

Refrigeration & Air Conditioning Mechanic

On-the-Job Checklist

	Level 1	Page 1/2
Red Seal Tasks	On-The-Job Duties	Completed
Performs safety-related functions	Maintain safety by following protocols	☐
	Perform LOTO procedures & confirm zero energy	☐
	Select & use PPE & safety equipment	☐
Uses tools & equipment	Select & use hand tools	☐
	Inspect power tools for unsafe conditions	☐
	Inspect & clean torch tips & O-rings, replacing if needed	☐
	Connect recovery equipment following manufacturers' instructions	☐
	Clean & flush vacuum pumps as per guidelines	☐
	Calibrate scales & gauges for accuracy	☐
	Interpret data & readings based on set parameters	☐
	Erect, secure, level & dismantle ladders	☐
	Rig loads according to procedures & regulations	☐
	Connect smartphones to Bluetooth & Wi-Fi accessories	☐
Organizes work	Verify equipment details using manuals	☐
	Prepare material lists & confirm availability	☐
Uses communication & mentoring techniques	Demonstrate effective communication through active listening, reflection & verbal & written response	☐
Performs work site preparation	Assess job hazards by reviewing tasks & controls	☐
	Receive & verify materials using packing slips	☐
Plans installation of HVAC/R systems	Identify basic environmental factors that affect system placement	☐
Plans installation of control systems	Identify serviceability & code requirements for placement	☐

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On-the-Job Checklist

	Level 1	Page 2/2
Red Seal Tasks	On-The-Job Duties	Completed
Performs trade activities	Choose brazing & soldering materials as per regulations	☐
	Record leak & pressure test results for integrity	☐
	Perform vacuum tests according to manufacturers' specifications	☐
	Select & use tools, such as torches & regulators	☐
	Select & use tools, such as crimpers & cutters	☐
	Choose sealants & adhesives according to compatibility & manufacturers' specifications	☐
Installs HVAC/R systems	Select & use tools to place equipment & components	☐
	Secure brackets & hangers according to codes & specifications	☐
	Cut, fit & connect piping according to industry standards	☐
	Select, introduce & monitor refrigerant to achieve positive pressure	☐
Installs control systems	Select & use tools & equipment according to task	☐
	Select wiring, cabling & tubing according to manufacturers' specifications	☐
Maintains HVAC/R systems	Select & use tools & test equipment for system checks	☐
	Verify system components operate sequentially according to manufacturer specifications	☐
	Use tools & test equipment to diagnose system issues	☐

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On-the-Job Checklist



	Level 2	Page 1/2
Red Seal Tasks	On-The-Job Duties	Completed
Organizes work	Verify equipment installation details from manuals & bulletins	☐
	Determine pipe & duct sizes using standard charts	☐
	Store materials according to site conditions & manufacturers' specifications	☐
Performs trade activities	Identify system oil & refrigerant requirements	☐
	Interpret schematics to identify termination points	☐
Plans installation of HVAC/R systems	Charge system with oil & refrigerants as specified	☐
	Interpret schematics to determine wiring requirements	☐
	Follow manufacturer regulations for system charging	☐
Plans installation of control systems	Identify components & accessories according to application & code requirements	☐
	Determine system tie-in points using drawings & site information	☐
	Calculate material quantities based on specifications & requirements	☐
Installs HVAC/R systems	Check unpacked equipment for shipping damage & compatibility	☐
	Install anchors & supports according to regulations & specifications	☐
Installs control systems	Perform pre-assembly checks on controls & devices for condition & accuracy	☐
	Layout wiring, cabling & tubing paths according to drawings & specifications	☐
Maintains HVAC/R systems	Conduct safety checks & identify components needing further investigation	☐
	Lubricate bearings, motors & linkages, as required	☐
	Check refrigerant pressures & temperatures for abnormalities	☐
Services HVAC/R systems	Gather client information about equipment concerns & history	☐
	Replace the refrigerant in an existing system	☐

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On-the-Job Checklist

	Level 2	Page 2/2
Red Seal Tasks	On-The-Job Duties	Completed
Maintains & services control systems	Complete regular preventative maintenance activities	☐
	Discuss client concerns to diagnose issues	☐
	Verify system operation & calibration after completing repairs	☐
	Replace a faulty pressure switch	☐

