



COMPETENCY BASED CURRICULUM (FORKLIFT OPERATION)

CERTIFICATE-2



Published by Technical Trainers Training and Resource Center (TTTRC)
Department of Workforce Planning and Skills Development
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དཔལ་ལྷན་འབྲུག་གཞུང་། ཤེས་རིག་དང་རིག་ཏུ་སྒྲུབ་ཀྱིང་འཕེལ་ལྗན་ཁག
ལས་མི་འཆར་གཞི་དང་རིག་ཏུ་སྒྲུབ་ཀྱིང་འཕེལ་ལས་བྱེད་པ།

Royal Government of Bhutan
Ministry of Education and Skills Development
Department of Workforce Planning and Skills Development



Certificate No: *DWPSD/CEC-FO/2025-26/021*

Curriculum Endorsement Certificate

This is to certify that the curriculum for the following course(s) developed by

Technical Trainers Training and Resource Center

has been endorsed by the department.

Course	Level
Forklift Operation	BQF Certificate 2

Date of Endorsement: 1/07/2026



This certificate is valid till 30/06/2031 from the date of endorsement

Director General
Department of Workforce Planning and Skills Development

FOREWORD

Bhutan has seen a gradual increase in the requirement of skilled workers in recent years due to growth of industries. However, supply of skilled workforce that are responsive to the needs of the industry has not been able to keep in pace with the industry demand. Since the skilled workers are crucial ingredient for socio-economic development of the country, it is important to have adequate number of trained and certified workers. With growing industries, the “Forklift operator” are not only the most significant occupation but also have high demand in the labour market. In an effort to meet the skilled human resources requirement, it is imperative to deliver training based on Competency Based Training system in Forklift operation Certificate 2 to ensure quality and adequate number of work force in this sector.

To this end, the Department of Workforce Planning and Skills Development (DWPSD) is pleased to present the Competency Based Curriculum for Forklift Operation BQF Certificate 2 course developed based on national competency standard. Since it is an outcome of a more participatory process of curriculum development, it is expected to provide training delivery with reformed approaches having its content being directly related to labour market needs, focusing on imparting of skills and assessment based on industry work standards. We believe that the Competency Based Curriculum will help in bridging the skill gap between industry’s needs and training institutes thereby enhance the employability of the technical graduates.

The Department acknowledges the valuable contributions made by institutes, officials, and experts from relevant industries who were involved in the design and development of this curriculum. As it is a dynamic document which may require revision based on the needs of the changing labour market, the Department look forward to receiving valuable feedbacks from the institutes and the industries to further improve and refine the curriculum. The Department hope that this document will help advance Competency Based Learning in most of the TVET Institutions.

A handwritten signature in blue ink, appearing to read 'Phub Rinzin', is written over a faint, light blue circular official stamp.

(Phub Rinzin)
Director General

Department of Workforce Planning and Skills Development

ACKNOWLEDGEMENT

Technical Trainers Training and Resource Center, Department of Workforce Planning and Skills Development under MoESD would like to express our appreciation to the following subject experts and facilitators who have participated in the development and validation of curriculum for forklift operation BQF Certificate 2:

Experts involved in the development of Forklift Operation BQF C2 curriculum:

1. Mr. Ugyen Dorji, offtg. Principal, TTI-Samthang
2. Mr. Nima Gyeltshen, Instructor, TTI-Samthang
3. Mr. Sonam Dorji, Forklift Operator, CDCL, gelephu
4. Mr. Tandin Dorji, Forklift Operator, FMCL, Bumthang
5. Mr. Nima Gyeltshen, Forklift Operator, FMCL, Gelephu

Experts involved in the validation of Forklift operation BQF C2 curriculum:

1. Mr. Tsheltrim Norbu, Crane Operator, CDCL, Wangduephodrang (**Chair Person**)
2. Mr. Sangay Dorji, Freelance, Thimphu
3. Mr. Passang Dorji, Freelance, Thimphu
4. Mr. Sonam, Instructor, TTI Samthang
5. Mr. Ngawang Tenzin, Instructor, TTI Samthang
6. Mr. Tandin Wangchuk, Instructor, TTI Samthang
7. Mr. Chogay Lhendup, Dy. Chief Program Officer, TVET Quality Council, BQPCA

Facilitators for development and validation of Forklift operation BQF C2 curriculum:

1. Ms. Karma Dema, Program Officer, TTTRC, DWPSD

Chief editor

1. Mr. Karma Dorji, Offtg. Chief Program Officer, TTTRC, DWPSD

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Competency Profile
Trade: Forklift Operation BQF Certificate 2
Occupation: Forklift Operator

Competency Area	Sub- Competency Area	Competencies/Tasks			
A: Practice worksite Health and Safety	A1: Apply Safety measure and regulations	A1.01 Use PPE	A1.02 Assess work site	A1.03 Use fire extinguisher	A1.04 Conduct toolbox talk
		A1.05 Manage emergency situations			
	A2: Apply first aid	A2.01 Perform CPR	A2.02 Apply bandage	A2.03 Prepare stretcher	
	A3: Apply communication and Signals	A3.01 Apply audible signal	A3.02 Apply hand signal	A3.03 Follow traffic signs and symbols	A3.04 Use safety signs
B: Carryout maintenance of Forklift	B1: Maintain tools and equipment	B1.01 Check hand tools	B1.02 Check grease gun	B1.03 Overhaul grease gun	
	B2: Perform preventive maintenance	B2.01 Change fuse	B2.02 Service primary battery	B2.03 Service secondary battery	B2.04 Change air filter
		B2.05 Change tyre	B2.06 Perform greasing	B2.07 Perform jump-start	
	B3: Perform periodic maintenance	B3.01 Change engine oil	B3.02 Change transmission oil	B3.03 Change hydraulic oil	B3.04 Change coolant
		B3.05 Change fuel filter	B3.06 Change fan belt		
C: Carry out pre operation check	C1: Perform exterior check	C1.01 Perform walkaround inspection	C1.02 Check tyre pressure/Condition	C1.03 Check chains and hoses	C1.04 Inspect cables and connectors

		C1.05 Inspect lifting mechanism (<i>mast, carriage and forks</i>)	C1.06 Check lighting system		
	C2: Perform under hood check	C2.01 Check engine oil	C2.02 Check coolant	C2.03 Check hydraulic fluid	C2.04 Check brake fluid
		C2.05 Check fan belt	C2.06 Check battery electrolyte		
	C3: Perform interior check	C3.01 Check document	C3.02 Read monitor panel	C3.03 Conduct operator's ergonomic setup	
D: Carryout productive and post operation of Forklift	D1: Perform hoist calculation	D1.01 Interpret load chart	D1.02 Determine Forklift capacity	D1.03 Perform rigging calculations	
	D2: Perform Forklift Operation	D2.01 Evaluate risk and hazard	D2.02 Perform final site inspection	D2.03 Perform starting and hydraulic warm up	D2.04 Perform moving off
		D2.05 Perform stopping	D2.06 Perform Maneuvring	D2.07 Perform reversing	D2.08 Operate Fork and Mast Control
		D2.09 Perform 3/5 point turn			
	D3: Perform Load Handling and transportation	D3.01 Operate Mast and Tilt Control	D3.02 Apply knot and hitches	D3.03 Perform Load Securing and Visibility	D3.04 Perform Load Positioning and Fork handling
		D3.05 Perform Terrain and Gradient Adaptation	D3.06 Perform load transportation	D3.07 Perform Load Stacking and Unstacking	D3.08 Mount forklift Attachments

	D4: Perform post operation	D4.01 Perform parking	D4.02 Perform Visual Damage Inspection	D4.03 Maintain log book	D4.04 Record/update maintenance History sheet/card
	D5: Transport Forklift	D5.01 Prepare travel documents	D5.02 Prepare loading ramp	D5.03 Load Forklift	D5.04 Unload Forklift

COURSE INFORMATION

COURSE TITLE	Forklift Operation
LEVEL	BQF Certificate 2
COURSE OBJECTIVE	Upon completion of this training program, the trainees will be able to: • Practice worksite health and safety • Carry out maintenance of forklift • Carry out pre operation check • Carry out productive and post operation of forklift
COURSE DESCRIPTION	This curriculum is designed to provide knowledge, skills and attitude to trainees to be competent Forklift operator in accordance with industry standards Upon completion of the course, graduates will be able to carry out maintenance of forklift, pre & post operation check and productive operation for forklift. In addition, this course will also prepare the graduates to comply with regulatory and organizational requirements for practicing Occupational Health and Safety procedures. This course also includes the soft skills components such as basic computer application, entrepreneurship, numeracy, communication and value education to supplement core competencies and enhance practical skills.
TOTAL DURATION	1041 Hours
TRAINER AND TRAINEE RATIO	1:06 (Practical) 1:20 (Theory)
ENTRY REQUIREMENT	• Completed class VI and should be above 21 years old
TVET TRAINER REQUIREMENTS	• Must have a minimum qualification of diploma in relevant field; • Must have valid Forklift Operator license/Certificate; • Must have undergone Training of Trainers-Technical Instruction and Pedagogy; • Must have at least 3 years job/industry experience in relevant field if institute hire guest lecturer from industry.

COURSE OUTLINE

Sl. No	Subject /Module	Duration (Hours)	Content Competencies (Mapped)
1.	Core modules	371 (3 months)	CC
2.	OJT	140 (1 months)	CC
3.	Applied Dzongkha	42	SS
4.	ICT	68	SS
5.	Applied Mathematics	60	SS
6.	Technical English	82	SS
7.	Entrepreneurship	70	SS
8.	Occupational Health and Safety (OHS)	34	ES
9.	Sustainable Consumption and Production (SCP)	36	ES
10.	Professional Ethics	68	PD
11.	Assessment	70	
	Total Course Duration	1041	

Note: (*) This curriculum contains core modules which cover main competencies of forklift Operation BQF C2 and OJT component. There are separate curricula for subjects/modules for delivery of soft skills, professional development & values and environmental concern & safety. In order to achieve the qualification of forklift Operation BQF C2, the subjects and modules listed must be accomplished as per the credit hours provided.

