







# **Model Curriculum**

# **Skid Steer Loader Operator**

**SECTOR: INFRASTRUCTURE EQUIPMENT** 

SUB-SECTOR: EQUIPMENT OPERATIONS

OCCUPATION: MACHINE OPERATION

REF ID: IES/Q0126, V1.0

**NSQF LEVEL: 4** 















### Certificate

## CURRICULUM COMPLIANCE TO QUALIFICATION PACK – NATIONAL OCCUPATIONAL STANDARDS

is hereby issued by the

INFRASTRUCTURE EQUIPMENT SKILL COUNCIL

for the

#### MODEL CURRICULUM

Complying to National Occupational Standards of Job Role/ Qualification Pack: 'Skid Steer Loader Operator' QP No. 'IES/ Q 0126 NSQF Level 4'

Date of Issuance: April 1st, 2018

Valid up to: March 31st, 2020

\* Valid up to the next review date of the Qualification Pack

Authorized Signatory (Infrastructure Equipment Skill Council)









## **TABLE OF CONTENTS**

1. Curriculum	01
2. Trainer Pre-requisites	05
3. Annexure: Assessment Criteria	06









#### **CURRICULUM / SYLLABUS**

This program is aimed at training candidates for the job of a "<u>Skid Steer Loader Operator</u>", in the "<u>Infrastructure Equipment</u>" Sector/Industry and aims at building the following key competencies amongst the learner

Program Name	Skid Steer Loader O	perator			
Qualification Pack Name & Reference ID	IES/Q0126				
Version No.	1.0 Version Update Date 20 December 2017				
Pre-requisites to Training	Class 8th 1-2 years' experience in material handling equipment operations				
Training Outcomes	<ul> <li>Conduct pre-inspecting, presystems of the devices.</li> <li>Carry out services worksite, und executing it perfectifying comper organisati.</li> <li>Comply with processes a equipment, be</li> </ul>	ular maintenance of skid out the relevant service s nmon faults, compiling ar	steer loader machine by nctions of all controls and a monitoring and safety ions by inspecting the ing the methodology and n the allotted resources steer loader by selecting schedule, diagnosing and nd submitting reports as y guidelines by following to personal protective on injuries at work site,		









This course encompasses <u>4</u> out of <u>4</u> National Occupational Standards (NOS) of "<u>Skid Steer Loader</u> Operator" Qualification Pack issued by "<u>Infrastructure Equipment Skill Council</u>".

Sr. No.	Module	Key Learning Outcomes	Equipment Required
1	Carry out pre- operation checks on skid steer loader  Theory Duration (hh:mm) 08:00 Practical Duration (hh:mm) 16:00  Corresponding NOS Code IES/N0176	<ul> <li>Inspect loaders body for cracks/damages and hose lines including clamps/couplers for leakages.</li> <li>Inspect condition of tires, air pressure, tightness of bolts and nuts.</li> <li>Inspect and replenish as necessary fluid levels in the engine (fuel, lube, coolant), hydraulic transmission systems</li> <li>Service fuel system by draining out water sediments and removing air</li> <li>Service air filtration system by emptying out dust bowls and clean air filter elements.</li> <li>Inspect electrical battery terminals and electrolyte levels, adjust fan belt tension as applicable</li> <li>Inspect and lubricate all greasing points/ pivots / pins of all moving parts and components.</li> <li>Operate all control levers/sticks, and check all gauges, switches, lights and horns are functional.</li> <li>Acquire the ability to read and comprehend basic signs, symbols, diagrams, charts and decals on the equipment.</li> <li>Communicate information &amp; instructions using correct tech terms and phrases to team members /supervisor in a clear and concise manner.</li> <li>Maintain a logbook to record all checks /activities carried out before starting operations.</li> <li>Report defects and problems in time and, if beyond his scope, escalate as necessary</li> </ul>	Skid Steer Loader with standard tools, accessories and equipment/attachments. Class room with audiovideo system Manufacturers O and M Manual & Video Safety video PPE Items & Safety Gear Open ground
2	Operate skid steer loader  Theory Duration (hh:mm) 18:00 Practical Duration (hh:mm) 36:00  Corresponding NOS	<ul> <li>Formulate the methodology for execution of tasks as per the site conditions and operational instructions/guidelines.</li> <li>Inspect the site conditions for any obstruction like underground service utilities and overhead power lines.</li> <li>Position the loader machine and related attachments / accessories ensuring stability and safety at the worksite.</li> </ul>	Skid Steer Loader with standard tools, accessories and equipment/attachments     Class room with audiovideo system     Manufacturers O and M Manual & Video     Safety video     PPE Items & Safety Gear