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On-the-Job Checklist

	Level 3	Page 1/2
Red Seal Tasks	On-The-Job Duties	Completed
Organizes work	Determine pipe & duct sizes using tables & charts	☐
	Select & order parts based on documentation & specifications	☐
	Schedule equipment delivery to meet timelines	☐
Plans installation of HVAC/R systems	Identify system capacity using heat load calculations & location data	☐
	Determine HVAC/R component limitations based on design & operational needs	☐
	Assess equipment placement limitations according to codes, design & environmental factors	☐
	Calculate pipe size & length based on run, refrigerant & equipment capacity	☐
Plans installation of control systems	Define control requirements based on needs, efficiency & specifications	☐
	Select & install components per manufacturer & engineering specifications	☐
	Assess component placement to avoid interference & ensure code compliance	☐
	Identify alternative materials according to availability & conditions	☐
Installs HVAC/R systems	Verify equipment matches take-offs & site measurements	☐
	Assemble & adjust components according to design specifications	☐
	Secure components to meet regulations & specifications	☐
Installs control systems	Set hardware options & positions according to job specifications & site conditions	☐
	Install wiring, cabling & tubing following codes & standards	☐
Commissions HVAC/R systems	Verify system lock out has been removed	☐
	Ensure utilities meet specifications & are balanced	☐
	Verify type of refrigerant required for system using manufacturers' label	☐
	Select diagnosis tools to verify functionality	☐

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Refrigeration & Air Conditioning Mechanic

On-the-Job Checklist

	Level 3	Page 2/2
Red Seal Tasks	On-The-Job Duties	Completed
Commissions control systems	Verify system start-up will not affect other systems	☐
	Verify parameters meet specifications, site conditions & client requirements	☐
Services HVAC/R systems	Diagnose problems using tools, client information & system readings	☐
	Shut down or isolate failed components & recover refrigerant following procedures	☐
Maintains & services control systems	Inspect control systems to meet manufacturers' specifications & client requirements	☐
	Discuss client concerns & diagnose problems using tools & equipment	☐
	Test system conditions & verify controls function within design settings	☐
	Select replacement components based on specifications & availability	☐

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Refrigeration & Air Conditioning Mechanic

On-the-Job Checklist

	Level 4	Page 1/2
Red Seal Tasks	On-The-Job Duties	Completed
Organizes work	Determine installation procedures based on specifications & site conditions	☐
	Determine procedures based on complex specifications & site conditions	☐
	Coordinate with suppliers to prevent delays	☐
Uses communication & mentoring techniques	Coordinate communication between trades during HVAC/R layout & installation	☐
	Demonstrate a skill to a new worker, ensuring understanding & practice	☐
Plans installation of HVAC/R systems	Determine system parameters using engineering data & equipment for installation	☐
	Identify refrigeration systems with energy savings & environmental benefits	☐
	Measure equipment for fit within specified locations according to site requirements	☐
	Create material orders & identify alternative options based on requirements	☐
Plans installation of control systems	Determine operating ranges to ensure control of space & equipment	☐
	Evaluate control component limitations based on design & application	☐
	Select optimal locations for controls based on function & requirements	☐
	Assess material options for cost, performance & environmental impact	☐
Commissions HVAC/R systems	Inspect electrical components for loose or damaged wiring	☐
	Inspect & adjust HVAC/R controls for optimal operation	☐
	Measure & interpret load conditions using pressures, temperatures, superheat & subcooling	☐
	Measure & interpret readings from HVAC/R systems to verify design compliance	☐
Commissions control systems	Verify connections meet manufacturers' specifications & jurisdictional regulations	☐
	Program controllers & adjust set points as required	☐
Services HVAC/R systems	Troubleshoot systems, analyze data & suggest repair options	☐
	Repair components, conduct tests & retrofit systems according to manufacturers' specifications	☐

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On-the-Job Checklist

	Level 4	Page 2/2
Red Seal Tasks	On-The-Job Duties	Completed
Maintains & services control systems	Conduct run checks, verify controls & suggest improvements	☐
	Analyze data to identify issues & recommend solutions	☐
	Adjust controls to meet design parameters & regulations	☐
	Document components repaired or replaced for future maintenance	☐

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Refrigeration & Air Conditioning Mechanic 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 2019 Refrigeration & Air Conditioning Mechanic Red Seal Occupational Standard (Employment and Social Development Canada).

A complete version of the Occupational Standard can be found at 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

Saskatchewan Apprenticeship & Trade Certification Commission (Saskatoon)

603 45th Street West Saskatoon, SK S7L 5W5

Tel: (306) 933-8476

Toll Free: 1-877-363-0536

Website: 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
saskapprenticeship.ca

