

Vincennes University

Automotive Tool List

Updated 2-4-2025

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 54" Length and 24" Depth maximum size

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 (All Sockets must be 6 point)

1/4" Drive ratchet
Universal Joint
Screwdriver type socket handle
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
50 to 200 Inch pounds **click type or electronic** torque wrench

3/8" Drive Sockets, Ratchets, Extensions (All Sockets must be 6 point)

3/8" Drive fixed head ratchet
Chrome universal joint
3" extension
6" extension
10" extension
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 **six point** sockets
10mm through 19mm deep **six point** chrome sockets
5/8" spark plug socket
3/8"-1/2" adapter
15 to 100 ft/lb **click type or electronic** torque wrench

1/2" Drive Sockets, Ratchets & Extensions (All Sockets must be 6 point)

2" extension
6" extension
10" extension
Fixed head ratchet
25 to 250 ft/lb **click type or electronic** torque wrench
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** Swivel 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 10mm through 24mm **six point shallow impact sockets**

Wrenches

5/16" through 1 1/4" 12 point SAE combination wrench set
8mm through 22mm 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" long nose locking pliers (**needle nose**) (**vise grip brand recommended**)
7" curved jaw locking pliers (**vise grip brand recommended**)

Specialty Sockets and Bits

T10 through T55 internal Torx bits
4mm, 5mm, 6mm, 7mm, 8mm, 10mm hex bits (**Allen**)
3/16" through 3/8" hex bits (**Allen**)
E6 through E16 external Torx bits

Screwdrivers

Minimum eight piece assortment of Phillips and straight
(**Must include stubby's**)
(**Must include pocket style**)

Hammers/Chisels

Minimum five piece punch set
Minimum four piece chisel set
16 oz ball peen hammer (not dead blow style)
32 oz ball peen hammer (not dead blow style)
Dead blow hammer with soft and hard faces

Air or Electric Power Tools

Air blow gun (Rubber Tip)
Tire inflation chuck with gauge (one tool)
½” impact wrench (battery power preferred)

Electrical Tools

*Fluke 115 or 117 Digital Multi-Meter
Test light (non-powered)
Automatic wire stripping tool
Wire crimping pliers

Brake service kit to include

Brake spoon
Brake shoe hold down spring removal tool
Mechanics brake spring pliers (professional quality a must)
Brake piston compressor

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

***Textbooks**

Black Sharpie markers (for toolbox)
Professional type work pants (three minimum)
Heavy leather work boots or shoes (steel toe optional)
Supply of pens and paper
Daily planner
Box of adhesive bandages (for toolbox)
Zip lock bags (1 qt size freezer) (for toolbox)
Anti-fog glass wipes (for toolbox)

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 (non-magnetic)
Snap-ring plier's kit (internal and external) (non-removable tip)
Magnetic parts tray
Razor utility knife
O-ring pick set
Wire brush
Type C male air nipples Qty 2
Mechanics style work gloves or equivalent
Hearing protection ear muffs or ear plugs
Safety glasses Z87+ certified and/or safety goggles (clear)
Pen light (pocket type) or small LED flash light (rechargeable is recommended)
Post-type socket organizers
Wrench organizing racks for each wrench set
Tape measure SAE and Metric (16 ft minimum length)

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.

ALL TOOLS SHOULD BE ENGRAVED WITH SOME IDENTIFYING MARK! MISPLACED TOOLS WILL BE PLACED IN "LOST AND FOUND" AND EVERY ATTEMPT WILL BE MADE TO RETURN THEM TO THE OWNER IF THEY ARE MARKED.

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)

*3/8" drive battery powered ratchet

*3/8" Drive flex head ratchet 11"

*3/8" Drive stubby ratchet

*1/2" Drive Flex head ratchet 17"

Serpentine belt remover/installer tool

SAE and metric thread chaser sets

Brake flaring kit ISO & Double flaring

Brake line tubing cutter

Metal file assortment

Tire valve core remover/installer

Carbide gasket scraper

Automotive stethoscope

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

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

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

Battery powered 1/2" Drill

Adjustable Ignition Spark Tester

Seal puller tool

LED work light

Heavy duty soldering iron with rosin core solder

High speed drill bit set 20 piece minimum up to 1/2 inch

25 ft heavy duty extension cord

Welding gloves

Heavy duty scissors

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