

Qualification Pack



· TRANSIT MIXER

Transit Mixer Operator

QP Code: IES/Q0118

NSQF Level: 4

Infrastructure Equipment Skill Council || Infrastructure Equipment Skill Council, Avik Royale-First Floor
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IES/Q0118: Transit Mixer Operator

Brief Job Description

A transit mixer operator drives and controls the mixer operations safely and as per schedule. He is responsible for loading the required quantity of aggregates, sand and cement as per mix design into the drum and discharge the concrete to the desired location at the site after mixing the batched aggregates.

Personal Attributes

The job requires the individual to be extremely careful and diligent and have high level of concentration. Hard work and strong work ethics, courteous behavior with co-workers are equally desirable. He should also be physically agile, strong, have good eye sight and not suffer from colour-blindness.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. [IES/N0152: Carry out Pre-operation checks on a transit mixer](#)
2. [IES/N0153: Operate a transit mixer](#)
3. [IES/N0154: Perform routine maintenance and troubleshooting of a transit mixer](#)
4. [IES/N7601: Comply with worksite health and safety guidelines](#)

Qualification Pack (QP) Parameters

Sector	Infrastructure Equipment
Sub-Sector	Equipment Operations
Occupation	Operator
Country	India
NSQF Level	4
Aligned to NCO/ISCO/ISIC Code	NCO-2004/8212.30
Minimum Educational Qualification & Experience	8th Class with 2-3 Years of experience For existing operators, experience as Junior Transit Mixer Operator OR 10th Class with 0-6 Months of experience For freshers

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Minimum Level of Education for Training in School	
Pre-Requisite License or Training	1. Certification Training in Transit Mixer operations preferably.2. Must have valid Light Commercial Vehicle Driving License (LCV)
Minimum Job Entry Age	18 Years
Last Reviewed On	26/04/2016
Next Review Date	30/06/2020
NSQC Approval Date	09/10/2017
Version	1.0

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IES/N0152: Carry out Pre-operation checks on a transit mixer

Description

This unit insight into activities that need to be carried out to perform pre-check and prepare the transit mixer for a shift

Scope

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

Elements and Performance Criteria

Pre-operation Checks

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

- PC1.** visually inspect the body components for cracks and bearing wear
- PC2.** check if tyre inflation pressure corresponds to that prescribed norms of the manufacturer
- PC3.** ensure that wheel nuts are firmly tightened as per prescribed norms of the manufacturer
- PC4.** check oil levels of engine transmission, radiator coolant and brake
- PC5.** check hydraulic oil levels as per the prescribed norms of the manufacturer
- PC6.** check water system for leaks and clean water pump filter per the prescribed norms of the manufacturer
- PC7.** drain water and sediment from the fuel tank as per operational manual
- PC8.** ensure that the mixer drums are clean and free from concrete
- PC9.** ensure not to fill the fuel tank while engine is running
- PC10.** check battery electrolyte level as per the prescribed norms of the manufacturer
- PC11.** check electronic weighing system for any malfunctioning
- PC12.** apply grease to all grease nipples as per the prescribed norms of the manufacturer
- PC13.** ensure that the area is clear of all personnel and equipment before moving the equipment
- PC14.** ensure drivers seat, steps and handles are always clean and free from any foreign object or grease trials, oil mud and unfastened objects in the cabin
- PC15.** ensure proper condition of parking brake, main horn, reverse horn and head light
- PC16.** check all protection and safety for appropriate position for operation

Reporting and documentation

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

- PC17.** maintain a checking/maintenance logbook to record all activities performed before starting the machine
- PC18.** report defects precisely to the supervisor if beyond scope of the role

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

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- 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.** timeframe in which the complaint/problem should be resolved
- KU5.** location of tools
- KU6.** contact person in case of queries on procedure or equipments
- KU7.** location and process for storage and disposal of waste material
- KU8.** safety policy of the company
- KU9.** different types of concrete mixer and their use and function
- KU10.** components of concrete mixer and its functioning- - mixing drum - loading bucket - discharge hopper - discharge chute - driving turret - hydraulic pumps - water system
- KU11.** introduction to engine transmission, their use and function
- KU12.** basic electrical functioning and repairs
- KU13.** different types of hydraulic mechanisms
- KU14.** steering mechanisms and correct way of steering on slopes
- KU15.** significance and methods of lubricating different parts of mixer
- KU16.** procedure of filling diesel and coolant in the machine
- KU17.** the various types of hand signals used on the site
- KU18.** instrument panel/cabin controls, their location and operation
- KU19.** controls, levers and switches in order to operate the mixer properly
- KU20.** optimal engine oil pressure, radiator coolant temperature
- KU21.** visual checks to identify damage, defects, cracks or leaks beforehand
- KU22.** response to emergencies e.g. correct way to use fire extinguisher