Sr. No.	Module	Key Learning Outcomes	Equipment Required
NO.	Code IES/N0177	<ul> <li>Operate the engine as per procedure and check functioning of all the controls and monitoring devices /aids.</li> <li>Execute loading and unloading of material as per procedure ensuring optimal productivity and safety of machine &amp; operator</li> <li>Identify operational slowdowns and initiate necessary actions to rectify the issues in time</li> <li>Terminate operations by removing the attachments, parking the loader and shutting down the engine.</li> <li>Ascertain state and condition of loader by walk around check and take remedial action as necessary.</li> <li>Maintain a logbook to record all activities carried out during the loader operations.</li> <li>Report defects and problems in time and, if beyond his scope, escalate as necessary</li> <li>Achieve high levels of customer satisfaction by ensuring quality service is delivered as committed.</li> </ul>	Open ground
3	Carry out routine maintenance and troubleshooting of skid steer loader  Theory Duration (hh:mm) 08:00 Practical Duration (hh:mm) 16:00  Corresponding NOS Code IES/N0178	<ul> <li>Determine the service requirement as per the parameters listed in the maintenance schedule</li> <li>Position the machine correctly and safely before carrying out any maintenance activity</li> <li>Inspect machine for damaged / cracked parts / components and rectify as necessary</li> <li>Inspect and check functioning of all control mechanisms and monitoring devices.</li> <li>Inspect engine, hydraulic, electrical and transmission systems and service the various components as per the guidelines.</li> <li>Inspect and service the loader attachments as laid down in the maintenance manual</li> <li>Diagnose the defect/ problem and rectify using appropriate tools/eqpt; if need be take advice from supervisor</li> <li>Complete documentation on prescribed formats legibly and punctually.</li> <li>Report defects and problems in time and escalate, if beyond his scope, as</li> </ul>	Skid Steer Loader with standard tools, accessories and equipment/attachments     Class room with audiovideo system     Manufacturers O and M Manual & Video     Safety video     PPE Items & Safety Gear     Lab/workshop/ Covered Shed









Sr. No.	Module	Key Learning Outcomes	Equipment Required
		necessary	
4	Comply with Worksite Health and Safety Guidelines  Theory Duration (hh:mm) 06:00  Practical Duration (hh:mm) 12:00  Corresponding NOS Code IES/N7601	<ul> <li>Comply with all safety, health, security and environmental regulations and guidelines at the worksite</li> <li>Utilise Personal Protective Equipment (PPE) and other safety gear related to protection of body in an effective manner.</li> <li>Follow safety measures during operations to ensure that the health and safety of all including members of the publics is not at risk.</li> <li>Handle the transportation, storage and disposal of hazardous materials and waste in compliance with workshop health, safety and environmental guidelines</li> <li>Operate various types and grades of fire extinguishers, as applicable to the different categories of equipment</li> <li>Support in administering basic first aid and report to concerned staff in case of an accident</li> <li>Respond promptly and appropriately to an accident/ incident or an emergency within limits of one's roles and responsibilities</li> <li>Record and report essential details related to operations, incidents or accidents as per the organisation's procedures.</li> </ul>	Skid Steer Loader_with standard tools, accessories and equipment/attachments.     Class room with audiovideo system     Organisation's ESH / Safety video     PPE Items & Safety Gear     Firefighting equipment & Charts     First Aid Kit and Charts
	Total Duration	Unique Equipment Required:  Skid Steer Loader with standar	d tools, accessories and
	Theory Duration 40:00	<ul> <li>equipment/attachments.</li> <li>Class room with audio-video projection</li> <li>Manufacturers O and M Manual &amp; Vide</li> </ul>	•
	Practical Duration 80:00	<ul> <li>Safety video</li> <li>PPE Equipment: Helmet, gloves, earplu</li> <li>Firefighting equipment and 'How to Use</li> <li>First Aid Box and 'How to Do' Charts</li> <li>Open ground and Lab/Workshop/Cover</li> </ul>	e' Charts

Grand Total Course Duration: 120 Hours, 0 Minutes

(This syllabus/ curriculum has been approved by Infrastructure Equipment Skill Council)









