

QUALIFICATION PACK – OCCUPATIONAL STANDARD FOR INFRASTRUCTURE EQUIPMENT INDUSTRY

What are Occupational Standards(OS)?

- OS describe what individuals need to do, know and understand in order to carry out a particular job role or function
- OS are performance standards that individuals must achieve when carrying out functions in the workplace, together with specifications of the underpinning knowledge and understanding

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Introduction

Qualification Pack - Junior Mechanic (Engine)

| | |
|----------------------|------------------------------|
| SECTOR: | INFRASTRUCTURE EQUIPMENT |
| SUB SECTOR: | Equipment service and spares |
| OCCUPATION: | Equipment Maintenance |
| REFERENCE ID: | IES/Q1102 |
| ALIGNED TO: | NCO-2004/ NIL |

Brief Job Description: The primary role of a Junior Mechanic (engine) is to provide assistance to Mechanic (engine) in breakdown repair & preventive maintenance in issues related to engines of the 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. Junior Mechanic Engine should have good hand-eye coordination, good eye-sight, no colour-blindness and should be able to complete precise and detailed work.

| | | | |
|---------------------------------|-------------------------------------|-------------------------|-----------------|
| Qualifications Pack Code | IES/Q1102 | | |
| Job Role | Junior Mechanic (Engine) | | |
| Credits(NSQF) | TBD | Version number | 1.0 |
| Sector | Infrastructure Equipment | Drafted on | 16/02/15 |
| Sub-sector | Equipment service and spares | Last reviewed on | 31/03/15 |
| Occupation | Equipment Maintenance | Next review date | 31/03/17 |
| NSQC clearance on | 31/03/15 | | |

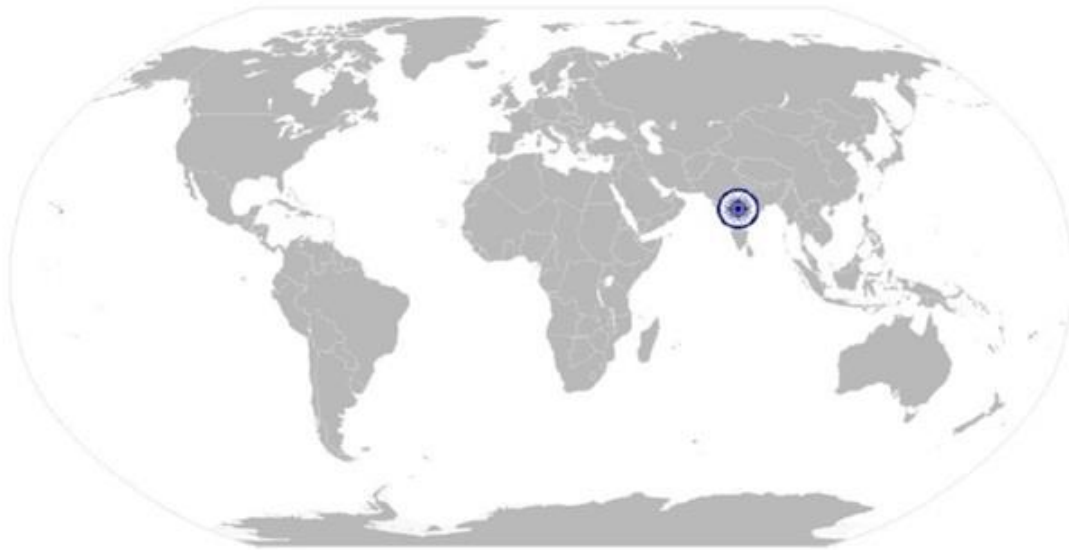
| | |
|---|---|
| Job Role | Junior Mechanic (Engine) |
| Role Description | Assist Mechanic (engine) in breakdown repair & preventive maintenance in issues related to engines of the vehicles |
| NSQF level | 3 |
| Minimum Educational Qualifications* | Preferably Class VIII |
| Maximum Educational Qualifications* | NA |
| Training (Suggested but not mandatory) | NA |
| Minimum Job Entry Age | Preferably 18 years |
| Experience | NA |
| Applicable National Occupational Standards (NOS) | <p>Compulsory</p> <ol style="list-style-type: none"> 1. IES/N1102 Assist in repair and maintenance of equipment's engine parts 2. IES/N7801 Maintain the work area, tools and machine to support the operations 3. IES/N7602 Comply with workshop health and safety guidelines <p>Optional: N.A.</p> |
| Performance Criteria | As described in the relevant OS units |