Content Competencies:

CC-Core Competencies

SS-Soft Skills

PD-Professional Development and Values

ES-Environmental concern and Safety

COURSE STRUCTURE FOR CORE COMPETENCIES

Training Modality	Module Title	Learning outcomes	Nominal Duration (Hour)
1. Institute Training	A. Practicing Worksite Health and Safety	A1. Apply safety measure and regulations A2. Apply first aid A3. Apply communication and signals	25.5
	B. Carrying out maintenance of forklift	B1. Maintain tools and equipment B2. Perform preventive maintenance B3. Perform periodic maintenance	67
	C. Carrying out pre operation check	C1. Perform exterior check C2. Perform under hood check C3. Perform interior check	38
	D. Carrying out productive and post operation of forklift	D1. Perform hoist calculation D2. Operate forklift D3. Perform load handling and transportation D4. Perform post operation D5. Transport forklift	240.5
2. On the Job Training	A. Practicing Worksite Health and Safety	A1. Apply safety measure and regulations A2. Apply first aid A3. Apply communication and signals	140
	B. Carrying out maintenance of forklift	B1. Maintain tools and equipment B2. Perform preventive maintenance B3. Perform periodic maintenance	
	C. Carrying out pre operation check	C1. Perform exterior check C2. Perform under hood check C3. Perform interior check	
	D. Carrying out productive and post operation of forklift	D1. Perform hoist calculation D2. Operate forklift D3. Perform load handling and transportation D4. Perform post operation D5. Transport forklift	
Total CC Duration:			511

ASSESSMENT AND CERTIFICATION SYSTEM

ASSESSMENT	Formative assessment for every module and learning outcome will be conducted through assignments, project works, continuous assessment, demonstration of practical skills/observations, oral questioning and written test. Summative assessment after completion of each national certificate level will be conducted by TVET Quality Council, Bhutan Qualifications and professional certification authority, MoESD as per the National Competency Standards and Guidelines for National Assessment and Certification System, provided the course is accredited with TVET Quality Council, Bhutan Qualifications and professional certification authority, MoESD .
CERTIFICATION	On successful completion of every module, the institute will award a certificate of achievement to the trainees. The TVET Quality Council, Bhutan Qualifications and professional certification authority, MoESD will award a National Certificate to the trainees upon the successful completion of NC level assessment.
COURSE DELIVERY	1. Modular 2. Demonstration 3. Lecture 4. Industrial training/attachment 5. Project work 6. Problem-based learning 7. Project-based learning
RESOURCES	Materials Pen and paper, cleaning rag, fuel, first aid kit, Markin clothes, handkerchief, bandage, cotton, splints, clothes, sack, poles, ropes, water, flip chart, hand signal posture, signalman flag, caution ribbon tape, poster, sign board, manual book, piston seal, grease nipple, spring, MP grease, fuse, fuse wire, petroleum jelly/grease, sand paper, distilled water, baking soda, air filter element, engine oil, rust lubricant spray, diesel/kerosene, battery terminal end, jumper cable, oil filter, fuel filter, hydraulic oil filter, transmission oil, hydraulic oil, brake fluid, coolant, LPG cylinder, fan belt, checklist, insulation tape, battery, RC book, insurance certificate, log book, operator license, movement order, road worthiness certificate, file, inspection checklist, forklift history book (maintenance record book), rope (metal/fabric), chain, load chart, forklift specification, load (solid/liquid), straps, shrink wrap, load binder and O-ring. Tools/instruments Bucket, jug, knife, scissors, whistle, sign boards (mandatory, informatory and cautionary), basic hand tool set, wire brush, pliers, terminal expander, jack, wheel wrench, torque wrench, wooden block, steel horse, tyre pressure gauge, tray, mechanic hand tool set, wheel wedge, oil filter clamp, funnel, oil container/empty barrel, wrench set, valve key, chain gauge, inspection mirror, ruler, screwdriver, flashlight, lever, calculator, measuring tape, pallet, dynamic rope, static rope, cotton rope, chain, side shift attachment, wedge, and chain puller.

FORKLIFT OPERATION BQF C2

Instrument

Multimeter, hydrometer and Tyre pressure gauge

Equipment

Fire extinguisher, forklift, hand set, bench vice, grease gun, battery, battery charger, air compressor, pneumatic gun, grease adapter, oil dispenser, EV charging console, walkie talkie set, and loading truck/trailer

PPE

Safety gloves, safety helmet, safety boots, safety goggles, safety mask, ear muffs/ear plug, reflective jacket/belt and work dress

Learning Materials

- Competency Based Learning Materials (CBLM)
- Reference books
- Hand-outs
- Audio visuals

Infrastructure and training facilities

- **Theory classroom size:** Minimum of 1.5 square meter per trainee
- **Practical classroom size:** Minimum of 3 square meter per trainee. Other variables must be considered depending upon type of skill being taught and the number of trainees participating at one time

MODULE INFORMATION:
FORKLIFT OPERATION

MODULE 1
ON
PRACTICING WORKSITE HEALTH AND SAFETY

MODULE INFORMATION

Occupation	Forklift Operator
Competency Area	Practice worksite health and safety
Module Title	Practicing worksite health and safety
Module Code	8344- L2-M1
Module Description	This module is structured to provide learners with the knowledge, skills and right attitude required to apply safety measure and regulation, first aid and communication skills
Nominal Duration	25.5 Hours
Certificate Level	BQF Certificate Level 2
Pre-requisite	Completed VI and should be above 21 years old
Learning Outcome	1. Apply safety measure and regulations 2. Apply first aid 3. Apply communication and signals

Module Title	Practicing worksite health and safety		
Module Code	8344- L2-M1		
Learning Outcome 1	Apply safety measure and regulations		
Duration	Theory: 5 hours	Practical:6 hours	Total: 11 hours
Assessment Criteria	• PPE is used as per the job requirement following standard procedure • Work site is assessed as per the job requirement following standard procedure • Fire extinguisher is used as per the job requirement following standard procedure		
Content	A1.00 Introductory knowledge • Introduction to forklift operation • Roles and responsibilities of forklift operator • Safety for forklift operation • Trend and scope for forklift operator • Introduction to forklift • Types of forklift and its application • Types of forklift based on power source (<i>LPG, battery and fossil fuel</i>) • Components/parts of forklift • Specification of forklift • Working principle of forklift A1.01 Using Personal Protective Equipment (PPE) Knowledge • Introduction to Occupational Health and Safety Regulations • Importance of using PPE • List of PPE and its functions • Importance of checking the condition of PPEs Skills • Observation skills • Communication skills • Analytical skills Attitude, safety and environmental concern • Having work ethics and integrity • Being a team player • Proper handling of PPEs • Having sense of ownership and accountability • Ensuring appropriate use of PPE to avoid fines and penalty • Ensuring to follow OHS rules and regulation A1.02 Assessing worksite Knowledge • Introduction to environmental regulations • Purpose of assessing worksite • Types of risk & hazards at work site and their mitigations Skills • Observation skills • Communication skills		

	• Analytical skills • Problem solving skills <i>Attitude, safety and environmental concern</i> • Being vigilant and patient • Having work ethics and integrity • Being a team player • Proper handling of tools, materials and equipment • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring to follow proper housekeeping at site • Ensuring to follow OHS rules and regulation A1.03 Using fire extinguisher <i>Knowledge</i> • Fire triangle • Classification of fire • Purpose of using fire extinguisher • Types of fire extinguisher and its application • Methods of fire control • PASS principle <i>Skills</i> • Observation skills • Communication skills • Analytical skills <i>Attitude, safety and environmental concern</i> • Effective time management • Being vigilant and patient • Having work ethics and integrity • Being a team player • Proper handling of tools, materials and equipment • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring proper disposal of waste • Ensuring appropriate selection of fire extinguisher • Ensure to follow environmental rules and regulations • Ensuring to follow OHS rules and regulation • Ensuring to maintain safe distance between fire extinguisher and fire A1.04 Conducting toolbox talk <i>Knowledge</i> • Toolbox talk and its importance • Audience-centred messaging and its importance • Safety climate theory • Importance of Trust and openness <i>Skills</i> • Facilitation skills • Communication skills
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	● Situational Awareness and Decision-Making skills <i>Attitude, safety and environmental concern</i> ● Trusting in leadership ● Openness to reporting ● Team-oriented communications ● Effective time management ● Efficient use of resources ● Ensure to reinforce safety values and environmental responsibility ● Ensure to deliver clear and relevant messages ● Ensuring to follow OHS rules and regulations ● Ensuring to use appropriate PPE A1.05 Managing emergency situations <i>Knowledge</i> ● Introduction to emergency response planning ● Emergency contact details ● Importance of securing the incident area ● Types of emergency situations <i>Skills</i> ● Observation skills ● Communication skills ● Analytical skills <i>Attitude, safety and environmental concern</i> ● Effective time management ● Being vigilant and patient ● Having work ethics and integrity ● Being a team player ● Proper handling of tools, materials and equipment ● Having sense of ownership and accountability ● Ensuring to use appropriate PPE ● Ensuring to follow OHS rules and regulation
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Learning Conditions	Learning Materials • Competency Based Learning Materials (CBLM)/Reference materials • Hand-outs • Audio Visuals • Reference books • Manuals Learning facilities and infrastructure • Classroom with adequate facilities • Information Technology (IT) lab • Library • Workshop Materials • Pen and paper, cleaning rag, fuel, first aid kit and water Tools • Bucket and jug Equipment • Fire extinguisher and forklift PPE • Safety gloves, safety helmet, safety boots, safety goggles, safety mask, ear muffs/ear plug, reflective jacket/belt and work dress
Instructional Methodologies	The trainer shall use <i>inter alia</i>, the following instructional methods: • Lecture • Interactive discussion • Demonstration • Industrial visit/training • Guided practice • Group practice with project-based learning • Individual practice with problem-based learning • Universal Design of Learning (UDL)
Method of Assessment	The trainer shall use <i>inter alia</i>, the following assessment methods: • Practical observation • Oral/viva-voce • Written test • Assignment

Module Title	Practicing worksite health and safety		
Module Code	8344- L2-M1		
Learning Outcome 2	Apply first aid		
Duration	Theory:1.5 hours	Practical: 4.5 hours	Total: 6 hours
Assessment Criteria	• CPR is performed as per the job requirement following standard procedure • Bandage is applied as per the job requirement following standard procedure • Stretcher is prepared as per the job requirement following standard procedure		
Content	A2.01 Performing CPR Knowledge • Introduction to first aid • Definition of CPR • Purpose of CPR • Dos and Don'ts of CPR Skills • Observation skills • Communication skills • Analytical skills • Planning skills Attitude, safety and environmental concern • Effective time management • Being vigilant and patient • Having work ethics and integrity • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring proper disposal of waste • Ensuring to check for surrounding hazards • Ensuring to follow OHS rules and regulation A2.02 Applying bandage Knowledge • Definition of bandage • Types of bandages • Purpose of sterilization • Methods of applying bandage and splints Skills • Using splints • Observation skills • Communication skills • Analytical skills • Problem solving skills Attitude, safety and environmental concern • Effective time management • Being vigilant and patient		

	• Having work ethics and integrity • Being a team player • Proper handling of tools, materials and equipment • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring proper disposal of waste • Ensuring to follow OHS rules and regulation A2.03 Preparing stretcher Knowledge • Definition of stretcher • Types of Stretchers • Methods of lifting victim Skills • Observation skills • Communication skills • Analytical skills • Planning skills • Problem solving skills Attitude, safety and environmental concern • Effective time management • Being vigilant and patient while preparing stretchers • Having work ethics and empathy • Ensuring appropriate use of PPE • Ensuring proper disposal of waste • Ensuring to follow OHS rules and regulation
Learning Conditions	Learning Materials • Competency Based Learning Materials (CBLM)/reference materials • Hand-outs • Audio Visuals • Reference books • Manuals Learning facilities and infrastructure • Classroom with adequate facilities • Information Technology (IT) lab • Library • Workshop Materials • Pen and paper, handkerchief, bandage, cotton, splints, clothes, sack, poles and ropes Tools • Knife and scissors PPE • Safety gloves, safety helmet, safety boots, safety goggles, safety mask, ear muffs/ear plug, reflective jacket/belt and work dress

