



• **MECHANIC**

# Mechanic (Hydraulic)

QP Code: IES/Q1103

NSQF Level: 4

Infrastructure Equipment Skill Council || Infrastructure Equipment Skill Council, Avik Royale-First Floor  
(Next of Vijaya Bank), No.6, 50 feet Main Road, Avalahalli Extension, Girinagar  
Bengaluru 560026

## Qualification Pack

### Contents

IES/Q1103: Mechanic (Hydraulic) .....	3
<i>Brief Job Description</i> .....	3
Applicable National Occupational Standards (NOS) .....	3
<i>Compulsory NOS</i> .....	3
<i>Qualification Pack (QP) Parameters</i> .....	3
IES/N1103: Carry out repair and maintenance of equipments hydraulic system .....	5
IES/N7602: Comply with workshop health and safety guidelines .....	13
IES/N7701: Carry out reporting and documentation .....	19
Assessment Guidelines and Weightage .....	23
<i>Assessment Guidelines</i> .....	23
<i>Assessment Weightage</i> .....	23
Acronyms .....	25
Glossary .....	26

## Qualification Pack

### IES/Q1103: Mechanic (Hydraulic)

#### Brief Job Description

Mechanic (Hydraulic) supports the equipment operation by conducting inspections and preventive maintenance. His work involves diagnosis, adjusting, repairing, or overhauling hydraulic equipment.

#### Personal Attributes

This job requires the individual to work independently as well as in teams. He Should have analytical skills, problem solving attitude, high concentration levels. Mechanic (Hydraulic) should have good hand-eye coordination, good eye-sight, no color-blindness and should be able to complete precise and detailed work.

#### Applicable National Occupational Standards (NOS)

##### Compulsory NOS:

1. [IES/N1103: Carry out repair and maintenance of equipments hydraulic system](#)
2. [IES/N7602: Comply with workshop health and safety guidelines](#)
3. [IES/N7701: Carry out reporting and documentation](#)

#### Qualification Pack (QP) Parameters

<b>Sector</b>	Infrastructure Equipment
<b>Sub-Sector</b>	Equipment Service and spares
<b>Occupation</b>	Equipment Maintenance
<b>Country</b>	India
<b>NSQF Level</b>	4
<b>Aligned to NCO/ISCO/ISIC Code</b>	NCO-2004/7233.28
<b>Minimum Educational Qualification &amp; Experience</b>	I.T.I (Hydraulic Mechanic) with 2-3 Years of experience experience in Hydraulic system maintenance OR Diploma (Hydraulic Mechanic) with 2-3 Years of experience experience in Hydraulic system maintenance
<b>Minimum Level of Education for Training in School</b>	

## Qualification Pack

<b>Pre-Requisite License or Training</b>	Hydraulic system training preferred
<b>Minimum Job Entry Age</b>	18 Years
<b>Last Reviewed On</b>	31/03/2015
<b>Next Review Date</b>	30/06/2020
<b>NSQC Approval Date</b>	18/06/2015
<b>Version</b>	1.0

## Qualification Pack

# IES/N1103: Carry out repair and maintenance of equipments hydraulic system

## Description

This unit provides Performance Criteria, Knowledge & Understanding and Skills & Ability for activities that need to be carried out for testing, diagnosing, repairing and maintaining Hydraulic system.

## Scope

This unit/task covers the following: Breakdown Repair Maintenance Work

## Elements and Performance Criteria

### *Breakdown Repair*

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

- PC1.** collect information on the symptoms and problems associated with fault
- PC2.** use all the relevant information on the symptoms and problems associated with the fault
- PC3.** select and apply appropriate diagnostic techniques, tools and aids to locate the fault
- PC4.** use methods as per manufacturers manual to check the following MRV pressure & setting Hydraulic Pump RAM for pipe & tube Boom
- PC5.** results and recommend action as per service manual
- PC6.** inspect the work area is free from hazards as per the safety norm of the organization
- PC7.** inspect the work area and check for the cleanliness and as per the organizational standards
- PC8.** carry out random checks and inspections to keep a check on the quality of work carried out
- PC9.** remove, replace or repair the required hydraulic components, using approved tools and techniques as per manufacturers manual
- PC10.** remove, hydraulic system and components as per standard operating procedure
- PC11.** dismantle hydraulic system and components to standard operating procedure
- PC12.** repair hydraulic system and components as per manufacturers specifications.
- PC13.** reinstate hydraulic system and components to manufacturers specifications.
- PC14.** assemble or repair pipes and hoses used within hydraulic systems as per manufacturers manual
- PC15.** report any instances where the removal and replacement activities cannot be fully met as per organizations policy
- PC16.** complete the relevant documentation, in accordance with organizational requirements.
- PC17.** work safely at all times, complying with health and safety and other relevant regulations, directives and guidelines
- PC18.** handle and dispose waste based on environmental guidelines at the work place