Definition

| Keywords /Terms | Description |
|---------------------------------------|---|
| Sector | Sector is a conglomeration of different business operations having similar businesses 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. |
| Vertical | Vertical may exist within a sub-sector representing different domain areas or the client industries served by the industry. |
| Occupation | Occupation is a set of job roles, which perform similar/related set of functions in an industry. |
| Function | Function is an activity necessary for achieving the key purpose of the sector, occupation, or area of work, which can be carried out by a person or a group of persons. Functions are identified through functional analysis and form the basis of OS. |
| Sub-functions | Sub-functions are sub-activities essential to fulfil achieving the objectives of the function. |
| Job role | Job role defines a unique set of functions that together form a unique employment opportunity in an organization. |
| 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; he/she needs to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts. |
| Performance Criteria | Performance Criteria 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 Code | Qualifications Pack Code is a unique reference code that identifies a qualifications pack. |
| Qualifications Pack(QP) | Qualifications Pack comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A Qualifications Pack is assigned a unique qualification 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 find the required one. |
| Scope | Scope is the 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 the quality of required performance. |
| Knowledge and Understanding | Knowledge and Understanding are statements which together specify the technical, generic, professional and organizational specific knowledge that an individual needs in order to perform up to the required standard. |

| Acronyms | Keywords /Terms | Description |
|----------|-----------------|---|
| | OS | Occupational Standard(s) |
| | NOS | National Occupational Standard(s) |
| | QP | Qualifications Pack |
| | NSQF | National Skill Qualifications Framework |
| | ITI | Industrial Training Institute |
| | HCV | Heavy Commercial Vehicle |
| | SHE | Safety Health and Environment |
| | SOP | Standard Operating Procedure |
| | TBD | To Be Determined |

National Occupational Standard



Overview

This unit provides Performance Criteria, Knowledge & Understanding and Skills & Ability for activities that need to be carried out for assisting mechanic (Engine) in testing, diagnosing, repairing and maintaining engines.

IES/N1102 Assist in repair and maintenance of equipment's engine parts

| Unit Code | IES/N1102 |
|---|--|
| Unit Title (Task) | Assist in repair and maintenance of equipment's engine parts |
| Description | This unit provides Performance Criteria, Knowledge & Understanding and Skills & Ability for activities that need to be carried out for assisting mechanic (Engine) in testing, diagnosing, repairing and maintaining engines. |
| Scope | <p>This unit/task covers the following:</p> <ul style="list-style-type: none"> Breakdown Repair Assistance Maintenance Work Assistance |
| Performance Criteria(PC) w.r.t. the Scope | |
| Element | Performance Criteria |
| Breakdown Repair Assistance | <p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. Ensure availability of tools, spare parts, equipment and supplies for repair work</p> <p>PC2. Carry out visual inspection for leakage as per the mechanic's instruction</p> <p>PC3. Disassemble broken or defective engine part to facilitate repair as per Standard Operating procedure</p> <p>PC4. Reassemble when repairs are complete as per Standard Operating procedure</p> <p>PC5. Ensure appropriate Positioning of equipment, machinery, physical structures, and other objects for assembly or installation, using hand tools, power tools, and moving equipment as per mechanic's instruction</p> <p>PC6. ensure appropriate condition of tools, equipment, and machines as per Standard Operating Procedure</p> <p>PC7. Ensure cleaning or lubrication of engine components, equipment, instruments, tools, work areas, and other objects, using hand tools, power tools, and cleaning equipment as per the manufacturer's manual</p> <p>PC8. Assist the mechanic in preparing parts list for procurement</p> <p>PC9. Work safely at all times, complying with health and safety and other relevant regulations, directives and guidelines</p> <p>PC10. Handle and dispose waste based on environmental guidelines at the work place</p> |
| Maintenance Work assistance | <p>PC11. Follow the maintenance schedule as per manufacturer's manual</p> <p>PC12. Assist in replacing the scheduled spare parts as per mechanic's instruction</p> <p>PC13. Assist in Replenish / change the consumables</p> <p>PC14. Perform visual inspection to Verify in appropriate sequence, for the engine, as per service manual, the following</p> <ul style="list-style-type: none"> leakage from parts breakage of parts unusual noise under-rated performance <p>PC15. Check the engine indication as per manufacturer's manual</p> <p>PC16. Check Air Filter as per manufacturer's manual</p> <p>PC17. Clean Air Filter as per manufacturer's manual</p> <p>PC18. Check Engine oil & coolant level as per manufacturer's manual</p> |

