



Aerial Work Platform Operator

Options: Telescopic Handler

QP Code: IES/Q0127

Version: 2.0

NSQF Level: 4

Infrastructure Equipment Skill Council || Avik Royale - First Floor (Next of Vijaya Bank), No.6, 50 feet
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Qualification Pack

Contents

IES/Q0127: Aerial Work Platform Operator	3
<i>Brief Job Description</i>	3
Applicable National Occupational Standards (NOS)	3
<i>Compulsory NOS</i>	3
<i>Option: Telescopic Handler</i>	3
<i>Qualification Pack (QP) Parameters</i>	3
IES/N0179: Carry out pre-operation checks on Aerial Work Platform	5
IES/N0180: Carry out aerial work platform equipment operations	9
IES/N0181: Carry out maintenance and troubleshooting of the aerial work platform	14
IES/N7601: Comply with worksite health and safety guidelines	19
IES/N0182: Operate and maintain telescopic handler equipment	23
Assessment Guidelines and Weightage	28
<i>Assessment Guidelines</i>	28
<i>Assessment Weightage</i>	29
Acronyms	31
Glossary	32

Qualification Pack

IES/Q0127: Aerial Work Platform Operator

Brief Job Description

Aerial work platform operator is responsible to raise workmen/material to an elevated work position supported by scissors, masts and booms to and from places in a safe and secured manner depending on the requirement

Personal Attributes

The job requires an operator to be physically agile, strong and should have good eye sight and not be color blind, fit to work at heights. He should maintain constant alertness to the multiple concurrent activities during workmen/material handling operations.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. [IES/N0179: Carry out pre-operation checks on Aerial Work Platform](#)
2. [IES/N0180: Carry out aerial work platform equipment operations](#)
3. [IES/N0181: Carry out maintenance and troubleshooting of the aerial work platform](#)
4. [IES/N7601: Comply with worksite health and safety guidelines](#)

Options(Not mandatory):

Option : Telescopic Handler

A telescopic handler operator is responsible for moving loads to and from places in a safe and secured manner using different types of extensions depending on the requirement

1. [IES/N0182: Operate and maintain telescopic handler equipment](#)

Qualification Pack (QP) Parameters

Sector	Infrastructure Equipment
Sub-Sector	Equipment Operations
Occupation	Operator

Qualification Pack

Country	India
NSQF Level	4
Aligned to NCO/ISCO/ISIC Code	NCO-2015/ 8342.2101 Mobile Equipment Operator
Minimum Educational Qualification & Experience	8th Class (OR 8th Class Pass + ITI (2years) + 2 years of relevant experience OR 10th Class Pass with 2 years of relevant experience OR 10th Class Pass + ITI (1year after Class 10th) with 1 year of relevant experience OR 10th Class Pass + ITI (2years after Class 10th) OR 10th Class Pass and pursuing continuous regular schooling OR 12th Class + 6 months of relevant experience OR 3 Year Diploma (After 10th) OR Previous relevant Qualification of NSQF Level 3 with 2 years of relevant experience) with 2 Years of experience
Minimum Level of Education for Training in School	
Pre-Requisite License or Training	Light Commercial Vehicle Driving License (LCV) is preferred
Minimum Job Entry Age	18 Years
Last Reviewed On	26/05/2022
Next Review Date	26/05/2025
NSQC Approval Date	26/05/2022
Version	2.0
Reference code on NQR	2022/IS/IESC/05908
NQR Version	1.0

Qualification Pack

IES/N0179: Carry out pre-operation checks on Aerial Work Platform

Description

This unit provides insight into activities that are required for conducting prechecks on the aerial work platform before starting the operations.

