# OCCUPATIONAL TOOLS AND EQUIPMENT LIST

### SHEET METAL WORKER



Government of Newfoundland Labrador Department of Immigration, Skills and Labour Apprenticeship and Trades Certification Division

#### **Preface**

This document is intended as a companion to the March 2018 Plans of Training for the **Sheet Metal Worker** occupation. It identifies the necessary tools and equipment required by apprentices and training institutions for the completion of apprenticeships.

#### **Acknowledgements**

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We offer you a sincere thank you.

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#### Note:

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



## Tools and Equipment List SHEET METAL WORKER

| SECTION A: TOOLS AND EQUIPMENT REQUIRED BY STUDENT |                                     |   |          |  |  |
|--|-------------------------------------|---|----------|--|--|
| Item   | Units for<br>Individual<br>Students | Required for<br>Entry (E)<br>Advanced (A)<br>Both (B) | Comments |  |  |
|  | PERSONA                             | L PROTECTIVE EQU                                      | IPMENT   |  |  |
| Coveralls  | 1                                   | В   |          |  |  |
| Ear Plugs  | 1 set                               | В   |          |  |  |
| Gloves (e.g. Kevlar)                               | 1                                   | В   |          |  |  |
| Safety Boots                                       | 1                                   | В   |          |  |  |
| Safety Glasses                                     | 1                                   | В   |          |  |  |
| Welding Gloves (TIG)                               | 2 pairs                             | В   |          |  |  |
| Welding Goggles                                    | 1                                   | В   |          |  |  |
| Welding Shield                                     | 1                                   | В   |          |  |  |
|  |                                     | HAND TOOLS  |          |  |  |
| Aviation Snips (R.H. and L.H.)                     | 1 of each                           | В   |          |  |  |
| Combination or Straight Snip                       | 1                                   | В   |          |  |  |
| Drafting Set                                       | 1                                   | В   |          |  |  |
| Hand Seamer/Folding Pliers                         | 1                                   | В   |          |  |  |
| Marking Pen  | 1                                   | В   |          |  |  |
| Scratch Awl  | 1                                   | В   |          |  |  |
| Screwdriver Set                                    | 1                                   | В   |          |  |  |
| Setting Hammer                                     | 1                                   | В   |          |  |  |
| Tape measure (1/4 in.)                             | 1                                   | В   |          |  |  |
| Tape measure (3/4 in.)                             | 1                                   | В   |          |  |  |



| SECTION B: TOOLS AND EQUIPMENT REQUIRED BY TRAINING INSTITUTION |  |                                 |   |                       |  |  |  |
|---|--|---------------------------------|---|-----------------------|--|--|--|
| Item  | Units per<br>15 Students                           | Maximum<br>Students<br>per Unit | Required for<br>Entry (E)<br>Advanced (A)<br>Both (B) | Comments              |  |  |  |
| PERSON  | PERSONAL PROTECTIVE EQUIPMENT AND SAFETY EQUIPMENT |                                 |   |                       |  |  |  |
| First Aid Kit   | 2  | 8                               | В   | O.H. & S. Requirement |  |  |  |
| Safety Glasses  | 2  | 8                               | В   |                       |  |  |  |
| Face Shield (Clear)   | 3  | 5                               | В   |                       |  |  |  |
| Gloves (e.g. Kevlar)  | 2  | 8                               | В   |                       |  |  |  |
| Hearing Protection (ear plugs)                                  | 15 sets  | 1                               | В   | Tool Crib             |  |  |  |
| Eye Wash Station(s)   | 2  | 8                               | В   | Per shop environment  |  |  |  |
| Welding Gloves (TIG)  | 2 pairs  | 8                               | В   |                       |  |  |  |
| Welding Goggles   | 2  | 8                               | В   |                       |  |  |  |
| Welding Shield  | 8  | 2                               | В   |                       |  |  |  |
|   | Н  | AND TOOLS                       |   |                       |  |  |  |
| Adjustable Wrench   | 5  | 3                               | В   |                       |  |  |  |
| Metric & Standard Allen<br>Keys                                 | 3 sets of each                                     | 5                               | В   |                       |  |  |  |
| Aviation Snips R.H. and L.H.                                    | 5 of each  | 3                               | В   |                       |  |  |  |
| Ball Peen Hammer  | 5  | 3                               | В   |                       |  |  |  |
| Bulldog Snips   | 3  | 5                               | В   |                       |  |  |  |
| Circumference Rule  | 3  | 5                               | В   |                       |  |  |  |
| C-clamp Vise Grip   | 10   | 2                               | В   | Various Sizes         |  |  |  |
| Caulking Gun  | 1  | 15                              | В   |                       |  |  |  |
| Center Punch  | 5  | 3                               | В   |                       |  |  |  |



