

Vincennes University

Automotive Tool List

Updated 12-6-19

Students entering the Automotive Program at VU are **required** to have the tools and supplies listed below. Each student will need the following items to successfully complete the required tasks and training exercises. Vincennes University does not provide insurance coverage of tools/supplies that are the property of the individual student. **It is suggested that student tool sets be added to your homeowner's insurance policy.**

Tool Storage 40" width minimum to 50" width maximum

Storage unit must have multiple drawers to securely hold and organize the tools listed below. **Storage unit must be on wheels and lock securely.** A large lower rolling cabinet is recommended as it offers ample storage space and a work surface on top. It can be upgraded with an upper chest to accommodate additional tools. High quality here is a must. Low quality tool storage units will not provide the service life needed by professional technicians.

Hand Tools

1/4" Drive Sockets, Ratchets, Extensions

- 1/4" Drive ratchet
- Universal Joint
- Screwdriver type socket handle
- 1.5" extension
- 3" extension
- 6" extension
- 3/16" thru 1/2" six point shallow sockets
- 3/16" thru 1/2" six point deep sockets
- 5mm thru 13 mm six point shallow sockets
- 5mm thru 13 mm six point deep sockets
- Inch pounds **click type** torque wrench

3/8" Drive Sockets, Ratchets, Extensions

- 3/8" Drive fixed head ratchet
- Chrome universal joint
- 3" extension
- 6" extension
- 10" extension
- 4mm, 5mm, 6mm, 7mm, 8mm, 10mm hex bits
- 3/16" through 3/8" hex bits
- 5/16" through 7/8" six point shallow chrome sockets
- 8mm through 19mm six point shallow chrome sockets

3/8" through 7/8" deep chrome sockets
10mm through 19mm deep chrome sockets
5/8" spark plug socket
13/16" spark plug socket
3/8"-1/2" adapter
ft/lb **click type** torque wrench

1/2" Drive Sockets, Ratchets & Extensions

2" extension
6" extension
10" extension
Fixed head ratchet
25 to 250 ft/lb **click type** torque wrench
Chrome Universal joint
1/2" to 3/8" reducer
1/2" through 1 1/4" six point shallow chrome sockets
10mm through 24 mm six point shallow chrome sockets
1/2" through 1 1/4" six point deep chrome sockets
10mm through 24 mm six point deep chrome sockets
1/2" Drive Impact Universal joint
1/2" Drive 1/2" through 7/8" six point deep impact sockets
1/2" Drive 10mm through 24mm six point deep impact sockets
1/2" Drive 30mm, 32mm, 36mm six point deep impact sockets
1/2" Drive 10mm through 24mm six point shallow impact sockets

Wrenches

1/4" through 1 1/4" 12 point SAE combination wrench set
8mm through 21mm 12 point Metric combination wrench set
10mm through 18mm flare nut wrenches (line wrenches)
3/8" through 7/8" flare nut wrenches (line wrenches)
12" adjustable wrench

Pliers

6" slip joint pliers
8" rib lock pliers (channel lock pliers)
16" rib lock pliers (channel lock pliers)
7" heavy duty diagonal cutters (side cuts)
8" long nose pliers (needle nose)

7" straight jaw locking pliers (vise grip brand recommended)
Automatic wire stripping tool
Wire crimping pliers

Specialty Sockets and Bits

T10 through T60 internal Torx bits

Screwdrivers

Minimum eight piece assortment of Phillips and straight (Must include stubby's)
Torx bit Screwdriver set

Hammers/Chisels

Minimum five piece punch set
Minimum four piece chisel set
16 oz ball peen hammer
32 oz ball peen hammer
Dead blow hammer with soft and hard faces

Air Tools

Air blow gun (Rubber Tip)
Tire inflation chuck with gauge (**one tool**)
Heavy duty twin hammer ½" impact wrench

Miscellaneous Tools/Supplies

3 piece pry bar set
Gasket scraper
Feeler gauge set to including: *.0015"-.030"* some brass gauges (non-magnetic) would be beneficial
Spark plug gapping tool (should range from .035"-.080")
Telescoping Flexible mirror
Telescoping magnetic retrieval tool
Flexible retrieval tool (finger type grabber)
Fender cover
Brake shoe retaining spring removal tool
Mechanic's brake spring pliers (Professional quality a must)
Brake spoon
Snap-ring plier's kit (internal and external)
Pocket screwdriver
Magnetic parts tray
Razor utility knife
O-ring pick set
Test light (non-powered)
Wire brush
Type C male air nipples Qty 2
Leather work gloves or equivalent
Chemical gloves
Hearing protection ear muffs
Safety glasses and/or safety goggles (clear)
Pen light (pocket type)
Fluke 115 Digital Multi-Meter capable of AC/DC volts, 10Amps, and Ohms
Magnetic or post-type socket organizers
Wrench organizing racks
Tape measure SAE and Metric (16 ft minimum length)

Student Supplied Items These items will be mandatory for the successful completion of lab objectives.

Lock & keys for locker
Black Sharpie markers
Professional type work pants (three minimum)
Heavy leather work boots or shoes (steel toe optional)
Supply of pens and paper
Daily planner
Textbooks
Clipboard

NOTE: IT IS INEVITABLE THAT SLIGHT VARIATIONS FROM THIS LIST WILL OCCUR. DO NOT BE ALARMED IF YOUR SET DIFFERS SLIGHTLY FROM THIS LIST.

VINCENNES UNIVERSITY DOES NOT PROFIT FROM THE SALE OF TOOL KITS.

THE KITS ARE OFFERED TO STUDENTS BY THE VARIOUS TOOL COMPANIES.

PLEASE NOTE THAT THE TOOL KITS OFFERED TO STUDENTS ATTENDING THE AUTOMOTIVE PROGRAM AT VINCENNES UNIVERSITY MAY BE PURCHASED AT A GREATLY REDUCED RATE.

Optional Tools The following tools are frequently purchased by technicians when they first enter the Automotive repair industry. We have included them as optional tools because VU students have a once in a lifetime opportunity to purchase these items at a greatly reduced price. These tools are not required to successfully complete the Automotive Program.

***Electric tool engraver**

***Metric and SAE Gearwrenches (big time saver)**

Metal file assortment

Tire valve core remover/installer

Serpentine belt remover/installer tool

SAE and metric tap and die sets

3/8" drive air ratchet

1/4" drive air ratchet

Paint pens (white or silver)

Automotive stethoscope

5/16" ratcheting Battery terminal wrench

1/4" Drive 8mm six point shallow flex socket

1/4" Drive 10mm six point shallow flex socket

1/4" Drive 13mm six point shallow flex socket

3/8" Drive flex head ratchet

1/2" Drive Flex head ratchet

10" straight jaw locking pliers (vise grip brand recommended)

7" curved jaw locking pliers (vise grip brand recommended)

E6 through E16 external Torx bits

Brass punch (1/2" min dia.)

Punch/Chisel holder

Straight die grinder to accept 1/4" carbide bits, cut off wheels, etc. with Roloc disc adapter

Electric 1/2" Drill

Adjustable Ignition Spark Tester

Seal puller tool

Fluorescent corded work light

Flashlight

Heavy duty soldering gun with rosin core solder

High speed drill bit set (3/8" shank) 20 piece minimum

25 ft heavy duty extension cord

Welding gloves

Heavy duty scissors

Parts organizer tray with lid (for small parts and fasteners)

All tools should be engraved with some identifying mark. Misplaced tools will be placed in a "lost and found" and every attempt will be made to return the tools to their owner.