Generic Skills (GS)

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

- GS1.** record any deviations/ incidents as per prescribed norms
- GS2.** read and comprehend basic english and regional language as applicable to read manuals of operations, guidelines, etc.
- GS3.** comprehend basic sign and symbols at the worksite
- GS4.** give clear instructions to co-workers, subordinates and other personnel
- GS5.** use correct technical terms while interacting with supervisor
- GS6.** decide when to conduct maintenance checks
- GS7.** work with supervisors/ team mates to carry out work related tasks
- GS8.** plan work according to the required schedule and location
- GS9.** plan for cleaning and lubricating the activities every day
- GS10.** provide service of the highest order to ensure customer satisfaction
- GS11.** identify immediate or temporary solutions to resolve mechanical issues
- GS12.** judge when to seek assistance from supervisor



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- GS13.** identify cause and effect relations in his area of work
- GS14.** analyse, evaluate and apply the information gathered from observations, 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>Pre-operation Checks</i>	10	18	-	-
PC1. visually inspect the body components for cracks and bearing wear	1	2	-	-
PC2. check if tyre inflation pressure corresponds to that prescribed norms of the manufacturer	1	1	-	-
PC3. ensure that wheel nuts are firmly tightened as per prescribed norms of the manufacturer	1	1	-	-
PC4. check oil levels of engine transmission, radiator coolant and brake	1	1	-	-
PC5. check hydraulic oil levels as per the prescribed norms of the manufacturer	0.5	1	-	-
PC6. check water system for leaks and clean water pump filter per the prescribed norms of the manufacturer	1	1	-	-
PC7. drain water and sediment from the fuel tank as per operational manual	0.5	2	-	-
PC8. ensure that the mixer drums are clean and free from concrete	0.5	0.5	-	-
PC9. ensure not to fill the fuel tank while engine is running	0.5	0.5	-	-
PC10. check battery electrolyte level as per the prescribed norms of the manufacturer	0.5	1	-	-
PC11. check electronic weighing system for any malfunctioning	1	1	-	-
PC12. apply grease to all grease nipples as per the prescribed norms of the manufacturer	0.5	2	-	-
PC13. ensure that the area is clear of all personnel and equipment before moving the equipment	0.5	1	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC14. ensure drivers seat, steps and handles are always clean and free from any foreign object or grease trials, oil mud and unfastened objects in the cabin	0.5	1	-	-
PC15. ensure proper condition of parking brake, main horn, reverse horn and head light	-	1	-	-
PC16. check all protection and safety for appropriate position for operation	-	1	-	-
<i>Reporting and documentation</i>	-	2	-	-
PC17. maintain a checking/maintenance logbook to record all activities performed before starting the machine	-	1	-	-
PC18. report defects precisely to the supervisor if beyond scope of the role	-	1	-	-
NOS Total	10	20	-	-

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National Occupational Standards (NOS) Parameters

NOS Code	IES/N0152
NOS Name	Carry out Pre-operation checks on a transit mixer
Sector	Infrastructure Equipment
Sub-Sector	Equipment Operations
Occupation	Operator
NSQF Level	4
Credits	TBD
Version	1.0
Last Reviewed Date	26/04/2016
Next Review Date	30/04/2018
NSQC Clearance Date	

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IES/N0153: Operate a transit mixer

Description

This unit provides insight into activities that are required for operating a transit mixer.

Scope

This unit/task covers the following: Mixer operations Shutdown procedures Reporting and documentation

Elements and Performance Criteria

Mixer operations

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

- PC1.** plan and organize the job according to instructions from the supervisor
- PC2.** inspect the worksite to identify and loose soil hidden deep trenches or marshy patches where a mixer could get stuck
- PC3.** fill water tanks ready for daily use as per organizational standards
- PC4.** carry out all peruse and running checks as per organizational standards
- PC5.** wear seat belt and adjust seat position to ones comfort
- PC6.** start the engine using the starting key
- PC7.** ensure parking brake is engaged and electric gear selector is in neutral position before starting the engine
- PC8.** select appropriate type of steering mechanism as per the situational requirements
- PC9.** load correct proportions of aggregates, cement, water and admixtures as per the production requirements
- PC10.** ensure mixer load and operating speed is within specified limits as per the manufacturers
- PC11.** adjust the direction of drum rotation for mixing as per the requirement
- PC12.** adjust the concrete chute to the discharge position
- PC13.** discharge concrete to the desired location at the site
- PC14.** use the emergency stop button to disable all power to the transit mixer in case of a crisis as per operational manual