Instructional Methodologies	The trainer shall use <i>inter alia</i>, the following instructional methods: • Lecture • Interactive discussion • Demonstration • Industrial visit/training • Guided practice • Group practice with project-based learning • Individual practice with problem-based learning • Universal Design of Learning (UDL)
Method of Assessment	The trainer shall use <i>inter alia</i>, the following assessment methods: • Practical observation • Oral/viva-voce • Written test • Assignment

Module Title	Practicing worksite health and safety		
Module Code	8344- L2-M1		
Learning Outcome 3	Apply communication and signals		
Duration	Theory:3 hours	Practical:5.5 hours	Total: 8.5 hours
Assessment Criteria	• Audible signal is applied as per the job requirement following standard procedure • Hand signal is applied as per the job requirement following standard procedure • Traffic signs and symbols are followed as per the job requirement following standard procedure • Safety signs are used as per the job requirement following standard procedure		
Content	A3.01 Applying audible signal Knowledge • Introduction to audible signal • Types of audible signal • Purpose of using audible signal • Process of setting radio communication device Skills • Observation skills • Communication skills • Analytical skills Attitude, safety and environmental concern • Effective time management • Being vigilant and patient • Having work ethics and integrity • Proper handling of tools, materials and equipment • Having sense of ownership and accountability • Ensuring appropriate use of Communication devices • Ensuring appropriate use of PPE • Ensuring to follow OHS rules and regulation A3.02 Applying hand signal Knowledge • Introduction to forklift operator's hand signal • Purpose of hand signal • Types of hand signals and its usage Skills • Interpreting hand signals • Observation skills • Communication skills • Analytical skills Attitude, safety and environmental concern • Being vigilant and patient • Having work ethics and integrity • Proper handling of tools, materials and equipment		

	• Having sense of ownership and accountability • Ensuring appropriate interpretation and usage of hand signal • Ensuring appropriate use of PPE • Ensuring to follow OHS rules and regulation A3.03 Following traffic signs and symbols <i>Knowledge</i> • Introduction to traffic rules and regulations • Purpose of traffic signs and symbols • Type of traffic signs and its functions • Introduction to traffic signals • Traffic rules in industrial settings <i>Skills</i> • Interpreting traffic signs and symbols • Observation skills • Communication skills • Analytical skills <i>Attitude, safety and environmental concern</i> • Being vigilant and patient • Having work ethics and integrity • Having sense of ownership and accountability • Ensuring appropriate usage of the traffic signal • Ensuring to follow environmental rules and regulations • Ensuring appropriate use of PPE • Ensuring to follow OHS rules and regulation A3.04 Using safety signs <i>Knowledge</i> • Definition of safety sign • Types of safety signs • Purpose of safety signs <i>Skills</i> • Interpreting safety signs • Observation skills • Communication skills • Analytical skills <i>Attitude, safety and environmental concern</i> • Being vigilant and patient • Having work ethics and integrity • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring to follow safety signs appropriately • Ensure to follow environmental rules and regulations • Ensuring to follow OHS rules and regulation
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Learning Conditions	Learning Materials • Competency Based Learning Materials (CBLM)/reference materials • Hand-outs • Audio Visuals • Reference books • Manuals Learning facilities and infrastructure • Classroom with adequate facilities • Information Technology (IT) lab • Library • Workshop Materials • Pen and paper, fuel, flip chart, hand signal posture, signalman flag, caution ribbon tape, poster, sign board and manual book Tools • Whistle and sign boards (mandatory, informatory and cautionary) Equipment • Forklift and hand set PPE • Safety gloves, safety helmet, safety boots, safety goggles, safety mask, ear muffs/ear plug, reflective jacket/belt and work dress
Instructional Methodologies	The trainer shall use <i>inter alia</i>, the following instructional methods: • Lecture • Interactive discussion • Demonstration • Industrial visit/training • Guided practice • Group practice with project-based learning • Individual practice with problem-based learning • Universal Design of Learning (UDL)
Method of Assessment	The trainer shall use <i>inter alia</i>, the following assessment methods: • Practical observation • Oral/viva-voce • Written test • Assignment • Project work

MODULE 2
ON
CARRYING OUT MAINTENANCE OF FORKLIFT

MODULE INFORMATION

Occupation	Forklift Operator
Competency Area	Carry out maintenance of forklift
Module Title	Carrying out maintenance of forklift
Module Code	8344-L2-M2
Module Description	This module is structured to provide learners with the knowledge, skills and right attitude required to maintain tools and equipment, perform preventive and periodic maintenance.
Nominal Duration	67 Hours
Certificate Level	BQF Certificate Level 2
Pre-requisite	Must complete module 1
Learning Outcome	1.Maintain tools and equipment 2.Perform periodic maintenance 3.Perform periodic maintenance

Module Title	Carrying out maintenance of forklift		
Module Code	8344- L2-M2		
Learning Outcome 1	Maintain tools and equipment		
Duration	Theory:3 hours	Practical:6.5 hours	Total: 9.5 hours
Assessment Criteria	• Hand tool is checked as per the job requirement following standard procedure • Grease gun is checked as per the job requirement following standard procedure • Grease gun is overhauled as per the job requirement following standard procedure		
Content	B1.01 Checking hand tools Knowledge • Introduction to hand tools • Purpose of checking hand tools • Types of hand tools and its functions • Sequence of using hand tools • 5S principles • Safety precautions while using hand tools Skills • Observation skills • Communication skills • Analytical skills Attitude, safety and environmental concern • Having work ethics and integrity • Proper handling of tools, materials and equipment • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring appropriate use of Hand tools • Ensuring proper disposal of waste • Ensuring to follow OHS rules and regulation B1.02 Checking grease gun Knowledge • Components of grease gun and its function • Purpose of grease gun • Types of grease gun Skills • Using grease gun • Observation skills • Communication skills • Analytical skills Attitude, safety and environmental concern • Being vigilant and patient • Having work ethics and integrity • Proper handling of tools, materials and equipment • Having sense of ownership and accountability		

	• Ensuring appropriate use of PPE • Ensuring proper disposal of waste • Ensuring appropriate use of Grease gun • Ensuring to follow OHS rules and regulation B1.03 Overhauling grease gun Knowledge • Purpose of overhauling grease gun • Common defects of grease gun Skills • Using grease gun • Observation skills • Communication skills • Analytical skills Attitude, safety and environmental concern • Being efficient in using resources • Being vigilant and patient • Having work ethics and integrity • Proper handling of tools, materials and equipment • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring proper disposal of waste • Ensuring to follow OHS rules and regulation
Learning Conditions	Learning Materials • Competency Based Learning Materials (CBLM)/Reference Materials • Hand-outs • Audio Visuals • Reference books • Manuals Learning facilities and infrastructure • Classroom with adequate facilities • Information Technology (IT) lab • Library • Workshop Materials • Pen and paper, Markin clothes, piston seal, grease nipple, spring and MP grease Tools • Basic hand tool set Equipment • Bench vice and grease gun PPE • Safety gloves, safety helmet, safety boots, safety goggles, safety mask, ear muffs/ear plug, reflective jacket/belt and work dress

Instructional Methodologies	The trainer shall use <i>inter alia</i>, the following instructional methods: • Lecture • Interactive discussion • Demonstration • Industrial visit/training • Guided practice • Group practice with project-based learning • Individual practice with problem-based learning • Universal Design of Learning (UDL)
Method of Assessment	The trainer shall use <i>inter alia</i>, the following assessment methods: • Practical observation • Oral/viva-voce • Written test • Assignment

Module Title	Carrying out maintenance of forklift		
Module Code	8344-L2-M2		
Learning Outcome 2	Perform preventive maintenance		
Duration	Theory:7.5 hours	Practical:21 hours	Total: 28.5 hours
Assessment Criteria	● Fuse is changed as per the job requirement following standard procedure ● Primary battery is serviced as per the job requirement following standard procedure ● Secondary battery is serviced as per the job requirement following standard procedure ● Air filter is cleaned as per the job requirement following standard procedure ● Tyre is changed as per the job requirement following standard procedure ● Greasing is performed as per the job requirement following standard procedure ● Jump start is performed as per the job requirement following standard procedure		
Content	B2.01 Changing fuse Knowledge ● Definition of fuse ● Types of fuse ● Function of fuse ● Importance of using correct fuse rating Skills ● Using Multimeter ● Observation skills ● Communication skills ● Analytical skills Attitude, safety and environmental concern ● Being efficient in using resources ● Being vigilant and patient ● Having work ethics and integrity ● Proper handling of fuse ● Having sense of ownership and accountability ● Ensuring appropriate use of PPE ● Ensuring proper disposal of waste ● Ensuring to follow OHS rules and regulation ● Ensuring to use correct rating of fuse ● Ensuring to check the fuse before replacing B2.02 Servicing primary battery Knowledge ● Introduction to primary battery ● Function of battery ● Types of battery ● Components of battery and its functions ● Methods of taking care of battery		

