

## 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 Transit Mixer Operator

<b>SECTOR:</b>	INFRASTRUCTURE EQUIPMENT
<b>SUB SECTOR:</b>	Equipment Operations
<b>OCCUPATION:</b>	Operator
<b>REFERENCE ID:</b>	IES/Q0119
<b>ALIGNED TO:</b>	NCO-2004/NIL

**Brief Job Description:** A junior transit mixer operator assists the operator in guiding and aligning the vehicle. He assists the operator in 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:** This 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 color-blindness.

<b>Qualifications Pack Code</b>	<b>IES/Q0119</b>		
<b>Job Role</b>	<b>Junior Transit Mixer Operator</b>		
<b>Credits(NSQF)</b>	<b>TBD</b>	<b>Version number</b>	<b>1.0</b>
<b>Sector</b>	<b>Infrastructure Equipment</b>	<b>Drafted on</b>	<b>14/04/16</b>
<b>Sub-sector</b>	<b>Equipment Operations</b>	<b>Last reviewed on</b>	<b>26/04/16</b>
<b>Occupation</b>	<b>Operator</b>	<b>Next review date</b>	<b>30/04/18</b>
<b>NSQC Clearance on</b>	<b>NA</b>		

<b>Job Role</b>	<b>Junior Transit Mixer Operator</b>
<b>Role Description</b>	A junior transit mixer operator assists the operator in guiding and aligning the vehicle. He assists the operator in 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.
<b>NSQF level</b>	3
<b>Minimum Educational Qualifications</b>	Class VIII preferably.
<b>Maximum Educational Qualifications</b>	NA
<b>Training</b> (Suggested but not mandatory)	Certification Training in transit mixer operations preferred.
<b>Minimum Job Entry Age</b>	18 years
<b>Experience</b>	NA
<b>Applicable National Occupational Standards (NOS)</b>	<p><b>Compulsory</b></p> <ol style="list-style-type: none"> <li><a href="#">IES/N0155 Assist in carrying out Pre-operation checks on a transit mixer</a></li> <li><a href="#">IES/N0156 Assist in operating a transit mixer</a></li> <li><a href="#">IES/N0157 Assist in regular maintenance of the transit mixer</a></li> <li><a href="#">IES/N7601 Comply with worksite health and safety guidelines</a></li> </ol> <p><b>Optional:</b> N.A.</p>
<b>Performance Criteria</b>	As described in the relevant OS units

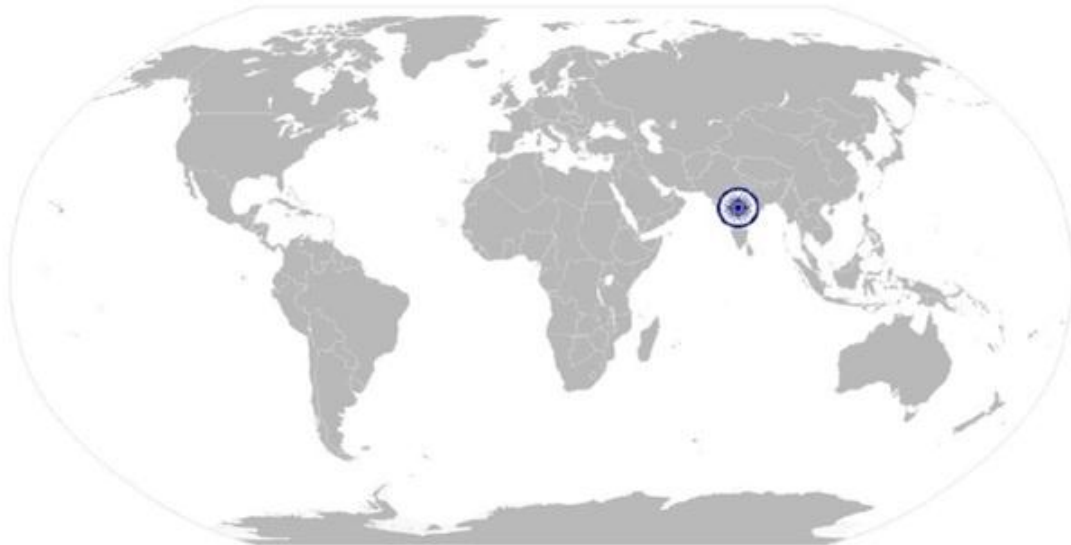
Keywords /Terms	Description
Sector	Sector is a conglomeration of different business operations having similar businesses and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
Sub-sector	Sub-sector is derived from a further 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 fulfill 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	

IES/N0155 Assist in carrying out Pre-operation checks on a transit mixer

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# National Occupational Standard



## Overview

This unit provides Performance Criteria, Knowledge & Understanding and Skills & Ability for assisting in activities that need to be carried out to prepare the transit mixer for a shift.

**IES/N0155 Assist in carrying out Pre-operation checks on a transit mixer**

National Occupational Standard

<b>Unit Code</b>	<b>IES/N0155</b>
<b>Unit Title (Task)</b>	<b>Assist in carrying out Pre-operation checks on a transit mixer</b>
<b>Description</b>	This unit provides insight into activities that need to be carried out to prepare the transit mixer for a shift.
<b>Scope</b>	This unit/task covers the following: <ul style="list-style-type: none"> <li>• Pre-operation checks</li> <li>• Reporting and Documentation</li> </ul>
<b>Performance Criteria(PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Pre-operation Checks</b>	To be competent, the user/individual on the job must be able to: <ul style="list-style-type: none"> <li>PC1. Visually inspect the body components for cracks and bearing wear</li> <li>PC2. Tighten the wheel nuts firmly on the ground as per instructions from the operator</li> <li>PC3. Assist in checking that oil levels of engine transmission, radiator coolant and brake are as per instructions from the operator</li> <li>PC4. Assist in checking hydraulic oil levels as per instructions from the operator</li> <li>PC5. Check water system for leaks and clean water pump filter as per instructions from the operator</li> <li>PC6. Clean the mixer drum as per instructions from the operator</li> <li>PC7. Lubricate all the moving joints as per instructions from the operator/supervisor</li> <li>PC8. Ensure that the area is clear of all personnel and equipment before moving</li> <li>PC9. Assist in conducting checks to ensure proper condition of parking brake, main horn, reverse horn and head light as per instructions from the operator</li> </ul>
<b>Reporting and documentation</b>	<ul style="list-style-type: none"> <li>PC10. Assist in maintaining a checking/maintenance logbook to record all activities performed before starting the machine</li> <li>PC11. Report defects precisely to the operator if beyond scope of the role</li> </ul>
<b>Knowledge and Understanding (K)</b>	
<b>A. Organizational Context</b> (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand: <ul style="list-style-type: none"> <li>KA1. The organization's procedures and guidelines related to breakdown &amp; maintenance services</li> <li>KA2. The performance standards &amp; procedures followed in the company</li> <li>KA3. Reporting structure in the company</li> <li>KA4. Location of tools</li> <li>KA5. Contact person in case of queries on procedure or products</li> <li>KA6. Location and process for storage and disposal of waste material</li> <li>KA7. Safety policy of the company</li> </ul>
<b>B. Technical Knowledge</b>	The user/individual on the job needs to know and understand: <ul style="list-style-type: none"> <li>KB1. Different types of Concrete mixer and their use and function</li> <li>KB2. Components of concrete mixer and its functioning-</li> </ul>

