

Metal Fabricator (Fitter)

On-the-Job Checklist



	Level 1	Page 1/2
Red Seal Tasks	On-The-Job Duties	Completed
Performs safety-related functions	Perform workplace safety procedures, such as hazard identification, reporting concerns & handling hazardous materials	☐
	Use PPE & safety equipment, ensuring proper selection, use & compliance	☐
Uses & maintains tools & equipment	Use, inspect, maintain & store hand tools	☐
	Perform stationary machinery maintenance, ensuring inspections, lubrication, coolant levels & safety mechanisms	☐
	Perform cutting & welding equipment maintenance, ensuring inspections, safe procedures, cleaning, storage & condition of consumables	☐
	Inspect & use access equipment ensuring condition compliance & storage	☐
Organizes work	Perform basic drawing interpretation, such as piece marks, line types & unit conversion	☐
Performs quality assurance throughout fabrication & assembly process	Identify omissions in completed assemblies	☐
Handles materials	Identify materials & calculate volume & weight based on accepted specifications	☐
	Perform rigging inspections & setup, ensuring equipment selection, defect identification & lay-down preparation	☐
	Operate material handling equipment by inspecting, planning, securing, and placing loads	☐
Uses communication & mentoring techniques	Participate in safety & information meetings, ensuring key details are relayed effectively	☐
Performs layout	Visualize patterns & layouts, interpret drawings & imagine the final product in 3D	☐
	Estimate material quantity, based on job specifications & standard allowances	☐
	Use simple formulas to verify measurements	☐
Forms materials	Participate in heating equipment/tool selection based on material size, type & shape	☐

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	Level 1	Page 2/2
Red Seal Tasks	On-The-Job Duties	Completed
Performs welding activities	Use measuring tools to determine the pre-heat temperature of component materials	☐
	Install protective measures to shield nearby components during welding	☐
	Minimize distortion & stress by estimating allowances, selecting restraints, determining welding sequence & applying stress removal methods	☐
Cuts materials	Determine the settings required to cut various materials using a plasma cutter	☐
	Identify the types of oxy-fuel tips, their limitations & procedures for use	☐
	Identify the limitations to material thickness & size when using a shear	☐
	Determine the type of saw blade that is required based upon material thickness & hardness	☐
	Verify material compatibility, ensuring safety features align with equipment capacity	☐
	Identify the CNC speeds & feeds based upon the material being cut	☐
	Determine the metric equivalent to an imperial sized drill bit	☐
	Determine the correct size drill bit for tapping procedures	☐
	Select & handle equipment for edge beveling & grooving, ensuring proper tool application	☐
Fits & fastens sub-components & components	Select materials & tools, establish work points & lay out & fasten components to build a jig	☐
	Interpret documents & drawings, visualize components & define assembly steps to ensure efficiency & accuracy	☐
	Select & use assembly tools & equipment, considering space limitations & component requirements	☐
	Verify installation location, anticipate challenges, secure work area & position components	☐
	Determine joining methods based on drawings & job specifications	☐

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	Level 2	Page 1/2
Red Seal Tasks	On-The-Job Duties	Completed
Uses & maintains tools & equipment	Identify hazards & proper lockout/tagout procedures	☐
Organizes work	Review fabrication drawings, identify discrepancies, visualize designs in 3D & assist with planning & cut list	☐
Performs quality assurance throughout fabrication & assembly process	Verify material dimensions, confirm specifications & identify tools required	☐
	Transfer material information, document job details, keep certifications & ensure accurate data transfer	☐
Performs layout	Generate & refine patterns using visualization, layout methods, tools & efficiency considerations	☐
	Calculate material needs, such as bend radius & excess for rolling & flat spots	☐
	Select & use layout tools to mark & verify dimensions	☐
	Mark & locate work points, using layouts, drawings & measuring tools	☐
	Select tools & materials for template construction	☐
Cuts materials	Set up & operate plasma cutting equipment, verifying material type & thickness & ensuring straight or profiled edges according to specification	☐
	Perform oxy-fuel cutting, verifying material, setting up equipment, adjusting settings, ensuring edge quality & minimizing distortion	☐
	Operate shearing equipment, ensuring safety, verifying material & adjusting settings for accurate cuts	☐
	Operate cutting equipment, ensuring safety, verifying material, selecting blades, applying coolants & using guides for precision	☐
	Operate ironworker equipment, ensuring safety, verifying material specifications, set up functions & using guides for repeatability	☐
	Operate drilling equipment, setting up drills, clamping material & applying cutting fluids for precision	☐
	Operate threading tools, selecting speed & feed rates, clamping material & applying cutting fluids for precision	☐
	Operate edge beveling & grooving equipment, ensuring consistency & cleaning joints to prevent defects	☐