IES/N1102 Assist in repair and maintenance of equipment's engine parts

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|---|---|
| | <p>PC19. Report any instances where the parts need to be changed/repaired as per company's guidelines</p> <p>PC20. Assist to Change/Repair the defective part as per mechanic's instructions</p> <p>PC21. Assist in post repair trials as per mechanic's instructions</p> |
| Knowledge and Understanding (K) | |
| A. Organizational Context (Knowledge of the company / organization and its processes) | <p>The user/individual on the job needs to know and understand:</p> <p>KA1. The organization's procedures and guidelines related to Breakdown & Maintenance services</p> <p>KA2. The performance standards & procedures followed in the company</p> <p>KA3. Reporting structure in the company</p> <p>KA4. Escalation matrix for reporting unresolved problems</p> <p>KA5. Timeframe in which the complaint/problem should be resolved</p> <p>KA6. Work target and review mechanism with supervisor for obtaining/ giving feedback related to performance process</p> <p>KA7. Location of tools</p> <p>KA8. Contact person in case of queries on procedure or products</p> <p>KA9. Location and process for storage and disposal of waste material</p> <p>KA10. Safety Policy of the company</p> |
| B. Technical Knowledge | <p>The user/individual on the job needs to know and understand:</p> <p>KB1. Manufacturer's specification of the engine in use</p> <p>KB2. Techniques used to diagnose the faults through visual inspection</p> <p>KB3. Methods to remove component from engine system without damage to the components or surrounding structure</p> <p>KB4. Usage of various hand tools (such as spanners, sockets, screwdrivers, pliers, torque wrenches)</p> <p>KB5. Methods to check that the tools and equipment to be used are correctly calibrated, and are in a safe, tested and serviceable condition</p> <p>KB6. Method to use all tools correctly, check and store after use</p> <p>KB7. Methods to lay the removed components out in a logical sequence to aid re-assembly,</p> <p>KB8. Methods that can be used to keep component parts together or in the order that they were removed</p> <p>KB9. Usage of tools in the rectification operations (such as alignment tools, torque wrenches, presses)</p> <p>KB10. Usage of sealants and lubricants of the correct specification for the vehicle</p> <p>KB11. Techniques to Clean/service different parts of engine</p> <p>KB12. The hazards associated with diagnosing and rectifying engine faults</p> <p>KB13. Usage of tools and equipment to minimize & reduce any risk</p> |
| Skills (S) | |
| A. Core Skills / Generic Skills | <p>Writing Skills</p> <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. Write, as required, in English or vernacular language</p> <p>SA2. Record and document the basic details of repairs and maintenance performed on various aggregates/ components</p> |

IES/N1102 Assist in repair and maintenance of equipment's engine parts

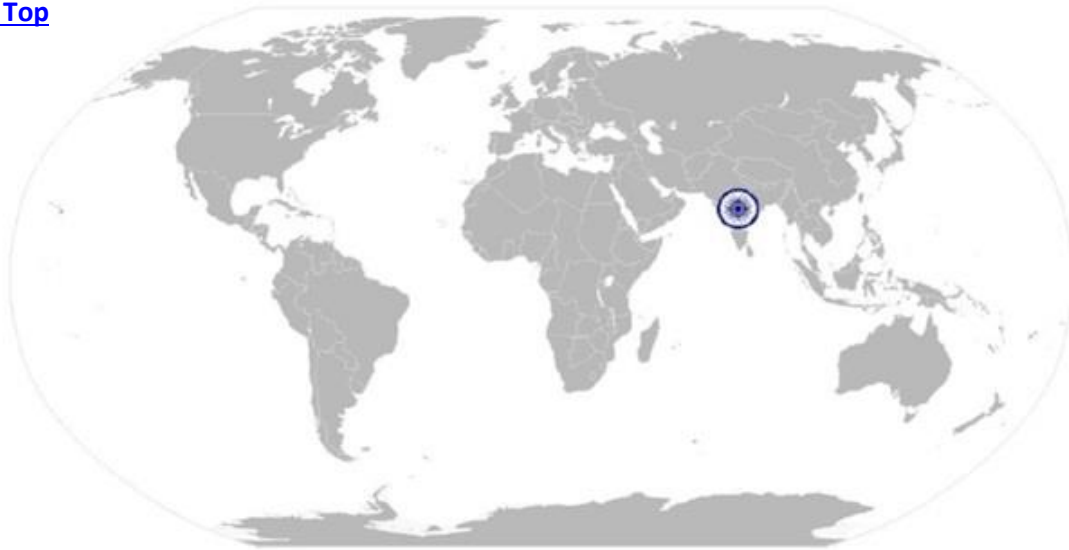
| | |
|-------------------------------|---|
| | Reading Skills |
| | <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA3. Read work orders, specifications etc. related to the job role</p> <p>SA4. Read the maintenance manual for understanding basic specifications of the equipment/ process to be undertaken</p> <p>SA5. Refer to operator and maintenance manuals to support work tasks</p> |
| | Oral Communication (Listening and Speaking Skills) |
| | <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA6. Interact with the mechanic/ supervisors, as required, to seek clarifications and understand issues</p> |
| B. Professional Skills | Decision Making |
| | <p>The user/ individual on the job needs to know and understand how to:</p> <p>SB1. Evaluate the situation to decide on seeking assistance from manager/ peers</p> |
| | Plan and Organize |
| | <p>The user/ individual on the job needs to know and understand how to:</p> <p>SB2. Plan, prioritize and sequence work operations as per required schedule and location</p> <p>SB3. Organize and analyze information relevant to work</p> |
| | Customer Centricity |
| | <p>The user/ individual on the job needs to know and understand how to:</p> <p>SB4. Provide service of the highest order to ensure customer satisfaction</p> |
| | Problem Solving |
| | <p>The user/ individual on the job needs to know and understand how to:</p> <p>SB5. Assist in repair and maintenance of equipment under the supervision of the mechanic</p> <p>SB6. Bring any noticeable issue in the component/sub-assemblies currently working on or otherwise to the attention of the mechanic</p> |
| | Analytical Thinking |
| | <p>The user/ individual on the job needs to know and understand how to:</p> <p>SB7. Evaluate the complexity of the tasks to determine if any assistance required from manager/ peers</p> |
| | Critical Thinking |
| | <p>The user/ individual on the job needs to know and understand how to:</p> <p>SB8. Analyse, evaluate and apply the information gathered from observation, experience, reasoning to act efficiently and effectively</p> |