	• Causes of battery corrosion • Methods of cleaning corrosion • Methods of charging battery • Safety precautions while handling battery Skills • Using multimeter • Using hydrometer • Observation skills • Communication skills • Analytical skills Attitude, safety and environmental concern • Being vigilant and patient • Having work ethics and integrity • Proper handling of battery • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring proper disposal of waste • Ensuring to follow OHS rules and regulation B2.03 Servicing secondary battery Knowledge • Introduction to secondary battery • Components of battery and its functions • Difference between primary and secondary battery • Safety precautions while handling battery Skills • Using multimeter • Using hydrometer • Observation skills • Communication skills • Analytical skills Attitude, safety and environmental concern • Being vigilant and patient • Having work ethics and integrity • Proper handling of battery • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring proper disposal of waste • Ensuring to follow environmental rules and regulations • Ensuring to follow OHS rules and regulation B2.04 Changing air filter Knowledge • Definition of air filter • Types of air filter • Function of air filter • Methods of cleaning air filter
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	● Interval of changing air filter Skills ● Using air compressor ● Observation skills ● Communication skills ● Analytical skills ● Planning skills Attitude, safety and environmental concern ● Being efficient in using resources ● Being vigilant and patient ● Having work ethics and integrity ● Proper handling of air filter ● Having sense of ownership and accountability ● Ensuring appropriate use of PPE ● Ensuring proper disposal of waste ● Ensure not to clean or replace air filter while engine is running ● Ensuring to follow OHS rules and regulation B2.05 Changing tyre Knowledge ● Types of forklift tyre and its applications ● Construction of forklift tyre ● Tyre specification ● Tool and equipment required for changing the tyre ● Signs of tyre wear and replacement criteria ● Importance of maintaining tyre pressure Skills ● Using pneumatic gun ● Using air compressor ● Using tyre pressure gauge ● Using jack ● Communication skills ● Observation skills (<i>Ability to assess tire wear, rim damage, and alignment issues</i>) ● Problem solving skills ● Planning skills Attitude, safety and environmental concern ● Team-Oriented Communication ● Safety-First Mindset ● Attention to Details ● Having sense of ownership and accountability ● Ensuring appropriate use of PPE ● Ensure to dispose of old tires through certified recycling or disposal services. ● Adheres to all safety protocols ● Ensuring to follow OHS rules and regulation
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	B2.06 Performing greasing Knowledge • Function of grease • Types of grease and its usage • Purpose of greasing Skills • Using grease gun • Observation skills • Communication skills Attitude, safety and environmental concern • Being efficient in using resources • Having work ethics and integrity • Proper handling of tools, materials and equipment • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring proper disposal of waste • Ensuring to follow OHS rules and regulation B2.07 Performing jump start Knowledge • Definition of jump start • Purpose of jump start • Methods of Jump start • Circuit diagram of jump start • Safety precautions while performing jump-start Skills • Using battery starter/booster • Interpreting circuit diagram • Observation skills • Communication skills • Analytical skills • Planning skills Attitude, safety and environmental concern • Being vigilant and patient • Having work ethics and integrity • Being a team player • Proper handling of tools, materials and equipment • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring to follow OHS rules and regulation
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Learning Conditions	Learning Materials • Competency Based Learning Materials (CBLM)/ Reference materials • Hand-outs • Audio Visuals • Reference books • Manuals Learning facilities and infrastructure • Classroom with adequate facilities • Information Technology (IT) lab • Library • Workshop Materials • Pen and paper, fuse, fuse wire, Markin clothes, petroleum jelly/grease, sand paper, distilled water, baking soda, air filter element, rust lubricant spray, diesel/kerosene, battery terminal end and jumper cable Tools • Basic hand tool set, wire brush, pliers, terminal expander, jack, wheel wrench, torque wrench, wooden block, steel horse and tyre pressure gauge Instrument • Multimeter and hydrometer Equipment • Forklift, jack, battery, battery charger, air compressor, pneumatic gun, grease gun and grease adapter PPE • Safety gloves, safety helmet, safety boots, safety goggles, safety mask, ear muffs/ear plug, reflective jacket/belt and work dress
Instructional Methodologies	The trainer shall use <i>inter alia</i>, the following instructional methods: • Lecture • Interactive discussion • Demonstration • Industrial visit/training • Guided practice • Group practice with project-based learning • Individual practice with problem-based learning • Universal Design of Learning (UDL)
Method of Assessment	The trainer shall use <i>inter alia</i>, the following assessment methods: • Practical observation • Oral/viva-voce • Written test • Assignment

Module Title	Carrying out maintenance of forklift		
Module Code	8344-L2-M2		
Learning Outcome 3	Perform periodic maintenance		
Duration	Theory:8 hours	Practical:21 hours	Total: 29 hours
Assessment Criteria	• Engine oil is changed as per the job requirement following standard procedure • Transmission oil is changed as per the job requirement following standard procedure • Hydraulic oil is changed as per the job requirement following standard procedure • Coolant is changed as per the job requirement following standard procedure • Fuel filter is changed as per the job requirement following standard procedure • Fan belt is changed as per the job requirement following standard procedure		
Content	B3.01 Changing engine oil Knowledge • Introduction to lubrication system • Components of lubrication system • Function of engine oil • Specification of engine oil • Interval of changing engine oil • Purpose of flushing oil • Types of filter wrench Skills • Using oil filter wrench/clamp • Observation skills • Communication skills • Analytical skills • Planning skills Attitude, safety and environmental concern • Being vigilant and patient • Having work ethics and integrity • Proper handling of tools, materials and equipment • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring proper disposal of old engine oil and filter • Ensuring to follow OHS rules and regulation B3.02 Changing transmission oil Knowledge • Purpose of transmission oil • Specification of transmission oil • Interval of changing transmission oil		

	Skills • Using oil dispenser • Observation skills • Communication skills • Analytical skills • Planning skills Attitude, safety and environmental concern • Being vigilant and patient • Having work ethics and integrity • Proper handling of tools, materials and equipment • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring proper disposal of old transmission oil • Ensuring to follow OHS rules and regulation B3.03 Changing hydraulic oil Knowledge • Purpose of hydraulic oil • Specification of hydraulic oil • Properties of hydraulic oil • Interval of changing hydraulic oil • Causes of hydraulic hydrolock Skills • Using oil dispenser • Observation skills • Communication skills • Analytical skills Attitude, safety and environmental concern • Being vigilant and patient • Having work ethics and integrity • Proper handling of tools, materials and equipment • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring proper disposal of hydraulic oil and filter • Ensuring to follow OHS rules and regulation B3.04 Changing coolant Knowledge • Purpose of coolant • Types of coolant • Components of cooling system and its functions • Coolant mixing ratio • Interval of changing coolant • Introduction to stray current • Effects of stray current Skills • Using multimeter
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	• Using hydrometer • Observation skills • Communication skills • Analytical skills • Planning skills <i>Attitude, safety and environmental concern</i> • Being vigilant and patient • Having work ethics and integrity • Proper handling of tools, materials and equipment • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring to follow OHS rules and regulation B3.05 Changing fuel filter <i>Knowledge</i> • Components of fuel system • Function of fuel filter • Types of fuel filter • Importance of bleeding • Interval of changing fuel filter <i>Skills</i> • Observation skills • Communication skills • Analytical skills • Planning skills <i>Attitude, safety and environmental concern</i> • Being vigilant and patient • Having work ethics and integrity • Proper handling of tools, materials and equipment • Having sense of ownership and accountability • Ensuring appropriate use of machinic tools • Ensuring proper disposal of old fuel filter • Ensuring appropriate use of PPE • Ensuring to follow OHS rules and regulation B3.06 Changing fan belt <i>Knowledge</i> • Types of fan belt • Function and components of fan belt drive system • Importance of maintaining proper fan belt tension <i>Skills</i> • Observation skills • Communication skills <i>Attitude, safety and environmental concern</i> • Being efficient in using resources • Having work ethics and integrity • Proper handling of tools, materials and equipment
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	• Having sense of ownership and accountability • Ensuring proper disposal of waste • Ensuring appropriate use of PPE • Ensuring to follow OHS
Learning Conditions	Learning Materials • Competency Based Learning Materials (CBLM)/ Reference materials • Hand-outs • Audio Visuals • Reference books • Manuals Learning facilities and infrastructure • Classroom with adequate facilities • Information Technology (IT) lab • Library • Workshop Materials • Pen & paper, Markin clothes, engine oil, oil filter, fuel filter, hydraulic oil filter, transmission oil, hydraulic oil, brake fluid, coolant, distilled water, fuel and fan belt Tools • Mechanic hand tool set, wheel wedge, oil filter clamp, funnel, oil tray, oil container/empty barrel and wrench set Instrument • Multimeter and Hydrometer Equipment • Forklift and oil dispenser PPE • Safety gloves, safety helmet, safety boots, safety goggles, safety mask, ear muffs/ear plug, reflective jacket/belt and work dress
Instructional Methodologies	The trainer shall use <i>inter alia</i>, the following instructional methods: • Lecture • Interactive discussion • Demonstration • Industrial visit/training • Guided practice • Group practice with project-based learning • Individual practice with problem-based learning • Universal Design of Learning (UDL)
Method of Assessment	The trainer shall use <i>inter alia</i>, the following assessment methods: • Practical observation • Oral/viva-voce • Written test • Assignment

MODULE 3
ON
CARRYING OUT PRE OPERATION CHECK

MODULE INFORMATION

Occupation	Forklift Operator
Competency Area	Carryout pre operation check
Module Title	Carrying out pre operation check
Module Code	8344-L2-M3
Module Description	This module is structured to provide learners with the knowledge, skills and right attitude required to perform exterior, under hood and interior check
Nominal Duration	38 Hours
Certificate Level	BQF Certificate Level 2
Pre-requisite	Completed module 2
Learning Outcome	1.Perform exterior check 2.Perform under hood check 3.Perform interior check

Module Title	Carrying out pre operation check		
Module Code	8344- L2-M3		
Learning Outcome 1	Perform exterior check		
Duration	Theory:5.5 hours	Practical:11.5 hours	Total: 17 hours
Assessment Criteria	• Walk around inspection is performed as per the job requirement following standard procedure • Tyre pressure and condition is checked as per the job requirement following standard procedure • Chain and hoses are inspected as per the standard procedure • Cables and connector are inspected as per the standard procedure • Lifting mechanism are checked as per the job requirement following standard procedure • Lighting system is checked as per the job requirement following standard procedure		
Content	C1.01 Performing walk around inspection Knowledge • Introduction to pre and post operation check • Purpose of walk around inspection Skills • Observation skills • Communication skills • Analytical skills Attitude, safety and environmental concern • Being vigilant and patient • Having work ethics and integrity • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring to follow OHS rules and regulation C1.02 Checking tyre pressure and condition Knowledge • Types of tyres • Function of pressure gauge • Importance of maintaining tyre pressure as per tyre specification • Effect of under inflation and over inflation • Factors affecting tyre pressure Skills • Using pressure gauge • Using air compressor • Observation skills • Communication skills • Analytical skills • Planning skills Attitude, safety and environmental concern • Effective time management • Being efficient in using resources		

