

Boilermaker

On-the-Job Checklist



	Level 1	Page 1/2
Red Seal Tasks	On-The-Job Duties	Completed
Maintains safe & healthy workplace	Inspect the work area & mitigate & document hazards	☐
	Identify, select & inspect PPE equipment	☐
	Participates in man watch or fire watch	☐
	Attend & participate in daily toolbox meetings	☐
Uses, inspects & maintains tools, equipment & work platforms	Inspect & select tools based on task requirements	☐
	Select cut off disc based on tool RPM rating & verify condition	☐
	Determine speeds & feeds for various machines & materials, such as a drill press or bandsaw	☐
	Use cutting torch to demolish/fabricate a component	☐
	Use porta-power or airbags to move equipment into final position	☐
	Review scaffold tag to identify access concerns	☐
	Complete an AWP pre-use inspection & function check	☐
Organizes Work	Anticipate task requirements & gather tools & equipment	☐
	Assist in the completion of a task hazard analysis	☐
	Unload & organize materials as per site requirements	☐
	Remove & recycle scrap materials	☐
Performs cutting & welding activities	Layout cutting line & cut using an angle grinder	☐
	Bevel weld joints & verify component alignment	☐
	Secure component from movement using various methods	☐
	Perform tack welds & verify final position	☐
	Assist journey person with joining metal plates using SMAW or GMAW processes	☐
Uses communication & mentoring techniques	Communicate with operator & signal person using hand signals or radios	☐

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	Level 1	Page 2/2
Red Seal Tasks	On-The-Job Duties	Completed
Plans lift	Assist journeyperson with calculating a load weight	☐
	Select & use basic rigging equipment, such as slings & shackles, to position small components	☐
	Prevent unauthorized access to the hoisting area by erecting barricades or tape	☐
Rigs, hoists & positions load	Verify rigging condition & inspection date	☐
	Set up & attach rigging & have the set up verified by a journeyperson prior to hoisting	☐
	Use a tagline to assist in positioning the load	☐
Performs post-lift activities	Verify the load has been set undamaged & secure from movement	☐
	Disassemble hoisting equipment & perform post use inspection	☐
	Grease snatch blocks & store as per site requirements	☐
Performs fabrication	Create a template according to the detail drawings	☐
	Use cutting tools to cut metal plates to specified dimensions	☐
	Follow blueprint to assemble components using hand & power tools	☐
Assembles & fits vessels & components	Assist with draining & cleaning a vessel, removing debris, & inspecting for minor defects	☐
Fastens components	Understand the procedure to torque a flange according to site specifications (star pattern)	☐

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	Level 2	Page 1/2
Red Seal Tasks	On-The-Job Duties	Completed
Uses, inspects & maintains tools, equipment & work platforms	Cut & bevel a steel pipe	☐
	Use a hydraulic press to form metal plates into specified shapes & dimensions	☐
	Cut & weld & install a structural component	☐
	Use porta-power to adjust the fit of a component	☐
	Use work platforms, scaffolding & access equipment to access & prepare a component for welding	☐
	Assist with the preparation to repair boiler tubes using MEWP	☐
Organizes Work	Identify sequence of installation required by a component	☐
	Identify the detail drawings that specifies the materials required for a component install	☐
	Secure materials & components for transport	☐
Performs cutting & welding activities	Cut material using abrasive methods, such as cut-off saw & zip cut	☐
	Prep, land & bevel a component	☐
	Use screw dogs & wedges to set the gap high/lows	☐
	Join metal plates using SMAW or GMAW processes	☐
Plans lift	Calculate the weight of a plate based on material type & dimensions	☐
	Verify load calculations & safety checks during lift planning	☐
Rigs, hoists & positions load	Operate lifting devices, such as hydraulic jacks & chain hoists	☐
	Assemble basic rigging equipment, such as slings & shackles, to position small components	☐
	Understand the limitations of the crane & the effects that weather may have on the load	☐
	Use specialty equipment & procedures to reposition & turn components horizontally	☐
	Verify final location before releasing load tension	☐