IES/N1102 Assist in repair and maintenance of equipment's engine parts

NOS Version Control

| NOS Code | IES/N1102 | | |
|---------------------|------------------------------|------------------|----------|
| Credits(NSQF) | TBD | Version number | 1.0 |
| Sector | Infrastructure Equipment | Drafted on | 16/02/15 |
| Industry Sub-sector | Equipment service and spares | Last reviewed on | 31/03/15 |
| Occupation | Equipment Maintenance | Next review date | 31/03/15 |

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IES/N7801 Maintain the work area, tools and machine to support the operations

National Occupational Standard



Overview

This unit provides Performance Criteria, Knowledge & Understanding and Skills & Ability for activities that are needed to Maintain the work area, tools and machine to support the operations.

IES/N7801 Maintain the work area, tools and machine to support the operations

National Occupational Standard

| Unit Code | IES/N7801 |
|---|---|
| Unit Title (Task) | Maintain the work area, tools and machine to support the operations |
| Description | This unit provides Performance Criteria, Knowledge & Understanding and Skills & Ability for activities that are needed to Maintain the work area, tools and machine to support the operations. |
| Scope | <p>This unit/task covers the following:</p> <ul style="list-style-type: none"> Work area / tools / machinery maintenance at work |
| Performance Criteria(PC) w.r.t. the Scope | |
| Element | Performance Criteria |
| Work area / tools / machinery maintenance at work | <p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. Ensure safe handling of materials, machinery, equipment and tools</p> <p>PC2. Assist in carrying out checks to ensure the environmental conditions required are met</p> <p>PC3. Follow correct lifting and handling procedures</p> <p>PC4. Follow instructions with regard to materials to minimize waste</p> <p>PC5. Ensure a clean and hazard free working area</p> <p>PC6. Maintain tools and equipment as per organization guidelines and manufacturer's instructions</p> <p>PC7. Report the need for maintenance and/or cleaning outside your area of responsibility</p> <p>PC8. Report unsafe equipment and other dangerous occurrences</p> <p>PC9. Ensure good condition of the appropriate machine guards for equipment</p> <p>PC10. Ensure use of appropriate cleaning equipment and methods appropriate for the work to be carried out</p> <p>PC11. Carry out cleaning according to schedules and limits of responsibility</p> <p>PC12. Ensure safe disposal of waste</p> |
| Knowledge and Understanding (K) | |
| A. Organizational Context (Knowledge of the company / organization and its processes) | <p>The user/individual on the job needs to know and understand:</p> <p>KA1. The organization's procedures and guidelines related to Breakdown & Maintenance services</p> <p>KA2. The performance standards & procedures followed in the company</p> <p>KA3. Reporting structure in the company</p> <p>KA4. Escalation matrix for reporting unresolved problems</p> <p>KA5. Timeframe in which the complaint/problem should be resolved</p> <p>KA6. Work target and review mechanism with supervisor for obtaining/giving feedback related to performance process</p> <p>KA7. Location of tools</p> <p>KA8. Contact person in case of queries on procedure or products</p> <p>KA9. Location and process for storage and disposal of waste material</p> <p>KA10. Safety Policy of the company</p> |
| B. Technical Knowledge | <p>The user/individual on the job needs to know and understand:</p> <p>KB1. Work instructions and specifications and interpret them accurately</p> <p>KB2. Lifting and handling procedures</p> |

