

**COMPETENCY ANALYSIS PROFILE**  
**Refrigeration and Air Conditioning Systems Mechanic - Branch 1 – 313A**

*(All unshaded skill sets must be demonstrated/completed)*

**SKILL SETS**

**SKILLS**

<b>PROTECT SELF AND OTHERS</b>	Identify, interpret, and comply with safety directives	Wear, adjust, and maintain personal protective equipment	Practise good housekeeping in the workplace	Handle and dispose designated substances and refrigerants	Follow fire safety procedures
<b>6238.0</b>	6238.01	6238.02	6238.03	6238.04	6238.05
	Operate emergency safety equipment	Follow first aid procedures	Report injuries	Lock out equipment for repair or maintenance	Work within safe physical limits
	6238.06	6238.07	6238.08	6238.09	6238.10
	Operate material handling equipment	Operate worker elevating platforms	Handle and transport compressed gases and equipment		
	6238.11	6238.12	6238.13		

## Refrigeration and Air Conditioning Systems Mechanic - Branch 1

### **SKILL SETS**

### **SKILLS**

<b>PLAN AND PREPARE FOR INSTALLATION, MAINTENANCE, OR SERVICE OF REFRIGERATION &amp; AIR CONDITIONING (R&amp;AC) SYSTEM</b>  <b>6239.0</b>	Read and interpret job documentation	Identify type of R&AC system	Identify and select R&AC system components and equipment	Identify design parameters of R&AC system	Calculate the R&AC system operating parameters
	6239.01	6239.02	6239.03	6239.04	6239.05
	Identify and select R&AC system operating controls	Identify and select R&AC system safety controls	Identify and select R&AC system functional controls	Identify and select R&AC system accessories	Identify and select welding, cutting, brazing, soldering, or purging equipment
	6239.06	6239.07	6239.08	6239.09	6239.10
	Identify and select hand tools	Identify and select power tools	Identify and select electrical measuring devices	Identify and select R&AC pressure, temperature, and flow measuring devices	Identify and select R&AC specialty instruments
	6239.11	6239.12	6239.13	6239.14	6239.15
Identify and select R&AC precision measuring instruments	Identify and select the R&AC installation and material handling equipment	Identify and select material handling and worker elevating methods and equipment	Coordinate permits, inspections, and sub-trades	Complete planning work sheets	
6239.16	6239.17	6239.18	6239.19	6239.20	
Communicate with others					
6239.21					



## Refrigeration and Air Conditioning Systems Mechanic - Branch 1

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### **SKILL SETS**

### **SKILLS**

<b>SERVICE OR MAINTAIN AIR COOLING (AC) AND HEAT PUMP (HP)</b>	Troubleshoot AC and HP accessories and components	Replace or repair AC and HP accessories and components	Replace or repair system zoning components	Repair or replace AC and HP operating and safety controls	Clean or replace AC and HP electrical components
<b>6241.0</b>	6241.01	6241.02	6241.03	6241.04	6241.05
	Test or replace AC and HP electronic components	Rewire and repair AC and HP system wiring	Clean or replace actuator and damper/zone controls	Repair or replace refrigerant flow and metering devices	Clean and replace heat transfer devices, coils, and heat exchangers
	6241.06	6241.07	6241.08	6241.09	6241.10
	Adjust and replace heat transfer medium	Test or replace AC and HP electrical heaters, HRV/ERV and electronic air cleaners	Replace or repair system piping	Replace or repair AC and HP condensate drains and accessory components	Check system for leakage
	6241.11	6241.12	6241.13	6241.14	6241.15
	Replace air cooling compressor	Clean or replace AC and HP filter system and components	Replace or repair the air side of AC and HP equipment	Replace or repair air handler components	Replace or repair AC and HP fans and motors
	6241.16	6241.17	6241.18	6241.19	6241.20
	Check operations and functions of total AC and HP system	Complete AC and HP service and maintenance records	Clean up work site		
	6241.21	6241.22	6241.23		

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### **SKILL SETS**

### **SKILLS**

<b>INSTALL AND COMMISSION REFRIGERATION AND AIR CONDITIONING (R&amp;AC) SYSTEM</b>  <b>6242.0</b>	Read and interpret R&AC installation and start up documentation	Inspect R&AC system, accessories, and components at work site	Perform a work site evaluation	Prepare work site	Coordinate permits, inspections, and sub-trades
	6242.01	6242.02	6242.03	6242.04	6242.05
	Prepare site for installation	Assemble and install R&AC system, accessories, and components	Assemble R&AC piping and components	Join and install R&AC piping	Check refrigerant piping for leaks
	6242.06	6242.07	6242.08	6242.09	6242.10
	Check component piping for leaks	Assemble and install R&AC electrical system accessories and components	Evacuate and dehydrate R&AC system	Commission R&AC system	Complete the installation and commissioning records
	6242.11	6242.12	6242.13	6242.14	6242.15
	Clean up work site				
	6242.16				

<b>MAINTAIN REFRIGERATION AND AIR CONDITIONING (R&amp;AC) SYSTEM</b>  <b>6243.0</b>	Troubleshoot R&AC systems and components	Clean and maintain R&AC filters and components	Clean and maintain R&AC condenser, evaporator, and accessory components	Clean and maintain R&AC humidifier and components	Clean or replace R&AC electrical components
	6243.01	6243.02	6243.03	6243.04	6243.05
	Check operation and functions of total R&AC system	Clean up work site	Complete R&AC maintenance documentation		
	6243.06	6243.07	6243.08		

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### **SKILL SETS**

### **SKILLS**

<b>SERVICE REFRIGERATION AND AIR CONDITIONING (R&amp;AC) SYSTEM</b>  <b>6244.0</b>	Check R&AC system accessories and components  6244.01	Replace or repair R&AC mechanical components  6244.02	Repair or replace R&AC condensate components  6244.03	Repair or replace R&AC piping, accessories, and components  6244.04	Repair or replace R&AC refrigerant system, components, and accessories  6244.05
	Repair or replace R&AC open, semi-hermetic, or hermetic compressor  6244.06	Repair or replace R&AC fans and components  6244.07	Repair or replace R&AC pneumatics  6244.08	Replace R&AC controls and switches  6244.09	Repair or replace Variable Air Volume (VAV) components  6244.10
	Repair or replace R&AC metering devices  6244.11	Replace or repair R&AC electrical and electronic system and components  6244.12	Decommission packaged R&AC equipment  6244.13	Decommission split-system R&AC equipment  6244.14	Decommission R&AC equipment for demolition  6244.15
	Clean up work site  6244.16	Complete servicing documentation  6244.17			
<b>PERFORM CUSTOMER SERVICE</b>  <b>6245.0</b>	Determine nature of service or maintenance call  6245.01	Conduct a site evaluation  6245.02	Perform a diagnostic inspection  6245.03	Estimate costs of service or maintenance call  6245.04	Complete service or maintenance schedule  6245.05
	Complete job work order  6245.06	Instruct clients  6245.07			