Scope

The scope covers the following :

- This unit/task covers the following:
- Pre- operation checks
- Reporting and documentation

Elements and Performance Criteria

To be competent, the user/individual on the job must be able to:

- PC1.** inspect the tyre for damage and bulges
- PC2.** check the wheels for loose lug bolts, twisted rims and fractures
- PC3.** examine the equipment for cracks, misalignment, welds, excessive mast movement and broken locking pins
- PC4.** check the hydraulic system reservoir, engine crankcase, engine coolant, transmission, air filter and axles are filled to the required operating fluid levels
- PC5.** inspect for defects such as cracked welds, fuel leaks, hydraulic leaks, damaged control cables or wire harness
- PC6.** examine whether the work platform and extension slides are clean, dry and debris-free
- PC7.** check the carrying basket for any physical damages and all the fastenings and linkages for any damages
- PC8.** check to see that the lower operational controls of boom lift equipment effectively override the top controls
- PC9.** ensure that the emergency lowering features are operational
- PC10.** after the equipment has been inspected, fill out the details in the checklist report
- PC11.** report any defect or abnormality in the equipment to the person responsible for the maintenance of the equipment

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the organization operations, maintenance and safety related guidelines
- KU2.** the company's operating standards and processes, as well as the timeline for resolving the complaint/problem
- KU3.** reporting structure of the company
- KU4.** location of specialized tools and the equipment

Qualification Pack

- KU5.** location and procedure for waste storage and disposal
- KU6.** overview of types of boom lift and scissors lift equipment and the general applications of that equipment
- KU7.** technical characteristics, features and performance of various types of aerial work platform equipment
- KU8.** identify the components of a boom lift, scissors lift and how they work
- KU9.** engine and subsystem fundamentals; fuel, lubrication and cooling systems
- KU10.** basics of transmission, auto-electrical functioning and repairs
- KU11.** different types of hydraulic mechanisms, principles of friction
- KU12.** the fundamentals of electrical systems, including the control panel
- KU13.** controls, levers and switches in order to operate the aerial work platform
- KU14.** procedure for topping up the machine's fuel, lubricating oil and coolant
- KU15.** procedure of topping up fuel, lube oil and coolant in the machine
- KU16.** manufacturer's specifications for tools and supplies

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** record information/observations on activities/incidents in accordance with the established rules
- GS2.** read and understand basic signs, symbols, graphs, charts and decals on equipment and at the job site
- GS3.** read and understand the applicable relevant aspects of the equipment operation & maintenance manuals
- GS4.** when communicating with coworkers and supervisors, utilise the right technical terms/phrases
- GS5.** explain/instruct other team members in a straightforward and simple way
- GS6.** pay close attention to and understand the questions/comments offered by other team members
- GS7.** decide when to escalate and seek assistance if the problem is beyond the scope
- GS8.** prioritize and schedule maintenance activity on equipment to support operational needs
- GS9.** design and organise the work schedule in collaboration with the rest of the team and the supervisor
- GS10.** execute the tasks efficiently within the time frame allotted and prescribed quality norms; with minimal supervision
- GS11.** deliver first-class service to ensure client satisfaction
- GS12.** evaluate the possible solutions and initiate appropriate remedial measures and actions
- GS13.** apply common sense and reasoning skills to identify the cause of delays and difficulties in execution
- GS14.** apply knowledge and judgement acquired through experience and awareness to execute tasks efficiently

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
	10	25	-	-
PC1. inspect the tyre for damage and bulges	1	2	-	-
PC2. check the wheels for loose lug bolts, twisted rims and fractures	1	2	-	-
PC3. examine the equipment for cracks, misalignment, welds, excessive mast movement and broken locking pins	1	2	-	-
PC4. check the hydraulic system reservoir, engine crankcase, engine coolant, transmission, air filter and axles are filled to the required operating fluid levels	1	3	-	-
PC5. inspect for defects such as cracked welds, fuel leaks, hydraulic leaks, damaged control cables or wire harness	1	3	-	-
PC6. examine whether the work platform and extension slides are clean, dry and debris-free	1	2	-	-
PC7. check the carrying basket for any physical damages and all the fastenings and linkages for any damages	1	2	-	-
PC8. check to see that the lower operational controls of boom lift equipment effectively override the top controls	1	2	-	-
PC9. ensure that the emergency lowering features are operational	0.5	3	-	-
PC10. after the equipment has been inspected, fill out the details in the checklist report	1	2	-	-
PC11. report any defect or abnormality in the equipment to the person responsible for the maintenance of the equipment	0.5	2	-	-
NOS Total	10	25	-	-