# Trainer Pre-requisites for Job role: "Skid Steer Loader Operator" mapped to Qualification Pack: "IES/Q0126, v1.0"

Sr. No.	Area	Details				
1	Description	To deliver accredited training service, mapping to the curriculum detailed above, in accordance with the Qualification Pack <u>"IES/Q 0126 Version 1.0"</u> .				
2	Personal Attributes	Aptitude for conducting training, with strong communication and interpersonal skills. Passion for training and developing others; well-organised; and a team player. Eager to learn and keep oneself updated with the latest in the mentioned field.				
3	Minimum	Class 10 <sup>th</sup>				
	Educational Qualifications	Desired: Certification Training in Skid Steer Loader Operations and Maintenance (O&M); and valid LMV (Light Motor Vehicle) License				
4a	Domain	Certified for Job Role: "Skid Steer Loader Operator" mapped to QP: "IES/Q				
	Certification	0126 – Version 1.0". Minimum accepted score 70%.				
4b	Platform Certification	Certified for Job Role: "Trainer" mapped to Qualification Pack: MEP/Q0102. Minimum accepted score 80%.				
5	Experience	<ul> <li>Have 3 to 4 years' site experience in Skid Steer Loader Operations.</li> <li>Have 1 to 2 years' experience in conducting O and M training programs.</li> </ul>				









Assessment Criteria	
Job Role	Skid Steer Loader Operator
Qualification Pack	IES/Q 0126 Version 1.0
Sector Skill Council	Infrastructure Equipment

Sr. No.	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	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 this criterion
6	To pass the Qualification Pack, trainee should score a minimum of 70% of aggregate marks to successfully clear the assessment
7	In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack

Compulsory NOS Total Marks: 100					Marks Allocation	
Assessment outcomes	Asses	sment criteria for outcomes	Total Marks	Out Of	Theor y	Skills Practica I
IES/N0176 Carry     out pre-operation     checks on skid     steer loader	PC1.	inspect the body components for cracks and bearing wear		1.5	0.5	1
	PC2.	check the inflation pressure of the tyres as per the prescribed norms/ the requirement of the ground		1.5	0.5	1
	PC3.	examine the machine for loose or missing nuts and bolts, loose guards, connectors and pivot pins	30	1.5	0.5	1
	PC4.	check conditions of parking brake, main horn, reverse horn, and head light		1.5	0.5	1
	PC5.	ensure footplates, grab irons, hand holds and steps are clean and free from mud, dirt and oil to reduce skidding risks		2.5	0.5	2
	PC6.	check electrical and hydraulic lines, hoses for damages and leaks		2.5	0.5	2









	PC7.	ensure oil levels of engine transmission, radiator coolant, battery electrolyte level are as per the required levels		2.5	0.5	2
	PC8.	drain water and sediment from the fuel tank if required		2.5	0.5	2
	PC9.	check that all protection and safety devices such as controls locking lever, loading arm locking pin and operator post rotation locking pin are in the right position as per the equipment manual		2.5	0.5	2
	PC10.	check the various controls, gauges, warning lamp, fan belt tension, terminal tightness and other safety devices		2.5	0.5	2
	PC11.	inspect pins and keepers of bucket for any damages and connections for leakages		2.5	0.5	2
		check and if required, adjust the seat height, tilt and distance from pedals		2.5	0.5	2
		report defects precisely to the supervisor if beyond scope		2.5	0.5	2
	PC14.	maintain a checking/maintenance logbook to record all activities performed before starting the skid steer loader		1.5	0.5	1
		Total		30	7	23
IES/N0177     Operate a skid     steer loader	PC1.	ensure the joystick controls are in neutral position before starting the skid steer loader		1.5	0.5	1
	PC2.	enter the cabin of the skid steer loader only with the engine off, lift arms down and attachments on the ground and by using steps and grab bars		1.5	0.5	1
	PC3.	was seek helt and edited seek				
		wear seat belt and adjust seat position as per one's comfort and safety		1.5	0.5	1
	PC4.	position as per one's comfort and		1.5 1.5	0.5	1
		position as per one's comfort and safety	35			
	PC4.	position as per one's comfort and safety lower the safety/restraining bar start the engine using the starting key and test all controls- steering, forward reverse, raise and lower lift	35	1.5	0.5	1
	PC4. PC5.	position as per one's comfort and safety lower the safety/restraining bar start the engine using the starting key and test all controls- steering, forward reverse, raise and lower lift arms, etc. start the machine by unlocking the controls using toggle switch near the	35	1.5	0.5	1









