

# Steamfitter/Pipefitter On-the-Job Checklist



	Level 1	Page 1/2
Red Seal Tasks	On-The-Job Duties	Completed
Performs safety-related functions	Plan, document & address hazards & maintain a tidy worksite	<input type="checkbox"/>
	Use & maintain PPE & safety equipment	<input type="checkbox"/>
	Install, document, isolate & remove equipment	<input type="checkbox"/>
Uses & maintains tools & equipment	Select & use tools & equipment	<input type="checkbox"/>
	Use access equipment, such as ladders & scaffolding	<input type="checkbox"/>
	Identify, use & store welding equipment & consumables	<input type="checkbox"/>
	Identify, use & store soldering & brazing equipment & consumables	<input type="checkbox"/>
	Understand & use oxy-fuel & plasma cutting equipment	<input type="checkbox"/>
Organizes job	Plan tasks & identify tools & components according to construction sequence & requirements	<input type="checkbox"/>
	Prepare, modify & interpret drawings using layout tools, symbols & 3D visualization	<input type="checkbox"/>
	Prepare, interpret & verify drawings & material list	<input type="checkbox"/>
	Identify & plan development of template	<input type="checkbox"/>
	Follow QC documentation to verify materials, fabricate components & perform required inspections & tests	<input type="checkbox"/>
	Identify, organize, store, handle & dispose of materials	<input type="checkbox"/>
Uses communication & mentoring techniques	Use clear, professional written & verbal communication to share information & follow instructions	<input type="checkbox"/>
Performs fabrication	Install & verify support components, then inspect & document to meet QA/QC standards	<input type="checkbox"/>
Installs, maintains, troubleshoots, repairs & tests valves	Install & test valves using tools, measurements & documentation per regulations	<input type="checkbox"/>
	Maintain, repair & test valves while following LOTO procedures & complete documentation	<input type="checkbox"/>

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

# Steamfitter/Pipefitter

## On-the-Job Checklist



	Level 1	Page 2/2
Red Seal Tasks	On-The-Job Duties	Completed
Lays out & installs piping, tubing, fittings & related components	Select, prepare, assemble & install copper piping & components, then test & document work	<input type="checkbox"/>
	Select, prepare, assemble & install plastic piping & components, then test & document work	<input type="checkbox"/>
	Select, prepare, assemble & install carbon steel piping & components, then test & document work	<input type="checkbox"/>
	Select, prepare, assemble & install stainless steel piping & components, then test & document work	<input type="checkbox"/>
Performs common rigging, hoisting, lifting & positioning	Calculate load weight, dimensions & centre of gravity	<input type="checkbox"/>
	Assess hazards, secure lift areas & establish communication strategies	<input type="checkbox"/>
	Verify rigging equipment capacity & inspect for faults & certifications	<input type="checkbox"/>
	Plan lifts, check rigging connections & secure loads for stability	<input type="checkbox"/>
	Perform test lifts, transfer loads safely & ensure placement	<input type="checkbox"/>
	Communicate the lift plan, inspect rigging equipment, attach components, determine load placement & secure tag lines	<input type="checkbox"/>
	Perform test lifts, use communication procedures, stabilize the load with tag lines & transfer load for final placement	<input type="checkbox"/>
	Organize & inspect rigging, hoisting, lifting & positioning equipment & complete documentation	<input type="checkbox"/>

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

# Steamfitter/Pipefitter On-the-Job Checklist



	Level 2	Page 1/1
Red Seal Tasks	On-The-Job Duties	Completed
Organizes job	Measure pipe coordinates based on size & orientation, then lay out for template cutting	<input type="checkbox"/>
Performs fabrication	Select materials, assemble piping system components, test & document	<input type="checkbox"/>
Lays out & installs piping, tubing, fittings & related components	Install fibreglass piping & components, then test & document per QA/QC standards	<input type="checkbox"/>
	Install specialty piping & components, then test & document per QA/QC standards	<input type="checkbox"/>
Installs, tests, maintains, troubleshoots & repairs heat tracing systems	Install & test liquid-filled tracing systems, ensuring compliance & functionality	<input type="checkbox"/>
	Maintain & repair liquid-filled tracing systems & complete documentation	<input type="checkbox"/>
Installs, tests, maintains, troubleshoots & repairs hydronic systems	Identify high & low points for hydronic system equipment & controls using drawings	<input type="checkbox"/>
	Plan piping routes using drawings & adjust to avoid obstructions	<input type="checkbox"/>
	Inspect hydronic systems, note deficiencies & confirm installation	<input type="checkbox"/>
	Troubleshoot systems to locate & address faulty equipment or components	<input type="checkbox"/>

