior and Engine Compartment	Rectify Faults on Installed Audio and Video System to Automotive Vehicle
Conduct Engine Hot Test	Rectify Assembly Faults on Assembled Mechanical Assemblies	Rectify Faults on Mounted/Installed Brake and Fuel System	Rectify Faults on Mounted/Installed Power Drive System	Rectify Faults on Mounted/Installed Suspension Drive Train
Select Heat Treatment Process	Perform Heat Treatment Process	Change Equipment Dies	Prepare and Start Equipment for Production	Produce Injection Molded Products
Produce Blow Molded Products	Apply quality systems	Conduct product and/or process capability studies	Maintain/supervise the application of quality procedures	Select and classify materials and parts for assembly of wiring harness
Perform cutting and stripping of electrical wires	Perform crimping and soldering of terminals	Perform tying, taping and finishing of assembly wires	Use Comparison and Basic Measuring Devices	Measure Components Using Coordinate Measuring Machines
Use Graphical Techniques and Perform Simple Statistical Computations	Machine Parts	Perform Precision Assembly	Perform press machine setting	Perform mechanical shearing operation
Perform mechanical press forming operation	Perform Hand Forging	Perform Hammer Forging	Perform Basic Incidental Heat/Quenching, Tempering and Annealing	Hand Forge Complex Shapes
Hammer Forge Complex Shapes	Perform Drop and Upset Forging	Carry Out Minor Vehicle Maintenance and Servicing	Drive Light Vehicle	Obey and Observe Traffic Rules and Regulations

Implement and Coordinate Accident-Emergency Procedures	Perform Minor Maintenance and Servicing on Vehicles Classified under LTO Restriction Codes 3 up to 5	Perform Pre-and Post Operation Procedures Vehicles Classified under LTO Restriction Codes 3 up to 5	Drive Passenger Bus	Drive Straight Truck
Perform Minor Maintenance and Servicing on Vehicles Classified under LTO Restriction Codes 6 up to 8	Perform Pre-and Post Operation Procedures Vehicles Classified under LTO Restriction Codes 6 up to 8	Observe Road Health and Safety Practices	Drive Articulated Vehicle	Perform pre-delivery inspection
Perform periodic maintenance of automotive engine	Perform periodic maintenance of drive train	Perform periodic maintenance of brake system	Perform periodic maintenance of suspension system	Perform periodic maintenance of steering system
Service Automotive Battery	Service Ignition System	Test and Repair Wiring/ Lighting System	Service Starting System	Service Charging System
Service Engine Mechanical System	Service Clutch System	Service Differential and Front Axle	Service Steering System	Service Brake System
Service Suspension System	Perform Underchassis Preventive Maintenance	Overhaul Manual Transmission	Test and Repair Electrical Security System/Components	Service Electronic Engine Management
Overhaul Engines and Associated Components	Service Automatic Transmission	Perform Maintenance Service Check-Up and Repair to Auto AC System	Remove and Replace Automotive Engine and Engine-Related Systems	Service and repair electronically controlled steering systems
Service and repair electronically controlled suspension systems	Repair Instruments and warning systems	Carry out diagnostic procedures	Service Diesel Engine Management System	Service Electronic Body Management System
Service Diesel Fuel Injection System Components	Service Electronic Drive Management System	Service Emission Control System	Service and repair electronically controlled anti-lock braking system	Service and repair electronically operated traction control System
Service and repair electronically operated stability control System	Plan assessment activities and processes	Manage facility and inventory requirements	Estimate complex jobs	Ensure a safe workplace
Implement continuous improvement	Manage people performance	Plan and manage compliance with environmental regulations in a workplace or business	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	Diagnose and repair body electrical system
Remove and store vehicle body components	Replace and repair vehicle body panels and components	Repair vehicle body panels using filler (rough finish)	Conduct basic inspection of engine and other electrical components	Perform installation of Speed Limitation Device
Maintain Speed Limitation Device				