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	IES/N0179
NOS Name	Carry out pre-operation checks on Aerial Work Platform
Sector	Infrastructure Equipment
Sub-Sector	Equipment Operations
Occupation	Operator
NSQF Level	4
Credits	TBD
Version	2.0
Last Reviewed Date	26/05/2022
Next Review Date	26/05/2025
NSQC Clearance Date	26/05/2022

Qualification Pack

IES/N0180: Carry out aerial work platform equipment operations

Description

This unit provides insight into activities that are required for performing the aerial work platform operations

Scope

The scope covers the following :

- This unit/task covers the following:
- Starting up the equipment
- Equipment Operations
- Shutdown Procedures
- Reporting and documentation

Elements and Performance Criteria

To be competent, the user/individual on the job must be able to:

- PC1.** throughout the lift, inspect the ground for enough strength to sustain the weight of both the machine and the load/workmen
- PC2.** set outriggers on pads or on a level, solid surface of boom lift equipment
- PC3.** ensure that the road side gradient is not more than 15 degree to avoid boom lift toppling
- PC4.** lower the platform using controls to allow the workmen enter into the boom or scissor lift
- PC5.** extend the boom, lift slowly and move the boom lift or scissor lift to the work area
- PC6.** determine the operating range based on the load capacities for the equipment
- PC7.** use the capacity chart to determine safe boom extension range
- PC8.** place the booms and lift in stowed position, when finished with the machine
- PC9.** keep the transmission in neutral and wait for the engine to slow down to idle speed
- PC10.** park the machine on a level surface
- PC11.** to prevent unauthorised operation, verify that the engine is switched off and the key is removed
- PC12.** communicate problems accurately to others, such as maintenance personnel
- PC13.** concerns should be documented and communicated to relevant individuals, such as a supervisor or a mechanic

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the organization operations, maintenance and safety related guidelines
- KU2.** the company's operating standards and processes, as well as the timeline for resolving the complaint/problem
- KU3.** reporting structure of the company

Qualification Pack

- KU4.** location of specialized tools and the equipment
- KU5.** location and procedure for waste storage and disposal
- KU6.** contact person/area in case of emergency
- KU7.** technical specifications, features and performance of different types of boom and scissors lifts
- KU8.** load Chart reading and balancing of weight
- KU9.** ground and supporting conditions, for example, are factors that impact equipment stability
- KU10.** motion, balance, and stability concepts such as centre of gravity, horizontal and vertical stability, speed, centrifugal force, and acceleration
- KU11.** controls, levers and switches in order to operate the aerial work platform
- KU12.** actual and potential hazards, such as overhead utilities and guide wires, other equipment, personnel and vehicular traffic
- KU13.** impact of wind speed, storms and other weather conditions on equipment
- KU14.** automatic limit switches, overload limit devices, and fire extinguishers are examples of safety controls and equipment
- KU15.** safety measures to be followed at time of emergencies to avoid damage
- KU16.** staff positions on-site, such as supervisor, signalmen and others

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** record information/observations on activities/incidents in accordance with the established rules
- GS2.** read and understand basic signs, symbols, graphs, charts and decals on equipment and at the job site
- GS3.** read and understand the applicable relevant aspects of the equipment operation & maintenance manuals
- GS4.** when communicating with coworkers and supervisors, utilise the right technical terms/phrases
- GS5.** explain / instruct other team members in a straightforward and simple way
- GS6.** pay close attention to and understand the questions/comments offered by other team members
- GS7.** decide when to escalate and seek assistance if the problem is beyond the scope
- GS8.** prioritize and schedule maintenance activity on equipment to support operational needs
- GS9.** design and organise the work schedule in collaboration with the rest of the team and the supervisor
- GS10.** execute the tasks efficiently within the time frame allotted and prescribed quality norms; with minimal supervision
- GS11.** deliver first-class service to ensure client satisfaction
- GS12.** evaluate the possible solutions and initiate appropriate remedial measures and actions
- GS13.** apply common sense and reasoning skills to identify the cause of delays and difficulties in execution



Qualification Pack

GS14. apply knowledge and judgement acquired through experience and awareness to execute tasks efficiently

Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
	10	20	-	-
PC1. throughout the lift, inspect the ground for enough strength to sustain the weight of both the machine and the load/workmen	1	2	-	-
PC2. set outriggers on pads or on a level, solid surface of boom lift equipment	1	2	-	-
PC3. ensure that the road side gradient is not more than 15 degree to avoid boom lift toppling	-	-	-	-
PC4. lower the platform using controls to allow the workmen enter into the boom or scissor lift	1	2	-	-
PC5. extend the boom, lift slowly and move the boom lift or scissor lift to the work area	1	2	-	-
PC6. determine the operating range based on the load capacities for the equipment	1	2	-	-
PC7. use the capacity chart to determine safe boom extension range	1	2	-	-
PC8. place the booms and lift in stowed position, when finished with the machine	1	1	-	-
PC9. keep the transmission in neutral and wait for the engine to slow down to idle speed	-	2	-	-
PC10. park the machine on a level surface	-	2	-	-
PC11. to prevent unauthorised operation, verify that the engine is switched off and the key is removed	1	1	-	-
PC12. communicate problems accurately to others, such as maintenance personnel	1	1	-	-
PC13. concerns should be documented and communicated to relevant individuals, such as a supervisor or a mechanic	1	1	-	-
NOS Total	10	20	-	-

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	IES/N0180
NOS Name	Carry out aerial work platform equipment operations
Sector	Infrastructure Equipment
Sub-Sector	Equipment Operations
Occupation	Operator
NSQF Level	4
Credits	TBD
Version	2.0
Last Reviewed Date	26/05/2022
Next Review Date	26/05/2025
NSQF Clearance Date	26/05/2022

Qualification Pack

IES/N0181: Carry out maintenance and troubleshooting of the aerial work platform

Description

This unit provides Performance Criteria, Knowledge & Understanding and Skills & Ability for activities that are required for performing routine maintenance and troubleshooting of aerial work platform equipment.

Scope

The scope covers the following :

- This unit/task covers the following:
- Preventive maintenance
- Repair and troubleshooting
- Reporting and documentation

Elements and Performance Criteria

To be competent, the user/individual on the job must be able to:

- PC1.** determine the right service schedule by tracking machine operating hours
- PC2.** check if all the plates are attached to the vehicle
- PC3.** replenish lubricants and fluids as needed or as directed by the manufacturer
- PC4.** dispose of waste lubricating oils, anti freeze and hydraulic fluids in accordance with local rules, or transport them to a recycling facility
- PC5.** check battery levels and condition of the terminals and carry out minor adjustments if required
- PC6.** fill up the fuel tank to keep water from condensing in it
- PC7.** ensure that no engine repair is conducted while the engine is running or remains hot
- PC8.** ensure the main is turned off from panel completely before carrying out maintenance work on the equipment
- PC9.** ensure that appropriate tools are used while troubleshooting
- PC10.** report defects precisely to the supervisor if beyond scope of the role
- PC11.** dispose waste as per the guidelines of the site / organization
- PC12.** adhere to the reporting procedures established by the employer
- PC13.** complete all documents in accordance with the required standards on time
- PC14.** identify the issues and relevant repair procedures

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the organization operations, maintenance and safety related guidelines

Qualification Pack

- KU2.** the company's operating standards and processes, as well as the timeline for resolving the complaint/problem
- KU3.** reporting structure of the company
- KU4.** location of specialized tools and the equipment
- KU5.** location and process for storage and disposal of waste material
- KU6.** contact person/area in case of emergency
- KU7.** maintenance schedule of the equipment
- KU8.** engine and subsystem fundamentals; fuel, lubrication and cooling systems
- KU9.** basics of transmission, auto-electrical functioning and repairs
- KU10.** different types of hydraulic mechanisms and principle of friction
- KU11.** the fundamentals of electrical systems, including the control panel
- KU12.** controls, levers and switches in order to operate the aerial work platform
- KU13.** common defects and general causes of breakdown
- KU14.** procedures for spill kits and battery recharging