procedures

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

- PC15.** turn off ignition after finishing operations as per the instructions given in the instructional manual
- PC16.** ensure gear is in neutral position post usage
- PC17.** ensure bucket drum and concrete-skid are cleaned as per the manufacturers instructional manual
- PC18.** remove attachments after use
- PC19.** ensure that the machine is secured when left unattended

Reporting and documentation

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

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PC20. maintain a production logbook to record all activities performed

PC21. report defects precisely to the supervisor if beyond scope of the role

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. timeframe in which the complaint/problem should be resolved

KU5. location of tools

KU6. contact person in case of queries on procedure or equipments

KU7. location and process for storage and disposal of waste material

KU8. safety policy of the company

KU9. various type and grade of materials- cement, aggregates, sand, admixture etc.

KU10. types of lubricants

KU11. different types of concrete mixer, their use and function

KU12. machine capacities and features such as speed rate, braking, steering, stability and load

KU13. components of concrete mixer and its functioning- - mixing drum - loading bucket - discharge hopper - discharge chute - driving turret - hydraulic pumps - water system

KU14. introduction to engine transmission, their use and function

KU15. basic electrical functioning and repairs

KU16. different types of hydraulic mechanisms

KU17. steering mechanisms and correct way of steering on slopes

KU18. significance and methods of lubricating different parts of mixer

KU19. procedure of filling diesel, coolant in the machine

KU20. the various types of hand signals used on the site and road

KU21. instrument panel/cabin controls, their location and operation

KU22. controls, levers and switches in order to operate the mixer properly

KU23. optimal engine oil pressure, radiator coolant temperature

KU24. visual checks to identify damage, defects, cracks or leaks beforehand

KU25. correct way to use fire extinguisher

Generic Skills (GS)

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

GS1. record any deviations/ incidents as per prescribed norms

GS2. read and comprehend basic english and regional language as applicable to read manuals of operations, guidelines, etc.

GS3. interpret stakes and signage on the road and during worksite operations

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- GS4.** give clear instructions to co-workers, subordinates and other personnel
- GS5.** use correct technical terms while interacting with supervisor
- GS6.** assess for any damage/faulty component in the transit mixer and take action accordingly
- GS7.** decide when to perform appropriate driving operations i.e forward, reverse, 'u' turn, tight spot
- GS8.** work with supervisors/ team mates to carry out work related tasks
- GS9.** plan work according to the required schedule and location
- GS10.** provide service of the highest order to ensure customer satisfaction
- GS11.** identify immediate or temporary solutions to resolve mechanical issues
- GS12.** judge when to seek assistance from supervisor
- GS13.** identify possible ways to improve operational efficiency
- GS14.** suggest methods to avoid accidents/errors while operating machine
- GS15.** 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>Mixer operations</i>	8.5	16.5	-	-
PC1. plan and organize the job according to instructions from the supervisor	1	1	-	-
PC2. inspect the worksite to identify and loose soil hidden deep trenches or marshy patches where a mixer could get stuck	1	0.5	-	-
PC3. fill water tanks ready for daily use as per organizational standards	0.5	0.5	-	-
PC4. carry out all peruse and running checks as per organizational standards	1	1	-	-
PC5. wear seat belt and adjust seat position to ones comfort	0.5	0.5	-	-
PC6. start the engine using the starting key	-	0.5	-	-
PC7. ensure parking brake is engaged and electric gear selector is in neutral position before starting the engine	0.5	0.5	-	-
PC8. select appropriate type of steering mechanism as per the situational requirements	0.5	1	-	-
PC9. load correct proportions of aggregates, cement, water and admixtures as per the production requirements	1	2	-	-
PC10. ensure mixer load and operating speed is within specified limits as per the manufacturers	1	2	-	-
PC11. adjust the direction of drum rotation for mixing as per the requirement	0.5	2	-	-
PC12. adjust the concrete chute to the discharge position	-	2	-	-
PC13. discharge concrete to the desired location at the site	-	2	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC14. use the emergency stop button to disable all power to the transit mixer in case of a crisis as per operational manual	1	1	-	-
<i>procedures</i>	2.5	4.5	-	-
PC15. turn off ignition after finishing operations as per the instructions given in the instructional manual	0.5	0.5	-	-
PC16. ensure gear is in neutral position post usage	0.5	0.5	-	-
PC17. ensure bucket drum and concrete-skid are cleaned as per the manufacturers instructional manual	0.5	2	-	-
PC18. remove attachments after use	0.5	0.5	-	-
PC19. ensure that the machine is secured when left unattended	0.5	1	-	-
<i>Reporting and documentation</i>	1	2	-	-
PC20. maintain a production logbook to record all activities performed	0.5	1	-	-
PC21. report defects precisely to the supervisor if beyond scope of the role	0.5	1	-	-
NOS Total	12	23	-	-