IES/N7801 Maintain the work area, tools and machine to support the operations

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| | <p>KB3. The importance of taking action when problems are identified</p> <p>KB4. Different ways of minimizing waste</p> <p>KB5. Different types of machine guards for equipment</p> <p>KB6. The importance of running maintenance and regular cleaning</p> <p>KB7. Effects of contamination on products i.e. machine oil, dirt</p> <p>KB8. Maintenance procedures and manufacturer's instructions</p> <p>KB9. Different types of cleaning equipment/ substances and their use</p> |
| Skills (S) | |
| A. Core Skills / Generic Skills | Writing Skills |
| | The user/ individual on the job needs to know and understand how to: |
| | SA1. Write, as required, in English or vernacular language |
| | Reading Skills |
| | The user/ individual on the job needs to know and understand how to: |
| B. Professional Skills | SA2. Read instructions, guidelines/procedures/rules |
| | Oral Communication (Listening and Speaking Skills) |
| | The user/ individual on the job needs to know and understand how to: |
| | SA3. Interact with the mechanic/ supervisors, as required, to seek clarifications and understand issues |
| | Decision Making |
| B. Professional Skills | The user/ individual on the job needs to know and understand how to: |
| | SB1. Evaluate the situation to decide on seeking assistance from superiors/ peers |
| | Plan and Organize |
| | The user/ individual on the job needs to know and understand how to: |
| | SB2. Organize and analyze information relevant to work |
| B. Professional Skills | SB3. Plan and organize work area, tools, equipment and materials to minimise any risk for health and safety related incident/accident |
| | Customer Centricity |
| | The user/ individual on the job needs to know and understand how to: |
| | SB4. Ensure that the service provided is of the highest order to ensure customer satisfaction |
| | Problem Solving |
| B. Professional Skills | The user/ individual on the job needs to know and understand how to: |
| | SB5. Seek appropriate assistance from other sources to resolve problems |
| | Analytical Thinking |
| | The user/ individual on the job needs to know and understand how to: |
| | SB6. Identify cause and effect relations in their area of work |
| B. Professional Skills | Critical Thinking |
| | The user/ individual on the job needs to know and understand how to: |
| | SB7. Apply balanced judgment to different situations |

IES/N7801 Maintain the work area, tools and machine to support the operations

NOS Version Control

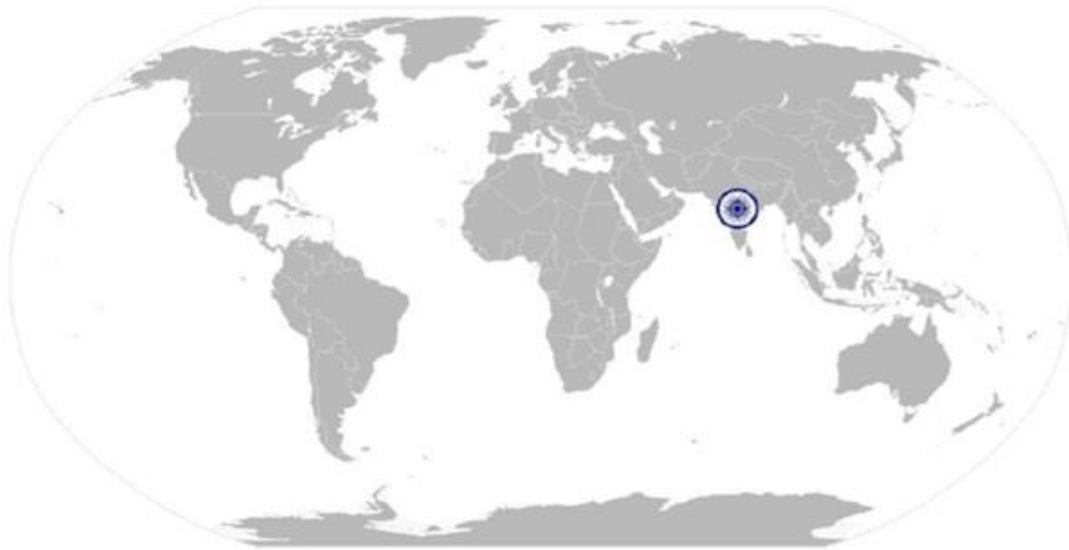
| NOS Code | IES/N7801 | | |
|---------------------|------------------------------|------------------|----------|
| Credits(NSQF) | TBD | Version number | 1.0 |
| Sector | Infrastructure Equipment | Drafted on | 16/02/15 |
| Industry Sub-sector | Equipment service and spares | Last reviewed on | 31/03/15 |
| Occupation | Equipment Maintenance | Next review date | 31/03/15 |

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IES/N7602**Comply with workshop health and safety guidelines**