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** record information/observations on activities/incidents in accordance with the established rules
- GS2.** read and understand basic signs, symbols, graphs, charts and decals on equipment and at the job site
- GS3.**
 - read and understand the applicable relevant aspects of the equipment operation &
 - maintenance manuals
- GS4.** when communicating with coworkers and supervisors, utilise the right technical terms/phrases
- GS5.** explain / instruct other team members in a straightforward and simple way
- GS6.** pay close attention to and understand the questions / comments offered by other team members
- GS7.** decide when to escalate and seek assistance if the problem is beyond the scope
- GS8.** prioritize and schedule maintenance activity on equipment to support operational needs
- GS9.** design and organise the work schedule in collaboration with the rest of the team and the supervisor
- GS10.** execute the tasks efficiently within the time frame allotted and prescribed quality norms; with minimal supervision
- GS11.** deliver first-class service to ensure client satisfaction
- GS12.** evaluate the possible solutions and initiate appropriate remedial measures and actions
- GS13.** apply common sense and reasoning skills to identify the cause of delays and difficulties in execution
- GS14.** apply knowledge and judgement acquired through experience and awareness to execute tasks efficiently

Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
	5	15	-	-
PC1. determine the right service schedule by tracking machine operating hours	0.5	2	-	-
PC2. check if all the plates are attached to the vehicle	0.5	1	-	-
PC3. replenish lubricants and fluids as needed or as directed by the manufacturer	0.5	1.5	-	-
PC4. dispose of waste lubricating oils, anti freeze and hydraulic fluids in accordance with local rules, or transport them to a recycling facility	0.5	1.5	-	-
PC5. check battery levels and condition of the terminals and carry out minor adjustments if required	-	1	-	-
PC6. fill up the fuel tank to keep water from condensing in it	-	1	-	-
PC7. ensure that no engine repair is conducted while the engine is running or remains hot	0.5	1	-	-
PC8. ensure the main is turned off from panel completely before carrying out maintenance work on the equipment	-	1	-	-
PC9. ensure that appropriate tools are used while troubleshooting	-	1	-	-
PC10. report defects precisely to the supervisor if beyond scope of the role	0.5	1	-	-
PC11. dispose waste as per the guidelines of the site / organization	0.5	1	-	-
PC12. adhere to the reporting procedures established by the employer	0.5	1	-	-
PC13. complete all documents in accordance with the required standards on time	0.5	0.5	-	-

Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC14. identify the issues and relevant repair procedures	0.5	0.5	-	-
NOS Total	5	15	-	-

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	IES/N0181
NOS Name	Carry out maintenance and troubleshooting of the aerial work platform
Sector	Infrastructure Equipment
Sub-Sector	Equipment Operations
Occupation	Operator
NSQF Level	4
Credits	TBD
Version	2.0
Last Reviewed Date	26/05/2022
Next Review Date	26/05/2025
NSQC Clearance Date	26/05/2022

Qualification Pack

IES/N7601: Comply with worksite health and safety guidelines

Description

This unit is about adhering to health and safety requirements at the worksite during equipment operations.

Scope

The scope covers the following :

- Worksite health and safety

Elements and Performance Criteria

Worksite health and safety

To be competent, the user/individual on the job must be able to:

- PC1.** Comply with safety, health, security and environment related regulations/guidelines at the work site
- PC2.** use personal protective equipment (ppe) and other safety gear as applicable to the equipment and the worksite
- PC3.** Follow safety measures during operations to ensure that the health and safety of self or others (including members of the public) is not at risk
- PC4.** Carry out operations as per the manufacturer's and worksite related health and safety guidelines
- PC5.** Handle the transport, storage and disposal of hazardous materials and waste in compliance with worksite health, safety and environmental guidelines
- PC6.** operate various grades of fire extinguishers, as applicable
- PC7.** support in administering basic first aid and report to concerned team members, as required, in case of an accident
- PC8.** respond promptly and appropriately to an accident/ incident or emergency, within limits of your role and responsibility
- PC9.** record and report details related to operations, incidents or accidents, as applicable

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** health, safety, environmental (HSE) and security related policies/guidelines of the organization and the worksite and its importance
- KU2.** personnel responsible for health, safety and environment (HSE) related matters and their contact details
- KU3.** location of worksite storage, she team and safe assembly points
- KU4.** reporting and documentation procedures for HSE and security matters
- KU5.** manufacturers guidelines related to health and safety requirements