### *Maintenance work*

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

- PC19.** follow the maintenance schedule as per the manufacturers manual
- PC20.** check and replace the components of hydraulic system per the schedule

## Qualification Pack

- PC21.** verify as per the manufacturers manual, for the following components of hydraulic system:  
Leakage from hose pipe Transmission & Hydraulic Pressure Hydraulic oil Level & lubrication  
Hydraulic filter, breather filter & strainer Pin Brush & oil cooler
- PC22.** carry out cleaning activity for hydraulic tank as per service manual
- PC23.** report any instances where the parts need to be changed/repared as per organization policy
- PC24.** change/repair the defective part as per service manual
- PC25.** replenish/ change the consumables as per the manufacturers manual
- PC26.** carry out the post maintenance trials as per manufacturers manual
- PC27.** complete the relevant documentation, in accordance with

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the organizations procedures and guidelines related to breakdown & maintenance services
- KU2.** the performance standards & procedures followed in the company
- KU3.** reporting structure in the company
- KU4.** escalation matrix for reporting unresolved problems
- KU5.** timeframe in which the complaint/problem should be resolved
- KU6.** work target and review mechanism with supervisor for obtaining/ giving feedback related to performance process
- KU7.** location of tools
- KU8.** contact person in case of queries on procedure or products
- KU9.** location and process for storage and disposal of waste material
- KU10.** safety policy of the company
- KU11.** the method to extract and use information from the relevant areas to assist in the diagnosis
- KU12.** the manufacturers specification of the hydraulic parts in use
- KU13.** various components of hydraulic systems
- KU14.** the techniques to read common symbols used in hydraulic circuit diagrams
- KU15.** the technique to read and interpret hydraulic circuit diagrams to include open center, closed center and load sensing
- KU16.** the techniques used to diagnose the faults (such as sensory information - sight, sound, smell, touch, visual and functional checks, taking measurements and use of equipment self-diagnostics)
- KU17.** the techniques used to usage of fault diagnostic equipment to investigate the problem in the hydraulic system(such as oil pump, pressure gauges, compressor wrench)
- KU18.** the methods to understand construction, types and function of hydraulic system components: hydraulic pumps and motors, e.g. fixed and variable displacement hydraulic pressure maintaining valves, relief valves, shock valves hydraulic control valves, e.g. distributors, solenoid valves, proportional valves, pressure differential valves, pilot operated valves hydraulic rams, single, acting, double acting hydraulic direction flow valves, flow dividers, orbital valves, priority valves, restrictors reservoirs accumulators
- KU19.** methods to identify hydraulic pipe and hose types and their appropriate fittings

## Qualification Pack

- KU20.** technique to remove components from hydraulic system without damage to the components or surrounding structure
- KU21.** usage of range of hand tools (such as spanners, sockets, screwdrivers, pliers, torque wrenches)
- KU22.** method to check that the tools and equipment to be used are correctly calibrated, and are in a safe, tested and serviceable condition
- KU23.** method to use all tools correctly, check and store after use
- KU24.** technique to lay the removed components out in a logical sequence to aid re-assembly
- KU25.** methods to keep component parts together or in the order that they were removed
- KU26.** techniques of inspecting removed components
- KU27.** methods of inspecting removed hydraulic component
- KU28.** technique to check for the damage and wear
- KU29.** usage of equipment used in the rectification operations (such as alignment tools, torque wrenches, presses)
- KU30.** method to rectify the fault (component replacement, adjustments, repair and refitting techniques)
- KU31.** method to assemble and repair hydraulic hoses and pipe
- KU32.** ensure that all sealants and lubricants used are of the correct specification for the vehicle
- KU33.** technique to carry out visual, aural, functional and measurement tests
- KU34.** the expected outcomes of the tests being conducted
- KU35.** problems with the diagnosis and rectification operations,
- KU36.** process of informing appropriate people of non-conformances
- KU37.** technique to clean/service different hydraulic parts
- KU38.** different jigs and fixtures used
- KU39.** method to fill different reports/templates followed in the organization
- KU40.** the hazards associated with diagnosing and rectifying hydraulic faults
- KU41.** usage of proper tools and equipment used and minimize & reduce any risk