National Occupational Standard



Overview

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

IES/N7602

Comply with workshop health and safety guidelines

| Unit Code | IES/N7602 |
|---|---|
| Unit Title (Task) | 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 | <p>This unit/task covers the following:</p> <ul style="list-style-type: none"> Service workshop health and safety |
| Performance Criteria(PC) w.r.t. the Scope | |
| Element | Performance Criteria |
| Service workshop health and safety | <p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. Comply with safety, health, security and environment related regulations/ guidelines as per organizational/ manufacturer's policy</p> <p>PC2. Carry out maintenance operations as per the manufacturer's and workshop related health and safety guidelines/ standard operating procedures</p> <p>PC3. Follow safety regulations and procedures with regard to service workshop hazards and risks</p> <p>PC4. Use appropriate protective clothing/ equipment for specific tasks and work conditions as per service manual</p> <p>PC5. Lift and carry tools/equipment/components safely using correct procedure as per the service manual</p> <p>PC6. Use appropriate tools in a proper manner as given in the service manual</p> <p>PC7. Keep the work area free from clutter and spillage</p> <p>PC8. Store equipment and tools back at designated place post use and inspect to make sure they are not left behind</p> <p>PC9. Handle the storage and disposal of hazardous materials and waste in compliance with health, safety and environmental guidelines</p> <p>PC10. Operate various grades of fire extinguishers, as applicable</p> <p>PC11. Support in administering basic first aid and report to concerned team members, as required, in case of an accident</p> <p>PC12. Respond promptly and appropriately to an accident/ incident or emergency situation, within limits of your role and responsibility</p> <p>PC13. Record and report details related to operations, incidents or accidents, as applicable</p> |
| Knowledge and Understanding (K) | |
| A. Organizational Context (Knowledge of the company / organization and its processes) | <p>The user/individual on the job needs to know and understand:</p> <p>KA1. Health, safety, environmental(HSE) and security related policies/ guidelines of the organization</p> <p>KA2. The importance of complying with health, safety, environmental and security guidelines during workshop operations</p> <p>KA3. Contact details of personnel responsible for Health, Safety and environment (SHE) related matters</p> <p>KA4. Location of workshop store, first aid station and safe assembly points</p> <p>KA5. Concerned personnel to reach out in case of emergencies and</p> |

IES/N7602

Comply with workshop health and safety guidelines

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|--|--|
| | accidents/ incidents KA6. Reporting and documentation procedures for HSE and security matters |
| B. Technical Knowledge | <p>The user/individual on the job needs to know and understand:</p> <p>KB1. Manufacturer's guidelines related to health and safety requirements</p> <p>KB2. Common types of health, safety, environment and security risks related to maintenance operations</p> <p>KB3. Types, use and importance of Personal Protective Equipment (PPE) and other safety clothing</p> <p>KB4. Safe working practices to avoid common hazards and risks</p> <p>KB5. Safe working practices when working with tools and machines</p> <p>KB6. Safe working practices while working in different processes/ confined spaces</p> <p>KB7. Various dangers associated with the use of electrical equipment</p> <p>KB8. Various types of safety signs/ warnings and their meaning</p> <p>KB9. Guidelines for transport, storage and disposal of hazardous materials and waste</p> <p>KB10. Types of common hazards and risks at the workshop including fire, electrical, equipment related</p> <p>KB11. Knowledge of safe lockdown/ stop of machinery use in case of emergencies and incidents/ accidents</p> <p>KB12. Types of fire extinguishers and their use</p> <p>KB13. Common injuries and appropriate basic first aid treatment eg. electrical shock, bleeding, wounds, fractures, minor burns, eye injuries</p> |
| Skills (S) | |
| A. Core Skills / Generic Skills | Writing Skills |
| | The user/ individual on the job needs to know and understand how to: |
| | SA1. Document and report any health and safety related incidents/ accidents |
| | Reading Skills |
| | The user/ individual on the job needs to know and understand how to: |
| | SA2. Read all organizational and equipment related health and safety manuals and documents |
| B. Professional Skills | SA3. Read instructions, guidelines/procedures/rules |
| | Oral Communication (Listening and Speaking Skills) |
| | The user/ individual on the job needs to know and understand how to: |
| | SA4. Give clear instructions to coworkers, subordinates and others |
| B. Professional Skills | Decision Making |
| | The user/ individual on the job needs to know and understand how to: |
| | SB1. Make decisions on a suitable course of action or response in the event of any emergency, health and safety related incidents/accidents |
| | Plan and Organize |
| | The user/ individual on the job needs to know and understand how to: |
| | SB2. Plan and organize own work schedule, work area, tools, equipment and materials to minimise any risk for health and safety related incident/accident |
| B. Professional Skills | Customer Centricity |
| | The user/ individual on the job needs to know and understand how to: |

IES/N7602

Comply with workshop health and safety guidelines

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|--|--|
| | SB3. Build and maintain positive and effective relationships with colleagues and customers |
| | Problem Solving |
| | The user/ individual on the job needs to know and understand how to: |
| | SB4. Identify immediate or temporary solutions to resolve delays |
| | SB5. Seek appropriate assistance from other sources to resolve problems |
| | Analytical Thinking |
| | The user/ individual on the job needs to know and understand how to: |
| | SB6. Identify 'cause and effect' relations in own area of work |
| | Critical Thinking |
| | The user/ individual on the job needs to know and understand how to: |
| | SB7. Apply balanced judgment to different situations |