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	Level 2	Page 2/2
Red Seal Tasks	On-The-Job Duties	Completed
Performs post-lift activities	Inspect rigging components for damage & wear	☐
	Assist with packing up the crane & components	☐
Performs fabrication	Use templates to lay out complex curves & angles for a vessel	☐
	Use plasma cutters & oxy-fuel torches to shape large, intricate parts	☐
	Use a press brake to bend metal sheets to specified angles	☐
	Assemble, fit & weld field components	☐
Assembles & fits vessels & components	Use precision tools to verify component alignment	☐
	Clean vessel surfaces & verify component condition	☐
Fastens components	Verify hardware grade & torque specifications for the assembly of components	☐
	Understand the procedures & calculations to use a tube roller	☐
	Understand the procedures to prepare & layer fibreglass matting	☐
Services vessels & components	Understand the procedures to complete NDT	☐
	Verify system lockout by walking down affected lines & verifying isolation	☐
	Repair a tank crack & replace damaged fitting	☐
	Prepare, inspect & clean boiler tubes	☐
	Participate in a hydrostatic test of a pressure vessel	☐
Removes vessels & components	Dismantle a small storage vessel	☐
	Remove a damaged boiler tube	☐

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	Level 3	Page 1/2
Red Seal Tasks	On-The-Job Duties	Completed
Uses, inspects & maintains tools, equipment & work platforms	Use power tools to cut, shape & assemble components	☐
	Use a plate rolling machine to form metal plates into cylindrical shells	☐
	Fabricate components using cutting, shaping & welding techniques according to site specifications	☐
	Use a hydraulic press to form curved sections	☐
	Verify the rating of the scaffold meets the task requirements.	☐
	Use a MEWP to perform tasks at height in a tight access area	☐
Organizes Work	Identify how a task may affect other workers	☐
	Use a weld map to determine installation details	☐
	Identify & stage materials required according to sequence of assembly	☐
Performs cutting & welding activities	Cut material using various cutting processes, such as PAC, CAC-A & oxy-fuel cutting	☐
	Remove high lows to within site specifications	☐
	Conduct multi-pass welds on components of various materials	☐
	Use tiger torch to perform pre/post weld heat treatment	☐
Maintains continuous learning	Review manufacturer provided information for new components & products	☐
	Identify new skill & technology training opportunities	☐
Uses communication & mentoring techniques	Explain a site procedure to a new hire	☐
Plans lift	Confirm estimated load weights with crane operator	☐
	Identify the load's centre of gravity & lifting points	☐
	Perform complex lifts using specialized rigging & hoisting equipment, such as spreaders & lifting bars	☐
Assembles & fits vessels & components	Assist a team in aligning large components according to specifications	☐
	Position, verify alignment & secure components	☐

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	Level 3	Page 2/2
Red Seal Tasks	On-The-Job Duties	Completed
Rigs, hoists & positions load	Fabricate lifting lugs according to engineered specifications	☐
	Assemble specialty rigging, such as spreader bars, based on the load requirements	☐
	Use multiple rigging components & devices to drift a load horizontally	☐
Performs post-lift activities	Disassemble rigging used to position a component	☐
Performs fabrication	Interpret blueprints to layout & mark component location	☐
	Compare jig dimensions with the original specifications at regular intervals to ensure accuracy	☐
	Fabricate & assemble components according to blueprints	☐
Fastens components	Use hydraulic or pneumatic expanders to roll & flare boiler tubes	☐
Services vessels & components	Prepare & select gasket for installation & verify seating	☐
	Repair or replace a cracked shell according to boiler code procedures	☐
	Install shielding on boiler tubes	☐
	Assist NDT by chasing cracks & welds to eliminate defects	☐
Removes vessels & components	Dismantle a large industrial component as per site requirements & manufacturers' recommendations	☐
	Assist with pulling a tubing bundle	☐

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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 2025 Boilermaker 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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