



• **AERIAL WORK PLATFORM**



Aerial Work Platform Operator

Options: Telescopic Handler

QP Code: IES/Q0127

NSQF Level: 4

Infrastructure Equipment Skill Council || Infrastructure Equipment Skill Council, Avik Royale-First Floor
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Qualification Pack

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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
Country	India
NSQF Level	4

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Aligned to NCO/ISCO/ISIC Code	NCO-2015/8342.2101
Minimum Educational Qualification & Experience	8th Class with 1-2 Years of experience in material handling at the worksite
Minimum Level of Education for Training in School	
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 Years
Last Reviewed On	20/02/2018
Next Review Date	26/02/2021
NSQC Approval Date	19/12/2018
Version	1.0

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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

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.** check tires for damages and bulges
- PC2.** check wheels for loose lug bolts, bent rims, cracks
- PC3.** check the equipment for any damagecracks, misalignment, welds, excess mast movement, 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.** inspect whether work platform and extension slides are clean, dry & clear of debris
- PC7.** check the carrying basket for any physical damages and all the fastenings and linkages for any damages
- PC8.** verify whether lower operating controls successfully override the upper controls of boom lift equipment
- PC9.** ensure emergency lowering functions are working
- PC10.** fill up the details in the checklist report after inspection of the equipment
- 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 operational standards & procedures followed in the company in timeframe in which the complaint/problem should be resolved
- 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

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- KU6.** overview of types of boom lift and scissors lift equipment and the general applications of that equipment
- KU7.** technical specifications, features and performance of different types of aerial work platform equipment
- KU8.** identification of components of a boom lift, scissors lift and its functioning
- KU9.** identification of components of a Scissor lift and its functioning
- 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, principles of friction
- KU13.** basics of electrical systems including control panel
- KU14.** controls, levers and switches in order to operate the aerial work platform
- KU15.** procedure of topping up fuel, lube oil and coolant in the machine
- KU16.** optimal working parameters- engine oil levels, hydraulic oil levels
- KU17.** 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 comprehend basic signs, symbols, diagrams, charts and decals on the equipment & at work site
- GS3.** read and understand the applicable relevant aspects of the equipment operation & maintenance manuals
- 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

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
	10	20	-	-
PC1. check tires for damages and bulges	1	2	-	-
PC2. check wheels for loose lug bolts, bent rims, cracks	1	2	-	-
PC3. check the equipment for any damagecracks, misalignment, welds, excess mast movement, 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. inspect whether work platform and extension slides are clean, dry & clear of debris	1	2	-	-
PC7. check the carrying basket for any physical damages and all the fastenings and linkages for any damages	1	2	-	-
PC8. verify whether lower operating controls successfully override the upper controls of boom lift equipment	1	1	-	-
PC9. ensure emergency lowering functions are working	0.5	1	-	-
PC10. fill up the details in the checklist report after inspection of the equipment	1	1	-	-
PC11. report any defect or abnormality in the equipment to the person responsible for the maintenance of the equipment	0.5	1	-	-
NOS Total	10	20	-	-

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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	1.0
Last Reviewed Date	20/02/2018
Next Review Date	26/02/2021
NSQC Clearance Date	19/12/2018

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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

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.** check the ground for adequate strength to support the weight of both the machine and the load/workmen throughout the lift
- 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 15t 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.** shift the transmission to neutral and allow the engine to slow to idle speed
- PC10.** park the machine on a level surface
- PC11.** ensure the engine is turned off and remove the key to prevent unauthorized operation
- PC12.** communicate problems accurately to others, such as maintenance personnel
- PC13.** document and communicate concerns to appropriate personnel, such as supervisor, 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 operational standards & procedures followed in the company in timeframe in which the complaint/problem should be resolved
- KU3.** reporting structure of the company
- KU4.** location of specialized tools and the equipment

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- KU5.** location and process for storage and disposal of waste material
- 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.** factors that affect equipment stability, such as ground and supporting conditions
- KU10.** principles of motion, balance and stability such as centre of gravity, horizontal and vertical stability, effects of 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.** safety controls and equipment such as automatic limit switches, overload limit devices and fire extinguishers
- KU15.** safety measures to be followed at time of emergencies to avoid damage
- KU16.** roles of personnel on site, such as supervisor, signaller and others

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 comprehend basic signs, symbols, diagrams, charts and decals on the equipment & at work site
- GS3.** read and understand the applicable relevant aspects of the equipment operation & maintenance manuals
- 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

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
	13	22	-	-
PC1. check the ground for adequate strength to support the weight of both the machine and the load/workmen throughout the lift	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 15t to avoid boom lift toppling	1	2	-	-
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. shift the transmission to neutral and allow the engine to slow to idle speed	1	2	-	-
PC10. park the machine on a level surface	1	2	-	-
PC11. ensure the engine is turned off and remove the key to prevent unauthorized operation	1	1	-	-
PC12. communicate problems accurately to others, such as maintenance personnel	1	1	-	-
PC13. document and communicate concerns to appropriate personnel, such as supervisor, mechanic	1	1	-	-
NOS Total	13	22	-	-