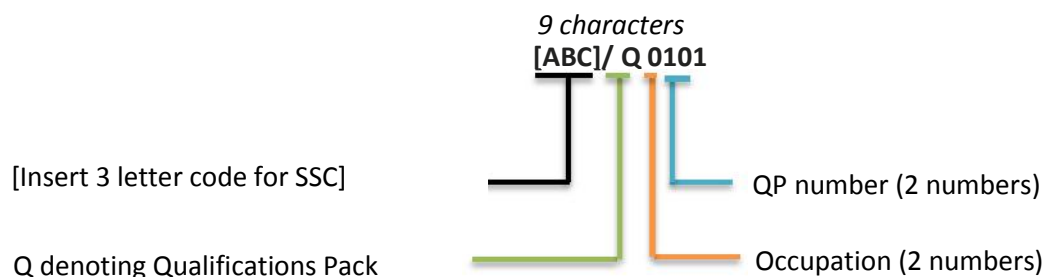
NOS Version Control

| NOS Code | IES/N7602 | | |
|---------------------|------------------------------|------------------|----------|
| Credits(NSQF) | TBD | Version number | 1.0 |
| Sector | Infrastructure Equipment | Drafted on | 16/02/15 |
| Industry Sub-sector | Equipment service and spares | Last reviewed on | 31/03/15 |
| Occupation | Equipment Maintenance | Next review date | 31/03/15 |

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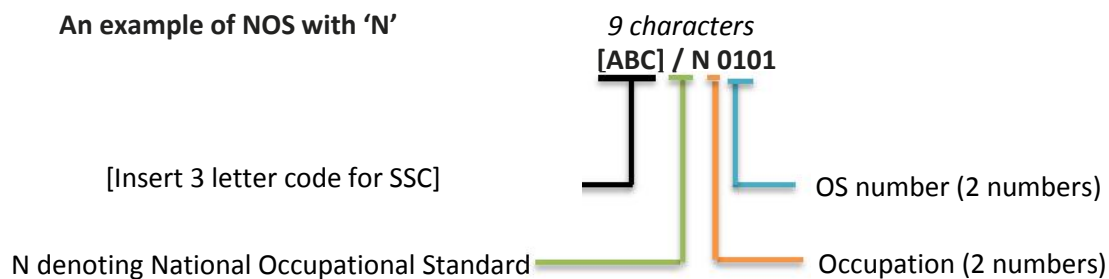
Nomenclature for QP and NOS units

Qualifications Pack



Occupational Standard

An example of NOS with 'N'



Nomenclature for QP and NOS units

The following acronyms/codes have been used in the nomenclature above:

| Sub-sector | Range of Occupation numbers |
|------------------------------|-----------------------------|
| Equipment Operations | 1 to 10 |
| Equipment Service and spares | 11 to 20 |
| Equipment Production | 21 to 40 |
| Equipment Sales | 41 to 50 |
| Equipment Financing | 51 to 55 |
| Core Enablers | 56 to 65 |
| Other Enablers | 66 to 75 |
| Common Occupations | 76 to 85 |

| Sequence | Description | Example |
|------------------|-------------------|---------|
| Three letters | Industry name | IES |
| Slash | / | / |
| Next letter | Whether QP or NOS | N |
| Next two numbers | Occupation code | 01 |
| Next two numbers | OS number | 01 |

CRITERIA FOR ASSESSMENT OF TRAINEES

Job Role Junior Mechanic (Engine)

Qualification Pack IES/Q1102

Sector Skill Council Infrastructure Equipment

Guidelines for Assessment

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each 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 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 this criteria
5. To pass the Qualification Pack, every trainee should score a minimum of 70% aggregate
6. In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack

| NOS | PC | Total Mark | Out Of | Marks Allocation | |
|---|---|------------|--------|------------------|------------------|
| | | | | Theory | Skills Practical |
| 1. IES/N1102 Assist in repair and maintenance of infrastructure equipment's engine parts | PC1. Ensure availability of tools, spare parts, equipment and supplies for repair work | 34 | 2 | 1 | 1 |
| | PC2. Carry out visual inspection for leakage as per the mechanic's instruction | | 2 | 1 | 1 |
| | PC3. Disassemble broken or defective engine part to facilitate repair as per Standard Operating procedure | | 1 | 0 | 1 |
| | PC4. Reassemble when repairs are complete as per Standard Operating procedure | | 2 | 1 | 1 |
| | PC5. Ensure appropriate Positioning of equipment, machinery, physical structures, and other objects for assembly or installation, using hand tools, | | 1 | 0 | 1 |

