

OCCUPATIONAL TOOLS AND EQUIPMENT LIST

Refrigeration and Air Conditioning Mechanic



Government of Newfoundland Labrador
Department of Education and Early Childhood Development
Apprenticeship and Trades Certification Division

March 2019

Preface

This document is intended as a companion to the March 2019 Plan of Training for the Refrigeration and Air Conditioning Mechanic occupation. It identifies the necessary tools and equipment required by apprentices and training institutions for the completion of apprenticeships.

Acknowledgements

The Department of Education and Early Childhood Development, and the Apprenticeship and Trades Certification Division wishes to acknowledge the contributions of industry and instructional representatives who participated in the development of this document.

Without their dedication to quality apprenticeship training, this document could not have been produced.

A sincere thank you is offered to everyone involved.

Contact Information

Department of Education and Early Childhood Development
Apprenticeship and Trades Certification Division
Tel: 709-729-2729 / 1-877-771-3737
Email: app@gov.nl.ca
Web: www.gov.nl.ca/atcd

Note:

The numbers suggested in the following Tools and Equipment List represents the required minimum. Please verify this list with your selected training institution.

Tools and Equipment List

REFRIGERATION AND AIR CONDITIONING MECHANIC

SECTION A: TOOLS AND EQUIPMENT REQUIRED BY STUDENT			
Item	Units for Individual Students	Required for Entry (E) Advanced (A) Both (B)	Comments
STUDENT TOOLS AND PPE			
Fireproof Coveralls	1	B	
Safety Glasses	1	B	
CSA Approved Safety boots	1	B	
Adjustable Wrench	1-6 in, 1-10 in., 1-12 in	B	
Ball Peen Hammer	1	B	
Calculator	1	B	
Combination Ratchet Valve Wrench	1	B	
Combination Wire Crimpers	1	B	
Digital Pocket Thermometer	1	B	
Electrical Side Cutters	1	B	
Flaring Tool Kit	1	B	
Flash Light	1	B	
Hacksaw	1	B	
Linesman Pliers	1	B	
Mechanics Toolbox (with lock)	1	B	
Mirror	1	B	
Needle Nose Pliers	1	B	
Quick Pic Screwdriver	1	B	

SECTION A: TOOLS AND EQUIPMENT REQUIRED BY STUDENT

Item	Units for Individual Students	Required for Entry (E) Advanced (A) Both (B)	Comments
Set Imperial Allen Keys	1	B	

SECTION A: TOOLS AND EQUIPMENT REQUIRED BY STUDENT			
Item	Units for Individual Students	Required for Entry (E) Advanced (A) Both (B)	Comments
Set of Combination Wrenches	1/4 - 15/16 in. set	B	
Slip Joint Pliers (Channel Locks)	1	B	
Swaging Tool Set or Various Size Swaging Punches	1	B	
Tape Measure	1	B	
Tube Cutter	1/4 - 1 1/8 in.	B	
Tube Reaming Tool	1	B	
Utility Knife	1	B	

Note: If identifying sets, please include specific information.

SECTION B: TOOLS AND EQUIPMENT REQUIRED BY TRAINING INSTITUTION				
Item	Units per 15 Students	Maximum Students per Unit	Required for Entry (E) Advanced (A) Both (B)	Comments
SHOP EQUIPMENT				
Air Compressor and Regulator 15 scfm@90 lbs	1	2	E	
Alignment Tools	2 sets (dial indicators)	3	B	
Bending Tools and Springs	5 sets	2		Shop - 1 Set Spring 3 Sets Leavers – 3/8", 1/2", 5/8"
Bolt Cutter	1 set	1	B	
Brush, Wire	15	1	B	
Carbon Dioxide (CO ₂) Cylinder and Regulator	1	3	E	
Caulking Gun	5	1	E	
Chalk Line	1	3	B	
Charging Manifold (Service Gauges)	5	3	B	
Chisels (Cold Set)	3	1	B	
Computer	5	1	E	
Cordless Drill - (1/2")	3	1	B	
Crimper	5	1	B	
Crowbar	2	1	B	
Drills (Electric)	3/8" - 2; 1/2" - 1	1	B	

SECTION B: TOOLS AND EQUIPMENT REQUIRED BY TRAINING INSTITUTION				
Item	Units per 15 Students	Maximum Students per Unit	Required for Entry (E) Advanced (A) Both (B)	Comments
Fin Combs	5	1	B	
Flaring Tools	5	1	B	
Funnel	3	2	B	
Glue Gun	1	1	B	
Grease Gun	1	1	B	
Ground Detectors (rigger)	1	1	E	
Hacksaw	15	1	B	
Hazardous Waste Container	2	3	B	
Hose - Water 50'	2	2	B	
Ladder - Step	3 - 6'; 2 - 8'	2	E	
Laser Level	1	3	E	
Levels (Bubble)	5	3	B	
Levels (Line)	2	2	B	
Levels (Precision)	2	2	B	
Nitrogen Cylinder and Regulator	4	2	B	
Oil Pump	2	7	B	
O-Ring Removal Tool	2	2	B	
Oxy-acetylene Torch Kit	5	1	B	

