



NEVADA LABOR COMMISSIONER
NEVADA STATE APPRENTICESHIP COUNCIL
2023 Non-Joint Standards of Apprenticeship

Appendix A

WORK PROCESS SCHEDULES AND RELATED INSTRUCTION OUTLINE

EquipmentShare

Heavy Equipment Technician

O*NET-SOC CODE: 49-3042.00 RAPIDS CODE: _____

APPROVED BY
THE NEVADA LABOR COMMISSIONER AND THE NEVADA STATE APPRENTICESHIP COUNCIL

Toni Giddens, Nevada State Apprenticeship Director

REGISTRATION DATE: _____

RAPIDS PROGRAM ID NUMBER: _____

DEVELOPED IN COOPERATION WITH THE
THE NEVADA LABOR COMMISSIONER, THE NEVADA STATE APPRENTICESHIP COUNCIL AND
THE U.S. DEPARTMENT OF LABOR

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5. **WORK PROCESS SCHEDULE** (See attached Work Process Schedule)

The sponsor may modify the work processes to meet local needs prior to submitting these Standards to the appropriate Registration Agency for approval.

6. **RELATED INSTRUCTION OUTLINE** (See attached Related Instruction Outline)

The sponsor may modify the related instruction to meet local needs prior to submitting these Standards to the appropriate Registration Agency for approval.

Appendix A

WORK PROCESS SCHEDULE

The term of the occupation shall be defined by the attainment of all competencies, both technical and behavioral, of the position, which would be expected and approximated to occur within **8000** hours of OJL, supplemented by a minimum of 144 hours of related instruction per year of apprenticeship.

Apprenticeship Competencies - Technical

ON-THE-JOB TRAINING	APPROXIMATE HOURS
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<p>A. <u>ORIENTATION</u></p> <ul style="list-style-type: none"> Learn uses of tool and equipment Learn name of parts, (nomenclature) Fundamentals of engine operation Engine print studies Specifications, symbols, diagrams, etc Trade periodicals study Safety observance Remove and disassemble transmissions Remove and disassemble differentials Remove and replace motor from frame Terminology, diesel operation Fuels and lubricants 	<p>1000</p>
<p>B. <u>MATERIALS, PARTS (Name and Designation)</u></p> <p>Learn proper procedure:</p> <ol style="list-style-type: none"> 1. main bearings 2. pistons 3. cylinder liners 4. bearing clearances 5. crankshaft 6. connecting rods <p>Disassembly and replacement</p> <p>Remove and replace pan</p> <p>Learn use of machine tools</p> <p>Operation care and maintenance</p> <p>Theory of job and processes</p>	<p>1000</p>
<p>C. <u>GENERAL REPAIR AND REPLACEMENT JOB</u></p> <ol style="list-style-type: none"> 1. Remove, repair and replace pan, starter and manifolds 	<p>1500</p>

2. Remove, clean and replace cylinder head	
3. Remove, check and replace crankshaft, and timing	
4. Remove, check and adjust governor	
5. Replace governor	
D. <u>MOTOR REPAIR, OVERHAUL OR INSTALL</u>	1800
1. Remove, check, repair and replace water pump	
2. Remove, check and replace injector system, fuel pump, pistons and piston rings, camshaft and bearings	
3. Remove, check, replace and adjust connecting rod bearings	
4. Remove, check, grind, and replace valves	
5. Remove and replace cylinder liners	
6. Assemble motor, adjust valves, check timing and test motor	
7. Adjust for proper mixture	
8. Make final test and check operation	
E. <u>AIR COMPRESSORS</u>	350
1. Check pump, dismantle, repair and assemble	
2. Check tank and pressure gauge	
3. Study parts book and service manual	
F. <u>GAS ENGINES</u>	350
1. Air cooled	
1. dismantle, repair and assemble	
2. Water cooled	
1. dismantle, repair and assemble	
3. Study parts book and service manual	
G. <u>CONCRETE MIXERS</u>	200
1. Learn sizes	
2. Learn about moving parts	
3. Dismantle, clean, repair and assemble	
H. <u>BULLDOZERS</u>	200
1. Learn types and sizes	
2. Learn names and identify moving parts	
3. Study parts book and service manuals	
I. <u>GRADERS</u>	200
1. Learn types and sizes	
2. Learn names of all moving parts	
3. Study parts book and service manual	