	PC9.	lift and lower the bucket through foot control and pedals as per the loading/unloading requirement		1.5	0.5	1
	PC10.	operate all the attachments in a skid steer loader as per the requirement and the operational manual		1.5	0.5	1
	PC11.	drive forward to engage and collect load		1.5	0.5	1
	PC12.	stop the machine just before you get to the pile of material, and lower the bucket to the ground with the front edge sitting level		1.5	0.5	1
	PC13.	drive forward, pushing the bucket into the load until the tyres spin, then press the left pedal down with heel while still attempting to drive forward		1.5	0.5	1
		push the right pedal with heel to tilt the bucket back for driving, back up, and raise the bucket to a safe carrying height		1.5	0.5	1
	PC15.	drive to the spot, press the right pedal with toe to tilt the bucket down and dump the load		1.5	0.5	1
	PC16.	ensure completion of work within defined time		1.5	0.5	1
	PC17.	determine and keep a safe distance from other objects vehicles		1.5	0.5	1
	PC18.	ensure that skid steer loader is always in a stationary position when parked with arms pulled and controls cut off		1.5	0.5	1
	PC19.	set the parking brake and controls to relieve hydraulic pressure		1.5	0.5	1
	PC20.	ensure the engine is turned off as per the manufacturer's instructions		1	0.5	0.5
	PC21.	ensure the controls are locked and remove the ignition key		1.5	0.5	1
	PC22.	unbuckle the safety belt, raise the safety bar and exit as per the manufacturer's instructions		1.5	0.5	1
	PC23.	ensure the tyres are in static position to avoid the vehicle moving forward or backward		1.5	0.5	1
	PC24.	report to the supervisor of any problems while operating the skid steer loader		1	0.5	0.5
		Total	]	35	12	23
IES/N0178     Carry out     maintenance and     troubleshooting	PC1.	determine the right service schedule by tracking machine operating hours	20	1.5	0.5	1









of a skid steer loader						
- Ioddoi	PC2.	check if all plates are attached into the vehicle		1.5	0.5	1
	PC3.	clean air filter dust bowls, footplates, pedals and steps free from mud, dirt, ice and snow at regular intervals and drain water and sediment/ fuel separators.		1	0	1
	PC4.	check and maintain the tire rims, air pressure, wheel nuts and treads as per manufacturer's indicators		1.5	0.5	1
	PC5.	replenish coolants, lubricants and fluids as per the running of the machine or as per the schedule		1.5	0.5	1
	PC6.	grease all greasing pins and pivot points regularly as per the usage of the machine		1	0	1
	PC7.	check battery levels and condition of the terminals and carry out minor adjustments if required		1	0.5	0.5
	PC8.	ensure all the tools are kept in the designated place after usage		1	0.5	0.5
	PC9.	ensure the main power is turned off from panel completely before carrying out maintenance work		1	0.5	0.5
	PC10.	ensure that bucket arm is lowered before any maintenance operations		1	0.5	0.5
	PC11.	ensure that no maintenance task on the engine is performed when running or still hot		1	0.5	0.5
	PC12.	ensure that appropriate tools are used while troubleshooting		1	0	1
	PC13.	diagnose the problem and identify appropriate repair procedures		1.5	0.5	1
	PC14.	report defects precisely to the supervisor if beyond scope of role		1	0.5	0.5
	PC15.	dispose waste as per the guidelines of the site/ organisation		1.5	0.5	1
	PC16.	follow reporting procedures as laid down by the employer		1	0.5	0.5
	PC17.	complete all documentation in the prescribed standards in a timely manner		1	0.5	0.5
		Total		20	7	13
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	15	1.5	0.5	1
gaideillies	PC2.	use Personal Protective Equipment (PPE) and other safety gear such as		2.5	0.5	2









T		1		1	
	seat belt, body protection, respiratory				
	protection, eye protection, ear				
	protection and hand protection				
PC3.	follow safety measures during		2	1	1
	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		1.5	0.5	1
	manufacturer's and worksite related				
	health and safety guidelines				
PC5.	handle the transport, storage and		1.5	0.5	1
	disposal of hazardous materials and				
	waste in compliance with worksite				
	health, safety and environmental				
	guidelines				
PC6.	,		1.5	0.5	1
	extinguishers, as applicable				
PC7.	support in administering basic first		1.5	0.5	1
	aid and report to concerned team				
	members, as required, in case of an				
	accident				
PC8.	respond promptly and appropriately		1.5	0.5	1
	to an accident/ incident or emergency				
	situation, within limits of role and				
	responsibility				
PC9.	• • • • • • • • • • • • • • • • • • •		1.5	0.5	1
	operations, incidents or accidents, as				
	applicable		45		40
	Total		15	5	10
Grand Total			100	31	69