	• Being vigilant and patient • Having work ethics and integrity • Being a team player • Proper handling of tools, materials and equipment • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring proper disposal of waste • Ensure to follow environmental rules and regulations • Ensuring to follow OHS rules and regulation C1.03 Checking chains and hoses <i>Knowledge</i> • Lockout/tagout (LOTO) principle • Common defects in chain and hoses • Importance of proper routing and flexibility of hose • Hoses and its purposes • Construction of hoses • Clamps and Brackets used for hoses • Hose Guides & Carriers and its purpose • Introduction to grommets and sleeves in forklift • Chains and its construction <i>Skills</i> • Observation skill • Communication skills • Using inspection mirror • Using chain gauge • Decision-Making skills <i>Attitude, safety and environmental concern</i> • Team-Oriented Communication • Safety-First Mindset • Being vigilant • Attention to Details • Proper handling of machinery tools • Having sense of ownership and accountability • Ensuring proper inspection of chain and hoses • Ensure there is no hydraulic oil leakages on the hoses • Adheres to all safety protocols • Ensuring appropriate use of PPE • Ensuring to follow OHS rules and regulation C1.04 Inspecting cables and connectors <i>Knowledge</i> • Introduction to forklift electrical circuits • Electrical cables and connectors in forklift <i>Skills</i> • Using multimeter • Safety and risk management skills
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	• Observation skills • Communication skills <i>Attitude, safety and environmental concern</i> • Being vigilant and patient • Proper handling of tools, materials and equipment • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring to follow OHS rules and regulation C1.05 Inspecting lifting mechanism <i>Knowledge</i> • Components of lifting mechanism and its function • Cause and effect of defective lifting mechanism <i>Skills</i> • Observation skills • Communication skills • Analytical skills <i>Attitude, safety and environmental concern</i> • Being vigilant and patient • Having work ethics and integrity • Proper handling of tools, materials and equipment • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring to follow OHS rules and regulation • Ensure the mast stops hold the carriage securely at full height • Ensure there is no hydraulic oil leakages on the hoses and cylinders C1.06 Checking lighting system <i>Knowledge</i> • Types of lighting system and its application <i>Skills</i> • Observation skills • Communication skills <i>Attitude, safety and environmental concern</i> • Being vigilant and patient • Having work ethics and integrity • Proper handling of tools, materials and equipment • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring to follow OHS rules and regulation • Ensuring to engage parking brake fully
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Learning Conditions	Learning Materials • Competency Based Learning Materials (CBLM)/ Reference materials • Hand-outs • Audio Visuals • Reference books • Manuals Learning facilities and infrastructure • Classroom with adequate facilities • Information Technology (IT) lab • Library • Workshop Materials • Pen & paper, Markin clothes, checklist, fuel, insulation tape and MP grease Tools • Mechanic hand tool set, valve key, chain gauge, inspection mirror, ruler, screwdriver and plier Instrument • Tyre pressure gauge and multimeter Equipment • Forklift and air compressor PPE • Safety gloves, safety helmet, safety boots, safety goggles, safety mask, ear muffs/ear plug, reflective jacket/belt and work dress
Instructional Methodologies	The trainer shall use <i>inter alia</i>, the following instructional methods: • Lecture • Interactive discussion • Demonstration • Industrial visit/training • Guided practice • Group practice with project-based learning • Individual practice with problem-based learning • Universal Design of Learning (UDL)
Method of Assessment	The trainer shall use <i>inter alia</i>, the following assessment methods: • Practical observation • Oral/viva-voce • Written test • Assignment

Module Title	Carrying out pre operation check		
Module Code	8344- L2-M3		
Learning Outcome 2	Perform under hood check		
Duration	Theory:4.5 hours	Practical:7 hours	Total:11.5 hours
Assessment Criteria	• Engine oil is checked as per the job requirement following standard procedure • Coolant is checked as per the job requirement following standard procedure • Hydraulic fluid is checked as per the job requirement following standard procedure • Brake oil checked as per the job requirement following standard procedure • Fan belt is checked as per the job requirement following standard procedure • Battery Electrolyte is checked as per the job requirement following standard procedure		
Content	C2.01 Checking engine oil Knowledge • Importance of checking engine oil Skills • Observation skills • Communication skills • Analytical skills Attitude, safety and environmental concern • Being vigilant and patient • Having work ethics and integrity • Proper handling of engine oil • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring to provide enough time for engine oil to settle • Ensure to park machine on leveled ground • Ensuring to follow OHS rules and regulation C2.02 Checking coolant Knowledge • Importance of checking coolant Skills • Observation skills • Communication skills • Analytical skills Attitude, safety and environmental concern • Having work ethics and integrity • Proper handling of tools, materials and equipment • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensure proper handling of hot coolant		

	• Ensuring to follow OHS rules and regulation C2.03 Checking hydraulic oil Knowledge • Effect of high & low level of hydraulic oil • Importance of checking hydraulic oil Skills • Observation skills • Communication skills • Analytical skills Attitude, safety and environmental concern • Being vigilant and patient • Having work ethics and integrity • Proper handling of hydraulic oil • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring to follow OHS rules and regulation C2.04 Checking brake fluid Knowledge • Introduction to brake fluid • Types of brake fluid • Purpose of checking brake fluid • Safety precautions while changing brake fluid Skills • Observation skills • Communication skills • Analytical skills Attitude, safety and environmental concern • Being vigilant and patient • Having work ethics and integrity • Proper handling of tools, materials and equipment • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring proper handling of brake fluid • Ensuring to follow OHS rules and regulation C2.05 Checking fan belt Knowledge • Purpose of checking fan belt tension • Methods of checking fan belt tension • Effect of improper belt tension • Causes and effects of defective fan belt Skills • Observation skills • Communication skills • Analytical skills
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	<i>Attitude, safety and environmental concern</i> • Being vigilant and patient • Having work ethics and integrity • Proper handling of tools, materials and equipment • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring proper tightening of belt tension • Ensuring to follow OHS rules and regulation C2.06 Checking battery electrolyte <i>Knowledge</i> • Definition of electrolyte • Methods of checking electrolyte • Purpose of checking electrolyte • Purpose of adding distilled water • Specific gravity of battery <i>Skills</i> • Observation skills • Communication skills • Analytical skills <i>Attitude, safety and environmental concern</i> • Having work ethics and integrity • Proper handling of electrolyte • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring to follow OHS rules and regulation
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Learning Conditions	Learning Materials • Competency Based Learning Materials (CBLM)/reference material • Hand-outs • Audio Visuals • Reference books • Manuals Learning facilities and infrastructure • Classroom with adequate facilities • Information Technology (IT) lab • Library • Workshop Materials • Pen & paper, cleaning rag, engine oil, coolant, distilled water, hydraulic oil, brake fluid, fan belt and battery Tools • Basic hand tool set, funnel, flashlight, oil tray and lever Equipment • Forklift and grease gun PPE • Safety gloves, safety helmet, safety boots, safety goggles, safety mask, ear muffs/ear plug, reflective jacket and work dress
Instructional Methodologies	The trainer shall use <i>inter alia</i>, the following instructional methods: • Lecture • Interactive discussion • Demonstration • Industrial visit/training • Guided practice • Group practice with project-based learning • Individual practice with problem-based learning • Universal Design of Learning (UDL)
Method of Assessment	The trainer shall use <i>inter alia</i>, the following assessment methods: • Practical observation • Oral/viva-voce • Written test • Assignment

Module Title	Carrying out pre operation check		
Module Code	8344- L2-M3		
Learning Outcome 3	Perform interior check		
Duration	Theory:3.5 hours	Practical:6 hours	Total: 9.5 hours
Assessment Criteria	- Document is checked as per the job requirement following standard procedure - Monitor panel is read as per the job requirement following standard procedure - Operators' ergonomics setup is conducted as per the job requirement following standard procedure		
Content	C3.01 Checking document Knowledge - Type of documents ✓ Driving license ✓ Log book ✓ Movement/deployment order ✓ Insurance Certificate ✓ Machine registration certificate ✓ Road worthiness certificate - Fines and penalty for late documentation Skills - Observation skills - Communication skills Attitude, safety and environmental concern - Being vigilant and patient - Having work ethics and integrity - Proper handling of tools, materials and equipment - Having sense of ownership and accountability - Ensuring appropriate use of PPE - Ensuring timely update of required documents - Ensuring to follow OHS rules and regulation C3.02 Reading monitor panel Knowledge - Types of monitor panel - Function of monitor panel - Illustration of control panel Skills - Interpreting reading - Observation skills - Communication skills - Analytical skills Attitude, safety and environmental concern - Being vigilant and patient - Having work ethics and integrity - Proper handling of equipment		

	• Having sense of ownership and accountability • Ensure to pay close attention and take immediate actions to any warning signs • Ensuring appropriate use of PPE • Ensuring to follow OHS rules and regulation C3.03 Conducting operators' ergonomic setup Knowledge • Principles of body mechanics to reduce strain and fatigue • Types of seats and its application • Forklift-specific adjustment mechanisms • Purpose and application of seat belt • Types of steering • Types of steering column and its purposes • Introduction to operators' presence sensing seat Skills • Observation skills • Machine operation skills (<i>Ability to operate levers, knobs, and dials to fine-tune seat and steering positions</i>) Attitude, safety and environmental concern • Safety first mindset • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring proper ergonomic setup before forklift operation • Ensuring to follow OHS rules and regulation
Learning Conditions	Learning Materials • Competency Based Learning Materials (CBLM)/Reference materials • Hand-outs • Audio Visuals • Reference books • Manuals Learning facilities and infrastructure • Classroom with adequate facilities • Information Technology (IT) lab • Library • Workshop Materials • Pen & paper, RC book, insurance certificate, log book, operator license, movement order, road worthiness certificate and file Equipment • Forklift PPE • Safety gloves, safety helmet, safety boots, safety goggles, safety mask, ear muffs/ear plug, reflective jacket/belt and work dress

Instructional Methodologies	The trainer shall use <i>inter alia</i>, the following instructional methods: • Lecture • Interactive discussion • Demonstration • Industrial visit/training • Guided practice • Group practice with project-based learning • Individual practice with problem-based learning • Universal Design of Learning (UDL)
Method of Assessment	The trainer shall use <i>inter alia</i>, the following assessment methods: • Practical observation • Oral/viva-voice • Written test • Assignment

MODULE 4
ON
CARRYING OUT PRODUCTIVE AND POST OPERATION OF
FORKLIFT

MODULE INFORMATION

Occupation	Forklift Operator
Competency Area	Carryout productive and post operation of forklift
Module Title	Carrying out productive and post operation of forklift
Module Code	8344-L2-M4
Module Description	This module is structured to provide learners with the knowledge, skills and right attitude required to perform hoist calculation, perform forklift operation, perform load handling & stability and transport forklift.
Nominal Duration	240.5 Hours
Certificate Level	BQF Certificate Level 2
Pre-requisite	Completed module 3
Learning Outcome	1.Perform hoist calculation 2.Perform forklift operation 3.Perform load handling and transportation 4.Perform post operation 5.Transport forklift

Module Title	Carrying out productive operation of forklift		
Module Code	8344-L2-M4		
Learning Outcome 1	Perform hoist calculation		
Duration	Theory:5.5 hours	Practical:6 hours	Total: 11.5 hours
Assessment Criteria	- Load chart is interpreted as per the job requirement following standard procedure - Forklift capacity is determined as per the job requirement following standard procedure - Rigging calculation is performed as per the job requirement following standard procedure		
Content	D1.01 Interpreting load chart Knowledge - Characteristics of load - Purpose of determining working load (SWL, WLL, Manufacturers Rated Capacity) - Rated load Capacity - Data Plate and its elements - Capacity chart & its elements - Maximum lift height - Load center, distance and capacity Skills - Interpreting load chart - Numeracy skills - Observation skills - Communication skills Attitude, safety and environmental concern - Having sense of ownership and accountability - Team-Oriented Communication - Safety-Consciousness - Ensuring appropriate use of PPE - Ensuring proper disposal of waste - Ensuring to interpret loading capacity and load - Ensuring to follow OHS rules and regulation D1.02 Determining forklift capacity Knowledge - Working principle of forklift - Relationship between load stability and load center - Basic principles of lifting capacity - Calculation of net load capacity - Factors affecting lifting capacity Skills - Interpreting load chart - Numeracy skills - Observation skills - Communication skills Attitude, safety and environmental concern - Effective time management		