GLOSSARY OF TERMS

1. **CALIBRATION/ RECALIBRATION**	Refers to setting of frequency of speed limitation device.
2. **CLOSED VAN**	Refers to a large motor vehicle, usually with an enclosed cargo space, designed to carry goods for commercial purposes, or engaged in services of transporting personal effects. *Note: Definition of Terms is based on the IRR Annex B of RA No. 10916 "Road Speed Limiter Act of 2016")*
3. **COVERED VEHICLE**	Refers to any closed van, hauler or cargo truck, PUV, shuttle service, or tanker truck as defined under this section and such other vehicles as may hereinafter be determined and included by the Department of Transportation and Communications, now the department of Transportation (DOTr), for the purpose of applying the provisions of this Act; excluding taxicabs, and public utility jeepneys (PUJs), without prejudice to the review by the DOTr after one (1) year on the necessity of their inclusion in the coverage of this Act. *Note: Definition of Terms is based on the IRR Annex B of RA No. 10916 "Road Speed Limiter Act of 2016")*
4. **ELECTRONIC THROTTLE LINKAGE**	Also known as drive by wire; engine may be in the front or back of vehicle.
5. **HAULER OR CARGO TRUCK**	Refers to a motor vehicle designed for transporting heavy or oversized loads or cargoes. *Note: Definition of Terms is based on the IRR Annex B of RA No. 10916 "Road Speed Limiter Act of 2016")*
6. **IMMEDIATE SUPERIOR**	Refers to Senior Technician or Supervisor.
7. **JOB ORDER**	Also known as installation report
8. **MECHANICAL THROTTLE LINKAGE**	Also known as mechanical.
9. **MODULE**	Part of speed limiter device (circuit board)
10. **MOTOR VEHICLE**	Refers to any vehicle propelled by any power other than muscular power using the public highways or roads, but excepting road rollers, trolley cars, street sweepers, sprinklers, lawn mowers, bulldozers, graders, fork-lifts, amphibian trucks, and cranes if not used on public highways and vehicles run only on rails or tracks, and tractors, trailers and traction engines of all kinds used exclusively for agricultural purposes as defined under R.A. No. 4136 Article ll Section 3.a. *Note: Definition of Terms is based on the IRR Annex B of RA No. 10916 "Road Speed Limiter Act of 2016")*
11. **PUBLIC UTILITY VEHICLE (PUV)**	Refers to a motor vehicle con5idered as a public transport conveyance or common carrier duly registered with the Land Transportation Office (LTO) and granted a franchise by the

	Land Transportation Franchising and Regulatory Board (LTFRB). *Note: Definition of Terms is based on the IRR Annex B of RA No. 10916 "Road Speed Limiter Act of 2016")*
12. **REPAIR**	Refers to fixing or returning a part/ component to working condition. It refers to cleaning, adjustment/recalibration, and replacement.
13. **ROAD TEST**	Refers to open road
14. **SHUTTLE SERVICE**	Refers to any motor vehicle provided by government or private company or establishment whether owned or leased from another entity, to transport its employees to and from the work premises or clients between designated origin and destination and carrying not less than four (4) passengers. *Note: Definition of Terms is based on the IRR Annex B of RA No. 10916 "Road Speed Limiter Act of 2016")*
15. **SOLENOID VALVE**	Controls the passage of fuel to engine, for mechanical speed limitation device
16. **SPEED LIMITER**	Refers to a device used to limit the top speed of a vehicle through the employment of mechanical, electronic or communications system or the combination of these systems or similar devices capable of performing the same function and issued a Certificate of Conformity by DOTr through DTI. *Note: Definition of Terms is based on the IRR Annex B of RA No. 10916 "Road Speed Limiter Act of 2016")*
17. **SLD**	Refers to Speed Limitation Devices Note: Definition of Terms is based on the Department of Trade and Industry (DTI) Lates Draft 2018 Department Administrative Order re: Guidelines for Recognition of Installation Facilities/Installers of Speed Limitation Device
18. **TANKER TRUCK**	Refers to a motor vehicle designated for transporting or carrying gas, oil or liquid, flammable, combustible, corrosive or hazardous materials, or substances in bulk such as molasses or water. *Note: Definition of Terms is based on the IRR Annex B of RA No. 10916 "Road Speed Limiter Act of 2016")*

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