

**MICHIGAN CIVIL SERVICE COMMISSION  
JOB SPECIFICATION**

**MACHINIST**

**JOB DESCRIPTION**

Employees in this job perform and oversee maintenance, repair, and fabrication work requiring the skillful use of a variety of metal machining tools and precision measuring devices to cut, grind, or otherwise shape metal and plastic parts into conformance with specified dimensions.

There are two classifications in this job.

**Position Code Title – Machinist-E**

Machinist E9

This is the experienced level. The employee performs a full range of machinist assignments using independent judgement to make decisions requiring the application of procedures and practices to specific work situations.

**Position Code Title – Machinist-A**

Machinist 10

This is the advanced level. The employee functions as a crew leader, overseeing the work of lower-level Machinists and others, and performs journey-level machinist assignments; or, as a senior worker performing duties which have been recognized by Civil Service as having greater complexity than those assigned at the experienced level.

**JOB DUTIES**

**NOTE:** The job duties listed are typical examples of the work performed by positions in this job classification. Not all duties assigned to every position are included, nor is it expected that all positions will be assigned every duty.

Studies specifications, blueprints, or damaged tools and machine parts to determine nature and dimension of parts to be fabricated.

Selects metallic and nonmetallic materials to be machined and measures, marks, or scribes dimensions and reference points on to stock preparatory to machining operations.

Sets up and operates lathes, milling machines, precision grinders, drill presses, band saws, shapers and other powered metal-working tools to machine parts to specified dimensions.

## **MACHINIST**

### **PAGE No. 2**

Uses precision measuring devices such as height gauges, micrometers, vernier calipers and dial indicators to verify conformance of machinist pieces to specifications.

Uses mechanic's hand tools such as files, scrapers, mallets, wrenches, screwdrivers, and riveters to fit and assemble parts and assemblies.

Operates machines and other mechanisms to observe operation and diagnose malfunctions or to test repaired equipment.

Keeps inventory of stock and orders new materials as needed.

Keeps records and reports use of equipment.

Develops specifications from general description of parts or assemblies to be fabricated and draws or sketches device to be made.

Operates bench grinder to sharpen cutting tools.

Operates gas or electric welders to install finished assemblies or to join or build up metal surfaces of parts to be machined or repaired.

Performs routine or preventive maintenance and repair, lubrication and cleaning of machine tools, equipment and mechanical, electrical, and hydraulic systems such as laundry, bakery, kitchen, automotive, farm and power plant equipment.

Designs and constructs jigs and special tools to facilitate the machining, assembly, or disassembly of parts and assemblies.

Makes estimates of time and materials required to complete an assignment.

May assist in the training of Trades Helpers and others.

Performs related work as assigned.

### **Additional Job Duties**

#### **Machinist 10 (Lead Worker)**

Coordinates work by scheduling assignments and overseeing the work of others.

Provides instruction and training in the proper methods and processes to carry out assignments.

Oversees and assures the work quality and flow by directing the strict adherence to methods and procedures.

Explains work instructions and adapts, if necessary, pertinent general methods and procedures in order to meet the needs of special projects.

## **MACHINIST**

**PAGE No. 3**

### **Machinist 10 (Senior Worker)**

Develops, modifies, designs and tests prototypes.

Creates complex or non-routine Computer Numerically Controlled (CNC) milling machine programs.

Selects and machines exotic materials (i.e. aluminum, abrasion resistant steel) emphasizing efficient operation and minimal cutting, tool wear and/or breakage.

Performs non-routine machine shop maintenance and repair, lubrication and cleaning of machine tools, equipment and mechanical, electrical and hydraulic systems.

Develops, designs or performs complex repairs on various tools, machines or equipment, of a specialized nature for state and/or non state entities.

Serve as a subject matter expert when reviewing and recommending equipment usability, life expectancy and salvage potential.

Provides guidance and instruction on agency specialized equipment and machining processes.

### **JOB QUALIFICATIONS**

#### **Knowledge, Skills, and Abilities**

**NOTE:** Considerable knowledge is required at the experienced level and thorough knowledge is required at the advanced level.

Knowledge of the methods, practices, tools and equipment of the machinist trade.

Knowledge of the machining qualities, properties and uses of various metals such as aluminum, brass, steel, cast iron and stainless steel.

Skill in the operation of machine tools and the use of precision measuring devices.

Ability to apply machinist craft techniques, processes and principles.

Ability to apply shop mathematics to practical problems such as computing dimensions, laying out work, and setting up machine tools.

Ability to read and work from sketches, specifications, and blueprints.

#### **Additional Knowledge, Skills, and Abilities**

### **Machinist 10 (Lead Worker)**

Ability to train and instruct others in the work.

## **MACHINIST**

**PAGE No. 4**

Ability to assign work to employees.

Ability to prioritize and evaluate the work of others.

Ability to organize and coordinate the work of the unit.

### **Machinist 10 (Senior Worker)**

Ability to perform the most complex machining assignments.

Ability to program and operate complex computerized machining equipment.

### **Working Conditions**

Some jobs require an employee to be exposed to a hazardous work environment.

### **Physical Requirements**

The job duties require an employee to move heavy objects.

### **Education**

No specific amount is required.

### **Experience**

#### **Machinist E9**

Four years of experience assisting a skilled machinist in a general machine shop.

#### **Machinist 10**

Five years of experience in the machine trade, including one year equivalent to a Machinist E9.

### **Special Requirements, Licenses, and Certifications**

None.

**NOTE:** Equivalent combinations of education and experience that provide the required knowledge, skills, and abilities will be evaluated on an individual basis.

**MACHINIST**

**PAGE No. 5**

**JOB CODE, POSITION TITLES AND CODES, AND COMPENSATION INFORMATION**

| <b><u>Job Code</u></b> | <b><u>Job Code Description</u></b> |
|------------------------|------------------------------------|
| MACHINIST              | Machinist                          |

| <b><u>Position Title</u></b> | <b><u>Position Code</u></b> | <b><u>Pay Schedule</u></b> |
|------------------------------|-----------------------------|----------------------------|
| Machinist-E                  | MACHNSTE                    | A31-010                    |
| Machinist-A                  | MACHNSTA                    | A31-012                    |

ECP Group 1  
Revised 07/13/10  
LP/MF