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National Occupational Standards (NOS) Parameters

NOS Code	IES/N0153
NOS Name	Operate a transit mixer
Sector	Infrastructure Equipment
Sub-Sector	Equipment Operations
Occupation	Operator
NSQF Level	4
Credits	TBD
Version	1.0
Last Reviewed Date	26/04/2016
Next Review Date	30/04/2018
NSQC Clearance Date	

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IES/N0154: Perform routine maintenance and troubleshooting of a transit mixer

Description

This unit provides insight into activities that are required for performing routine maintenance and troubleshooting on the transit mixer

Scope

This unit/task covers the following:

- Routine maintenance
- Basic diagnostics and troubleshooting
- Documentation and Reporting

Elements and Performance Criteria

Routine maintenance

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

- PC1.** assess the right service schedule by tracking machine operating hours
- PC2.** read and observe all plates and instructions concerning safety that are attached onto the vehicle
- PC3.** clean footplates, pedals and steps free from mud, dirt, ice and snow at regular intervals
- PC4.** check and maintain the tire rims, air pressure, wheel nuts and treads as per manufacturers indicators
- PC5.** replenish coolants, lubricants and fluids everyday as per instructions from the manufacturer from the manufacturer
- PC6.** grease all greasing pins and pivot points everyday as per instructions from the manufacturer
- PC7.** clean and adjust windows mirrors, lights and reflectors daily as per the requirement
- PC8.** check battery levels and condition of the terminals
- PC9.** adjust alternator belt tension and feed pump while engine is off
- PC10.** keep the tools in the appropriate place after use

Basic diagnostics and troubleshooting

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

- PC11.** ensure the machine is on firm and level ground before attempting to carry out any maintenance; track machine operating hours to assess the right service schedule
- PC12.** turn off the main power from panel completely before carrying out maintenance work
- PC13.** ensure that bucket arm is lowered before any maintenance operations
- PC14.** lubricate fifth wheel and pinion with grease or equivalent lubrication using a hard bristle brush
- PC15.** complete timely and legibly daily/weekly maintenance sheets as provided by the company
- PC16.** ensure that no maintenance task on the engine is performed when running or still hot
- PC17.** use appropriate tools are used while troubleshooting

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PC18. diagnose the problem

PC19. handle and dispose waste based on environmental guidelines at the work place

Reporting and documentation

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

PC20. follow reporting procedures as laid down by the employer

PC21 . complete all documentation in the prescribed standards in a timely manner

PC22. report defects precisely to the supervisor if beyond scope of his role

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. job specific documents e.g. daily maintenance checklist and importance of the same

KU2. common hazards in the work area and workplace procedures to deal with them

KU3. safety policy of the company

KU4. emergency organization of the specific work site

KU5. risk and impact of not following defined procedures/work instructions

KU6. the performance standards & procedures followed in the company

KU7. reporting structure in the company

KU8. timeframe in which the complaint/problem should be resolved

KU9. implications of delays in process to the company

KU10. cost of equipment and loss for the company that result from damage of equipment

KU11. location of tools

KU12. contact person in case of queries on procedure or products

KU13. location and process for storage and disposal of waste material

KU14. responsibilities of the assigned job role

KU15. control and switches needed to operate the transit mixer appropriately

KU16. basic physics and mechanics involved in various functions of the transit mixer

KU17. common defects and general causes of breakdown

KU18. response to emergency situations

KU19. the optimal levels of control indicators e.g. fuel gauge, engine oil pressure and temperature

KU20. possible sources of any unusual sound emanating from the engine

Generic Skills (GS)

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

GS1. record any deviations/ incidents as per prescribed norms

GS2. read basic english and regional language as applicable to understand manuals of operations, guidelines, etc

