# My Toolbox - Maintenance Tools List





## What's In My Toolbox?

Recently, I have been reducing my footprint on this planet, particularly in my workshop and my toolbox. In many cases, I have two to four versions of similar tools. This stems mainly from maintaining "sets of tools" at multiple locations and inheriting tools that hold sentimental value. To that end, I have been purging duplicate tools to a young man down the street from my home.

I have also been replacing and upgrading tools with newer versions that provide higher quality results with less effort and greater efficiency. In all honesty, I like collecting and using tools.

You might also be interested in the **Basic Industrial Maintenance Tool List** post.

## Selecting Maintenance Tools for My Toolbox

I'm realistic with my needs when selecting tools, and I will never buy inferior-quality tools. I frequently buy premium hand tools from **Knipex**, **Wera**, **Wiha**, and **Stanley Proto**. I'm often satisfied with mid-priced consumer-grade tools from brands like **GearWrench**, **Crescent**, and **Husky**.

## **Shopping for Tools**

In recent years, there was a time when it was automatically assumed Amazon was the best place, and by best, I mean the cheapest place to buy tools. That is not necessarily true today. Don't get me wrong, Amazon is often the cheapest and can get tools in your hands on a weekend, but that isn't the whole story. It pays to shop around at local stores.

I often keep tools I want to buy in shopping carts and wishlists while waiting for coupons and discount codes. All these actions are being tracked, and businesses sometimes price shop for you without doing any work. I also try to buy locally, and you might be surprised by your local industrial or electrical supply house's selection and prices.

### My Favorite Places to Buy Tools

- 1. Amazon
- 2. Wiha Tools (Follow on Instagram to get deals)
- 3. **Zoro**
- 4. Chads Toolbox (German Tools) Note: Delivery can be painfully slow.
- 5. KC Tool Co (German Tools)
- 6. Lowes (Lowes now carries Wiha tools)
- 7. MSC (Sales Flyers Only)
- 8. Ace Hardware Milwaukee & Dewalt Tools

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## Toolbox & Tool Storage

#### **Toolbox**

• U.S General 44 In. X 22 In. Double Bank Roller Cabinet, Blue — Selecting a toolbox for my use is probably the most difficult choice of everything listed on this page. My criteria, budget, and taste land me in a compromise with this toolbox. I don't need a toolbox like a snap-on with drawers that can hold a tremendous amount of weight versus the competition. I also don't have a Snap-on budget. I also don't need big deep drawers. I prefer several smaller and medium to shallow drawers that afford more tool separation and organization. The U.S General 44" roller cabinet is perfect from a layout standpoint. I like that I can also add additional add-on drawers for even more storage. All this at a price that won't break the bank.

### Additional Toolbox Storage



- Milwaukee Packout The <u>Milwaukee Packout System</u> is (expensive) tough as nails, versatile, and well thought out. I have yet to use anything close to its equal.
- Plano Plano makes great small parts storage. Don't be baited by the Chinese knockoffs

### **Electrical Tools**

### Wire Strippers & Cable Strippers

- <u>Knipex Automatic Wire Stripper 12 12 02</u> —
- <u>Jokari 20310 Sensor "Special Mini" Automatic Wire Stripper</u> PVC-coated cables, PUR-coated sensor/actuator cables, Shielded cables, Unshielded cables, TPE U cables, PUR-coated halogen-free sensor cables, PUR-coated cables.
- Weidmüller Stripax Wire Stripper 9005000000 -
- Jokari 20300 Sensor Special Automatic Wire Stripper
- Jonard WSA 1430 Self-Adjusting Wire Stripper 14-30 AWG
- Jokari Super 4 Plus Wire Stripper I bought this \$26 wire to replace an Ideal brand stripper I gifted a business owner while doing a side job. It's a great general-purpose automatic wire stripper covering typical insulation from 10-24AWG. It's inexpensive enough that you can loan it to a friend.
- Phoenix Contact WireFox D40 1212161 Cable Stripping Tool

### Crimpers

- Knipex 97 53 18 Twistor16 Self-Adjusting Crimping Pliers (Knipex Ferrule Crimper) —
- Wiha 43618 Ratchet Crimper for Standard Connectors -
- IWISS Open Barrel Crimper Open barrel terminals are those strange but familiar uninsulated terminals that typically run across in the field with OEM electrical hardware. You can recognize the connectors due to their construction. They have four ears, two ears crimp the insulation, and two ears crimp the conductors. Unfortunately, maintenance mechanics and technicians rarely have the correct tool for a proper crimp and resort to pliers and vice grips. Compounding the problem is there are several styles of open barrel terminal, and there's no one size fits all tool. Fortunately, IWISS offers a large selection of open-barrel crimpers and crimper kits. IWISS isn't a premium brand, but its tools are more than adequate for the occasional use required by maintenance personnel.
- IWISS Closed Barrel Crimper Most maintenance mechanics won't need a closed barrel crimper. I include the tool in our "Basic Industrial Maintenance Tool List" so you know the crimper exists. Click the highlighted link to the left and visit IWISS to learn more. I like the ability to properly crimp all terminals.