**IES/N0155 Assist in carrying out Pre-operation checks on a transit mixer**

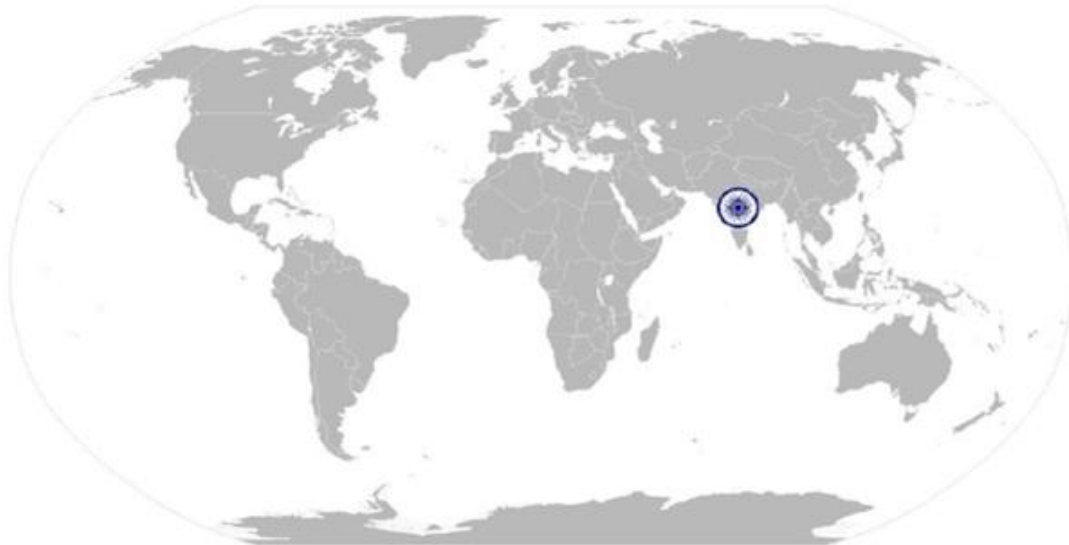
	<ul style="list-style-type: none"> <li>- Mixing drum</li> <li>- Loading bucket</li> <li>- Discharge hopper</li> <li>- Discharge chute</li> <li>- Driving turret</li> <li>- Hydraulic pumps</li> <li>- Water system</li> </ul> <p>KB3. Introduction to engine transmission, their use and function  KB4. Basic electrical functioning and repairs  KB5. Different types of hydraulic mechanisms  KB6. Steering mechanisms and correct way of steering on slopes  KB7. Significance and methods of lubricating different parts of mixer  KB8. Procedure of filling diesel, coolant in the machine  KB9. The various types of hand signals used on the site  KB10. Instrument panel/cabin controls, their location and operation  KB11. Controls, levers and switches in order to operate the mixer properly  KB12. Optimal engine oil pressure, radiator coolant temperature  KB13. Visual checks to identify damage, defects, cracks or leaks beforehand  KB14. Response to emergencies e.g. correct way to use fire extinguisher</p>
<b>Skills (S)</b>	
<b>A. Core Skills / Generic Skills</b>	<b>Writing Skills</b>
	The user/ individual on the job needs to know and understand how to: SA1. Record any deviations/ incidents as per prescribed norms
	<b>Reading Skills</b>
	The user/ individual on the job needs to know and understand how to: SA2. Read and comprehend basic English and regional language as applicable to read manuals of operations, guidelines, etc. SA3. Comprehend basic sign and symbols at the worksite
<b>B. Professional Skills</b>	<b>Oral Communication (Listening and Speaking Skills)</b>
	The user/ individual on the job needs to know and understand how to: SA4. Use correct technical terms while interacting with operator/ supervisor
	<b>Decision Making</b>
	The user/ individual on the job needs to know and understand how to: SB1. Assist in deciding when to conduct maintenance checks
	<b>Plan and Organize</b>
	The user/ individual on the job needs to know and understand how to: SB2. Work with operators/supervisors/ team mates to carry out work related tasks SB3. Plan work according to the required schedule and location
	<b>Customer Centricity</b>
The user/ individual on the job needs to know and understand how to: SB4. Provide service of the highest order to ensure customer satisfaction	
<b>Problem Solving</b>	
The user/ individual on the job needs to know and understand how to: SB5. Judge when to seek assistance from operator/supervisor	



## National Occupational Standards

### IES/N0155 Assist in carrying out Pre-operation checks on a transit mixer

	<b>Analytical Thinking</b>
	The user/ individual on the job needs to know and understand how to: SB6. Identify cause and effect relations in his area of work
	<b>Critical Thinking</b>
	The user/ individual on the job needs to know and understand how to: SB7. Analyse, evaluate and apply the information gathered from observation, experience, reasoning, or communication to act efficiently



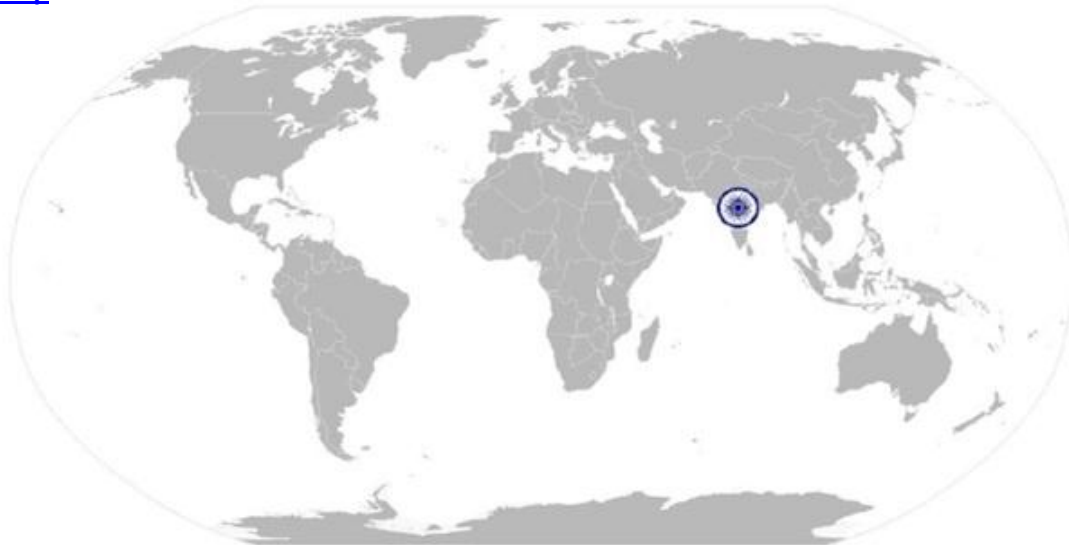


**IES/N0155 Assist in carrying out Pre-operation checks on a transit mixer**

## NOS Version Control

<b>NOS Code</b>	<b>IES/N0155</b>		
<b>Credits(NSQF)</b>	<b>TBD</b>	<b>Version number</b>	<b>1.0</b>
<b>Sector</b>	<b>Infrastructure Equipment</b>	<b>Drafted on</b>	<b>14/04/16</b>
<b>Industry Sub-sector</b>	<b>Equipment Operations</b>	<b>Last reviewed on</b>	<b>26/04/16</b>
<b>Occupation</b>	<b>Operator</b>	<b>Next review date</b>	<b>30/04/18</b>