Qualification Pack

- KU6.** common types of health, safety, environment and security risks related to the worksite and operations
- KU7.** types, use and importance of personal protective equipment (PPE) and other safety gear
- KU8.** safe working practices to avoid common hazards and risks
- KU9.** guidelines for transport, storage and disposal of hazardous materials and waste
- KU10.** types of common hazards and risks at the worksite including fire, electrical, gas emergencies, accidents, incidents, structure collapse, machine breakdown
- KU11.** knowledge of safe lockdown/stop of machinery use in case of emergencies and incidents/accidents
- KU12.** types of fire extinguishers and their use
- KU13.** common injuries and appropriate basic first aid treatment e.g. electrical shock, bleeding, wounds, fractures, minor burns, eye injuries

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** document and report any health and safety related incidents/accidents
- GS2.** read and comprehend basic English to read manuals of operations
- GS3.** read all organizational and equipment related health and safety manuals and documents
- GS4.** read instructions, guidelines / procedures /rules related to the worksite and equipment operations
- GS5.** Give clear instructions to co-workers, subordinates and other personnel
- GS6.** Use correct technical terms while interacting with supervisor
- GS7.** Make an appropriate timely decision in responding to emergencies/accidents in line with organizational/worksite guidelines
- GS8.** Use correct PPE and other safety gear while at the worksite
- GS9.** Work with supervisors/ team mates to carry out work related tasks
- GS10.** Plan work according to the required schedule and location
- GS11.** Build and maintain positive and effective relationships with colleagues and customers
- GS12.** Seek appropriate assistance from other sources to resolve problems
- GS13.** Assess the intensity of the fire accident and operate fire extinguishers
- GS14.** Analyse, evaluate and apply the information gathered from observation, experience, reasoning, or communication to act efficiently

Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Worksite health and safety</i>	5	10	-	-
PC1. Comply with safety, health, security and environment related regulations/guidelines at the work site	0.5	1	-	-
PC2. use personal protective equipment (ppe) and other safety gear as applicable to the equipment and the worksite	0.5	1	-	-
PC3. Follow safety measures during operations to ensure that the health and safety of self or others (including members of the public) is not at risk	0.5	1	-	-
PC4. Carry out operations as per the manufacturer's and worksite related health and safety guidelines	0.5	1	-	-
PC5. Handle the transport, storage and disposal of hazardous materials and waste in compliance with worksite health, safety and environmental guidelines	1	1	-	-
PC6. operate various grades of fire extinguishers, as applicable	0.5	2	-	-
PC7. support in administering basic first aid and report to concerned team members, as required, in case of an accident	0.5	1	-	-
PC8. respond promptly and appropriately to an accident/ incident or emergency, within limits of your role and responsibility	0.5	1	-	-
PC9. record and report details related to operations, incidents or accidents, as applicable	0.5	1	-	-
NOS Total	5	10	-	-

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	IES/N7601
NOS Name	Comply with worksite health and safety guidelines
Sector	Infrastructure Equipment
Sub-Sector	Equipment Operations
Occupation	Operator
NSQF Level	4
Credits	TBD
Version	2.0
Last Reviewed Date	26/05/2022
Next Review Date	31/05/2025
NSQF Clearance Date	26/05/2022

Qualification Pack

IES/N0182: Operate and maintain telescopic handler equipment

Description

This unit provides Performance Criteria, Knowledge & Understanding and Skills & Ability for activities that are required for performing the telescopic handler operations, routine maintenance and troubleshooting of the equipment

Scope

The scope covers the following :

- This unit/task covers the following:
- Pre-operation checks
- Operations of telescopic handler
- Maintenance and troubleshooting of telescopic handler

Elements and Performance Criteria

To be competent, the user/individual on the job must be able to:

- PC1.** check seat belt for damage, replace belt if frayed or cut webbing, damaged buckles or loose mounting hardware
- PC2.** check the gauges, switches, joysticks, horns and controls for proper condition
- PC3.** check for frame level indicator and window glass for damages
- PC4.** check all the lighting systems for proper working condition
- PC5.** check the ground for adequate strength to support the weight of both the machine and the load throughout the lift
- PC6.** determine the operating range based on the load capacities for the equipment
- PC7.** ensure that the correct carriage and forks are being used before loading the material
- PC8.** adjust spacing of forks to engage the pallet or load at max width
- PC9.** position the telescopic handler to place or retrieve the load without moving or repositioning the machine
- PC10.** engage the load, rest it against the backrest and tilt it back slightly
- PC11.** drive the telescopic handler to the landing location
- PC12.** align forks of telescopic handler at the level at which the load is to be placed, then extend boom slowly until load is just above area where it is to be placed
- PC13.** until the load rests in position, lower the boom of the telescopic handler and the forks should be free to retract
- PC14.** bring the machine to the parking lot
- PC15.** allow the engine to idle speed and shift the transmission to neutral
- PC16.** park the machine on a level surface
- PC17.** make sure that the engine is off and remove the ignition key of the telescopic handler
- PC18.** by monitoring the machine working hours, plan the correct service schedule
- PC19.** check if all the plates are attached onto the vehicle

Qualification Pack

- PC20.** before doing maintenance work, main power should be switched off from the panel
- PC21.** top up lubricants and fluids as per schedule or running hours of the machine
- PC22.** follow reporting procedures as laid down by the employer
- PC23.** systematically complete the documentation in the approved standards
- PC24.** if beyond scope of role, report defects to the supervisor
- PC25.** as per the guidelines of the site / organisation, dispose the waste

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the maintenance, safety related guidelines and operations of the organisation
- KU2.** the operational standards & procedures followed in the company in timeframe in which the complaint/problem should be resolved
- KU3.** identification of components of a telescopic handler and its functioning
- KU4.** location of specialized tools and the equipment
- KU5.** location and process for storage and disposal of waste material
- KU6.** contact person/area in case of emergency
- KU7.** know the types of telescopic handlers and their application
- KU8.** features, technical specifications and performance of various types of telescopic handlers
- KU9.** basics of transmission, auto-electrical functioning and repairs
- KU10.** basics of engine and sub systems; fuel, lubrication and cooling systems
- KU11.** basics of transmission, auto-electrical functioning and repairs
- KU12.** different types of hydraulic mechanisms, and principles of friction
- KU13.** basics of electrical systems including control panel
- KU14.** controls, levers and switches in order to operate the telescopic handler
- KU15.** procedure of topping up fuel, lube oil and coolant in the machine
- KU16.** optimal working parameters- engine oil pressure, hydraulic oil pressure and temperatures
- KU17.** maintenance schedule of the equipment
- KU18.** common defects and general causes of breakdown
- KU19.** procedures for spill kits and battery recharging
- KU20.** manufacturer's specifications for tools and supplies

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** record information/observations on activities/incidents as per the prescribed norms
- GS2.** read and understand basic signs, symbols, graphs, charts and decals on equipment and at the job site
- GS3.** read and understand the applicable relevant aspects of the equipment operation & maintenance manuals

Qualification Pack

- GS4.** use correct technical terms/phrases while interacting with other coworkers & supervisor
- GS5.** explain/instruct other team members effectively in a clear and concise manner
- GS6.** listen attentively and understand the queries /comments raised by other team members
- GS7.** decide when to escalate and seek assistance if the problem is beyond the scope
- GS8.** prioritize and schedule maintenance activity on equipment to support operational needs
- GS9.** plan and organise the work schedule in coordination with other team members & supervisor
- GS10.** execute the tasks efficiently within the time frame allotted and prescribed quality norms; with minimal supervision
- GS11.** ensure quality service is delivered as committed to achieve high levels of customer satisfaction
- GS12.** evaluate the possible solutions and initiate appropriate remedial measures and actions
- GS13.** apply common sense and reasoning skills to identify the cause of delays and difficulties in execution
- GS14.** apply knowledge and judgement acquired through experience and awareness to execute tasks efficiently

Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
	15	35	-	-
PC1. check seat belt for damage, replace belt if frayed or cut webbing, damaged buckles or loose mounting hardware	0.5	1	-	-
PC2. check the gauges, switches, joysticks, horns and controls for proper condition	0.5	1	-	-
PC3. check for frame level indicator and window glass for damages	0.5	1	-	-
PC4. check all the lighting systems for proper working condition	0.5	1	-	-
PC5. check the ground for adequate strength to support the weight of both the machine and the load throughout the lift	0.5	1	-	-
PC6. determine the operating range based on the load capacities for the equipment	0.5	2	-	-
PC7. ensure that the correct carriage and forks are being used before loading the material	0.5	2	-	-
PC8. adjust spacing of forks to engage the pallet or load at max width	0.5	2	-	-
PC9. position the telescopic handler to place or retrieve the load without moving or repositioning the machine	0.5	2	-	-
PC10. engage the load, rest it against the backrest and tilt it back slightly	0.5	2	-	-
PC11. drive the telescopic handler to the landing location	0.5	2	-	-
PC12. align forks of telescopic handler at the level at which the load is to be placed, then extend boom slowly until load is just above area where it is to be placed	1	1.5	-	-

Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. until the load rests in position, lower the boom of the telescopic handler and the forks should be free to retract	0.5	1.5	-	-
PC14. bring the machine to the parking lot	0.5	1	-	-
PC15. allow the engine to idle speed and shift the transmission to neutral	0.5	1	-	-
PC16. park the machine on a level surface	0.5	1	-	-
PC17. make sure that the engine is off and remove the ignition key of the telescopic handler	0.5	1.5	-	-
PC18. by monitoring the machine working hours, plan the correct service schedule	0.5	1.5	-	-
PC19. check if all the plates are attached onto the vehicle	1	1.5	-	-
PC20. before doing maintenance work, main power should be switched off from the panel	0.5	1	-	-
PC21. top up lubricants and fluids as per schedule or running hours of the machine	1	1.5	-	-
PC22. follow reporting procedures as laid down by the employer	0.5	1.5	-	-
PC23. systematically complete the documentation in the approved standards	0.5	1	-	-
PC24. if beyond scope of role, report defects to the supervisor	1	1	-	-
PC25. as per the guidelines of the site / organisation, dispose the waste	1	1.5	-	-
NOS Total	15	35	-	-

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	IES/N0182
NOS Name	Operate and maintain telescopic handler equipment
Sector	Infrastructure Equipment
Sub-Sector	Equipment Operations
Occupation	Operator
NSQF Level	4
Credits	TBD
Version	2.0
Last Reviewed Date	26/05/2022
Next Review Date	26/05/2025
NSQC Clearance Date	26/05/2022

Assessment Guidelines and Assessment Weightage

Assessment Guidelines

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
3. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).

Qualification Pack

4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training center based on these criteria.

5. In case of successfully passing only certain number of NOSs, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack.

6. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack

Minimum Aggregate Passing % at QP Level : 70

(Please note: Every Trainee should score a minimum aggregate passing percentage as specified above, to successfully clear the Qualification Pack assessment.)

Assessment Weightage

Compulsory NOS

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
IES/N0179.Carry out pre-operation checks on Aerial Work Platform	10	25	0	0	35	35
IES/N0180.Carry out aerial work platform equipment operations	10	20	0	0	30	30
IES/N0181.Carry out maintenance and troubleshooting of the aerial work platform	5	15	0	0	20	20
IES/N7601.Comply with worksite health and safety guidelines	5	10	0	0	15	15
Total	30	70	0	0	100	100

Optional: 1 Telescopic Handler

Qualification Pack

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
IES/N0182. Operate and maintain telescopic handler equipment	15	35	0	0	50	50
Total	15	35	-	-	50	50

Qualification Pack

Acronyms

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training

Qualification Pack

Glossary

Sector	Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
Sub-sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Occupation	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
Occupational Standards (OS)	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the Knowledge and Understanding (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria (PC)	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
National Occupational Standards (NOS)	NOS are occupational standards which apply uniquely in the Indian context.
Qualifications Pack (QP)	QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.
Unit Code	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
Unit Title	Unit title gives a clear overall statement about what the incumbent should be able to do.
Description	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
Scope	Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.

Qualification Pack

Knowledge and Understanding (KU)	Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.
Organisational Context	Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Technical Knowledge	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills/ Generic Skills (GS)	Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.
Electives	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
Options	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.