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4.	Dismantle, repair and assemble	
J.	<u>MOTOR SCRAPERS</u>	500
1.	Oil and grease	
2.	Service engine	
3.	Learn scraper parts	
4.	Study parts book and service	
5.	Dismantle repair and assemble	
K.	<u>POWER SHOVELS</u>	400
1.	Learn types	
2.	Identify all parts and service	
3.	Study parts books and service manuals	
4.	Dismantle, repair and assemble	
L.	<u>TRUCK CRANES</u>	400
1.	Learn various types	
2.	Identify parts and service	
3.	Study service manual	
4.	Dismantle, repair and assemble	
M.	<u>WELDING</u>	100
1.	Learn use of acetylene torches	
2.	Learn to do electrical welding	
TOTAL HOURS		8000

Item	Work Processes	Approx. Hours
A		
B		
C		
D		
E		
F		
G		

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H		
I		
J		
K		
L		
M		
N		
O		
P		
Q		
	Total hours (approximate)	

The above on-the-job-learning (OJL) work process competencies are intended as a guide. It need not be followed in any sequence, and it is understood that some adjustments may be necessary in the hours allotted for different work experience. In all cases, the apprentice is to receive sufficient experience to make them fully competent and use good workmanship in all work processes, which are a part of the industry. In addition, the apprentice shall be fully instructed in safety and OSHA requirements.

Apprenticeship Competencies – Behavioral

In addition to mastering all the essential technical competencies, an apprentice must consistently demonstrate at an acceptable level the following behavioral competencies, to complete the apprenticeship.

Item #	Behavioral Competencies
1.	Participation in team discussions/meetings
2.	Focus in team discussions/meetings
3.	Focus during independent work
4.	Openness to new ideas and change
5.	Ability to deal with ambiguity by exploring, asking questions, etc.
6.	Knows when to ask for help
7.	Able to demonstrate effective group presentation skills
8.	Able to demonstrate effective one-on-one communication skills
9.	Maintains an acceptable attendance record
10.	Reports to work on time
11.	Completes assigned tasks on time
12.	Uses appropriate language
13.	Demonstrates respect for patients, co-workers, and supervisors
14.	Demonstrates trust, honesty, and integrity
15.	Requests and performs work assignments without prompting
16.	Appropriately cares for personal dress, grooming and hygiene
17.	Maintains a positive attitude
18.	Cooperates with and assists co-workers
19.	Follows instructions/directions
20.	Able to work under supervision
21.	Able to accept constructive feedback and criticism
22.	Able to follow safety rules
23.	Able to take care of equipment and workplace
24.	Able to keep work area neat and clean
25.	Able to meet supervisor's work standards

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26.	Able to not let personal life interfere with work
27.	Adheres to work policies/rules/regulations

RELATED INSTRUCTION OUTLINE

The related instruction has been developed in cooperation with employer-partners as part of the apprenticeship. The following is a set of courses to be delivered by subject matter experts.

Related Technical Instruction (RTI) - This instruction shall include, but not be limited to, at least 225 hours per year for each year of the apprenticeship. The related theoretical education listed below is tightly integrated with real work product. The curriculum is defined as a variety of classes, around which the exams and projects are based. By defining the RTI this way, all competencies required of the students are met, through project work.

COURSE		
TOPICS		HOURS

- | | | |
|----|--|---|
| A. | | # |
| B. | | # |
| C. | | # |
| D. | | # |

Welding	Basic Welding
Diesel Technology	Introduction to Heavy Equipment
Basic Electricity	Electrical Systems I
	Electrical Systems II
Engines	Fluids and Filtration
	Engines I
	Engines II
HVAC	Truck Heating, Ventilation, and Air Conditioning
Hydraulics	Hydraulics I
	Hydraulics II
Power Trains	Power Train I
	Power Train II
Suspension	Medium/Heavy Truck Suspension and Steering
Scheduled Services	Preventative Maintenance
	Service and Parts Management

Communication

English 101

COURSE TOPIC DESCRIPTIONS

A. Description #1

B. Description #2

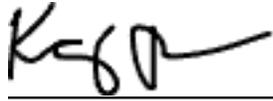
C. Description #3

D. Description #4

SECTION 27 - OFFICIAL ADOPTION OF APPRENTICESHIP STANDARDS

EquipmentShare hereby adopts these standards of apprenticeship.

Sponsor(s) designate the appropriate person(s) to sign the standards on their behalf.



_____ Date: 7/18/24
Signature of Sponsor (*designee*)

Kalynn Ramsey, Apprentice Program Manager
Type Name & Title