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

# Steamfitter/Pipefitter On-the-Job Checklist



	Level 3	Page 1/2
Red Seal Tasks	On-The-Job Duties	Completed
Installs, tests, maintains, troubleshoots & repairs heat tracing systems	Install & test steam tracing systems	<input type="checkbox"/>
	Maintain & repair steam tracing systems & update documentation	<input type="checkbox"/>
Installs, tests, maintains, troubleshoots & repairs low pressure steam & condensate systems	Select & install low-pressure steam & condensate equipment	<input type="checkbox"/>
	Assemble & install piping systems, ensuring compliance through documentation	<input type="checkbox"/>
	Inspect, test & reinstate steam systems while following safety & LOTO procedures	<input type="checkbox"/>
	Test & restore low-pressure steam systems & document to ensure compliance	<input type="checkbox"/>
Installs, tests, maintains, troubleshoots & repairs hydronic systems	Install hydronic system equipment, controls, supports & fasteners & complete documentation	<input type="checkbox"/>
	Assemble & install piping with supports, restraints & joining methods, accounting for insulation & expansion	<input type="checkbox"/>
	Perform hydronic system tests using connected equipment, document results & follow safety protocol	<input type="checkbox"/>
	Restore hydronic system operation post-repair	<input type="checkbox"/>
Installs, tests, maintains, troubleshoots & repairs industrial water & waste treatment systems	Select, size & install industrial water & waste equipment & controls & complete documentation	<input type="checkbox"/>
	Inspect, test & reinstate systems while following LOTO protocols	<input type="checkbox"/>
	Investigate, troubleshoot & repair systems, maintaining test medium quality & operational efficiency	<input type="checkbox"/>
	Perform testing & system treatment & complete documentation	<input type="checkbox"/>
Installs, tests, maintains, troubleshoots & repairs fuel systems	Install fuel equipment & controls & complete documentation	<input type="checkbox"/>
	Assemble & install fuel piping systems	<input type="checkbox"/>
	Inspect, test & reinstate fuel systems & complete documentation	<input type="checkbox"/>
	Troubleshoot, repair & test fuel systems	<input type="checkbox"/>

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

# Steamfitter/Pipefitter On-the-Job Checklist



	Level 3	Page 2/2
Red Seal Tasks	On-The-Job Duties	Completed
Installs, tests, maintains, troubleshoots & repairs medical gas systems	Select, size & install medical gas equipment & controls & complete documentation	<input type="checkbox"/>
	Determine route & location of the piping system & ensure alignment with drawings, while avoiding obstructions	<input type="checkbox"/>
	Perform a visual pre-check inspection to ensure components are installed correctly & identify obstructions or deficiencies	<input type="checkbox"/>
	Determine issues requiring investigation by consulting with the system owner/operator	<input type="checkbox"/>

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

# Steamfitter/Pipefitter

## On-the-Job Checklist



	Level 4	Page 1/3
Red Seal Tasks	On-The-Job Duties	Completed
Uses communication & mentoring techniques	Demonstrate a workplace skill, observe apprentice performance of skill & provide supportive feedback	<input type="checkbox"/>
Performs complex & critical rigging, hoisting, lifting & positioning	Review specifications, assess conditions, develop lift plans & complete documentation	<input type="checkbox"/>
	Calculate load parameters & rigging needs	<input type="checkbox"/>
	Verify rigging equipment capacity & compliance with load requirements	<input type="checkbox"/>
	Communicate plans, inspect rigging & secure loads	<input type="checkbox"/>
	Coordinate lifts, stabilize loads with tag lines, transfer & place securely	<input type="checkbox"/>
Installs, tests, maintains, troubleshoots & repairs high pressure steam & condensate systems	Install high-pressure steam & condensate equipment	<input type="checkbox"/>
	Assemble & install high-pressure piping systems	<input type="checkbox"/>
	Inspect, test & reinstate systems following LOTO procedures & protecting components	<input type="checkbox"/>
	Troubleshoot, repair & test systems, perform quality checks & maintain documentation	<input type="checkbox"/>
Installs, tests, maintains, troubleshoots & repairs process piping systems	Install process piping equipment & controls & document	<input type="checkbox"/>
	Assemble & install piping systems with prepared fittings	<input type="checkbox"/>
	Inspect, test & reinstate piping systems, adhering to LOTO protocols & safety standards	<input type="checkbox"/>
	Troubleshoot, repair & test systems & document	<input type="checkbox"/>
Installs, tests, maintains, troubleshoots & repairs hydraulic systems	Install hydraulic equipment & controls	<input type="checkbox"/>
	Assemble hydraulic piping systems with prepared fittings & supports	<input type="checkbox"/>
	Troubleshoot, repair & test hydraulic systems while maintaining test medium quality & following LOTO protocols	<input type="checkbox"/>
	Complete repair, perform system tests & document processes	<input type="checkbox"/>