| ltem                                | Units per<br>15 Students | Maximum<br>Students<br>per Unit | Required for<br>Entry (E)<br>Advanced (A)<br>Both (B) | Comments |
|-------------------------------------|--------------------------|---------------------------------|---|----------|
| Chaulk Line                         | 1                        | 15                              | В   |          |
| Cold Chisels (various)              | 5                        | 3                               | В   |          |
| Combination Snip                    | 1                        | 15                              | В   |          |
| Dividers (various)                  | 5                        | 3                               | В   |          |
| Files (various types)               | 15                       | 1                               | В   |          |
| Framing Square                      | 15                       | 1                               | В   |          |
| Groove Seamer - Hand<br>Groover Set | 3 sets of each size      | 5                               | В   |          |
| Hacksaw                             | 3                        | 5                               | В   |          |
| Handseamer/Folding Pliers           | 5                        | 3                               | В   |          |
| Hand Crimpers                       | 3 sets                   | 5                               | В   |          |
| Hand Dolly (various types)          | 5                        | 3                               | В   |          |
| Hand Notcher                        | 1                        | 15                              | В   |          |
| Level (2 ft.)                       | 3                        | 5                               | В   |          |
| Marking Pen                         | 15                       | 1                               | В   |          |
| Metal Straight Edge<br>(1 metre)    | 5                        | 3                               | В   |          |
| Pliers (various)                    | 3 sets                   | 5                               | В   |          |
| Plumb Bob                           | 1                        | 15                              | В   |          |
| Pop Riveter                         | 5                        | 3                               | В   |          |
| Prick Punch                         | 5                        | 3                               | В   |          |
| Rivet Set                           | 3                        | 5                               | В   |          |
| Riveting Hammer                     | 5                        | 3                               | В   |          |
| Scratch Awl                         | 3                        | 5                               | В   |          |
| Screwdriver Set                     | 1                        | 15                              | В   |          |



| ltem                   | Units per<br>15 Students | Maximum<br>Students<br>per Unit | Required for<br>Entry (E)<br>Advanced (A)<br>Both (B) | Comments |
|------------------------|--------------------------|---------------------------------|---|----------|
| Setting Hammer         | 4                        | 4                               | В   |          |
| Socket Set             | 2                        | 8                               | В   |          |
| Soldering Copper Sets  | 2                        | 8                               | В   |          |
| Straight Snip          | 1                        | 15                              | В   |          |
| Whitney Punch          | 1                        | 15                              | В   |          |
| Wire and Bolt Cutters  | 1                        | 15                              | В   |          |
| Wire Brushes           | 5                        | 3                               | В   |          |
| Wooden Mallett         | 5                        | 3                               | В   |          |
|                        | LAYOUT AND               | DRAFTING EC                     | UIPMENT   |          |
| Beam Compass           | 1                        | 15                              | В   |          |
| Drafting Set           | 3                        | 5                               | В   |          |
| T-Square               | 15                       | 1                               | В   |          |
|                        | MEA                      | SURING TOOL                     | .S  |          |
| Micrometer             | 1                        | 15                              | В   |          |
| Spirit level (2 sizes) | 2 of each                | 8                               | В   |          |
| Tape measure (1/4 in.) | 2                        | 8                               | В   |          |
| Tape measure (3/4 in.) | 2                        | 8                               | В   |          |
| Trammel Point          | 5                        | 3                               | В   |          |
|                        | METAL                    | FORMING STA                     | AKES  |          |
| Beak Horn              | 1                        | 15                              | В   |          |
| Bench Plate            | 1                        | 15                              | В   |          |
| Blow Horn              | 1                        | 15                              | В   |          |
| Candle Mould           | 1                        | 15                              | В   |          |
| Common Square          | 1                        | 15                              | В   |          |



| ltem                         | Units per<br>15 Students | Maximum<br>Students<br>per Unit | Required for<br>Entry (E)<br>Advanced (A)<br>Both (B) | Comments |
|------------------------------|--------------------------|---------------------------------|---|----------|
| Copper Smith                 | 1                        | 15                              | В   |          |
| Creasing Stake               | 1                        | 15                              | В   |          |
| Double Seaming with<br>Heads | 1                        | 15                              | В   |          |
| Hatchet                      | 1                        | 15                              | В   |          |
| Hollow Mandrel               | 2                        | 8                               | В   |          |
| Solid Mandrel                | 1                        | 15                              | В   |          |
| Square Steak                 | 1                        | 15                              | В   |          |
|                              | PORTABLE POWER           | R TOOLS AND                     | ACCESSORIES   |          |
| Angle Grinder                | 1                        | 15                              | В   |          |
| Chop Saw                     | 1                        | 15                              | В   |          |
| Cordless Drill (1/2")        | 3                        | 5                               | В   |          |
| Double Cutter                | 1                        | 15                              | В   |          |
| Electric Drill (3/8")        | 3                        | 5                               | В   |          |
| Jigsaw                       | 1                        | 15                              | В   |          |
| Reciprocating Saw            | 1                        | 15                              | В   |          |
| Portable Plasma Cutter       | 1                        | 15                              | В   |          |
| Portable Spot Welder         | 1                        | 15                              | В   |          |
| Unishear                     | 1                        | 15                              | В   |          |
|                              | INSPE                    | CTION TOOL                      | S   |          |
| Manometer                    | 2                        | 8                               | А   |          |
| Sling Psychrometer           | 8                        | 2                               | А   |          |
| Ductulator Chart             | 8                        | 2                               | А   |          |