GS3. give clear instructions to co-workers, subordinates and other personnel

GS4. use correct technical terms while interacting with supervisor

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- GS5.** decide when to conduct maintenance checks
- GS6.** evaluate the decide to conduct basic trouble shooting
- GS7.** work with supervisors/ team mates to carry out work related tasks
- GS8.** plan work according to the required schedule and location
- GS9.** plan for regular maintenance on a daily basis before machine operations
- GS10.** provide service of the highest order to ensure customer satisfaction
- GS11.** identify immediate or temporary solutions to resolve mechanical issues
- GS12.** judge when to seek assistance from supervisor
- GS13.** identify possible ways to improve operational efficiency
- GS14.** check for damages and diagnose common problems in the mixer and take relevant actions
- GS15.** 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>Routine maintenance</i>	3.5	6.5	-	-
PC1. assess the right service schedule by tracking machine operating hours	0.5	0.5	-	-
PC2. read and observe all plates and instructions concerning safety that are attached onto the vehicle	0.5	0.5	-	-
PC3. clean footplates, pedals and steps free from mud, dirt, ice and snow at regular intervals	-	0.5	-	-
PC4. check and maintain the tire rims, air pressure, wheel nuts and treads as per manufacturers indicators	0.5	0.5	-	-
PC5. replenish coolants, lubricants and fluids everyday as per instructions from the manufacturer from the manufacturer	0.5	1	-	-
PC6. grease all greasing pins and pivot points everyday as per instructions from the manufacturer	0.5	0.5	-	-
PC7. clean and adjust windows mirrors, lights and reflectors daily as per the requirement	-	0.5	-	-
PC8. check battery levels and condition of the terminals	0.5	0.5	-	-
PC9. adjust alternator belt tension and feed pump while engine is off	-	1	-	-
PC10. keep the tools in the appropriate place after use	0.5	1	-	-
<i>Basic diagnostics and troubleshooting</i>	3.5	5	-	-
PC11. ensure the machine is on firm and level ground before attempting to carry out any maintenance; track machine operating hours to assess the right service schedule	0.5	0.5	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. turn off the main power from panel completely before carrying out maintenance work	0.5	0.5	-	-
PC13. ensure that bucket arm is lowered before any maintenance operations	0.5	0.5	-	-
PC14. lubricate fifth wheel and pinion with grease or equivalent lubrication using a hard bristle brush	0.5	0.5	-	-
PC15. complete timely and legibly daily/weekly maintenance sheets as provided by the company	-	0.5	-	-
PC16. ensure that no maintenance task on the engine is performed when running or still hot	0.5	0.5	-	-
PC17. use appropriate tools are used while troubleshooting	0.5	0.5	-	-
PC18. diagnose the problem	-	0.5	-	-
PC19. handle and dispose waste based on environmental guidelines at the work place	0.5	1	-	-
<i>Reporting and documentation</i>	-	1.5	-	-
PC20. follow reporting procedures as laid down by the employer	-	0.5	-	-
PC21 . complete all documentation in the prescribed standards in a timely manner	-	0.5	-	-
PC22. report defects precisely to the supervisor if beyond scope of his role	-	0.5	-	-
NOS Total	7	13	-	-

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National Occupational Standards (NOS) Parameters

NOS Code	IES/N0154
NOS Name	Perform routine maintenance and troubleshooting of a transit mixer
Sector	Infrastructure Equipment
Sub-Sector	Equipment Operations
Occupation	Operator
NSQF Level	4
Credits	TBD
Version	1.0
Last Reviewed Date	26/04/2016
Next Review Date	30/04/2018
NSQC Clearance Date	

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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	-	-

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	IES/N7601
NOS Name	Comply with worksite health and safety guidelines
Sector	Infrastructure Equipment
Sub-Sector	Equipment Operations
Occupation	Operator
NSQF Level	4
Credits	TBD
Version	1.0
Last Reviewed Date	31/03/2015
Next Review Date	31/03/2017
NSQC Clearance Date	18/06/2015

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/N0152.Carry out Pre-operation checks on a transit mixer	10	20	-	-	30	26
IES/N0153.Operate a transit mixer	12	23	-	-	35	30
IES/N0154.Perform routine maintenance and troubleshooting of a transit mixer	7	13	-	-	20	18

Qualification Pack

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
IES/N7601. Comply with worksite health and safety guidelines	6	24	-	-	30	26
Total	35	80	-	-	115	100

Acronyms

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

Qualification Pack

Glossary

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

Qualification Pack

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