SECTION B: TOOLS AND EQUIPMENT REQUIRED BY TRAINING INSTITUTION				
Item	Units per 15 Students	Maximum Students per Unit	Required for Entry (E) Advanced (A) Both (B)	Comments
Padlock	5	2	B	
Pipe Cutters (up to 2 ½")	3	2	B	
Pipe Dies (up to 2 ½")	2 sets	2	B	
Pipe Threaders (Power)	1	2	B	
Pitot Tube	1	3	B	
Printer	2	2	B	
Propane Torch Kit	8	1	B	
Pry Bars	5	1	B	
Pullers (Wheel)	3 set	2	B	
Punch (Combination Set)	3	2	B	
Reamer (Pipe)	5	2	B	
Recovery Cylinder	5	3	B	
Recovery/Recycle Unit	5	3	E	
Saws (Hole) Kit up to 3" Sets	2	3	E	
Saws (Jig) Sabre	1	1	E	
Saws (Power/Electric) Reciprocating	3	1	E	
Scrapers (Gasket)	3	1	B	
Socket Set – 3/8" / ½" comb.	5	3	B	

SECTION B: TOOLS AND EQUIPMENT REQUIRED BY TRAINING INSTITUTION				
Item	Units per 15 Students	Maximum Students per Unit	Required for Entry (E) Advanced (A) Both (B)	Comments
Soldering Equipment (Iron/Fun)	2 each	7	B	
Squares (Machinist Combination)	5	3	B	
Stapler	1	1	B	
Straight Edge	8 - 12"	1	B	
Swaging Tools	5 sets	3	B	
Tin Snips	8 (left and right, straight)	2	B	
Tube Cutter up to 2"; up to 1 1/8"	10 mini; 3 - 2"	2	B	
Turbo Torch Kit	5 sets	2	B	
Utility Knife	6	2	B	
Vacuum Cleaner	1	1	E	
Vacuum Pump	5	2	E	
SAFETY				
Eye Wash Station	As required by OHS regulations	15	B	
First Aid Kit	As required by OHS regulations			
Fire Extinguishers	As required by OHS regulations			
TOOL POUCH (Common Tools carried by Mechanic)				

SECTION B: TOOLS AND EQUIPMENT REQUIRED BY TRAINING INSTITUTION				
Item	Units per 15 Students	Maximum Students per Unit	Required for Entry (E) Advanced (A) Both (B)	Comments
Cutters (Side)	5	1	B	
Cutters (Wire)	5	1	B	
Flashlight	5	1	B	
Hammer (Ball Peen - 1 lb.)	5	1	B	
Mirror	3	1	B	
Nut Drivers	5 sets	1	B	
Pliers (Needlenose)	5	1	B	
Pliers (Slip Locking)	5	1	B	
Pliers (Snap Ring)	2	1	B	
Refractometer	1	1	E	
Screwdrivers (Phillips)	5 sets	3	B	
Screwdrivers (Robertson)	5 sets	3	B	
Tape Measure (12')	5	1	B	
Vice Grips	5	1	B	
Wire Strippers	5	1	B	
Wrenches (Adjustable) 6", 8", 10", 12"	5 sets	2	B	
Wrenches (Allan)	5 sets	2	B	
Wrenches (Open End) 1 1/8"	5 sets	2	B	
Wrenches (Pipe)	3 - 10"; 3 - 14"; 3 - 18"	1	B	
Wrenches (Torque)	2 each	1	B	
Wrenches (Valve)	6	1	B	

SECTION B: TOOLS AND EQUIPMENT REQUIRED BY TRAINING INSTITUTION				
Item	Units per 15 Students	Maximum Students per Unit	Required for Entry (E) Advanced (A) Both (B)	Comments
HOISTING AND RIGGING EQUIPMENT				
Chain Fall	1	2	E	
Come-Along	1	2	E	
Scaffolding	1	3	E	Rental
Sling (Assorted)	2 sets	3	E	
MEASURING AND TESTING INSTRUMENTS				
Air Flow Meter	2	2	B	
Analyzers (Capacitor Anemometer)	1	3	B	
Analyzers (Vane)	1	3	B	
Compound Gauge	6	2	B	
Electronic Air Balancing Tools	1 set	3	B	
Electronic Temperature Meter	5	3	B	
Leak Detectors (Electronic)	5	3	B	
Manometers (U-Tube)	1	3	B	
Micron Gauge	5	3	B	
Milliamp Meter	2	2	B	
Clamp on Multi Meter/Bench Mount Multimeter	5	5	B	
PH Testing Kit	2	3	B	
Psychrometer Sling	3	3	B	
Tachometer	1	3	B	

SECTION B: TOOLS AND EQUIPMENT REQUIRED BY TRAINING INSTITUTION				
Item	Units per 15 Students	Maximum Students per Unit	Required for Entry (E) Advanced (A) Both (B)	Comments
Thermometer (Dry and Wet Bulb)	5	2	B	
Thermometer (Infrared)	3	2	B	
Vacuum Gauge	5	2	B	
Water Analysis Kit	1	2	B	
Weigh Scales	1 - minimum to 300 lbs. 2 - minimum to 100 lbs.	3	B	

Note: If identifying sets, please include specific information.