



CERTIFIED MANUFACTURING ASSOCIATE SKILLS CHECKLIST



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1.0 Safety

Performance Objective 1.1: Demonstrate the ability to select and use common safety practices required for most manufacturing environments.

	Performance Indicator	Verification Date/Initial
1.1.1	Demonstrate proper selection and use of safety glasses.	
1.1.2	Demonstrate proper selection and use of a clear face shield.	
1.1.3	Demonstrate proper selection and use of safety gloves.	
1.1.4	Demonstrate proper selection and use of ear plugs/muffs.	
1.1.5	Demonstrate proper selection and use of protective footwear.	
1.1.6	Demonstrate the ability to identify hazards in a work area.	
1.1.7	Recognize and identify an emergency stop on a piece of equipment.	
1.1.7	Recognize and identify the different safeguarding systems on a piece of equipment.	

Performance Objective 1.2: Demonstrate the ability to properly use a Safety Data Sheets (SDS) in the workplace

	Performance Indicator	Verification Date/Initial
1.2.1	Demonstrate proper selection of SDS sheets.	
1.2.2	Identify and describe ingredients listed on a SDS sheet.	
1.2.3	Identify and describe first aid measures listed on a SDS sheet.	
1.2.4	Identify and describe hazard identifications listed on a SDS sheet.	
1.2.5	Identify and describe firefighting measures listed on a SDS sheet.	
1.2.6	Identify and describe storage and handling listed on a SDS sheet.	
1.2.7	Identify and describe physical and chemical properties listed on a SDS sheet.	
1.2.8	Identify and describe the chemical stability and reactivity listed on a SDS sheet.	
1.2.9	Identify and describe toxicological information listed on a SDS sheet.	
1.2.10	Identify and describe the disposal requirements listed on a SDS sheet.	

Performance Objective 1.3: Demonstrate the ability to properly perform fire safety.

	Performance Indicator	Verification Date/Initial
1.3.1	Demonstrate the ability to identify locations of the fire exit, fire hose, and fire extinguisher using a Fire Prevention Plan (FPP) document.	
1.3.2	Demonstrate the ability to identify and eliminate fire hazards	
1.3.3	Demonstrate the ability to select and properly use a fire extinguisher to put out a small fire.	

Performance Objective 1.4: Demonstrate proper hand and power tool safety.

	Performance Indicator	Verification Date/Initial
1.4.1	Identify and inspect eye wash stations, hand wash stations, first aid kits, and fire extinguishers on the shop floor.	
1.4.2	Demonstrate the inspection and safe use of common hand tools	
1.4.3	Demonstrate the inspection and safe use of common power tools	

Performance Objective 1.5: Demonstrate the ability to recognize proper lock out tag out practices.

	Performance Indicator	Verification Date/Initial
1.5.1	Demonstrate the ability to properly verify that an electrical, hydraulic, or pneumatic energy source has been isolated.	
1.5.2	Demonstrate the ability to recognize and correct hazards that prevent the safe re-energizing of equipment.	
1.5.3	Demonstrate the ability to remove all locks, clasps, and tags from each isolation point.	

2.0 Quality and Lean

Performance Objective 2.1: Demonstrate the ability to perform the stages of 5S.

	Performance Indicator	Verification Date/Initial
2.1.1	Identify and implement the 5S stage, Sort.	
2.1.2	Identify and implement the 5S stage, Set in Order.	
2.1.3	Identify and implement the 5S stage, Sweep and Shine.	
2.1.4	Identify and implement the 5S stage, Standardize.	
2.1.5	Identify and implement the 5S stage, Sustain.	
2.1.6	Identify and implement the 5S Plus 1 stage, Safety.	

3.0 Inspection

Performance Objective 3.1: Demonstrate the use and care of common inspection instruments and gages.

	Performance Indicator	Verification Date/Initial
3.1.1	Demonstrate the ability to interpret a print.	
3.1.2	Demonstrate the ability to identify the measured feature on a part.	
3.1.3	Demonstrate the ability to select the correct inspection tools for a given part feature.	
3.1.4	Demonstrate the ability to operate a 0-6 in. digital caliper.	
3.1.5	Demonstrate the ability to read a digital caliper.	
3.1.6	Demonstrate the ability to operate a 2-3 in. depth micrometer.	
3.1.7	Demonstrate the ability to interpret tolerances.	
3.1.8	Demonstrate the ability to take a measurement using the gage block.	
3.1.9	Demonstrate the ability to interpret go/no-go gaging	

3.0 Inspection (Continued)

Performance Objective 3.1: Demonstrate the use and care of common inspection instruments and gages.

	Performance Indicator	Verification Date/Initial
3.1.10	Demonstrate the ability to interpret a print and determine thread tolerance using a thread chart as reference.	
3.1.11	Demonstrate the ability to use thread ring gages.	
3.1.12	Demonstrate the ability to operate a telescoping gage.	
3.1.13	Demonstrate the ability to operate Vernier micrometers.	
3.1.14	Demonstrate the ability to read Vernier scale.	
3.1.15	Demonstrate the ability to read a tape measure	

4.0 Fasteners

Performance Objective 4.1: Demonstrate the ability to identify various fasteners and fastening tools.

	Performance Indicator	Verification Date/Initial
4.1.1	Select proper fastener tools for various threaded and non-threaded fasteners.	
4.1.2	Demonstrate safe practices for working with hand tools.	
4.1.3	Demonstrate safe practices for working with power tools.	
4.1.4	Demonstrate safe practices for using pneumatic tools	
4.1.5	Demonstrate proper posture as it relates to assembly.	

5.0 CNC

Performance Objective 5.1: Demonstrate the ability to identify various CNC tools.

	Performance Indicator	Verification Date/Initial
5.1.1	Visually identify the major assemblies of a Lathe	
5.1.2	Visually identify the major assemblies of a Mill	
5.1.3	Demonstrate the proper use of guarding on a Lathe	
5.1.4	Demonstrate the proper use of guarding on a Mill	
5.1.5	Visually identify and demonstrate the use of the emergency stop/cut-off for a Lathe	
5.1.6	Visually identify and demonstrate the use of the emergency stop/cut-off for a Mill	

6.0 Robotics

Performance Objective 6.1: Demonstrate the ability to identify various parts of a robotic system.

	Performance Indicator	Verification Date/Initial
6.1.1	Visually identify the major assemblies of an industrial robot.	
6.1.2	Visually identify the safeguarding systems that protect employees from injury when working with robots	

7.0 Additive Manufacturing

Performance Objective 7.1: Demonstrate the ability to identify Additive Manufacturing systems.

	Performance Indicator	Verification Date/Initial
7.1.1	Visually identify Additive Manufacturing equipment	
7.1.2	Visually identify supplemental tools used in Additive Manufacturing	
7.1.3	Visually identify parts made by Additive Manufacturing	

Student Signature:	Completed: MM/DD/YY
Verifier Signature:	Completed: MM/DD/YY