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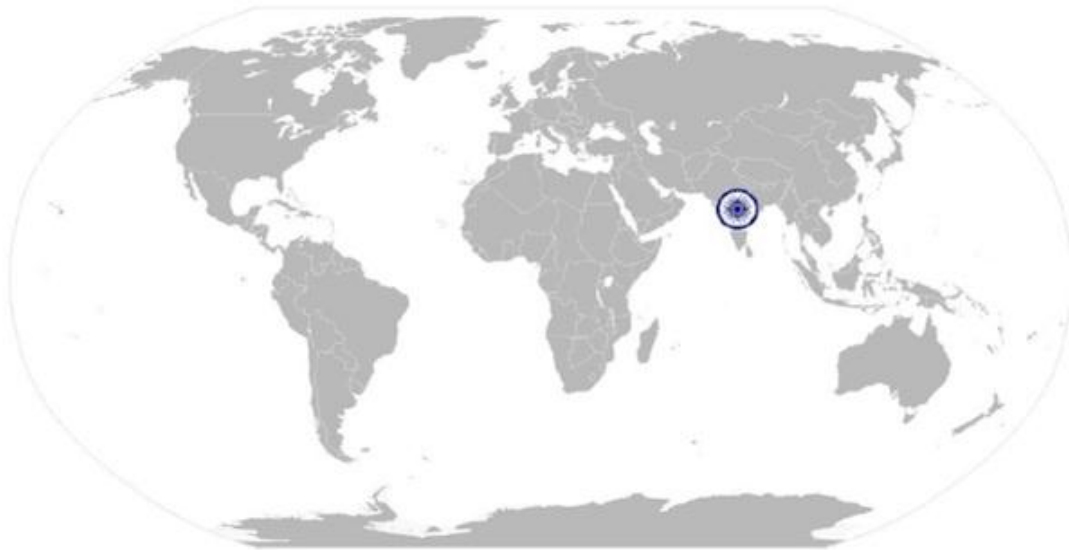


IES/N0156

Assist in operating a transit mixer

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# National Occupational Standard



## Overview

This unit provides Performance Criteria, Knowledge & Understanding and Skills & Ability for activities that are required to assist in operating a transit mixer.

**IES/N0156**

**Assist in operating a transit mixer**

National Occupational Standard

<b>Unit Code</b>	<b>IES/N0156</b>
<b>Unit Title (Task)</b>	<b>Assist in operating a transit mixer</b>
<b>Description</b>	This unit provides Performance Criteria, Knowledge & Understanding and Skills & Ability for activities that are required to assist in operating a transit mixer.
<b>Scope</b>	This unit/task covers the following: <ul style="list-style-type: none"> <li>• Loading of materials</li> <li>• Discharging concrete</li> </ul>
<b>Performance Criteria(PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Loading of materials</b>	To be competent, the user/individual on the job must be able to: <p>PC1. Check for loose soil, hidden deep trenches or marshy patches where a mixer could get stuck</p> <p>PC2. Fill water tanks ready for daily use as per instructions from the operator/ supervisor</p> <p>PC3. Check for hazards and risks, and ensure safety of self, other personnel and equipment</p> <p>PC4. Remove the obstacles if any during the loading process per instructions from the operator</p> <p>PC5. Assist in loading correct proportions of aggregates, cement, water and admixtures</p> <p>PC6. Check for correct direction of drum rotation during mixing as per instructions from the operator</p> <p>PC7. Guide the operator in keeping a safe distance from other vehicles</p>
<b>Discharging concrete</b>	<p>PC8. Guide the operator in parking the transit mixer on firm, level ground</p> <p>PC9. Assist in determining a position for discharging the concrete safely and as per instructions from the operator</p> <p>PC10. Assist the operator in discharge of concrete to the desired location</p> <p>PC11. Clean the bucket, drum and concrete-skid as per the instructions from the operator</p> <p>PC12. Assist in removing attachments after use as per instructions from the operator</p>
<b>Knowledge and Understanding (K)</b>	
<b>A. Organizational Context</b> (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand: <p>KA1. The organization's procedures and guidelines related to breakdown &amp; maintenance services</p> <p>KA2. The performance standards &amp; procedures followed in the company</p> <p>KA3. Reporting structure in the company</p> <p>KA4. Location of tools</p> <p>KA5. Contact person in case of queries on procedure or products</p> <p>KA6. Location and process for storage and disposal of waste material</p> <p>KA7. Safety policy of the company</p>
<b>B. Technical Knowledge</b>	The user/individual on the job needs to know and understand: <p>KB1. Various type and grade of materials- cement, aggregates, sand, admixture etc.</p>