	• Having work ethics and integrity • Proper handling of tools, materials and equipment • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring to measure the load center distance as per procedure • Ensuring to follow OHS rules and regulation D1.03 Performing rigging calculation Knowledge • Introduction to rigging • Introduction to sling and hardware • Types and application of slings and their hardware • Sling angles and effect on capacities • Factors affecting Working Load Limits (WLL) Skills • Interpreting load chart • Numeracy skills • Observation skills • Communication skills Attitude, safety and environmental concern • Effective time management • Having work ethics and integrity • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring proper disposal of waste • Ensuring to maintain appropriate sling angle and tension • Ensuring to follow OHS rules and regulation
Learning Conditions	Learning Materials • Competency Based Learning Materials (CBLM)/Reference materials • Hand-outs • Audio Visuals • Reference books • Manuals Learning facilities and infrastructure • Classroom with adequate facilities • Information Technology (IT) lab • Library • Workshop Material • Pen & paper, markin clothes, rope (metal/fabric), chain and load chart Tools • Calculator and measuring tape Equipment • Forklift

	PPE • Safety gloves, safety helmet, safety boots, safety goggles, safety mask, ear muffs/ear plug, reflective jacket/belt and work dress
Instructional Methodologies	The trainer shall use <i>inter alia</i>, the following instructional methods: • Lecture • Interactive discussion • Demonstration • Industrial visit/training • Guided practice • Group practice with project-based learning • Individual practice with problem-based learning • Universal Design of Learning (UDL)
Method of Assessment	The trainer shall use <i>inter alia</i>, the following assessment methods: • Practical observation • Oral/viva-voce • Written test • Assignment

Module Title	Carrying out productive operation of forklift		
Module Code	8344-L2-M4		
Learning Outcome 2	Perform forklift operation		
Duration	Theory:16 hours	Practical:95 hours	Total: 111 hours
Assessment Criteria	• Risk and hazard are evaluated as per the job requirement following standard procedure • Final site inspection is performed as per the job requirement following standard procedure • Starting and hydraulic warmup is performed as per the job requirement following standard procedure • Moving off is performed as per the job requirement following standard procedure • Stopping is performed as per the job requirement following standard procedure • Maneuvering is performed as per the job requirement following standard procedure • Reversing is performed as per the job requirement following standard procedure • Fork and mast control is operated as per the job requirement following standard procedure • 3/5point turn is performed as per the job requirement following standard procedure		
Content	D2.01 Evaluating risk and hazard Knowledge • Definition and types of risk and hazard for forklift operation • Importance of assessing risk and hazard Skills • Observation skills • Analytical skills • Communication skills Attitude, safety and environmental concern • Effective time management • Being vigilant and patient • Being a team player • Proper handling of tools, materials and equipment • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring proper disposal of waste • Ensuring to follow OHS rules and regulation • Ensure forklift setup is free of any risk and hazard D2.02 Performing final site inspection Knowledge • Importance of final site inspection • Effects of work environments on forklift safety Skills • Interpreting load chart • Observation skills		

	• Communication skills • Analytical skills • Numeracy skills <i>Attitude, safety and environmental concern</i> • Effective time management • Being efficient in using resources • Being vigilant and patient • Having work ethics and integrity • Being a team player • Proper handling of tools, materials and equipment • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring proper disposal of waste • Ensure rigging gears are up to required standard • Ensuring to follow OHS rules and regulation • Ensure to follow load chart to determine load capacity D2.03 Performing starting and hydraulic warm up <i>Knowledge</i> • Three-Point Climbing Method • Working principle of engine • Hydraulic fluid properties • Pascal's law and it's application • Bernoulli's principle and its application • Warm-up rationale • Cold weather effects on lubrications <i>Skills</i> • Pre-start inspection proficiency • Sequential thinking skills • Communication skills • Decision-Making skills <i>Attitude, safety and environmental concern</i> • Having sense of ownership and accountability • Team-Oriented Communication • Safety-First Mindset • Proper handling of tools, materials and equipment • Ensuring appropriate use of PPE • Ensuring to follow OHS rules and regulation D2.04 Performing moving off <i>Knowledge</i> • Basics of motion and speed • Basics of inertia and inertial forces • Basics of centrifugal force and centripetal force • 4Ps of forklift safety (<i>People, Places, Personal Protective Equipment (PPE) and Personal Accountability</i>) • Search techniques • Difference between automotive gear and forklift gear
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	Skills • Observation skills • Communication skills Attitude, safety and environmental concern • Safety-Consciousness • Being alert, disciplined, and respectful of Man, Machine and Material (3M) • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring to minimize idling time to reduce fuel use and emissions • Ensuring to follow OHS rules and regulation D2.05 Performing stopping Knowledge • Brake and its function • Construction, types and operation of brake • Types of brake fluid • Difference between stopping on levelled ground and gradient • Importance of proper stopping • Introduction to stopping distance and hydroplaning Skills • Observation skills • Communication skills Attitude, safety and environmental concern • Being vigilant and patient • Having work ethics and integrity • Proper handling of tools, materials and equipment • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring proper disposal of waste • Ensuring to engage parking brake • Ensuring to follow OHS rules and regulation D2.06 Performing maneuvering Knowledge • Rear-wheel steering mechanics • Turning radius and articulation • Traffic rules in industrial settings • Blind spots and visibility • Hazard identification Skills • Operational Skill (<i>steering control, speed modulation, fork positioning and load handling</i>) • Communication skills • Situational Awareness and Decision-Making skills • Observation skills Attitude, safety and environmental concern • Team-Oriented Communication • Safety-First Mindset • Having sense of ownership and accountability
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	• Ensuring appropriate use of PPE • Ensure to follow environmental rules and regulations • Ensuring to follow OHS rules and regulation D2.07 Performing reversing Knowledge • Difference between levelled and gradient reversing • Reverse lighting and warning circuit • Types of bulb used in reverse circuit • Precautions while reversing Skills • Communication skills • Observation skills • Analytical skills Attitude, safety and environmental concern • Effective time management • Being vigilant and patient • Having work ethics and integrity • Proper handling of tools, materials and equipment • Having sense of ownership and accountability • Ensuring to use seat belt • Ensuring a clear line of sight • Ensuring appropriate use of PPE • Ensuring to follow OHS rules and regulation D2.08 Operating fork and mast control Knowledge • Function and components of mast assembly (inner mast, outer mast, chains, rollers) • Basics of hydraulic system • Hydraulic system operation for lifting and lowering • Fork positioning principles and load alignment • Effects of mast height and load position on forklift stability • Stacking height • Load elevation • Vertical load positioning • Visibility control and stacking precision Skills • Interpreting load chart • Communication skills • Observation skills • Analytical skills Attitude, safety and environmental concern • Effective time management • Being vigilant and patient • Having work ethics and integrity • Proper handling of tools, materials and equipment • Having sense of ownership and accountability • Ensuring to follow search techniques
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	• Ensuring appropriate use of PPE • Ensuring to follow OHS rules and regulation D2.09 Performing 3/5 point turning Knowledge • Introduction to 3-point and 5-point methods • Micro-steering control • Brake modulation • Reverse gear handling • Importance of spatial judgment and sequential planning • Obstacle anticipation • Introduction to defensive operation Skills • Operational Skill (<i>steering control, speed modulation, fork positioning and load handling</i>) • Communication skills • Situational Awareness and Decision-Making skills • Observation skills • Decision making skills Attitude, safety and environmental concern • Team-Oriented Communication • Safety-First Mindset • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring to follow OHS rules and regulation
Learning Conditions	Learning Materials • Competency Based Learning Materials (CBLM)/Reference materials • Hand-outs • Audio Visuals • Reference books • Manuals Learning facilities and infrastructure • Classroom with adequate facilities • Information Technology (IT) lab • Library • Workshop Materials • Pen & paper, forklift specification, checklist, load, fuel, hydraulic fluid and brake fluid Tools • Measuring tape Instrument • Multi-meter Equipment • Forklift

	PPE • Safety gloves, safety helmet, safety boots, safety goggles, safety mask, ear muffs/ear plug, reflective jacket/belt and work dress
Instructional Methodologies	The trainer shall use <i>inter alia</i>, the following instructional methods: • Lecture • Interactive discussion • Demonstration • Industrial visit/training • Guided practice • Group practice with project-based learning • Individual practice with problem-based learning • Universal Design of Learning (UDL)
Method of Assessment	The trainer shall use <i>inter alia</i>, the following assessment methods: • Practical observation • Oral/viva-voce • Written test • Assignment

Module Title	Carrying out productive operation of forklift		
Module Code	8344- L2-M4		
Learning Outcome 3	Perform load handling and transportation		
Duration	Theory:9.5 hours	Practical:80 hours	Total: 89.5 hours
Assessment Criteria	• Mast and tilt control is performed as per the job requirement following standard procedure • Knot and hitches are applied as per the job requirement following standard procedure • Load securing and visibility is performed as per the job requirement following standard procedure • Load positioning and fork handling is performed as per the job requirement following standard procedure • Terrain and gradient adaptation are performed as per the job requirement following standard procedure • Load transportation is performed as per the job requirement following standard procedure • Load stacking and unstacking is performed as per the job requirement following standard procedure • Attachment is mounted as per the job requirement following standard procedure		
Content	D3.01 Operating mast and tilt control Knowledge • Joy stick, its purpose and the directional input • Importance of Load stability, mass and Center of Gravity • Importance of emergency stop procedures • Forklift structural standards Skills • Observation skills (<i>Recognize each joystick and demonstrate its correct directional operation</i>) • Communication skills Attitude, safety and environmental concern • Team oriented communication • Safety first Mindset • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring to raise the mast in low-clearance areas to avoid strike beams, lights, or pipes • Ensuring pedestrian awareness • Ensure proper ventilation • Ensuring to follow OHS rules and regulation D3.02 Applying knot and hitches Knowledge • Types of rope and its characteristics • Characteristics of Knots, Hitches and its application • Rigging triangle and its importance • Knot efficiency		