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| | power tools, and moving equipment as per mechanic's instruction | | | | |
| | PC6. ensure appropriate condition of tools, equipment, and machines as per Standard Operating Procedure | | 1 | 0 | 1 |
| | PC7. Ensure cleaning or lubrication of engine components, equipment, instruments, tools, work areas, and other objects, using hand tools, power tools, and cleaning equipment as per the manufacturer's manual | | 4 | 1 | 3 |
| | PC8. Assist the mechanic in preparing parts list for procurement | | 1 | 0 | 1 |
| | PC9. Work safely at all times, complying with health and safety and other relevant regulations, directives and guidelines | | 2 | 1 | 1 |
| | PC10. Handle and dispose waste based on environmental guidelines at the work place | | 1 | 0 | 1 |
| | PC11. Follow the maintenance schedule as per manufacturer's manual | | 1 | 0 | 1 |
| | PC12. Assist in replacing the scheduled spare parts as per mechanic's instruction | | 1 | 0 | 1 |
| | PC13. Assist in Replenish / change the consumables | | 1 | 0 | 1 |
| | PC14. Perform visual inspection to Verify in appropriate sequence, for the engine, as per service manual, the following <ul style="list-style-type: none"> leakage from parts breakage of parts unusual noise under-rated performance | | 4 | 1 | 3 |
| | PC15. Check the engine indication as per manufacturer's manual | | 1 | 0 | 1 |
| | PC16. Check Air Filter as per manufacturer's manual | | 1 | 0 | 1 |
| | PC17. Clean Air Filter as per manufacturer's manual | | 2 | 1 | 1 |

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| | PC18. Check Engine oil & coolant level as per manufacturer's manual | | 2 | 1 | 1 |
| | PC19. Report any instances where the parts need to be changed/repared as per company's guidelines | | 2 | 1 | 1 |
| | PC20. Assist to Change/Repair the defective part as per mechanic's instructions | | 1 | 0 | 1 |
| | PC21. Assist in post repair trials as per mechanic's instructions | | 1 | 0 | 1 |
| | | Total | 34 | 9 | 25 |
| 2. IES/N7801 Maintain the work area, tools and machine to support the operations | PC1. Ensure safe handling of materials, machinery, equipment and tools | 23 | 2 | 1 | 1 |
| | PC2. Assist in carrying out checks to ensure the environmental conditions required are met | | 3 | 0 | 3 |
| | PC3. Follow correct lifting and handling procedures | | 2 | 1 | 1 |
| | PC4. Follow instructions with regard to materials to minimize waste | | 2 | 1 | 1 |
| | PC5. Ensure a clean and hazard free working area | | 2 | 1 | 1 |
| | PC6. Maintain tools and equipment as per organization guidelines and manufacturer's instructions | | 4 | 1 | 3 |
| | PC7. Report the need for maintenance and/or cleaning outside your area of responsibility | | 2 | 1 | 1 |
| | PC8. Report unsafe equipment and other dangerous occurrences | | 1 | 0 | 1 |
| | PC9. Ensure good condition of the appropriate machine guards for equipment | | 1 | 0 | 1 |
| | PC10. Ensure use of appropriate cleaning equipment and methods appropriate for the work to be carried out | | 2 | 1 | 1 |
| | PC11. Carry out cleaning according to schedules and limits of responsibility | | 1 | 0 | 1 |

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|--|--|--------------|-----------|----------|-----------|
| | PC12. Ensure safe disposal of waste. | | 1 | 0 | 1 |
| | | Total | 23 | 7 | 23 |
| 3. IES/N7602 Comply with workshop health and safety guidelines | PC1. Comply with safety, health, security and environment related regulations/ guidelines as per organizational/ manufacturer's policy | 28 | 2 | 1 | 1 |
| | PC2. Carry out maintenance operations as per the manufacturer's and workshop related health and safety guidelines/ standard operating procedures | | 4 | 1 | 3 |
| | PC3. Follow safety regulations and procedures with regard to service workshop hazards and risks | | 2 | 1 | 1 |
| | PC4. Use appropriate protective clothing/ equipment for specific tasks and work conditions as per service manual | | 2 | 1 | 1 |
| | PC5. Lift and carry tools/equipment/components safely using correct procedure as per the service manual | | 4 | 1 | 3 |
| | PC6. Use appropriate tools in a proper manner as given in the service manual | | 4 | 1 | 3 |
| | PC7. Keep the work area free from clutter and spillage | | 2 | 1 | 1 |
| | PC8. Store equipment and tools back at designated place post use and inspect to make sure they are not left behind | | 1 | 0 | 1 |
| | PC9. Handle the storage and disposal of hazardous materials and waste in compliance with health, safety and environmental guidelines | | 1 | 0 | 1 |
| | PC10. Operate various grades of fire extinguishers, as applicable | | 2 | 1 | 1 |
| | PC11. Support in administering basic first aid and report to concerned team members, as required, in case of an accident | | 1 | 0 | 1 |
| | PC12. Respond promptly and appropriately to an accident/ incident or emergency situation, within limits of your role and responsibility | | 1 | 0 | 1 |

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|--|--|--------------|-----------|----------|-----------|
| | PC13. Record and report details related to operations, incidents or accidents, as applicable | | 2 | 1 | 1 |
| | | Total | 28 | 9 | 19 |