## Test Equipment

- Keysight 1242B Digital Multimeter
- Fluke T6-1000 Electrical Tester
- Fluke Model 187 DMM
- Fluke 1AC II Non-Contact Voltage Tester The Fluke 1AC II is a sharpie-sized tool that lights up and beeps when voltage is detected. It's an excellent tool for quick tests and safety checks.
- Fluke Model 97 ScopeMeter Oscilloscope An Oscilloscope allows you to see what electrical signals are doing. This is useful for monitoring voltages, frequency, sensors, encoders, electrical noise, etc.
- Banner DBQ5 DC Proximity Sensor Tester The DBQ5 is a portable Demo Box for powering dc self-contained sensors for testing purposes and provides a 4-pin euro-style quick-disconnect fitting.
  - Used to power dc self-contained photoelectric sensors for testing purposes
  - ∘ Designed around the 4-pin Euro-style connector
  - Powered by three standard 9V batteries (27V dc) for very long service life
  - Features bi-color LEDs that indicate not only sensor output status but also output type (NPN or PNP)
  - $\circ$  A 4-pin wiring barrier is mounted on the top of the box to allow the connection of cabled dc sensors
- <u>Turck TB3-CP80 Sensor Test Box</u> This sensor test box has been designed to test the functionality of inductive, magnetic field, capacitive and photoelectric sensors. The test box has clearly visible, illuminated LEDs indicating the switching status of the test box and an audible signal (if the box is connected to pin 4).

### **Hand Tools**

Wrenches



Wera 6004 Joker Self Setting Spanner Wrench

- 6004 Joker XS Self-Setting Spanner, 7-10 mm (1/4" 3/8") I've grown quite fond of the Wera Joker self-setting wrenches. The XS and X models handle 90% of my needs. They are available from <a href="KC Tool">KC Tool</a> or the <a href="KC Tool Amazon store">KC Tool Amazon store</a>.
- Wera 05020100001 6004 Joker S self-Setting Spanner with Ratchet Function, 10-13 mm (7/16 "-1/2 ")
- Wera 05020101001 6004 Joker L Self-Setting Spanner with ratchet function, 16
  -19 mm (5/8 "-3/4 ")
- <u>Moody Tools 57-0122 16-Piece English / Metric Mini Open End Wrench Set</u> When you need to deal with a small or thin nut or bolt, this wrench set is your best option.
- **Proto J704L Clik-Stop Adjustable Wrench 4**" The "Clik-Stop" feature separates these adjustable wrenches from the pack. Simply put, the adjustment settings remain set due to a detent feature in the adjustment mechanism.
- Proto J706L Clik-Stop Adjustable Wrench 6"
- Wera 020092 Joker Combination Wrench with Switch 4 Piece Set SAE-
- Wera 020090 Joker Combination Wrench with Switch 4 Piece Set Metric-
- <u>Gearwrench 10 Pc. 90-Tooth 12 Point Flex Head Ratcheting Combination SAE</u> Wrench Set 86758 —
- <u>Gearwrench 12 Pc. 90-Tooth 12 Point Flex Head Ratcheting Combination Metric Wrench Set 86727</u> —

### Hex Key Wrenches



#### Wera L Keys

- Wera 950/9 022640 Multicolor Hex + Ball End Hex SAE L-key Clip Set
- Wera 950/9 022089 Multicolor Hex + Ball End Hex Metric L-key Clip Set
- Wiha 26391 Screwdriver Set, Hex Inch With Precision Handle, 8 Piece

#### **Pliers**

- Knipex 86 05 180 7 1/4" Pliers -
- Knipex 26 12 200 8" Needle Nose Pliers -
- Knipex 87 41 250 10" Raptor Slip Joint Pliers -
- Knipex 81 11 250 SBA 10" Pipe and Connector Pliers with Soft Jaws (843221021412) —