	Skills • Situational Awareness and Decision-Making skills • Observation skills • Communication skills Attitude, safety and environmental concern • Team oriented communication • Safety first mindset • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring to inspect ropes and slings to avoid workplace pollution and environmental degradation • Ensuring to follow OHS rules and regulation D3.03 Performing load securing and visibility Knowledge • Principle of fork adjustment • Types of restraint • Stacking and pallet integrity • Principle of line of sight • Use of spotters and signals • Impact of lighting and weather conditions Skills • Interpreting load chart • Observation skills • Communication skills • Numeracy skills Attitude, safety and environmental concern • Safety-Consciousness • Being vigilant and patient • Willingness to Communicate • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring the load is stable and within rated capacity to prevent tip-over, injury, or equipment damage • Ensuring to maintain clear visibility and use signals or spotters to avoid collisions with pedestrians, objects, or other vehicles • Ensure to follow environmental rules and regulations • Ensuring to follow OHS rules and regulation D3.04 Performing load positioning and fork handling Knowledge • Importance of performing load positioning and fork handling • Housekeeping (5S principle) Skills • Interpreting load chart • Observation skills • Communication skills Attitude, safety and environmental concern • Being vigilant and patient
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	• Having work ethics and integrity • Being a team player • Proper handling of tools, materials and equipment • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensure to engage the parking brake fully • Ensuring to follow OHS rules and regulation D3.05 Performing terrain and gradient adaptation <i>Knowledge</i> • Incline limits and safe operating angles • Effects of slope on traction and tipping • Dynamic vs. static load forces • Surface types and grip • Ground clearance <i>Skills</i> • Operational Skill (<i>Throttle and brake modulation, Gear selection proficiency, Fork positioning control</i>) • Communication skills • Situational Awareness and Decision-Making skills • Observation skills <i>Attitude, safety and environmental concern</i> • Team-Oriented Communication • Safety-First Mindset • Makes informed decisions about when and how to proceed on challenging surfaces or inclines • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring adequate surface assessment or turning on inclines to avoid loss of control and serious injury • Ensuring to follow OHS rules and regulation D3.06 Performing load transportation <i>Knowledge</i> • Load weights and its effect on load transportation • Purpose of driving in reverse mode with poor visibility load • Importance of spotter and communication • Effect of sudden braking and sharp turning <i>Skills</i> • Maneuvering skills • Observation skills • Communication skills • Analytical skills <i>Attitude, safety and environmental concern</i> • Effective time management • Being vigilant and patient • Having work ethics and integrity • Being team player • Proper handling of tools, materials and equipment
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	• Having sense of ownership and accountability • Ensure load stability and visibility • Ensure to follow load transportation principles • Ensuring appropriate use of PPE • Ensuring to follow OHS • Ensuring to maintain the speed of forklift below 15 km/hr D3.07 Performing load stacking and unstacking Knowledge • Stability triangle and its purpose • Load center and its importance • Weight distribution: Effects of uneven or off-center loads • Stacking patterns: Safe stacking height, interlocking, and alignment for stability • Common hazards and preventive strategies Skills • Operational skills (<i>steering, lifting, tilting, reversing</i>) • Communication skills • Situational Awareness and Decision-Making skills (<i>Accurate judgment of distances, heights, and clearances</i>) • Observation skills Attitude, safety and environmental concern • Team-Oriented Communication • Safety-First Mindset • Maintains full attention to spatial alignment, load stability and clearance • Having sense of ownership and accountability • Ensuring safe maneuvering during forklift operation • Ensuring to adheres to all safety protocols (speed limits, horn use, visibility) • Ensuring appropriate use of PPE • Ensuring to follow OHS rules and regulations D3.08 Mounting forklift attachments Knowledge • Importance of using attachment • Types of attachment and its application • Guidelines for changing the attachments • Types of hoses & couplings and its application Skills • Operational skills • Communication skills • Observation skills Attitude, safety and environmental concern • Being vigilant and patient • Having work ethics and integrity • Proper handling of tools, materials and equipment • Having sense of ownership and accountability • Ensure to engage the parking brake fully • Ensuring appropriate use of PPE
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	Ensuring to follow OHS rules and regulations
Learning Conditions	Learning Materials - Competency Based Learning Materials (CBLM)/Reference materials - Hand-outs - Audio Visuals - Reference books - Manuals Learning facilities and infrastructure - Classroom with adequate facilities - Information Technology (IT) lab - Library - Workshop Materials - Pen & paper, fuel, hydraulic fluid, load (solid/liquid), straps, shrink wrap, load binder, load chart, MP grease and O-ring Tools - Pallet, dynamic rope, static rope, cotton rope, chain, hand tool set, tray and side shift attachment Equipment - Forklift and walkie talkie set PPE - Safety gloves, safety helmet, safety boots, safety goggles, safety mask, ear muffs/ear plug, reflective jacket and work dress
Instructional Methodologies	The trainer shall use <i>inter alia</i>, the following instructional methods: - Lecture - Interactive discussion - Demonstration - Industrial visit/training - Guided practice - Group practice with project-based learning - Individual practice with problem-based learning - Universal Design of Learning (UDL)
Method of Assessment	The trainer shall use <i>inter alia</i>, the following assessment methods: - Practical observation - Oral/viva-voce - Written test - Assignment

Module Title	Carrying out productive and post operation of forklift		
Module Code	8344- L2-M4		
Learning Outcome 4	Perform post operation		
Duration	Theory:2 hours	Practical:9 hours	Total: 11 hours
Assessment Criteria	• Parking is performed as per the job requirement following standard procedure • Visual damage inspection is performed as per the job requirement following standard procedure • Log book is maintained as per the job requirement following standard procedure • Forklift maintenance history sheet/card is maintained as per the job requirement following standard procedure		
Content	D4.01 Performing parking Knowledge • Methods of parking Skills • Maneuvering skills • Observation skills • Communication skills • Analytical skills • Decision making skills Attitude, safety and environmental concern • Being vigilant and patient • Having work ethics and integrity • Proper handling of machine • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring to turn off all the lights while parking • Ensuring to follow OHS rules and regulation D4.02 Performing visual damage inspection Knowledge • Types of visual damages Skills • Observation skills • Communication skills • Analytical skills Attitude, safety and environmental concern • Being vigilant and patient • Having work ethics and integrity • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring to follow OHS rules and regulation D4.03 Maintaining log book Knowledge • Purpose of Log Book • Format of log book		

	<i>Skills</i> ● Record keeping skills ● Observation skills ● Communication skills <i>Attitude, safety and environmental concern</i> ● Being efficient in using resources ● Having work ethics and integrity ● Having sense of ownership and accountability ● Ensuring appropriate use of PPE ● Ensuring to follow OHS rules and regulation D4.04 Recording maintenance history sheet/card <i>Knowledge</i> ● Introduction to forklift maintenance history sheet/card ● Purpose of maintaining forklift maintenance history sheet/card ● Key data to be recorded ● Difference between log book and forklift maintenance history sheet/card <i>Skills</i> ● Record keeping skills ● Observation skills ● Communication skills ● Analytical skills <i>Attitude, safety and environmental concern</i> ● Being vigilant and patient ● Having work ethics and integrity ● Having sense of ownership and accountability ● Ensuring appropriate use of PPE ● Ensuring to maintain clear record ● Ensuring to follow OHS rules and regulation
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Learning Conditions	Learning Materials • Competency Based Learning Materials (CBLM)/Reference materials • Hand-outs • Audio Visuals • Reference books • Manuals Learning facilities and infrastructure • Classroom with adequate facilities • Information Technology (IT) lab • Library • Workshop Materials • Pen & paper, cleaning rag, inspection checklist, forklift history sheet/card and log book Equipment • Forklift PPE • Safety gloves, safety helmet, safety boots, safety goggles, safety mask, ear muffs/ear plug, reflective jacket/ and work dress
Instructional Methodologies	The trainer shall use <i>inter alia</i>, the following instructional methods: • Lecture • Interactive discussion • Demonstration • Industrial visit/training • Guided practice • Group practice with project-based learning • Individual practice with problem-based learning • Universal Design of Learning (UDL)
Method of Assessment	The trainer shall use <i>inter alia</i>, the following assessment methods: • Practical observation • Oral/viva-voice • Written test • Assignment

Module Title	Carrying out productive and post operation of forklift		
Module Code	8344-L2-M4		
Learning Outcome 5	Transport forklift		
Duration	Theory:2 hours	Practical:15.5 hours	Total: 17.5 hours
Assessment Criteria	- Travel document is prepared as per the job requirement following standard procedure - Loading ramp is prepared as per the job requirement following standard procedure - Forklift is loaded as per the job requirement following standard procedure - Forklift is unloaded as per the job requirement following standard procedure		
Content	D5.01 Preparing travel documents Knowledge - List of documents - Purpose of documents - Importance of route information for forklift transport Skills - Observation skills - Communication skills - Analytical skills - Planning skills Attitude, safety and environmental concern - Effective time management - Being vigilant and patient - Having work ethics and integrity - Being a team player - Proper handling of tools, materials and equipment - Having sense of ownership and accountability - Ensuring appropriate use of PPE - Ensuring timely renewal of document - Ensuring to follow environmental rules and regulations - Ensuring to follow OHS rules and regulation D5.02 Preparing loading ramp Knowledge - Purpose of loading ramp Skills - Observation skills - Communication skills - Analytical skills - Planning skills Attitude, safety and environmental concern - Effective time management - Being efficient in using resources - Having work ethics and integrity - Proper handling of tools, materials and equipment - Having sense of ownership and accountability - Ensuring appropriate use of PPE		

	• Ensuring proper disposal of waste • Ensure to follow environmental rules and regulations • Ensuring to follow OHS rules and regulation • Ensuring to prepare loading ramp as per the height of loading truck D5.03 Loading forklift <i>Knowledge</i> • Importance of checking forklift balance • Pre-loading inspection procedures • Safety precautions while loading forklift • Methods of loading forklift <i>Skills</i> • Operational skills • Observation skills • Communication skills • Problem solving skills <i>Attitude, safety and environmental concern</i> • Safety conscious and alert • Being vigilant and patient • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensuring to follow OHS rules and regulation D5.04 Unloading forklift <i>Knowledge</i> • Methods of unloading forklift • Safety precaution for unloading forklift <i>Skills</i> • Operational skills • Observation skills • Communication skills • Analytical skills <i>Attitude, safety and environmental concern</i> • Effective time management • Being efficient in using resources • Being vigilant and patient • Having work ethics and integrity • Being a team player • Proper handling of tools, materials and equipment • Having sense of ownership and accountability • Ensuring appropriate use of PPE • Ensure to perform pre-operation checks to avoid accident while unloading in reverse position • Ensuring a clear line of sight, being aware of the rear end swing • Ensuring to follow OHS rules and regulation
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Learning Conditions	Learning Materials • Competency Based Learning Materials (CBLM)/Reference material • Hand-outs • Audio Visuals • Reference books • Manuals Learning facilities and infrastructure • Classroom with adequate facilities • Information Technology (IT) lab • Library • Workshop Materials • Pen & paper, Markin clothes, RC book, insurance certificate, movement order, fuel and file Tools • Mechanic hand tool set, wedge, chain and chain puller Equipment • Forklift and loading truck PPE • Safety gloves, safety helmet, safety boots, safety goggles, safety mask, ear muffs/ear plug, reflective jacket/belt and work dress
Instructional Methodologies	The trainer shall use <i>inter alia</i> , the following instructional methods: • Lecture • Interactive discussion • Demonstration • Industrial visit/training • Guided practice • Group practice with project-based learning • Individual practice with problem-based learning • Universal Design of Learning (UDL)
Method of Assessment	The trainer shall use <i>inter alia</i> , the following assessment methods: • Practical observation • Oral/viva-voce • Written test • Assignment

ON-THE-JOB TRAINING (OJT)

