**Vincennes University**

**Automotive Tool List**

Updated 9-13-16

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

**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

Inch pounds **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

**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**

25 ft heavy duty extension cord

3 piece pry bar set

Gasket scraper

Feeler gauge set to including: \*.0015"-.030"\* some brass gauges (non-magnetic) would be beneficial

Wire-type 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

 Welding gloves

 Heavy duty scissors

 Leather work gloves or equivalent

 Chemical gloves

 Hearing protection ear muffs

 Safety glasses and/or safety goggles (clear)

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

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

**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

**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

 ¼” drive air ratchet

 Paint pens (white or silver)

 Automotive stethoscope

 5/16” ratcheting Battery terminal wrench

 ¼” Drive 8mm six point shallow flex socket

 ¼” Drive 10mm six point shallow flex socket

 ¼” Drive 13mm six point shallow flex socket

 3/8” Drive flex head ratchet

 ½” Drive Flex head ratchet

 ½” Drive Impact Universal joint

 ½” Drive 1/2" through 7/8” six point deep impact sockets

 ½” Drive 10mm through 24mm six point deep impact sockets

 ½” Drive 30mm, 32mm, 36mm six point deep impact sockets

½” Drive 10mm through 24mm six point shallow impact sockets

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 ¼” carbide bits, cut off wheels, etc. with Roloc disc adapter

Electric ½” 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

Tape measure SAE and Metric (16 ft minimum length)

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.