# **Skills Transferability Matrix**



## Metalworking and Forging Machine Operators



Metals and alloys are common inputs in modern manufacturing. Metalworking and Forging Machining Operators acquire production techniques, skills, and abilities to shape and manipulate metals. These techniques and knowledge of processing and manufacturing may prove useful in transferring to roles within machine operation, metalworking, or other material processing, giving a degree of freedom to where operators can transfer or upskill.

### Skills

Skills are developed through training and experience, and are the practical proficiencies someone possesses. The following are top key skills metalworking and forging machine operators employ in their work:

- 1. Operation Monitoring
- 2. Operation and Control
- 3. Quality Control Analysis
- 4. Complex Problem Solving
- 5. Reading Comprehension

#### Tasks

Tasks are the assigned duties that an occupational group performs in their daily work. The following are the tasks metalworking and forging machine operators most regularly encounter:

- 1. Measure dimensions of completed products or workpieces to verify conformance to specifications.
- 2. Study blueprints or other instructions to determine equipment setup requirements.
- 3. Remove products or workpieces from production equipment.
- 4. Operate metal or plastic forming equipment.
- 5. Read work orders or other instructions to determine product specifications or materials requirements.

### Technical Knowledge

Technical Knowledge is the understanding of theory and utility of modern tools in a work environment. The following tools are used by metalworking and forging machine operators regularly:

- 1. Computer-aided design and manufacturing software
- 2. Industrial control software
- 3. Inventory management software
- 4. Analytical or scientific software
- 5. Office suite software

### Abilities

Abilities refer to the innate faculties that allow workers to carry out tasks and activities. The following are the top abilities that metalworking and forging machine operators possess:

- 1. Control Precision
- 2. Arm-Hand Steadiness
- 3. Manual Dexterity
- 4. Near Vision
- 5. Problem Sensitiity

# **Skills Transferability Matrix**



FOCAL's Skills Transferability Matrices analyze the transferability of an occupation across a multitude of other occupations on the basis of similarities in **skills**, **technical knowledge, tasks**, and **abilities** as outlined by the O\*Net database. It aims to show workers how to leverage their skill set in changing occupations, planning a career path, and transitioning to other industries. It also assists policy makers and educators address changing skill sets and areas of opportunity for workforce entrants in developing industries. Employers can also use this tool in reskilling or upskilling workers to circumvent skills shortages, and reduce the hiring and training challenges.

Metalworking and Forging Machine Operators					
Occupations	Skills	Technical Knowledge	Tasks	Abilities	Total
Woodworking machine operators	93%	94%	64%	93%	86%
Machining tool operators	95%	94%	61%	92%	86%
Plastics processing machine operators	95%	67%	77%	94%	83%
Machinists and machining and tooling inspectors	93%	89%	58%	91%	83%
Machine operators, mineral and metal processing	94%	50%	54%	93%	73%
Concrete, clay and stone forming operators	91%	44%	55%	91%	70%
Foundry workers	87%	56%	44%	88%	69%
Mechanical assemblers and inspectors	88%	67%	33%	84%	68%
Motor vehicle assemblers, inspectors and testers	89%	72%	27%	84%	68%
Chemical plant machine operators	94%	33%	38%	92%	64%
Central control and process operators, mineral and metal processing	92%	39%	30%	91%	63%
Mechanical engineering technologists and technicians	83%	83%	0%	75%	60%
Other metal products machine operators	91%	33%	25%	88%	60%
Pulping, papermaking and coating control operators	92%	33%	14%	90%	57%
Supervisors, other mechanical and metal products manufacturing	65%	72%	16%	72%	56%

After scanning over 2,600 skills, technical competencies, tasks, and abilities of each of the 500 occupations as defined by the National Occupational Classification (NOC) system, a skills transferability matrix for metalworking and forging machine operators is produced. In the matrix above, a high score is highlighted in green and indicates the high transferability potential of an attribute of an occupation with that of metalworking and forging machine operators. Lower or no transferability areas are marked in red. Metalworking and forging machine operators share high overall attribute transferability with machine operation roles, as they are functionally similar occupations necessitating many of the same skills and abilities, as well as performing similar work, and can transition to machine operation in other types of manufacturing. There is a trend of transferability to raw material processing, with transferability to foundry working, pulp and paper making as well as concrete and clay processing. Strong transferability is observed to machining and tooling as a trade, and moderate transferability to mechanical engineering technician roles, indicating with training and proper education, they may succeed in skilled trade roles.

To learn more about developments, trends and new technologies in Canada's automotive manufacturing industry, visit our website <u>futureautolabourforce.ca</u>.

You can also check our social media by following these links:



<u>/focalinitiative</u>

<u>@FocalInitiative</u>