COURSE	Forklift Operation
DESCRIPTION	The trainee will be attached with relevant industries for OJT program. During the OJT, the trainees will be exposed to real life working environment where they are expected to develop technical skills and learn positive working attitudes including life skills.
OBJECTIVE	After completion of OJT, learners will be able to • Develop critical thinking, creativity, collaboration and communication skills • Develop information, media and technology literacy • Adopt flexible and productive working attitude • Develop leadership skills • Apply initiatives • Develop social skills • Adopt OHS practices • Operate forklift
DURATION	140 Hours
CONDITIONS FOR OPERATION OF OJT	• The institute shall select relevant and reliable industry for OJT attachment • The trainee shall be attached in forklift operation and safety related activity for at least 70% of the total OJT duration • The industry shall maintain daily attendance of the trainee • The trainee shall maintain OJT logbook as per the OJT guideline • The trainee is required to follow company's rule • The collaborating industry shall provide working facilities • The industry shall assess performance of trainees • The industry shall provide feedback in the logbook
EVALUATION	The industry shall evaluate the trainees on the trainee's performance through observation and use of logbook. The evaluation shall be done on the following aspects of trainees: ➤ Core skills ➤ Critical thinking ➤ Creativity ➤ Collaboration ➤ Communication ➤ Information literacy ➤ Media literacy ➤ Conversant to up-to-date technology ➤ Flexibility ➤ Leadership ➤ Initiative ➤ Productivity ➤ Social skills
REPORT	The trainee shall submit comprehensive report on OJT to the Institute

What is Competency-Based Curriculum (CBC)

- ✓ A competency-based curriculum is a framework or guide for the subsequent detailed development of competencies, associated methodologies, training and assessment resources.
- ✓ The CBC specifies the outcomes which are consistent with the requirements of the workplace as agreed through the industry or community consultations.
- ✓ CBC can be developed immediately when competency standards exist.
- ✓ When competency standards do not exist, curriculum developers need to clearly define the learning outcomes to be attained. The standard of performance required must be appropriate to industry and occupational needs through the industry/enterprise or specified client group consultations.

The CBC materials are available in both printed and electronic copies.

ANNEXES

Annex I: Time Distribution

Forklift Operation BQF Certificate 2					
Module Title	Learning outcomes	Tasks	Theory (Hours)	Practical (Hours)	Total (hours)
A: Practice worksite Health and Safety	A1: Apply Safety measure and regulations	A1.00 Introductory knowledge	1	0	1
		A1.01 Use PPE	0.5	1	1.5
		A1.02 Assess work site	0.5	1	1.5
		A1.03 Use fire extinguisher	1	2	3
		A1.04 Conduct toolbox talk	1	1	2
		A1.05 Manage emergency situations	1	1	2
	Sub Total Duration		5	6	11
	A2: Apply first aid	A2.01 Perform CPR	0.5	2	2.5
		A2.02 Apply bandage	0.5	1.5	2
		A2.03 Prepare stretcher	0.5	1	1.5
	Sub Total Duration		1.5	4.5	6
	A3: Apply communication skill	A3.01 Apply audible signal	0.5	2	2.5
		A3.02 Apply hand signal	0.5	1.5	2
		A3.03 Follow traffic signs and symbols	1.5	1	2.5
		A3.04 Follow safety signs	0.5	1	1.5
	Sub Total Duration		3	5.5	8.5
	Total Duration (A)		9.5	16	25.5
B. Carry out maintenance of forklift	B1: Maintain tools and equipment	B1.01 Check hand tools	2	1.5	3.5
		B1.02 Check grease gun	0.5	1.5	2
		B1.03 Overhaul grease gun	0.5	3.5	4
	Sub Total Duration		3	6.5	9.5
	B2: Perform preventive maintenance	B2.01 Change fuse	0.5	1	1.5
		B2.02 Service primary battery	2	4	6
		B2.03 Service secondary battery	1	5	6
		B2.04 Clean air filter	0.5	2	2.5
		B2.05 Change tyre	2	4	6
		B2.06 Perform greasing	0.5	3	3.5
		B2.07 Perform jumpstart	1	2	3
	Sub Total Duration		7.5	21	28.5
	B3: Perform periodic maintenance	B3.01 Change engine oil	2	4	6
		B3.02 Change transmission oil	1	5	6
		B3.03 Change hydraulic oil	1.5	6	7.5
		B3.04 Change coolant	1.5	2	3.5
		B3.05 Change fuel filter	1	1	2
		B3.06 Change fan belt	1	3	4
	Sub Total Duration		8	21	29

	Total Duration (B)		18.5	48.5	67
C: Carry out pre and post operation check	C1: Perform exterior check	C1.01 Perform walkaround inspection	0.5	1	1.5
		C1.02 Check tyre pressure and condition	1	1.5	2.5
		C1.03 Check chains and hoses	2	2	4
		C1.04 Inspect cables and connectors	0.5	2	2.5
		C1.05 Inspect lifting mechanism (mast, carriage, and forks)	1	2	3
		C1.06 Check lighting system	0.5	3	3.5
	Sub Total Duration		5.5	11.5	17
	C2: Perform under hood check	C2.01 Check engine oil	0.5	1	1.5
		C2.02 Check coolant	0.5	1	1.5
		C2.03 Check hydraulic fluid	0.5	1	1.5
		C2.04 Check brake oil	1	1	2
		C2.05 Check fan belt	1	1	2
		C2.06 Check battery electrolyte	1	2	3
	Sub Total Duration		4.5	7	11.5
	C3: Perform interior check	C3.01 Check document	0.5	1	1.5
		C3.02 Read monitor panel	1	3	4
		C3.03 Conduct operator's ergonomic setup	2	2	4
	Sub Total Duration		3.5	6	9.5
	Total Duration (C)		13.5	24.5	38
D: Carryout productive and post operation of forlift	D1: Perform hoist calculation	D1.01 Interpret load chart	2	2	4
		D1.02 Determine forklift capacity	2	2	4
		D1.03 Perform rigging calculation	1.5	2	3.5
	Sub Total Duration		5.5	6	11.5
	D2: Perform forklift operation	D2.01 Evaluate risk and hazard	0.5	2	2.5
		D2.02 Perform final inspection	0.5	1	1.5
		D2.03 Perform starting and hydraulic warm up	2	4	6
		D2.04 Perform moving off	2	6	8
		D2.05 Perform stopping	2	6	8
		D2.06 Perform Maneuvring	2	30	32
		D2.07 Perform reversing	2	30	32
		D2.08 Perform Fork and Mast Control	3	4	7
		D2.09 Perform 3/5 point turn	2	12	14
	Sub Total Duration		16	95	111
	D3: Perform load handling and transportation	D3.01 Operate Mast and Tilt Control	1	5	6
		D3.02 Apply knot and hitches	1	3	4
		D3.03 Perform Load Securing and Visibility	1.5	6	7.5

		D3.04 Perform Load Positioning and Fork handling	1	6	7
		D3.05 Perform Terrain and Gradient Adaptation	1	12	13
		D3.06 Perform load transportation	1.5	12	13.5
		D3.07 Perform Load Stacking and Unstacking	1.5	30	31.5
		D3.08 Mount forklift Attachments	1	6	7
	Sub Total Duration		9.5	80	89.5
	D4: Perform post operation	D4.01 Perform Parking	0.5	6	6.5
		D4.02 Perform Visual Damage Inspection	0.5	1	1.5
		D4.03 Maintain log book	0.5	1	1.5
		D4.04 Record/Update maintenance history book	0.5	1	1.5
	Sub Total Duration		2	9	11
	D5: Transport forklift	D4.01 Prepare travel documents	0.5	0.5	1
		D4.02 Prepare loading ramp	0.5	3	3.5
		D4.03 Load Forklift	0.5	6	6.5
		D4.04 Unload Forklift	0.5	6	6.5
	Sub Total Duration		2	15.5	17.5
	Total Duration (D)		35	205.5	240.5
	Grand Total Duration (Hours)		76.5	294.5	371

Annex II: Module Recognition

This is to verify that

Mr/Ms.....

has completed module on

.....

Covering following learning outcomes:

1.
2.
3.

Instructor:

Head of the Department:

.....

.....

Signature:

Signature:

Date: / / (dd/mm/yyyy)
.....(dd/mm/yyyy)

Date: / /

Head of the Institute:

Trained Assessor (Institute)/Exam OC:

.....

.....

Signature:

Signature:

Date: / ... / (dd/mm/yyyy)

Date: / /(dd/mm/yyyy)

Annex III : Lesson Plan
Lesson Plan

Course Title:		NC Level:
Module Code:		Duration:
Module Title:		
Learning Outcome:		
Skill/Task/Topic:		
Terminal Performance Objective:		
<i>(Note: Write narrative statement extracted from TPO of Task Sheet)</i>		
Enabling Objectives (Related knowledge):		
<i>By the end of the lesson learners will be able to:</i>		
i) ii) iii)		
What (Content/Activity)	Who (T/L)	How (Methods/ Media) Duration (Min.) Questions
Introduction: Main body Conclusion		
Projects/Problems:		

Instructional Resources Plan				
Skills/Task/Topic:				
No. of Trainees:				
Sl. No.:	Instructional materials/resources	Specifications	Qty.	Remarks
Prepared by :		Signature	Date:	
Revised by:		Signature	Date:	
Approved by:		Signature	Date:	

Task sheet

TS-1/4: Practical Plan

TS-1/4: Practical Plan			
Course Title:			N C Level:
Module code:			Duration:
Module Title			
Learning outcome			
Skills/Task Title:			Task no:
Terminal Performance Objective: <i>Given:</i> <i>Cue:</i> <i>Who:</i> <i>What:</i> <i>Within:</i> <i>How well:</i> - - -			
Enabling Objectives (Related Skills): <i>By the end of a lesson, the learners will be able to:</i> i) ii) iii) iv)			
Activities	Who (T/L)	How (methods/ media)	Duration
Project/Assignment: 			

TS-2/4: Tool and Equipment required:						
Sl no.	Particulars	Specifications	Qty.	Remarks		
Training Materials required:						
Sl no.	Particulars	Specifications	Qty.	Rate	Amount	Remarks
TS-3/4: Performance Guide						
Skill/Task:					Date:	
Directions: Use the following performances criteria to rate the learner. Check YES/NO to indicate whether the leaner performed each step as indicated or not?						
Sl. No:	Steps				Yes	No
Note: Critical steps: All * marked steps should be carried out very carefully. For a quality performance guide, all items should be checked "YES"						

TS-4/4: Instruction and Drawing	
General Instructions for Trainees i) ii)	

FORKLIFT OPERATION BQF C2

iii) iv)		
Drawing (if any)		
Safety Precaution		
i) ii) iii)		
Prepared by :	Signature	Date:
Revised By:	Signature	Date:
Approved by :	Signature	Date:

Annex IV: Course Plan
Institutes letter head and Logo

(Trade)YEAR PLAN- _____ Semester_____ (Year)

Trade: Certificate Level:			Schedule																																								Total Hours																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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Prepared by:

Verified & Approved by:

Date:

Monthly/Weekly Plan

Month: Trade: Trainer:

Week	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Week 01							
Week 02							
Week 03							
Week 04							
Week 05							

Developed by: Approved by:

Date



For more information please contact:

Technical Trainers Training and Resource Center (TTTRC), DWPSD

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