## Generic Skills (GS)

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

- GS1.** record and document the details of repairs and maintenance performed on various components
- GS2.** record all diagnostics as per the prescribed format recommended by the manufacturer
- GS3.** refer to operator and maintenance manuals, parts checklist and other equipment related collateral to support work tasks
- GS4.** read the specifications of an equipment or any other component or part
- GS5.** interact with the customers, as required, to seek clarifications and understand issues
- GS6.** use correct technical terms while communicating with team members and customers
- GS7.** interact with team members including colleagues to work efficiently
- GS8.** evaluate the situation to decide on seeking assistance from manager/ peers

## Qualification Pack

- GS9.** decide on the repair/ replacement of any aggregate or component post the diagnosis
- GS10.** plan, prioritize and sequence work operations as per required schedule and location
- GS11.** organize and analyze information relevant to work
- GS12.** ensure that the service provided is of the highest order to ensure customer satisfaction
- GS13.** follow up with the superiors on any unfavourable feedback received from customer
- GS14.** ensure timely communication of the additional requirements in the equipment to the customer
- GS15.** refer problems outside area of responsibility to appropriate person
- GS16.** determine problems in the equipment needing priority action
- GS17.** refer complex diagnosis to supervisor/ other peers
- GS18.** assess repairs required based on technical faults identified
- GS19.** analyse, evaluate and apply the information gathered from observation, experience, reasoning to act efficiently and effectively
- GS20.** use the diagnosis results to take an appropriate decision on repair or replacement of component with consultation with manager/ peers



## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Breakdown Repair</i>	<b>10</b>	<b>43</b>	-	-
<b>PC1.</b> collect information on the symptoms and problems associated with fault	-	1	-	-
<b>PC2.</b> use all the relevant information on the symptoms and problems associated with the fault	1	2	-	-
<b>PC3.</b> select and apply appropriate diagnostic techniques, tools and aids to locate the fault	-	3	-	-
<b>PC4.</b> use methods as per manufacturers manual to check the following MRV pressure & setting Hydraulic Pump RAM for pipe & tube Boom	1	3	-	-
<b>PC5.</b> results and recommend action as per service manual	-	1	-	-
<b>PC6.</b> inspect the work area is free from hazards as per the safety norm of the organization	1	1	-	-
<b>PC7.</b> inspect the work area and check for the cleanliness and as per the organizational standards	-	3	-	-
<b>PC8.</b> carry out random checks and inspections to keep a check on the quality of work carried out	1	3	-	-
<b>PC9.</b> remove, replace or repair the required hydraulic components, using approved tools and techniques as per manufacturers manual	-	3	-	-
<b>PC10.</b> remove, hydraulic system and components as per standard operating procedure	1	3	-	-
<b>PC11.</b> dismantle hydraulic system and components to standard operating procedure	1	3	-	-
<b>PC12.</b> repair hydraulic system and components as per manufacturers specifications.	-	3	-	-
<b>PC13.</b> reinstate hydraulic system and components to manufacturers specifications.	1	3	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC14.</b> assemble or repair pipes and hoses used within hydraulic systems as per manufacturers manual	1	3	-	-
<b>PC15.</b> report any instances where the removal and replacement activities cannot be fully met as per organizations policy	1	3	-	-
<b>PC16.</b> complete the relevant documentation, in accordance with organizational requirements.	1	1	-	-
<b>PC17.</b> work safely at all times, complying with health and safety and other relevant regulations, directives and guidelines	-	3	-	-
<b>PC18.</b> handle and dispose waste based on environmental guidelines at the work place	-	1	-	-
<i>Maintenance work</i>	<b>2</b>	<b>13</b>	-	-
<b>PC19.</b> follow the maintenance schedule as per the manufacturers manual	-	1	-	-
<b>PC20.</b> check and replace the components of hydraulic system per the schedule	1	1	-	-
<b>PC21.</b> verify as per the manufacturers manual, for the following components of hydraulic system: Leakage from hose pipe Transmission & Hydraulic Pressure Hydraulic oil Level & lubrication Hydraulic filter, breather filter & strainer Pin Brush & oil cooler	1	3	-	-
<b>PC22.</b> carry out cleaning activity for hydraulic tank as per service manual	-	1	-	-
<b>PC23.</b> report any instances where the parts need to be changed/repared as per organization policy	-	3	-	-
<b>PC24.</b> change/repair the defective part as per service manual	-	1	-	-
<b>PC25.</b> replenish/ change the consumables as per the manufacturers manual	-	1	-	-
<b>PC26.</b> carry out the post maintenance trials as per manufacturers manual	-	1	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC27. complete the relevant documentation, in accordance with	-	1	-	-
<b>NOS Total</b>	<b>12</b>	<b>56</b>	-	-