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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	1.0
Last Reviewed Date	20/02/2018
Next Review Date	26/02/2021
NSQF Clearance Date	19/12/2018

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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

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 per the running of the machine or as per the schedule
- PC4.** dispose of waste lubricating oils, antifreeze and hydraulic fluids according to local regulations or take them to a recycling center for disposal
- PC5.** check battery levels and condition of the terminals and carry out minor adjustments if required
- PC6.** fill the fuel tank to prevent water from condensing in the tank
- PC7.** ensure that no maintenance task on the engine is performed when running or still 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.** diagnose the problem and identify appropriate repair procedures
- PC11.** report defects precisely to the supervisor if beyond scope of the role
- PC12.** dispose waste as per the guidelines of the site/ organization
- PC13.** follow reporting procedures as laid down by the employer
- PC14.** complete all documentation as per the prescribed standards in a timely manner

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 operational standards & procedures followed in the company in timeframe in which the complaint/problem should be resolved

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- 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.** basics of engine and sub systems; 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.** basics of electrical systems including control panel
- KU12.** control and switches needed to operate the aerial work platform appropriately
- KU13.** common defects and general causes of breakdown
- KU14.** spill kit and battery boosting procedures

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 comprehend basic signs, symbols, diagrams, charts and decals on the equipment & at work site
- GS3.** read and understand the applicable relevant aspects of the equipment operation & maintenance manuals
- 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

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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 per the running of the machine or as per the schedule	0.5	1.5	-	-
PC4. dispose of waste lubricating oils, antifreeze and hydraulic fluids according to local regulations or take them to a recycling center for disposal	0.5	1.5	-	-
PC5. check battery levels and condition of the terminals and carry out minor adjustments if required	-	1	-	-
PC6. fill the fuel tank to prevent water from condensing in the tank	-	1	-	-
PC7. ensure that no maintenance task on the engine is performed when running or still 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. diagnose the problem and identify appropriate repair procedures	0.5	1	-	-
PC11. report defects precisely to the supervisor if beyond scope of the role	0.5	1	-	-
PC12. dispose waste as per the guidelines of the site/ organization	0.5	1	-	-
PC13. follow reporting procedures as laid down by the employer	0.5	0.5	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC14. complete all documentation as per the prescribed standards in a timely manner	0.5	0.5	-	-
NOS Total	5	15	-	-

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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	1.0
Last Reviewed Date	20/02/2018
Next Review Date	26/02/2021
NSQC Clearance Date	19/12/2018

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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

This unit/task 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 such as seat belt, body protection, respiratory protection, eye protection, ear protection and hand protection
- 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 manufacturers 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.** follow safety regulations and procedures with regard to worksite hazards and risks
- PC7.** operate various grades of fire extinguishers, as applicable
- PC8.** support in administering basic first aid and report to concerned team members, as required, in case of an accident
- PC9.** respond promptly and appropriately to an accident/ incident or emergency situation, within limits of your role and responsibility

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
- KU2.** the importance of complying with health, safety, environmental and security guidelines at the worksite and during operations
- KU3.** contact details of personnel responsible for health, safety and environment (hse) related matters
- KU4.** location of worksite storage, site team and safe assembly points
- KU5.** concerned personnel to reach out in case of emergencies and accidents/ incidents
- KU6.** reporting and documentation procedures for hse and security matters
- KU7.** manufacturers guidelines related to health and safety requirements

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- KU8.** common types of health, safety, environment and security risks related to the worksite and operations
- KU9.** types, use and importance of personal protective equipment (ppe) and other safety gear
- KU10.** safe working practices to avoid common hazards and risks
- KU11.** guidelines for transport, storage and disposal of hazardous materials and waste
- KU12.** types of common hazards and risks at the worksite including fire, electrical, gas emergencies, accidents, incidents, structure collapse, machine breakdown
- KU13.** knowledge of safe lockdown/ stop of machinery use in case of emergencies and incidents/ accidents
- KU14.** types of fire extinguishers and their use
- KU15.** common injuries and appropriate basic first aid treatment eg. 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
- GS15.** document and report any health and safety related incidents/ accidents
- GS16.** read and comprehend basic english to read manuals of operations
- GS17.** read all organizational and equipment related health and safety manuals and documents
- GS18.** read instructions, guidelines/procedures/rules related to the worksite and equipment operations
- GS19.** give clear instructions to co-workers, subordinates and other personnel
- GS20.** use correct technical terms while interacting with supervisor
- GS21.** make an appropriate timely decision in responding to emergencies/accidents in line with organizational/ worksite guidelines