| SECTION B: TOOLS AND EQUIPMENT REQUIRED BY TRAINING INSTITUTION |                          |                                 |   |          |  |
|---|--------------------------|---------------------------------|---|----------|--|
| Item  | Units per<br>15 Students | Maximum<br>Students<br>per Unit | Required for<br>Entry (E)<br>Advanced (A)<br>Both (B) | Comments |  |
|   | ROTA                     | RY MACHINE                      | S   |          |  |
| Beading Machine   | 1                        | 15                              | В   |          |  |
| Burring Machine   | 1                        | 15                              | В   |          |  |
| Combination Beading and Crimping Machine                        | 1                        | 15                              | В   |          |  |
| Double Seaming<br>Equipment                                     | 1                        | 15                              | В   |          |  |
| Easy Edger  | 1                        | 15                              | В   |          |  |
| Elbow Edging  | 1                        | 15                              | В   |          |  |
| Furnace Collar lock   | 1                        | 15                              | В   |          |  |
| Slip Roll Former  | 1                        | 15                              | В   |          |  |
| Turning Machine   | 1                        | 15                              | В   |          |  |
| Wiring Machine  | 1                        | 15                              | В   |          |  |
|   | SHOP TOOL                | S AND EQUIF                     | PMENT   |          |  |
| Bar Folder  | 1                        | 15                              | В   |          |  |
| Bench Vice  | 1                        | 15                              | В   |          |  |
| Box and Pan Brake   | 1                        | 15                              | В   |          |  |
| Cleat Folder  | 1                        | 15                              | В   |          |  |
| Drill Press   | 1                        | 15                              | В   |          |  |
| Four Foot Shear   | 1                        | 15                              | В   |          |  |
| Pittsburgh Machine  | 1                        | 15                              | В   |          |  |
| Soldering Furnace or Pot  | 1                        | 15                              | В   |          |  |
| Universal Hand Brake<br>(8 ft.)                                 | 1                        | 15                              | В   |          |  |



| SECTION B: TOOLS AND EQUIPMENT REQUIRED BY TRAINING INSTITUTION |                          |                                 |   |  |  |  |
|---|--------------------------|---------------------------------|---|--|--|--|
| Item  | Units per<br>15 Students | Maximum<br>Students<br>per Unit | Required for<br>Entry (E)<br>Advanced (A)<br>Both (B) | Comments   |  |  |
| CNC Plasma Cutting Table (with sheet metal fitting programming) | 1                        | 15                              | В   |  |  |  |
| Clinch Lock Machine   | 1                        | 15                              | В   |  |  |  |
| Magnetic Brake  | 1                        | 15                              | В   |  |  |  |
| Hydraulic Press   | 1                        | 15                              | В   |  |  |  |
| Hydraulic Shear   | 1                        | 15                              | В   |  |  |  |
| Hydraulic Ironworker  | 1                        | 15                              | В   |  |  |  |
| Power Rolls   | 1                        | 15                              | В   |  |  |  |
|   | WELDI                    | NG EQUIPME                      | NT  |  |  |  |
| AC/DC Power Unit  | 1                        | 15                              | В   |  |  |  |
| MIG Welding Equipment<br>(GMAW)                                 | 8                        | 2                               | Е   | Pre-employment training (E) requires 1 machine per 2 students.                 |  |  |
| MIG Welding Equipment<br>(GMAW)                                 | 15                       | 1                               | А   | Direct entry level 1 (NLCS) and advanced levels require 1 machine per student. |  |  |
| Oxy-acetylene Welding<br>Equipment                              | 15                       | 1                               | В   |  |  |  |
| TIG Welding Equipment (GTAW)                                    | 8                        | 2                               | E   | Pre-employment training (E) requires 1 machine per 2 students.                 |  |  |
| TIG Welding Equipment (GTAW)                                    | 15                       | 1                               | А   | Direct entry level 1 (NLCS) and advanced levels require 1 machine per student. |  |  |