**IES/N0156**

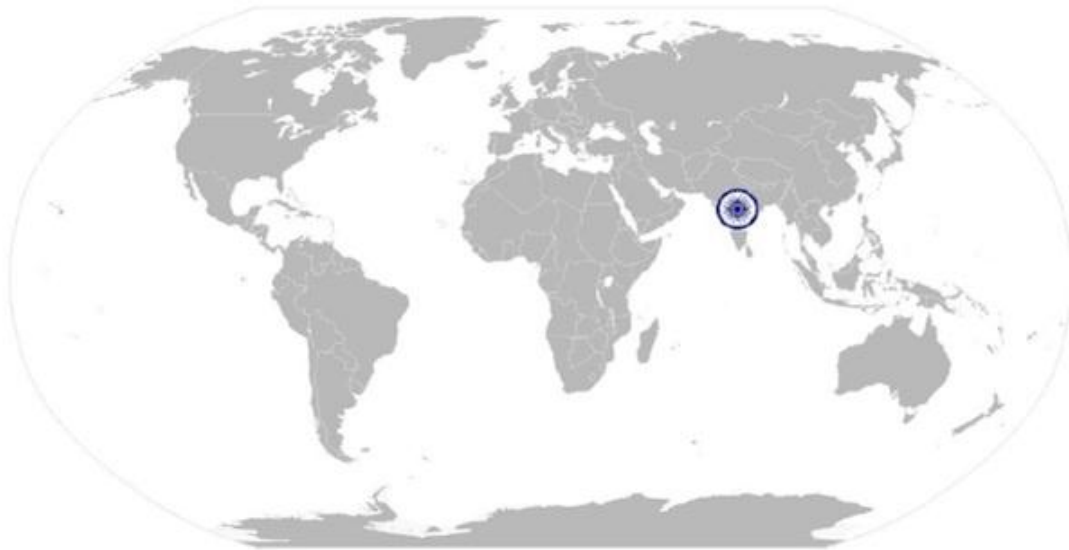
**Assist in operating a transit mixer**

	<p>KB2. Types of lubricants</p> <p>KB3. Different types of Concrete mixer, their use and function</p> <p>KB4. Machine capacities and features such as speed rate, braking, steering, stability and load</p> <p>KB5. Components of concrete mixer and its functioning-</p> <ul style="list-style-type: none"> <li>- Mixing drum</li> <li>- Loading bucket</li> <li>- Discharge hopper</li> <li>- Discharge chute</li> <li>- Driving turret</li> <li>- Hydraulic pumps</li> </ul> <p>KB6. Steering mechanisms and correct way of steering on slopes</p> <p>KB7. Significance and methods of lubricating different parts of mixer</p> <p>KB8. The various types of hand signals used on the site and road</p> <p>KB9. Controls, levers and switches in order to operate the mixer properly</p> <p>KB10. Optimal engine oil pressure, radiator coolant temperature</p> <p>KB11. Response to emergencies</p>
<b>Skills (S)</b>	
<b>A. Core Skills / Generic Skills</b>	<b>Writing Skills</b>
	The user/ individual on the job needs to know and understand how to: SA1. Record any deviations/ incidents as per prescribed norms
	<b>Reading Skills</b>
	The user/ individual on the job needs to know and understand how to: SA2. Read and comprehend basic English and regional language as applicable to read manuals of operations, guidelines, etc. SA3. Interpret stakes and signage on the road and during worksite operations
<b>B. Professional Skills</b>	<b>Oral Communication (Listening and Speaking Skills)</b>
	The user/ individual on the job needs to know and understand how to: SA4. Use correct technical terms while interacting with operator/supervisor
	<b>Decision Making</b>
	The user/ individual on the job needs to know and understand how to: SB1. Assess for any damage/faulty component in the transit mixer SB2. Decide when to perform appropriate driving operations i.e. forward, reverse, 'U' turn, tight spot
	<b>Plan and Organize</b>
	The user/ individual on the job needs to know and understand how to: SB3. Work with operators/ supervisors/ team mates to carry out work related tasks SB4. Plan work according to the required schedule and location
<b>B. Professional Skills</b>	<b>Customer Centricity</b>
	The user/ individual on the job needs to know and understand how to: SB5. Provide service of the highest order to ensure customer satisfaction
	<b>Problem Solving</b>
The user/ individual on the job needs to know and understand how to: SB6. Judge when to seek assistance from operator/supervisor	

**IES/N0156**

**Assist in operating a transit mixer**

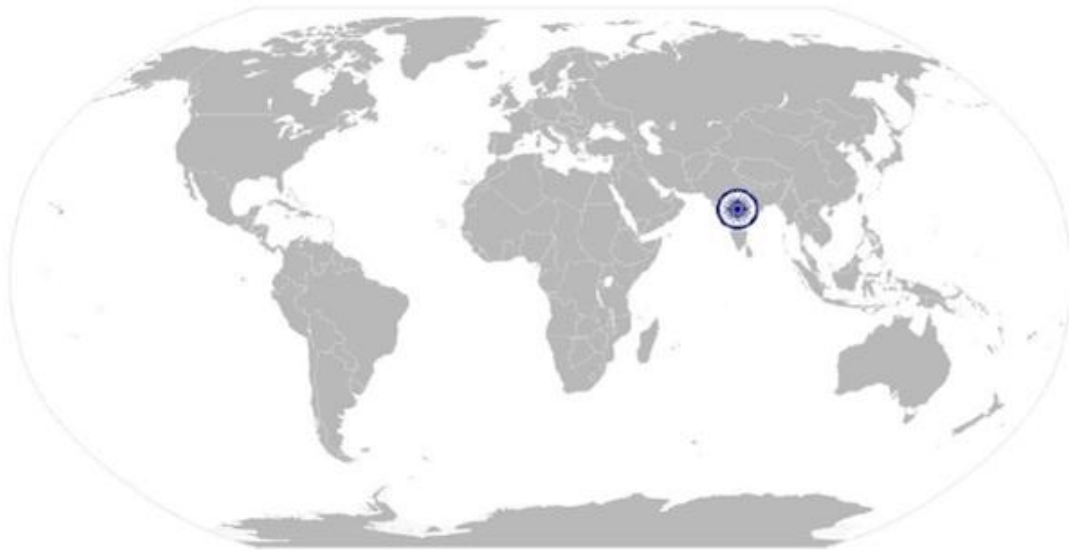
	<b>Analytical Thinking</b>
	The user/ individual on the job needs to know and understand how to: SB7. Suggest methods to avoid accidents/errors while operating machine
	<b>Critical Thinking</b>
	The user/ individual on the job needs to know and understand how to: SB8. Analyse, evaluate and apply the information gathered from observation, experience, reasoning, or communication to act efficiently



**IES/N0156** **Assist in operating a transit mixer**  
**NOS Version Control**

<b>NOS Code</b>	<b>IES/N0156</b>		
<b>Credits(NSQF)</b>	<b>TBD</b>	<b>Version number</b>	<b>1.0</b>
<b>Sector</b>	<b>Infrastructure Equipment</b>	<b>Drafted on</b>	<b>14/04/16</b>
<b>Industry Sub-sector</b>	<b>Equipment Operations</b>	<b>Last reviewed on</b>	<b>26/04/16</b>
<b>Occupation</b>	<b>Operator</b>	<b>Next review date</b>	<b>30/04/18</b>

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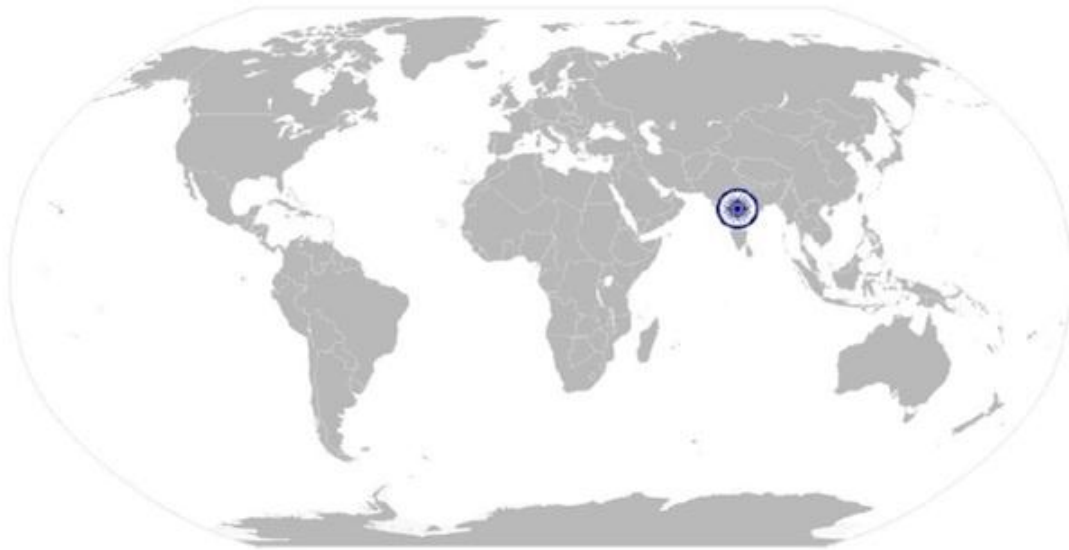


IES/N0157

Assist in regular maintenance of the transit mixer

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# National Occupational Standard



## Overview

This unit provides Performance Criteria, Knowledge & Understanding and Skills & Ability for activities that are required to assist in performing routine maintenance and troubleshooting on the transit mixer.



