

Model Curriculum

Junior Mechanic Hydraulic

SECTOR: INFRASTRUCTURE EQUIPMENT
SUB-SECTOR: EQUIPMENT SERVICE AND SPARES
OCCUPATION: EQUIPMENT MAINTENANCE
REF ID: IES/Q1104, V1.0
NSQF LEVEL: 3



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: 'Junior Mechanic Hydraulic' QP No. 'IES/Q 1104, NSQF Level 3'

Date of Issuance: July 1st, 2016

Valid up to: March 31st, 2017



Authorized Signatory
(Infrastructure Equipment Skill Council)

TABLE OF CONTENTS

1. Curriculum	04
2. Trainer Prerequisites	10
3. Annexure: Assessment Criteria	11

Junior Mechanic Hydraulic

CURRICULUM / SYLLABUS

This program is aimed at training candidates for the job of a “Junior Mechanic Hydraulic”, in the “Infrastructure Equipment” Sector/Industry and aims at building the following key competencies amongst the learner

Program Name	Junior Mechanic Hydraulic		
Qualification Pack Name & Reference ID	IES/Q1104		
Version No.	1.0	Version Update Date	
Pre-requisites to Training	Preferably Class 8th Standard		
Training Outcomes	<p>After completing this programme, participants will be able to:</p> <ul style="list-style-type: none"> • Assist in carrying out repairs and maintenance of equipment’s hydraulic assemblies and sub-assemblies. Basic working of hydraulic assemblies & systems, identification and use of hand tools and equipment, techniques for removal of defective components and fitment after rectification. • Maintain the work area, tools and machine to support operations. Maintenance of work area, tools and equipment, various cleaning agents and their use, safety precautions & measures • Comply with workshop health and safety guidelines. Health, safety and environment policies; personal protective equipment, fire-fighting equipment, basic first aid for common injuries at work shop 		

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<p>Skills - Core & Professional</p> <ul style="list-style-type: none"> • Read & understand general instructions, maintenance manuals & work orders related to equipment. • Record and document basic details of repairs and maintenance carried out. • Interact with mechanic / supervisors as necessary to seek clarifications & understand issues. • Plan and organise repair tasks with all concerned in most efficient and cost effective way. <p>Performance Criteria. Execute the following:</p> <p>Breakdown Repair Assistance</p> <ul style="list-style-type: none"> • Ensure availability of all tools, spares, consumables and equipment for repairs. • Ensure tools and equipment are in appropriate condition & correctly positioned for ensuing repair task • Disassemble defective part / component safely for repairs as per SOP. • Assist as instructed in service / repair of defective part /component. • Ensure cleaning and lubrication of parts etc as per guidelines. • Reassemble the same when repairs are complete. <p>Assist mechanic in preparing parts list for procurement</p> <ul style="list-style-type: none"> • <p>Maintenance Work Assistance</p> <ul style="list-style-type: none"> • Follow maintenance schedule as per manufacturers manual • Assist replenish or change consumables as per manual • Assist in cleaning of filters and hose pipes. • Report if any part has to be changed or repaired as per guidelines. • Perform/assist in visual inspection to check leakages and • Proper functioning of systems during post repair trials. 	

Trainer Pre-requisites for Job role: “Junior Mechanic Hydraulic” mapped to Qualification Pack: “IES/Q1104, 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 “IES/Q 1104 Version 1.0”.
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 Educational Qualifications	ITI / Diploma in Hydraulic
4a	Domain Certification	Certified for Job Role: “ <u>Junior Mechanic Hydraulic</u> ” mapped to QP: “ <u>IES/Q 1104 – Version 1.0</u> ”. Minimum accepted score 70%. Desired: Certification Training in Hydraulic System Maintenance and Repairs
4b	Platform Certification	Certified for Job Role: “ <u>Junior Mechanic Hydraulic</u> ” mapped to Qualification Pack: SSC/1402. Minimum accepted score 70%.
5	Experience	<ul style="list-style-type: none"> • Around 3 to 4 years’ experience in Hydraulic maintenance and repairs. • Desirable: Should have conducted Hydraulic service training programs.

Assessment Criteria	
Job Role	Junior Mechanic Hydraulic
Qualification Pack	IES/Q 1104 Version 1.0
Sector Skill Council	Infrastructure Equipment

Sr. No.	Guidelines for Assessment
1	Criteria for assessment for Qualification Pack has been laid down based on the NOS's. Each Performance Criteria (PC) has been assigned marks proportional to its importance within NOS and weightages have also been given among the NOSs accordingly.
2	The assessment of the theory/knowledge will be based on written test/viva or both while skill test shall be hands on practical. Behaviour and attitude will be assessed while performing the assigned task.
3	The assessment shall be done as per the guidelines formulated by IESC. The assessment agencies in consultation with IESC will create unique question papers for theory/knowledge and practical skills at each IESC accredited testing centres (as per assessment criteria below)
4	To pass the Qualification Pack, every trainee should score a minimum of 40% in each NOS and 50% aggregate. In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification pack.

NOS	PC	Total Mark	Out of	Marks Allocation	
				Theory	Skills Practical
1. IES/N1104 Assist in repair and maintenance of infrastructure equipment's hydraulic parts and systems	PC1. Carry out Visual inspection for leakage as per the mechanic's instruction	34	2	1	1
	PC2. Disassemble and reassemble broken or defective hydraulic component to facilitate repair as per Standard Operating procedure		2	1	1
	PC3. Ensure post repair reassembly of components as per Standard Operating procedure		1	0	1
	PC4. Ensure availability of tools, spare parts, equipment and supplies for repair work		2	1	1

	PC5. Ensure appropriate positioning of machinery, equipment, physical structures, and other objects for assembly or installation, using hand tools, power tools, and moving equipment as per mechanic's instructions		1	0	1
	PC6. Ensure appropriate conditions of tools, equipment, and machines as per mechanic's instruction		1	0	1
	PC7. Assist in adjusting, Connecting, or disconnecting of wiring, piping, tube and other parts, using hand or power tools as per Standard Operating Plan		4	1	3
	PC8. Ensure cleaning or lubrication components of hydraulic system, equipment, instruments, tools, work areas, and other objects, using hand tools, power tools, and cleaning equipment as per the manufacturer's manual		1	0	1
	PC9. Assist in assembly or repair of pipes and hoses used within hydraulic systems mechanic's instruction		2	1	1
	PC10. Work safely at all times, complying with health and safety and other relevant regulations, directives and guidelines		1	0	1
	PC11. Assist in preparing parts list for procurement		1	0	1
	PC12. Handle and dispose waste based on environmental guidelines at the work place		1	0	1
	PC13. Follow the maintenance schedule		1	0	1
	PC14. Assist in replacing the scheduled spare parts as per mechanic's instruction		4	1	3
	PC15. Perform visual inspection to verify proper functioning of hydraulic system as per manufacturer's manual		1	0	1
	PC16. Check and clean Hydraulic Pin as per manufacturer's manual		1	0	1

	PC12. Respond promptly and appropriately to an accident/incident or emergency situation, within limits of your role and responsibility		1	0	1
	PC13. Record and report details related to operations, incidents or accidents, as applicable		2	1	1
		Total	28	9	19