Introduction to Power Tools
Module 00104-09
Upon completion of this module, you will be able to:

1. Identify power tools commonly used in the construction trades.
2. Use power tools safely.
3. Explain how to maintain power tools properly.
1. Safely and properly use three of the following tools:
   - Safely and properly operate an electric drill.
   - Safely and properly operate a circular saw.
   - Safely and properly operate a SawZall®.
   - Safely and properly operate a pneumatic power nailer.
Figure 1 – Parts of the power drill

- CHUCK
- CHUCK COLLAR
- CHUCK KEY HOLE
- CHUCK JAWS
- GEAR CASE
- TRIGGER SWITCH
- PISTOL GRIP HANDLE
- CASE
Figure 2 – Drill bits

- **TWIST**
  
  104F02A.EPS

- **FORSTNER**
  
  104F02B.EPS

- **PADDLE OR SPADE**
  
  104F02C.EPS

- **MASONRY**
  
  104F02D.EPS

- **AUGER**
  
  104F02E.EPS
Figure 3 – Chuck key
(A) INSERT THE BIT SHANK INTO THE CHUCK OPENING.

(B) TIGHTEN WITH THE CHUCK KEY.

(C) HOLD THE DRILL PERPENDICULAR TO THE MATERIAL AND START THE DRILL.
Figure 6 – Loading the bit on a cordless drill

(A) INSERT THE BIT SHANK.

(B) TIGHTEN THE CHUCK.
Figure 7 – Hammer drill

- Depth Gauge
- Adjustable Ring
- Power Switch
Figure 9 – Proper use of a hammer drill
Figure 10 – Electromagnetic drill
Figure 11 – Pneumatic drill
Figure 12 – Proper use of a pneumatic drill
Figure 13 – Circular saw

- Power Switch
- Handle
- Upper Blade Guard
- Depth Adjustment
- Tilt Adjustment
- Lower Blade Guard
- Base
- Guide Slot

104F13.EPS
Figure 17 – Reciprocating saw

- **Trigger**
- **Blade**
- **Shoe Plate**
- **Handle**
Figure 19 – Portable handheld bandsaw

- Handle
- ON/OFF trigger switch
- Band adjust
- Band blade
- Speed adjustment
- Stop
Figure 20 – Proper use of a portable bandsaw

(A) PLACE THE STOP FIRMLY AGAINST THE OBJECT.

(B) APPLY ONLY A LITTLE PRESSURE TO MAKE A CUT.
(A) POWER MITER BOX

(B) COMPOUND MITER SAW

(C) COMPOUND SLIDE MITER SAW
Figure 23 – Angle grinders

- **4-INCH**
  - GRINDING DISK
  - HANDLE
  - GUARD

- **9-INCH**
  - GRINDING DISK
  - HANDLE
  - GUARD
Figure 25 – Detail grinder and points

DETAIL GRINDER

\[\frac{3}{4}\text{-INCH} \]
SHANK-MOUNTED POINTS

\[\frac{1}{8}\text{-INCH} \]
SHANK-MOUNTED POINTS
Figure 26 – Bench grinder

- GUARDS
- GRINDING DISKS
- ADJUSTABLE TOOL RESTS
Figure 28 – Pneumatic nailer
Figure 30 – Powder-actuated fastening system

INSTALLATION TOOL

POWDER LOADS

3/8"-16 SMOOTH

3/8"-16 KNURLED

THREADED STUDS

SMOOTH

KNURLED

DRIVE PINS
Figure 31 – Air impact wrench
Figure 32 – Typical demolition tools and attachments

- **PAVEMENT BREAKER**
  - T-HANDLES
  - THROTTLE
  - SHANK

- **CLAY SPADE**
  - HANDLE
  - THROTTLE
  - SHANK

- **ROCK DRILL**
  - T-HANDLES
  - THROTTLE
  - SHANK
Figure 32 – Typical demolition tools and attachments
Figure 33 – Portable hydraulic jack
This course map shows all of the modules in the Core Curriculum: Introductory Craft Skills. The suggested training order begins at the bottom and proceeds up. Skill levels increase as you advance on this course map. The local Training Program Sponsor may adjust this training order. Note that Module 00106-09, Basic Rigging, is an elective. It is not a requirement for level completion, but it may be included as part of your training program.