**IES/N0157**
**Assist in regular maintenance of the transit mixer**

<b>Unit Code</b>	<b>IES/N0157</b>
<b>Unit Title (Task)</b>	<b>Assist in regular maintenance of the transit mixer</b>
<b>Description</b>	This unit insight into activities that are required to assist in performing routine maintenance and troubleshooting on the transit mixer.
<b>Scope</b>	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> <li>• Routine maintenance</li> <li>• Basic diagnostics and troubleshooting</li> <li>• Documentation and Reporting</li> </ul>
<b>Performance Criteria(PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Routine Maintenance</b>	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. Clean footplates, pedals and steps free from mud, dirt, ice and snow at regular intervals</p> <p>PC2. Check and maintain the tire rims, air pressure, wheel nuts and treads as per instructions from the operator</p> <p>PC3. Replenish coolants, lubricants and fluids everyday as per instructions from the operator</p> <p>PC4. Lubricate all the moving joints in the mixer as per the instructions from the operator/ supervisor</p> <p>PC5. Clean and adjust windows mirrors, lights and reflectors daily as per instructions from the operator/ supervisor</p> <p>PC6. Assist in checking battery levels and condition of the terminals as per instructions from the operator/ supervisor</p> <p>PC7. Adjust alternator belt tension and feed pump while engine is off</p> <p>PC8. Keep the tools in the appropriate place after use</p>
<b>Basic Diagnostics and Troubleshooting</b>	<p>PC9. Assist in ensuring 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</p> <p>PC10. Ensure that bucket arm is lowered before any maintenance operations</p> <p>PC11. Handle and dispose waste based on environmental guidelines at the work place</p> <p>PC12. Comply with safety requirements such as confined space, lock-out procedures</p>
<b>Documentation and Reporting</b>	<p>PC13. Assist in maintaining records and documentation relating to service, such as log books, repair lists, etc.</p> <p>PC14. Follow reporting procedures as laid down by the employer</p>
<b>Knowledge and Understanding (K)</b>	
<b>A. Organizational Context</b> (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. Job specific documents e.g. daily maintenance checklist and importance of the same</p> <p>KA2. Common hazards in the work area and workplace procedures to deal with them</p> <p>KA3. Safety policy of the company</p> <p>KA4. Emergency organization of the specific work site</p>

**IES/N0157**

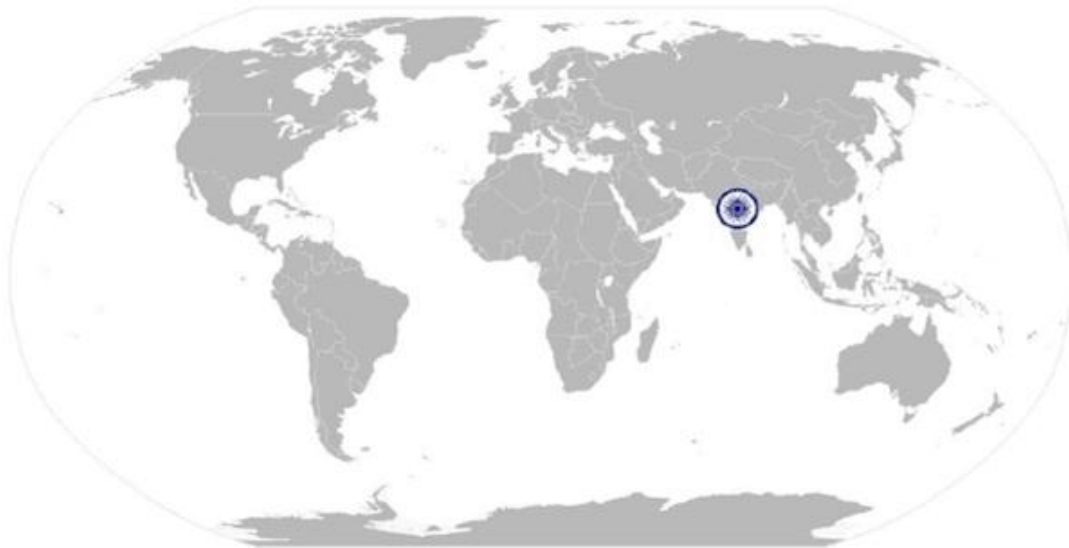
**Assist in regular maintenance of the transit mixer**

	<p>KA5. Risk and impact of not following defined procedures/work instructions          KA6. The performance standards &amp; procedures followed in the company          KA7. Reporting structure in the company          KA8. Timeframe in which the complaint/problem should be resolved          KA9. Implications of delays in process to the company          KA10. Location of tools          KA11. Contact person in case of queries on procedure or products          KA12. Location and process for storage and disposal of waste material</p>
<p><b>B. Technical Knowledge</b></p>	<p>The user/individual on the job needs to know and understand:          KB1. Responsibilities of the assigned job role          KB2. Control and switches needed to operate the transit mixer appropriately          KB3. Basic physics and mechanics involved in various functions of the transit mixer          KB4. Common defects and general causes of breakdown          KB5. Response to emergency situations          KB6. The optimal levels of control indicators e.g. fuel gauge, engine oil pressure and temperature          KB7. Possible sources of any unusual sound emanating from the engine</p>
<p><b>Skills (S)</b></p>	
<p><b>A. Core Skills / Generic Skills</b></p>	<p><b>Writing Skills</b>          The user/ individual on the job needs to know and understand how to:          SA1. Record any deviations/ incidents as per prescribed norms</p> <p><b>Reading Skills</b>          The user/ individual on the job needs to know and understand how to:          SA2. Read basic English and regional language as applicable to understand manuals of operations, guidelines, etc.</p> <p><b>Oral Communication (Listening and Speaking Skills)</b>          The user/ individual on the job needs to know and understand how to:          SA3. Use correct technical terms while interacting with operator/ supervisor</p>
<p><b>B. Professional Skills</b></p>	<p><b>Decision Making</b>          The user/ individual on the job needs to know and understand how to:          SB1. Use appropriate tools during repairs and maintenance</p> <p><b>Plan and Organize</b>          The user/ individual on the job needs to know and understand how to:          SB2. Work with operators/supervisors/ team mates to carry out work related tasks          SB3. Plan work according to the required schedule and location</p> <p><b>Customer Centricity</b>          The user/ individual on the job needs to know and understand how to:          SB4. Provide service of the highest order to ensure customer satisfaction</p> <p><b>Problem Solving</b>          The user/ individual on the job needs to know and understand how to:          SB5. Judge when to seek assistance from operator/supervisor</p> <p><b>Analytical Thinking</b>          The user/ individual on the job needs to know and understand how to:</p>