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On-the-Job Checklist



	Level 2	Page 2/2
Red Seal Tasks	On-The-Job Duties	Completed
Forms materials	Assess material conditions & prepare components for forming	☐
	Select & change dies, ensuring proper selection based on material shape & job specifications	☐
	Operate bending equipment, selecting dies, setting back stops, monitoring bends & using templates for accuracy	☐
	Operate forming equipment, setting up dies, adjusting benders & monitoring material for consistency	☐
	Perform forming, using jigs, heating equipment, measuring temperature, applying heat & correcting distortions	☐
Fits & fastens sub-components & components	Coordinate assembly, referencing documents, visualizing components, refining process steps & collaborating with other workers	☐
	Attach sub-components & components, applying appropriate joining methods & fastening devices	☐
	Plan for installation challenges, adapting to shifting work site conditions	☐
	Assess distortion, measuring tolerances, selecting tools & rectifying deviations according to specifications	☐
Performs welding activities	Select & use pre-heating equipment, ensuring correct temperature measurement to prevent material distortion	☐
	Limit welding distortion, estimating allowances, selecting restraints & applying stress removal methods	☐
	Perform welding operations, setting up equipment, selecting filler metals, adjusting parameters & inspecting weld quality	☐
	Use basic correction methods & tool selection	☐

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Metal Fabricator (Fitter)

On-the-Job Checklist



	Level 3	Page 1/2
Red Seal Tasks	On-The-Job Duties	Completed
Organizes work	Organize workflow by reviewing project specifications & verifying material requirements	☐
	Set up the work area & coordinate workflow with coworkers	☐
Handles materials	Group & sequence materials by priority, ensuring proper storage & protection	☐
Performs Layout	Refine visualization of complex shapes	☐
	Optimize material usage by refining calculations, verifying bend radius precision & minimizing waste	☐
	Refine analysis of technical drawings to ensure accurate layout for fabrication	☐
	Assist in complex layout, determining orientation, calculating slope & transferring top dead centre	☐
	Label templates accurately for production by refining precision drafting & digital workflow skills	☐
Cuts materials	Perform a test cut with a plasma cutter to verify settings match the material to be cut	☐
	Perform a 45-degree bevel cut using oxy-fuel cutting torch	☐
	Identify the need for shear sharpening based on the quality of the cut	☐
	Adjust the work holding clamps according to the thickness of the material to be cut	☐
	Understand & apply the coordinate system used in the typical CNC applications	☐
	Secure a mag drill using a rope or chain in case of a power loss	☐
	Tap a through hole using a tapered tap	☐
	Performs alignment of components prior to applying tack weld	☐
	Guide new employee by demonstrating skills, assessing independence & providing constructive feedback	☐
Uses communication & mentoring techniques	Guide new employee by demonstrating skills, assessing independence & providing constructive feedback	☐

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Metal Fabricator (Fitter) On-the-Job Checklist



	Level 3	Page 2/2
Red Seal Tasks	On-The-Job Duties	Completed
Performs quality assurance throughout fabrication & assembly process	Verify accuracy by checking material specifications, layout & weld dimensions	☐
	Manage job documentation, recording details, transferring information, marking pieces & verifying records	☐
Forms material	Form plate material, adjusting rollers & monitoring consistency	☐
	Operate forming equipment, selecting dies, adjusting rollers & monitoring material	☐
	Perform bend forming, selecting dies, determining sequence, setting up back stops, monitoring for irregularities & using templates to verify profiles	☐
	Perform bend forming, setting up dies, adjusting benders & monitoring material	☐
Fits & fastens sub-components & components	Coordinate assembly operations, ensuring alignment with technical drawings & efficient collaboration	☐
	Verify component torque & placement, ensuring compliance with manufacturer & client specifications	☐
	Secure work area, fit & place & adjust components to meet specifications	☐
	Attach components together, following procedures & manufacturer specifications for accuracy	☐
Completes project	Perform bend forming, setting up dies, adjusting benders & monitoring material	☐
	Perform surface finishing, selecting tools, profiling welds, sorting assemblies, blending blemishes, installing tags & preparing for galvanizing	☐

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Information Regarding the Checklist

Saskatchewan Apprenticeship and Trade Certification Commission's (SATCCs) On-The-Job Checklist provides a complete list of trade-specific Red Seal tasks for apprentices to complete under the supervision of a journeyman. This work should be completed prior to attending the technical training level under which the duties are listed (e.g. Level 1 completed prior to attending Level 1 technical training).

Completing this checklist will ensure that apprentices are exposed to the full scope of a particular Red Seal trade throughout their apprenticeship program. It will also help prepare apprentices for each level of technical training by performing work on-the-job relating specifically to topics covered later on. The trade-specific tasks listed have been reviewed by certified journeymen in Saskatchewan for their accuracy and have been set to an appropriate skill level.

An apprentice spends approximately 85% of their apprenticeship term training on-the-job. It is the both the apprentice and the employer's or journeyman's responsibility to supervise an apprentice's practical skills development during their program.

To promote transparency and consistency, this document aligns with the 2021 Metal Fabricator (Fitter) Red Seal Occupational Standard (Employment and Social Development Canada).

A complete version of the Occupational Standard can be found at www.red-seal.ca

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All work performed in this checklist is to be done under the supervision and guidance of a certified journeyman

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