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	IES/N1103
<b>NOS Name</b>	Carry out repair and maintenance of equipments hydraulic system
<b>Sector</b>	Infrastructure Equipment
<b>Sub-Sector</b>	Equipment Service and spares
<b>Occupation</b>	Equipment Maintenance
<b>NSQF Level</b>	4
<b>Credits</b>	TBD
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	31/03/2015
<b>Next Review Date</b>	31/03/2017
<b>NSQC Clearance Date</b>	

## Qualification Pack

### IES/N7602: Comply with workshop health and safety guidelines

#### Description

This unit provides Performance Criteria, Knowledge & Understanding and Skills & Ability for adhering to health and safety requirements at the service workshop during equipment maintenance.

#### Scope

This unit/task covers the following: Service workshop health and safety

#### Elements and Performance Criteria

##### *Service workshop 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 as per organizational/ manufacturers policy
- PC2.** carry out maintenance operations as per the manufacturers and workshop related health and safety guidelines/ standard operating procedures
- PC3.** follow safety regulations and procedures with regard to service workshop hazards and risks
- PC4.** use appropriate protective clothing/ equipment for specific tasks and work conditions as per service manual
- PC5.** lift and carry tools/equipment/components safely using correct procedure as per the service manual
- PC6.** use appropriate tools in a proper manner as given in the service manual
- PC7.** keep the work area free from clutter and spillage
- PC8.** store equipment and tools back at designated place post use and inspect to make sure they are not left behind
- PC9.** handle the storage and disposal of hazardous materials and waste in compliance with health, safety and environmental guidelines
- PC10.** operate various grades of fire extinguishers, as applicable
- PC11.** support in administering basic first aid and report to concerned team members, as required, in case of an accident
- PC12.** respond promptly and appropriately to an accident/ incident or emergency situation, within limits of your role and responsibility
- PC13.** 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
- KU2.** the importance of complying with health, safety, environmental and security guidelines during workshop operations

## Qualification Pack

- KU3.** contact details of personnel responsible for health, safety and environment (she) related matters
- KU4.** location of workshop store, first aid station 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
- KU8.** common types of health, safety, environment and security risks related to maintenance operations
- KU9.** types, use and importance of personal protective equipment (ppe) and other safety clothing
- KU10.** safe working practices to avoid common hazards and risks
- KU11.** safe working practices when working with tools and machines
- KU12.** safe working practices while working in different processes/ confined spaces
- KU13.** various dangers associated with the use of electrical equipment
- KU14.** various types of safety signs/ warnings and their meaning
- KU15.** guidelines for transport, storage and disposal of hazardous materials and waste
- KU16.** types of common hazards and risks at the workshop including fire, electrical, equipment related
- KU17.** knowledge of safe lockdown/ stop of machinery use in case of emergencies and incidents/ accidents
- KU18.** types of fire extinguishers and their use
- KU19.** 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 all organizational and equipment related health and safety manuals and documents
- GS3.** read instructions, guidelines/procedures/rules
- GS4.** give clear instructions to coworkers, subordinates and others
- GS5.** make decisions on a suitable course of action or response in the event of any emergency, health and safety related incidents/accidents
- GS6.** plan and organize own work schedule, work area, tools, equipment and materials to minimise any risk for health and safety related incident/accident
- GS7.** build and maintain positive and effective relationships with colleagues and customers
- GS8.** identify immediate or temporary solutions to resolve delays
- GS9.** seek appropriate assistance from other sources to resolve problems
- GS10.** identify 'cause and effect' relations in own area of work
- GS11.** apply balanced judgment to different situations
- GS12.** document and report any health and safety related incidents/ accidents
- GS13.** read all organizational and equipment related health and safety manuals and documents