## IES/N0157

### Assist in regular maintenance of the transit mixer

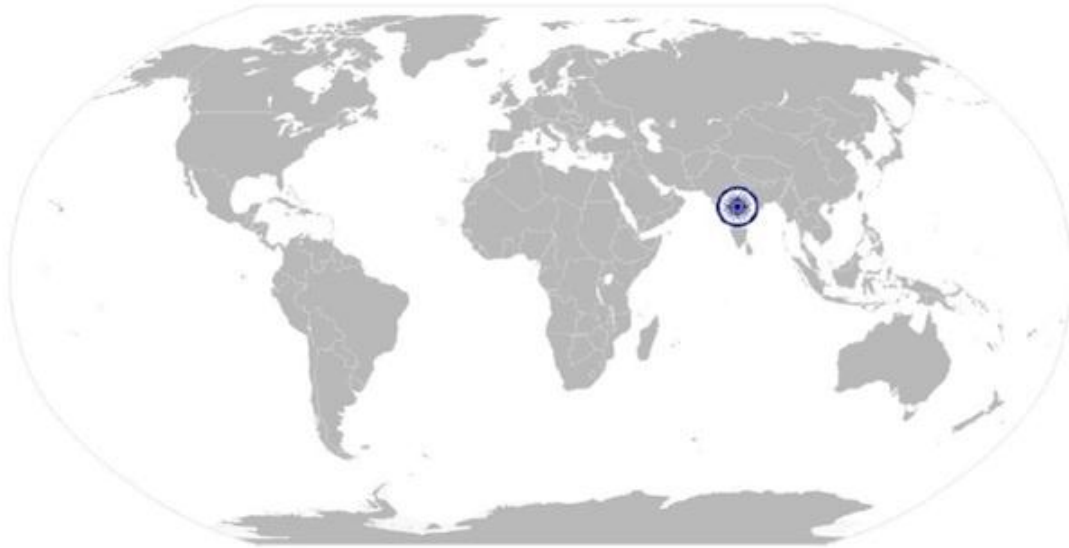
	SB6. Check for damages and diagnose common problems in the mixer and report to the operator
	<b>Critical Thinking</b>
	The user/ individual on the job needs to know and understand how to: SB7. Analyze, evaluate and apply the information gathered from observation, experience, reasoning, or communication to act efficiently



**IES/N0157 Assist in regular maintenance of the transit mixer**  
**NOS Version Control**

<b>NOS Code</b>	<b>IES/N0157</b>		
<b>Credits(NSQF)</b>	<b>TBD</b>	<b>Version number</b>	<b>1.0</b>
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<b>Occupation</b>	<b>Operator</b>	<b>Next review date</b>	<b>30/04/18</b>

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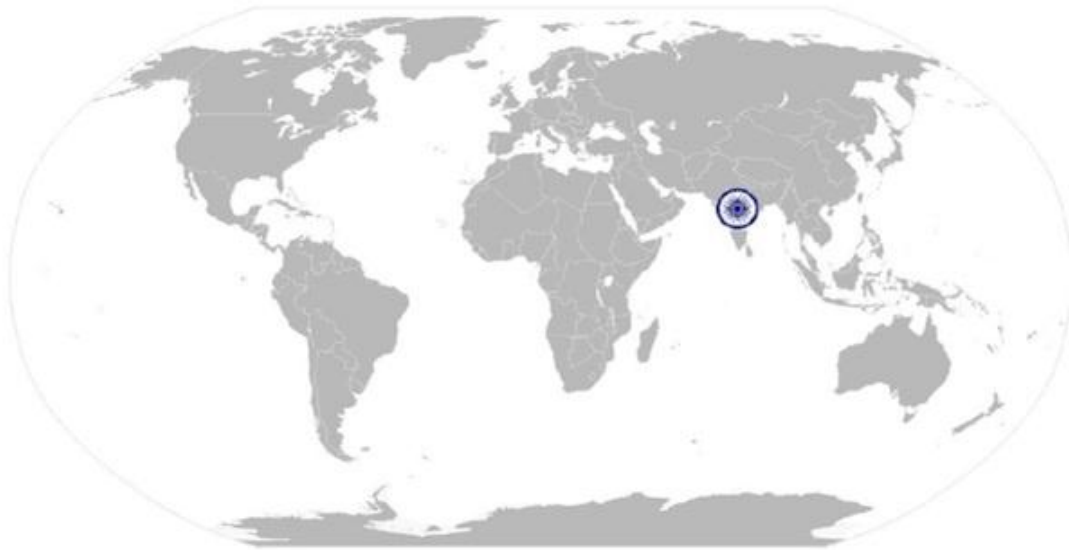


IES/N7601

Comply with worksite health and safety guidelines

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# National Occupational Standard



## Overview

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

**IES/N7601**

**Comply with worksite health and safety guidelines**

National Occupational Standard

<b>Unit Code</b>	<b>IES/N7601</b>
<b>Unit Title (Task)</b>	<b>Comply with worksite health and safety guidelines</b>
<b>Description</b>	This unit is about adhering to health and safety requirements at the worksite during equipment operations.
<b>Scope</b>	This unit/task covers the following: <ul style="list-style-type: none"> <li>• Worksite health and safety</li> </ul>
<b>Performance Criteria(PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Worksite health and safety</b>	To be competent, the user/individual on the job must be able to: <p>PC1. Comply with safety, health, security and environment related regulations/ guidelines at the work site</p> <p>PC2. Use Personal Protective Equipment (PPE) and other safety gear as applicable to the equipment and the worksite</p> <p>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</p> <p>PC4. Carry out operations as per the manufacturer's and worksite related health and safety guidelines</p> <p>PC5. Handle the transport, storage and disposal of hazardous materials and waste in compliance with worksite health, safety and environmental guidelines</p> <p>PC6. Operate various grades of fire extinguishers, as applicable</p> <p>PC7. Support in administering basic first aid and report to concerned team members, as required, in case of an accident</p> <p>PC8. Respond promptly and appropriately to an accident/ incident or emergency situation, within limits of your role and responsibility</p> <p>PC9. Record and report details related to operations, incidents or accidents, as applicable</p>
<b>Knowledge and Understanding (K)</b>	
<b>A. Organizational Context</b> (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand: <p>KA1. Health, safety, environmental(HSE) and security related policies/ guidelines of the organization and the worksite and its importance</p> <p>KA2. Personnel responsible for Health, Safety and environment (HSE) related matters and their contact details</p> <p>KA3. Location of worksite storage, SHE team and safe assembly points</p> <p>KA4. Reporting and documentation procedures for HSE and security matters</p>
<b>B. Technical Knowledge</b>	The user/individual on the job needs to know and understand: <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 the worksite and operations</p> <p>KB3. Types, use and importance of Personal Protective Equipment (PPE) and other safety gear</p> <p>KB4. Safe working practices to avoid common hazards and risks</p> <p>KB5. Guidelines for transport, storage and disposal of hazardous materials</p>