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- GS22.** use correct ppe and other safety gear while at the worksite
- GS23.** work with supervisors/ team mates to carry out work related tasks
- GS24.** plan work according to the required schedule and location
- GS25.** build and maintain positive and effective relationships with colleagues and customers
- GS26.** seek appropriate assistance from other sources to resolve problems
- GS27.** assess the intensity of the fire accident and operate fire extinguishers
- GS28.** analyse, evaluate and apply the information gathered from observation, experience, reasoning, or communication to act efficiently

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Worksite health and safety</i>	6	24	-	-
PC1. comply with safety, health, security and environment related regulations/ guidelines at the work site	-	2	-	-
PC2. use personal protective equipment (ppe) and other safety gear such as seat belt, body protection, respiratory protection, eye protection, ear protection and hand protection	1	3	-	-
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	1	3	-	-
PC4. carry out operations as per the manufacturers and worksite related health and safety guidelines	1	2	-	-
PC5. handle the transport, storage and disposal of hazardous materials and waste in compliance with worksite health, safety and environmental guidelines	1	3	-	-
PC6. follow safety regulations and procedures with regard to worksite hazards and risks	1	2	-	-
PC7. operate various grades of fire extinguishers, as applicable	-	3	-	-
PC8. support in administering basic first aid and report to concerned team members, as required, in case of an accident	1	3	-	-
PC9. respond promptly and appropriately to an accident/ incident or emergency situation, within limits of your role and responsibility	-	3	-	-
NOS Total	6	24	-	-

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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	1.0
Last Reviewed Date	31/03/2015
Next Review Date	31/03/2017
NSQC Clearance Date	18/06/2015

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

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.** lower the boom of telescopic handler until the load rests in position and the forks are free to retract
- PC14.** drive the equipment to the parking lot
- PC15.** shift the transmission to Neutral and allow the engine to slow to idle speed
- PC16.** park the machine on a level surface
- PC17.** ensure the engine is off and remove ignition key of telescopic handler
- PC18.** determine the right service schedule by tracking machine operating hours
- PC19.** check if all the plates are attached onto the vehicle

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- PC20.** ensure the main power is turned off from panel completely before carrying out maintenance work
- PC21.** replenish lubricants and fluids as per the running of the machine or as per the schedule
- PC22.** follow reporting procedures as laid down by the employer
- PC23.** complete all documentation in the prescribed standards in a timely manner
- PC24.** report defects precisely to the supervisor if beyond scope of his role
- PC25.** dispose waste as per the guidelines of the site/ organization

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 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.** overview of types of telescopic handler equipment and the general applications of it
- KU8.** technical specifications, features and performance of different types of telescopic handler
- 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 aerial work platform
- 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.** spill kit and battery boosting procedures
- 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 comprehend basic signs, symbols, diagrams, charts and decals on the equipment & at work site

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- GS3.** read and understand the applicable relevant aspects of the equipment operation & maintenance manuals
- 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

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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	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. lower the boom of telescopic handler until the load rests in position and the forks are free to retract	0.5	1.5	-	-
PC14. drive the equipment to the parking lot	0.5	1	-	-
PC15. shift the transmission to Neutral and allow the engine to slow to idle speed	0.5	1	-	-
PC16. park the machine on a level surface	0.5	1	-	-
PC17. ensure the engine is off and remove ignition key of telescopic handler	0.5	1.5	-	-
PC18. determine the right service schedule by tracking machine operating hours	0.5	1.5	-	-
PC19. check if all the plates are attached onto the vehicle	1	1.5	-	-
PC20. ensure the main power is turned off from panel completely before carrying out maintenance work	0.5	1	-	-
PC21. replenish lubricants and fluids as per the running of the machine or as per the schedule	1	1.5	-	-
PC22. follow reporting procedures as laid down by the employer	0.5	1.5	-	-
PC23. complete all documentation in the prescribed standards in a timely manner	0.5	1	-	-
PC24. report defects precisely to the supervisor if beyond scope of his role	1	1	-	-
PC25. dispose waste as per the guidelines of the site/ organization	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	1.0
Last Reviewed Date	20/02/2018
Next Review Date	26/02/2021
NSQC Clearance Date	19/12/2018

Qualification Pack

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).
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

Recommended Pass % : 70

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	20	-	-	30	26
IES/N0180.Carry out aerial work platform equipment operations	13	22	-	-	35	31
IES/N0181.Carry out maintenance and troubleshooting of the aerial work platform	5	15	-	-	20	17
IES/N7601.Comply with worksite health and safety guidelines	6	24	-	-	30	26

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National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
Total	34	81	-	-	115	100

Optional: 1 Telescopic Handler

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
IES/N0182. Operate and maintain telescopic handler equipment	15	35	-	-	50	30
Total	15	35	-	-	50	30

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.

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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.