## Qualification Pack

- GS14.** read instructions, guidelines/procedures/rules
- GS15.** give clear instructions to coworkers, subordinates and others
- GS16.** make decisions on a suitable course of action or response in the event of any emergency, health and safety related incidents/accidents
- GS17.** plan and organize own work schedule, work area, tools, equipment and materials to minimise any risk for health and safety related incident/accident
- GS18.** build and maintain positive and effective relationships with colleagues and customers
- GS19.** identify immediate or temporary solutions to resolve delays
- GS20.** seek appropriate assistance from other sources to resolve problems
- GS21.** identify 'cause and effect' relations in own area of work
- GS22.** apply balanced judgment to different situations

## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Service workshop health and safety</i>	<b>7</b>	<b>19</b>	-	-
<b>PC1.</b> comply with safety, health, security and environment related regulations/ guidelines as per organizational/ manufacturers policy	1	1	-	-
<b>PC2.</b> carry out maintenance operations as per the manufacturers and workshop related health and safety guidelines/ standard operating procedures	-	3	-	-
<b>PC3.</b> follow safety regulations and procedures with regard to service workshop hazards and risks	1	1	-	-
<b>PC4.</b> use appropriate protective clothing/ equipment for specific tasks and work conditions as per service manual	1	1	-	-
<b>PC5.</b> lift and carry tools/equipment/components safely using correct procedure as per the service manual	1	3	-	-
<b>PC6.</b> use appropriate tools in a proper manner as given in the service manual	1	3	-	-
<b>PC7.</b> keep the work area free from clutter and spillage	1	1	-	-
<b>PC8.</b> store equipment and tools back at designated place post use and inspect to make sure they are not left behind	-	1	-	-
<b>PC9.</b> handle the storage and disposal of hazardous materials and waste in compliance with health, safety and environmental guidelines	-	1	-	-
<b>PC10.</b> operate various grades of fire extinguishers, as applicable	1	1	-	-
<b>PC11.</b> support in administering basic first aid and report to concerned team members, as required, in case of an accident	-	1	-	-
<b>PC12.</b> respond promptly and appropriately to an accident/ incident or emergency situation, within limits of your role and responsibility	-	1	-	-



### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. record and report details related to operations, incidents or accidents, as applicable	-	1	-	-
<b>NOS Total</b>	<b>7</b>	<b>19</b>	-	-

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	IES/N7602
<b>NOS Name</b>	Comply with workshop health and safety guidelines
<b>Sector</b>	Infrastructure Equipment
<b>Sub-Sector</b>	Equipment Service and spares
<b>Occupation</b>	Equipment Maintenance
<b>NSQF Level</b>	3
<b>Credits</b>	TBD
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	31/03/2015
<b>Next Review Date</b>	31/03/2017
<b>NSQC Clearance Date</b>	18/06/2015

## Qualification Pack

### IES/N7701: Carry out reporting and documentation

#### Description

This unit provides Performance Criteria, Knowledge & Understanding and Skills & Ability for activities that are needed for preparation of various documents and reporting of data/problems.

#### Scope

This unit/task covers the following: Report unresolved problems Prepare reports related to field visits and work done

#### Elements and Performance Criteria

##### *Report unresolved problems*

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

- PC1.** follow reporting procedures as laid down by the employer
- PC2.** report and escalate problems/ incidents as required in a timely manner as per organizational policy
- PC3.** report to the appropriate authority as per the policy laid down by the employer

##### *Prepare reports related to field visits and work done*

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

- PC4.** identify job related documentation that needs to be completed
- PC5.** prepare parts list that needs to be procured for resolving problem in equipment
- PC6.** use prescribed formats and record details accurately as per the process
- PC7.** complete all documentation as per the policy laid down by the employer
- PC8.** adhere to the suggested timelines as per companys policy
- PC9.** make the documents available to appropriate authorities for inspection as per companys policy

#### Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the organizations procedures and guidelines related to reporting & documentation
- KU2.** reporting structure in the company
- KU3.** escalation matrix for reporting unresolved problems
- KU4.** timeframe in which the complaint/problem should be resolved
- KU5.** work target and review mechanism with supervisor for obtaining/ giving feedback related to performance process
- KU6.** implications of delays in process to the company
- KU7.** contact person in case of queries on procedure
- KU8.** companys guidelines on how to fill & maintain documents