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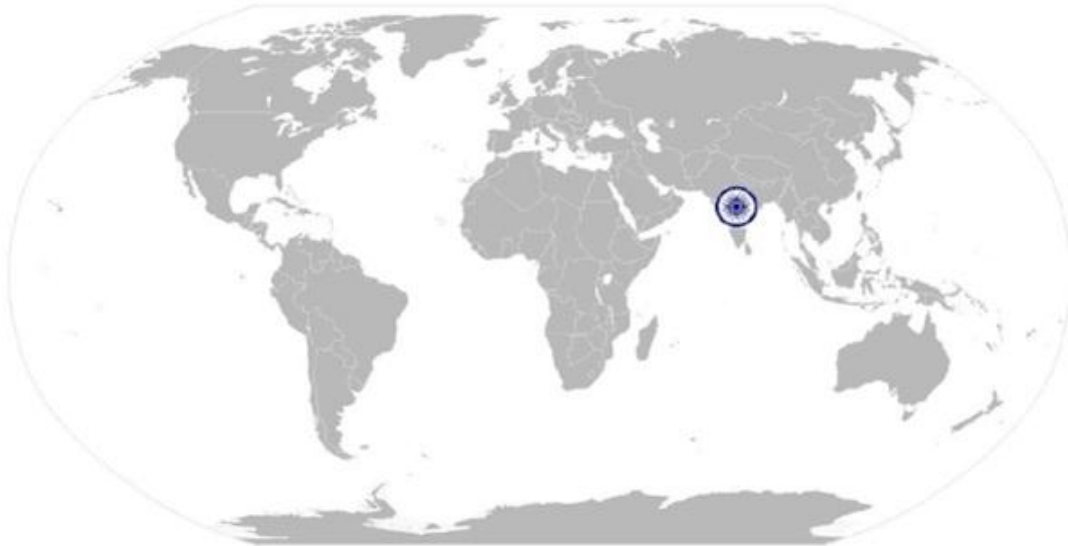
	<p>and waste</p> <p>KB6. Types of common hazards and risks at the worksite including fire, electrical, gas emergencies, accidents, incidents, structure collapse, machine breakdown</p> <p>KB7. Knowledge of safe lockdown/ stop of machinery use in case of emergencies and incidents/ accidents</p> <p>KB8. Types of fire extinguishers and their use</p> <p>KB9. Common injuries and appropriate basic first aid treatment eg. electrical shock, bleeding, wounds, fractures, minor burns, eye injuries</p>
<b>Skills (S)</b>	
<b>A. Core Skills / Generic Skills</b>	<b>Writing Skills</b>
	The user/ individual on the job needs to know and understand how to: SA1. Document and report any health and safety related incidents/ accidents
	<b>Reading Skills</b>
	The user/ individual on the job needs to know and understand how to: SA2. Read and comprehend basic English to read manuals of operations SA3. Read all organizational and equipment related health and safety manuals and documents SA4. Read instructions, guidelines/procedures/rules related to the worksite and equipment operations
	<b>Oral Communication (Listening and Speaking Skills)</b>
	The user/ individual on the job needs to know and understand how to: SA5. Give clear instructions to co-workers, subordinates and other personnel SA6. Use correct technical terms while interacting with operator/ supervisor
<b>B. Professional Skills</b>	<b>Decision Making</b>
	The user/ individual on the job needs to know and understand how to: SB1. Make an appropriate timely decision in responding to emergencies/accidents in line with organizational/ worksite guidelines SB2. Use correct PPE and other safety gear while at the worksite
	<b>Plan and Organize</b>
	The user/ individual on the job needs to know and understand how to: SB3. Work with operators/supervisors/ team mates to carry out work related tasks SB4. Plan work according to the required schedule and location
	<b>Customer Centricity</b>
	The user/ individual on the job needs to know and understand how to: SB5. Build and maintain positive and effective relationships with colleagues and customers
	<b>Problem Solving</b>
	The user/ individual on the job needs to know and understand how to: SB6. Seek appropriate assistance from other sources to resolve problems
<b>Analytical Thinking</b>	
The user/ individual on the job needs to know and understand how to: SB7. Assess the intensity of the fire accident and operate fire extinguishers	



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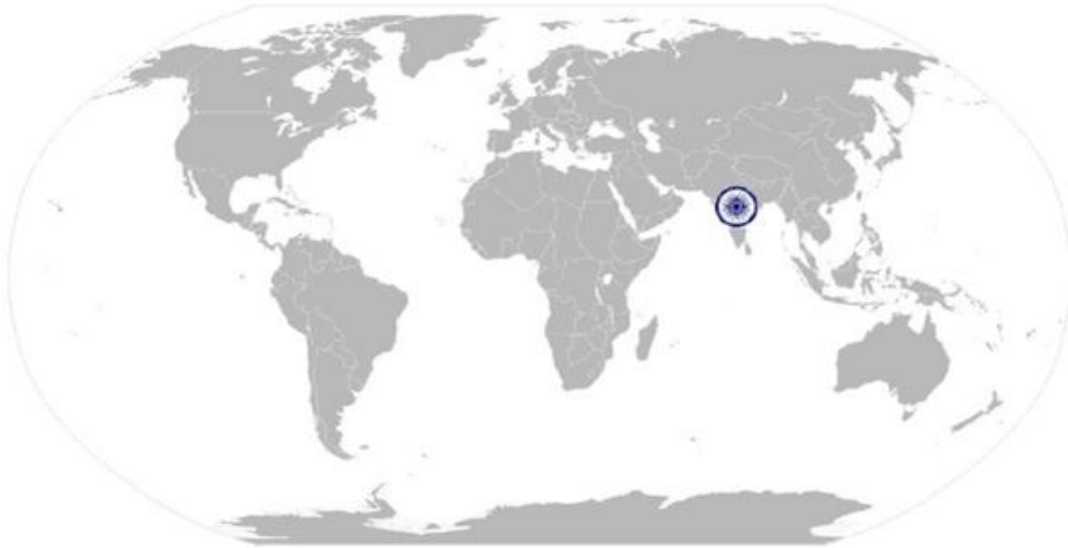
	<p><b>Critical Thinking</b></p> <p>The user/ individual on the job needs to know and understand how to: SB8. Analyze, evaluate and apply the information gathered from observation, experience, reasoning, or communication to act efficiently</p>
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**IES/N7601**                      **Comply with worksite health and safety guidelines**  
**NOS Version Control**

<b>NOS Code</b>	<b>IES/N7601</b>		
<b>Credits(NSQF)</b>	<b>TBD</b>	<b>Version number</b>	<b>1.0</b>
<b>Sector</b>	<b>Infrastructure Equipment</b>	<b>Drafted on</b>	<b>14/04/16</b>
<b>Industry Sub-sector</b>	<b>Equipment Operations</b>	<b>Last reviewed on</b>	<b>26/04/16</b>
<b>Occupation</b>	<b>Operator</b>	<b>Next review date</b>	<b>30/04/18</b>