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

# Steamfitter/Pipefitter

## On-the-Job Checklist



	Level 4	Page 2/3
Red Seal Tasks	On-The-Job Duties	Completed
Heating, Ventilation, Air Conditioning & Refrigeration (HVACR)	Install & operate HVACR systems using knowledge of components, applications & regulations	<input type="checkbox"/>
	Plan piping routes using drawings, adjusting for obstructions as preparation for technical training	<input type="checkbox"/>
	Inspect, test, & reinstate HVACR systems following lock-out protocols & completing documentation for compliance	<input type="checkbox"/>
	Observe, troubleshoot, repair & test HVACR systems & maintain medium quality	<input type="checkbox"/>
Compressed Air & Pneumatic Systems	Select, size & install compressed air & pneumatic equipment & controls	<input type="checkbox"/>
	Assemble & install hydraulic piping systems, preparing fittings & supports	<input type="checkbox"/>
	Use LOTO procedures to inspect, test & restore compressed air & pneumatic systems document	<input type="checkbox"/>
	inspect, test & reinstate systems safely, following lock-out protocols & completing documentation	<input type="checkbox"/>
Installs, tests, maintains, troubleshoots & repairs geo-exchange & geothermal systems	Use system drawings & specifications to layout & install equipment & controls	<input type="checkbox"/>
	Use routing, supports & joining methods	<input type="checkbox"/>
	Perform pre-check inspections & test procedures	<input type="checkbox"/>
	Troubleshoot, maintain & repair systems	<input type="checkbox"/>
Installs, tests, maintains, troubleshoots & repairs solar heating systems	Use system drawings & specifications to layout & install equipment & controls	<input type="checkbox"/>
	Use routing, supports & joining methods	<input type="checkbox"/>
	Use solar drawings & testing procedures to perform inspection, safety & commissioning practices	<input type="checkbox"/>
	Perform maintenance & troubleshooting procedures	<input type="checkbox"/>
Installs, tests, maintains, troubleshoots & repairs heat recovery systems	Use system drawings & specifications to layout & install equipment & controls	<input type="checkbox"/>
	Assemble & install piping systems using various layout techniques, joining methods & supports	<input type="checkbox"/>
	Use inspection & testing procedures to perform commissioning practices	<input type="checkbox"/>
	Troubleshoot, maintain, repair & reinstate systems	<input type="checkbox"/>

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

# Steamfitter/Pipefitter

## On-the-Job Checklist



	Level 4	Page 3/3
Red Seal Tasks	On-The-Job Duties	Completed
Prepares system for commissioning, start-up & turnover	Set up, clean & drain piping systems using flushing procedures & system drawings	<input type="checkbox"/>
	Treat & flush piping systems using chemical treatment procedures & complete documentation	<input type="checkbox"/>
	Inspect, verify & prepare systems according to engineered drawings & specifications	<input type="checkbox"/>
	Verify operating conditions & reinstate system components using drawings & specifications	<input type="checkbox"/>
Commissions systems	Obtain approvals, coordinate trades, secure the test area & perform LOTO	<input type="checkbox"/>
	Fill the system, vent air & pressurize to specified operating levels	<input type="checkbox"/>
	Detect, analyze & document system defects	<input type="checkbox"/>
	Use tools, LOTO procedures & repair methods to depressurize systems & fix leaks, components & joints	<input type="checkbox"/>
Installs, tests, maintains, troubleshoots & repairs heating, ventilation, air conditioning & refrigeration (HVACR) systems	Use knowledge of HVACR system components, applications, and regulations to install and verify operation	<input type="checkbox"/>
	Plan piping routes using drawings & adjusting for obstructions	<input type="checkbox"/>
	Inspect, test & reinstate HVACR systems following LOTO protocols & complete documentation	<input type="checkbox"/>
	Troubleshoot, repair & test HVACR systems	<input type="checkbox"/>
Installs, tests, maintains, troubleshoots & repairs compressed air & pneumatic systems	Install compressed air & pneumatic equipment & complete documentation	<input type="checkbox"/>
	Prepare fittings & supports, assemble and install piping systems	<input type="checkbox"/>
	Inspect, test & reinstate systems, following LOTO protocols & complete documentation	<input type="checkbox"/>
	Perform medium quality test & treat system	<input type="checkbox"/>

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



# Steamfitter/Pipefitter On-the-Job Checklist



## 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 2022 Steamfitter/Pipefitter Red Seal Occupational Standard (Employment and Social Development Canada).

A complete version of the Occupational Standard can be found at [www.red-seal.ca](http://www.red-seal.ca)

### **Saskatchewan Apprenticeship & Trade Certification Commission (Regina)**

2140 Hamilton St Regina SK, S4P 2E3  
Tel: (306) 787-2444  
Toll Free: 1-877-363-0536  
Website: [www.saskapprenticeship.ca](http://www.saskapprenticeship.ca)

### **Saskatchewan Apprenticeship & Trade Certification Commission (Saskatoon)**

603 45<sup>th</sup> Street West Saskatoon, SK S7L 5W5  
Tel: (306) 933-8476  
Toll Free: 1-877-363-0536  
Website: [www.saskapprenticeship.ca](http://www.saskapprenticeship.ca)

### **District Offices**

Estevan (306) 637-4930  
La Ronge (306) 425-4385  
Moose Jaw (306) 694-3735  
North Battleford (306) 446-7409  
Prince Albert (306) 953-2632  
Swift Current (306) 778-8945  
Yorkton (306) 786-1394

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

**1-877-363-0536**  
**[apprenticeship@gov.sk.ca](mailto:apprenticeship@gov.sk.ca)**  
**[saskapprenticeship.ca](http://saskapprenticeship.ca)**