## Qualification Pack

- KU9.** the different channels of reporting in the company
- KU10.** the different types of documents to be maintained
- KU11.** different methods of recording information/reporting
- KU12.** methods to collate information and fill in the required form
- KU13.** methods to maintain the documents
- KU14.** the importance of correct information
- KU15.** implications of sharing incorrect information

## Generic Skills (GS)

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

- GS1.** record/ accurately document the details of the job work as per organization's policies and process
- GS2.** read instructions, guidelines/procedures/rules
- GS3.** refer to operator and maintenance manuals, parts checklist and other equipment related collateral to support work tasks
- GS4.** use correct technical terms while interacting with superior
- GS5.** interact with team members including colleagues to work efficiently
- GS6.** evaluate the situation to decide on seeking assistance from manager/ peers
- GS7.** organize and analyze information relevant to work
- GS8.** provide service of the highest order to ensure customer satisfaction
- GS9.** seek appropriate assistance from other sources to resolve problems
- GS10.** identify cause and effect relations in area of work
- GS11.** apply balanced judgment to different situations

## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Report unresolved problems</i>	<b>3</b>	<b>3</b>	-	-
<b>PC1.</b> follow reporting procedures as laid down by the employer	1	1	-	-
<b>PC2.</b> report and escalate problems/ incidents as required in a timely manner as per organizational policy	1	1	-	-
<b>PC3.</b> report to the appropriate authority as per the policy laid down by the employer	1	1	-	-
<i>Prepare reports related to field visits and work done</i>	<b>4</b>	<b>8</b>	-	-
<b>PC4.</b> identify job related documentation that needs to be completed	1	1	-	-
<b>PC5.</b> prepare parts list that needs to be procured for resolving problem in equipment	-	3	-	-
<b>PC6.</b> use prescribed formats and record details accurately as per the process	1	1	-	-
<b>PC7.</b> complete all documentation as per the policy laid down by the employer	1	1	-	-
<b>PC8.</b> adhere to the suggested timelines as per companys policy	-	1	-	-
<b>PC9.</b> make the documents available to appropriate authorities for inspection as per companys policy	1	1	-	-
<b>NOS Total</b>	<b>7</b>	<b>11</b>	-	-

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	IES/N7701
<b>NOS Name</b>	Carry out reporting and documentation
<b>Sector</b>	Infrastructure Equipment
<b>Sub-Sector</b>	Equipment Service and spares
<b>Occupation</b>	Equipment Maintenance
<b>NSQF Level</b>	4
<b>Credits</b>	TBD
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	31/03/2015
<b>Next Review Date</b>	31/03/2017
<b>NSQC Clearance Date</b>	

## 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 Element/ Performance Criteria (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 Element/ PC.
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
3. Assessment will be conducted for all compulsory NOS, and where applicable, on the selected elective/option NOS/set of NOS.
4. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).
5. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training center based on these criteria.
6. To pass the Qualification Pack assessment, every trainee should score the Recommended Pass % aggregate for the QP.
7. 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/N1103.Carry out repair and maintenance of equipments hydraulic system	12	56	-	-	68	60
IES/N7602.Comply with workshop health and safety guidelines	7	19	-	-	26	22
IES/N7701.Carry out reporting and documentation	7	11	-	-	18	18



### Qualification Pack

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
Total	26	86	-	-	112	100



## Acronyms

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

## Qualification Pack

### Glossary

<b>Sector</b>	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.
<b>Sub-sector</b>	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
<b>Occupation</b>	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
<b>Job role</b>	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
<b>Occupational Standards (OS)</b>	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.
<b>Performance Criteria (PC)</b>	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
<b>National Occupational Standards (NOS)</b>	NOS are occupational standards which apply uniquely in the Indian context.
<b>Qualifications Pack (QP)</b>	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.
<b>Unit Code</b>	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
<b>Unit Title</b>	Unit title gives a clear overall statement about what the incumbent should be able to do.
<b>Description</b>	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.
<b>Scope</b>	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

<b>Knowledge and Understanding (KU)</b>	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.
<b>Organisational Context</b>	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.
<b>Technical Knowledge</b>	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
<b>Core Skills/ Generic Skills (GS)</b>	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.
<b>Electives</b>	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.
<b>Options</b>	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.