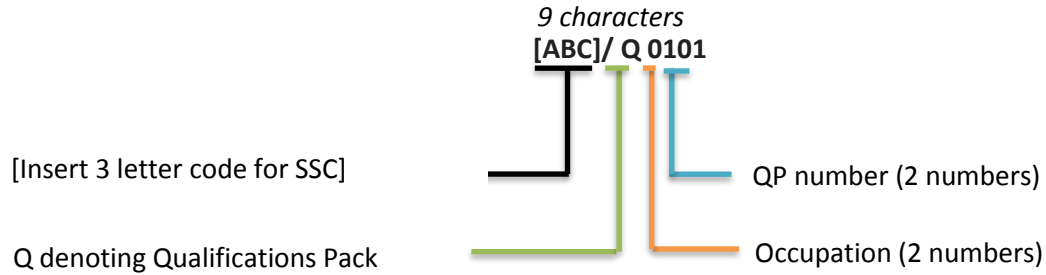
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## Annexure

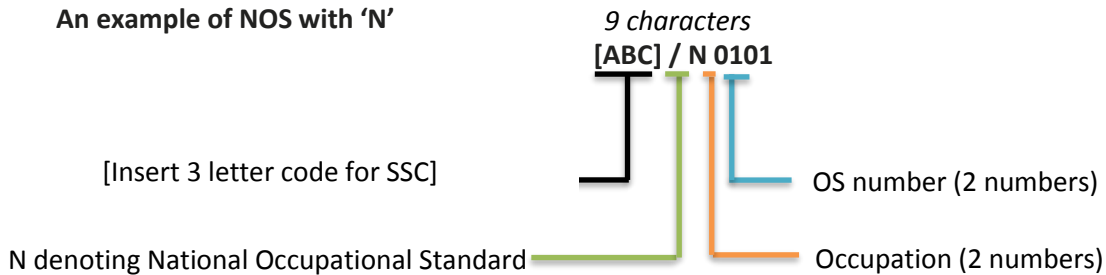
### Nomenclature for QP and NOS

#### Qualifications Pack



#### Occupational Standard

An example of NOS with 'N'



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 Transit Mixer Operator

**Qualification Pack** IES/Q0119

**Sector Skill Council** IESC

### 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 40% in each NOS and 50% 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.

Total Marks:100				Marks Allocation	
Assessment Outcomes	Assessment Criteria for outcomes	Total Marks	Out Of	Theory	Skills Practical
1. IES/N0155 Assist in carrying out pre-operation checks on a Transit mixer	PC1. Visually inspect the body components for cracks and bearing wear	<b>35</b>	3	1	2
	PC2. Tighten the wheel nuts firmly on the ground as per instructions from the operator		3	1	2
	PC3. Assist in checking that oil levels of engine transmission, radiator coolant and brake are as per instructions from the operator		4	1	3

	PC4. Assist in checking hydraulic oil levels as per instructions from the operator		3	1	2
	PC5. Check water system for leaks and clean water pump filter as per instructions from the operator		3	1	2
	PC6. Clean the mixer drum as per instructions from the operator		4	1	3
	PC7. Lubricate all the moving joints as per instructions from the operator/ supervisor		3	1	2
	PC8. Ensure that the area is clear of all personnel and equipment before moving		3	1	2
	PC9. Assist in conducting checks to ensure proper condition of parking brake, main horn, reverse horn and head light as per instructions from the operator		3	1	2
	PC10. Assist in maintaining a checking/maintenance logbook to record all activities performed before starting the machine		3	1	2
	PC11. Report defects precisely to the operator if beyond scope of the role		3	1	2
		<b>Total</b>	<b>35</b>	<b>11</b>	<b>24</b>
2. IES/N0156 Assist in operating a transit mixer	PC1. Check for loose soil, hidden deep trenches or marshy patches where a mixer could get stuck		1	0	1
	PC2. Fill water tanks ready for daily use as per instructions from the operator/ supervisor	<b>30</b>	2	0	2
	PC3. Check for hazards and risks, and ensure safety of self, other personnel and equipment		3	1	2

	PC4. Remove the obstacles if any during the loading process per instructions from the operator		4	2	2
	PC5. Assist in loading correct proportions of aggregates, cement, water and admixtures		3	1	2
	PC6. Check for correct direction of drum rotation during mixing as per instructions from the operator		2	0	2
	PC7. Guide the operator in keeping a safe distance from other vehicles		3	2	1
	PC8. Guide the operator in parking the transit mixer on firm, level ground		3	1	2
	PC9. Assist in determining a position for discharging the concrete safely and as per instructions from the operator		1	0	1
	PC10. Assist the operator in discharge of concrete to the desired locations		2	0	2
	PC11. Clean the bucket, drum and concrete-skid as per the instructions from the operator		3	1	2
	PC12. Assist in removing attachments after use as per instructions from the operator		3	1	2
		<b>Total</b>	<b>30</b>	<b>9</b>	<b>21</b>
3. IES/N0157 Assist in regular maintenance of the transit mixer	PC1. Clean footplates, pedals and steps free from mud, dirt, ice and snow at regular intervals	<b>20</b>	1	0	1
	PC2. Check and maintain the tire rims, air pressure, wheel nuts and treads as per instructions from the operator		2	1	1



	PC3. Replenish coolants, lubricants and fluids everyday as per instructions from the operator		1	0	1
	PC4. Lubricate all the moving joints in the mixer as per the instructions from the operator/ supervisor		2	1	1
	PC5. Clean and adjust windows mirrors, lights and reflectors daily as per instructions from the operator/ supervisor		1	0	1
	PC6. Assist in checking battery levels and condition of the terminals as per instructions from the operator/ supervisor		1	0	1
	PC7. Adjust alternator belt tension and feed pump while engine is off		2	1	1
	PC8. Keep the tools in the appropriate place after use		2	1	1
	PC9. Assist in ensuring 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		1	0	1
	PC10. Ensure that bucket arm is lowered before any maintenance operations		2	1	1
	PC11. Handle and dispose waste based on environmental guidelines at the work place		1	0	1
	PC12. Comply with safety requirements such as confined space, lock-out procedures		2	1	1
	PC13. Assist in maintaining records and documentation relating to service, such as log books, repair lists, etc.		1	0	1

	PC14. Follow reporting procedures as laid down by the employer		1	0	1
		<b>Total</b>	<b>20</b>	<b>6</b>	<b>14</b>
4. IES/N7601_Comply with worksite health and safety guidelines	PC1. Comply with safety, health, security and environment related regulations/ guidelines at the work site	<b>15</b>	2	1	1
	PC2. Use Personal Protective Equipment (PPE) and other safety gear as applicable to the equipment and the worksite		2	1	1
	PC3. Follow safety measures during operations to ensure that the health and safety of self or others (including members of the public) is not at risk		2	0	2
	PC4. Carry out operations as per the manufacturer's and worksite related health and safety guidelines		1	0	1
	PC5. Handle the transport, storage and disposal of hazardous materials and waste in compliance with worksite health, safety and environmental guidelines		2	1	1
	PC6. Operate various grades of fire extinguishers, as applicable		1	0	1
	PC7. Support in administering basic first aid and report to concerned team members, as required, in case of an accident		2	1	1
	PC8. Respond promptly and appropriately to an accident/ incident or emergency situation, within limits of your role and responsibility		1	0	1

	PC9. Record and report details related to operations, incidents or accidents, as applicable		2	1	1
		<b>Total</b>	<b>15</b>	<b>5</b>	<b>10</b>
<b>Grand Total</b>			<b>100</b>	<b>31</b>	<b>69</b>