### Ratchets, Socket & Socket Sets

- Wera Zyklop Speed 8100 SA 6 1/4-Inch Drive Metric Ratchet Set, 28 Piece
- Wera Zyklop Speed 8100 SA 9 1/4-Inch Drive SAE Ratchet Set, 28 Piece
- GEARWRENCH 35 Pc. 1/4" Drive MicroDriver Set 85035 -
- GEARWRENCH 51 Pc. 1/4" Drive 6 Pt. 120XP Mechanics Tool Set, Standard & Deep, SAE/Metric 80300P —
- GEARWRENCH 56 Pc. 3/8" Drive 6 Pt. 120XP Mechanics Tool Set, Standard & Deep, SAE/Metric 80550P —
- GEARWRENCH 1/4" Drive Locking Extension 2" 81123 -
- GEARWRENCH 1/4-Inch Drive Locking Extension 4" 81125 -
- GEARWRENCH 1/4" Drive Locking Extension 6" 81126 -

#### Screwdrivers & Miscellaneous Drivers and Minature Tool Sets

- Wiha 8 Piece Insulated PicoFinish SL/PH Set 32088 my toolbox's most used screwdriver set.
- Wera 2054/7 Kraftform Micro Hex Metric Precision Screwdriver Set —
- Wiha 26192 Slotted and Phillips Screwdriver Set -
- Wiha 30298 8-Piece Slotted and Phillips Screwdriver Set with Soft Finish Handles —
- Wiha 77795 Ultra Driver Bonus Pack -
- Wiha 75965 Master Tech 65 Piece Set ESD Handle, Mini Ratchet, and MicroBits In Metal Storage Box —
- Wiha 32088 Insulated Precision Slotted and Phillips Screwdriver Set, 8

#### Pieces -

- Wiha 7 Piece Insulated SoftFinish Screwdriver Set 1000-Volt VDE Set 32099 -
- Wiha 28391 Insulated SlimLine Interchangeable Set Includes Handle with Pouch, 8-Piece —
- Milwaukee 11 in 1 Multi-Bit DRIVER with ECX 48-22-2760 -
- Wera Kraftform Kompakt VDE 60 i/62 i/65 i/8 Insulated Blade Screwdriver Set, KK VDE 18 Universal 2, 05 347 107 001 —
- FELO 07157 63697 Ergonic 2PC Insulated Z1/Z2 Plus/Minus Z1/Z2 +/-Screwdriver Set—

### **Power Tools**

- Bosch Electric Screwdriver 3.6V Soon to be replaced by the Wiha SpeedE II
- <u>Milwaukee M18 Fuel 2697-22 18-Volt 1/2-Inch 2-Tool Combo Kit</u>, which includes the 1/2" Hammer Drill Driver (<u>2607-20</u>) and the 1/4" Hex Compact Impact Driver (<u>2656-20</u>)
- Bosch GSR18V-535FCB15 18V EC Brushless Connected-Ready Flexiclick 5-In-1 Drill/Driver System with (1) CORE18V 4.0 Ah Compact Battery —
- Bosch IDH182B Brushless Socket Ready Impact Driver -
- Bosch RH328VC 1-1/8-Inch SDS Rotary Hammer -
- Bosch CCS180B 18-Volt 6-1/2-Inch Litheon Circular Saw -
- Bosch CRS180B 18-Volt Lithium-Ion Reciprocating Saw —
- Metabo HPT DB3DL2M Cordless Screwdriver Kit, 3.6V I have tried other cordless screwdrivers, notably <u>Milwaukee</u> and <u>Dewalt</u>, and I end up back with my \$78 Hitachi/Metabo.

## Miscellaneous Tools & Helpers

- Thomas & Betts TY-Wrap ERG50 Cable Tie Gun -
- Portasol Pro Piezo 75-Watt Heat Tool Kit –
- QuadHands Deluxe WorkBench Helping Hands Third Hand System —
- Milwaukee Fastback Utility Knife

## **Precision Tools & Layout Tools**

- Mitutoyo Digital Caliper
- Mitutoyo 0"-1" Digital Micrometer
- Mitutoyo 0"-.5" Digital Indicator
- Starrett 12" Steel Rule 5r Graduations
- Starrett 25′ Nist Traceable Tape Measure
- Starrett 12" Combination Square
- Starrett 12" Precision Level
- Starrett 4" Precision Level
- Pec 1-2-3 Blocks
- Precision Angle Block

- Brown & Sharp 4″ Machinist Square
- Pec 3″ Machinist Square
- 12" Flat Machinist Square (2)
- 18″ Machinist Square
- Bosch Laser Measure Tool
- Proto 6060A 1/4" Drive Ratcheting Head Micrometer Torque Wrench 10-50 IN-LBS

