

## REQUIRED TOOLS

### Brand Requirements

For all required tools we have listed a number of tool manufactures below that are acceptable. Due to safety concerns and fastener damage all other brands are unacceptable for the "Required Basic Tool Set".

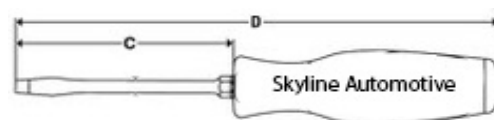
### Acceptable Brands for the Required Basic Tool Set

Snap-on\*, Mac\*, Matco\*, Craftsman, S & K, Proto, Stanley, Cronwell, Irwin & Crescent. (\*-- or brands sold through a Snap-on, Mac or Matco.)

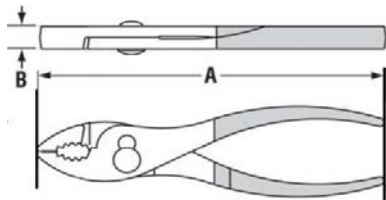
### Screw Driver, Plier & Cutter Dimensions

Screwdriver length is measured in shank length (Dimension C) and overall length (Dimension D) **Note!** ≈ means approximate sizes should be close to the listed sizes below.

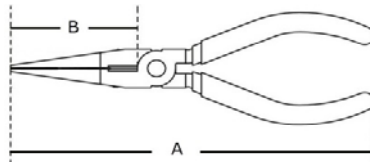
	Small	Medium	Large
Dimension C	≈ 3"	≈ 4"	≈ 8"
Dimension D	≈ 7"	≈ 9"	≈ 13.5"



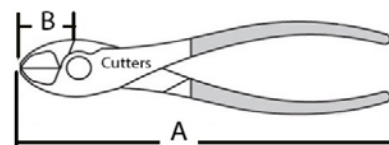
Slip Joint Pliers	
Dimension A	≈ 8 ¼"
Dimension B	≈ 7/16"



Needle Nose Pliers	
Dimension A	≈ 8"
Dimension B	≈ 2 ¼"



Diagonal Cutters	
Dimension A	≈ 7 3/8"
Dimension B	≈ 13/16"



### BASIC TOOL SET

#### REQUIRED SET FOR ALL MORNING PROGRAM CLASSES:

Description of Tool or Set	Quantity
3/8" drive ratchet. (recommended long handle flex head)	1
3/8" drive shallow socket set. 8mm to 19mm 6 pt.	1
3/8" drive deep socket set. 8mm to 19mm 6 pt.	1
3/8" drive extension set including 4 extensions--(1 1/2", 3", 6" and 10")	1
Drive adapter set. 3/8" female to 1/4" male, 3/8" female to 1/2" male, and 1/2" female to 3/8" male.	1
Screw driver set. (Minimum 6 pieces) Small, Medium and Large sizes in both flat and Phillips tips. See chart above for approximate size values.	1
Combination wrench set. 12 pt. 10mm to 19mm	1
8mm or 5/16" Combination wrench <b>6 pt.</b>	1
24 oz. Ball peen hammer.	1
24" or larger pry bar	1
Pick set 4 piece with handles.	1
Pliers set. Standard size including Cutters, needle nose and slip joint.	1
12" Adjustable Joint Pliers	1
2 1/4" round telescoping inspection mirror	1
Tire pressure gauge	1
Hex ball Air Chuck and shop nipple	1

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OPTIONAL RECOMMENDED TOOLS	
<b>NOTE!</b> Many of the tools in the optional kits are in multiple kits. That is because many of the tools are useful in multiple repair areas.	
<b>BASIC TOOLS</b>	
Description of Tools	Quantity
Combination wrench set. 12 pt. 3/8" to 3/4"	1
3/8" drive shallow and deep socket set. 1/4" to 7/8" 6 pt.	1
Mini flashlight	1
Magnetic pickup tool. 2 lb. lift. Maximum extension 26 "	1
Metal gasket scraper.	1
6" metal machinist rule. US and Metric	1
Spark plug gap tool	1
1/2" drive long handled flex head ratchet	1
1/2" drive extension kit with at least 3 extensions	1
1/2" drive metric socket set 12mm - 24mm 6 pt. (shallow)	1
<b>ELECTRICAL TOOLS</b>	
Description of Tools	Quantity
12v test light	1
Remote starter switch	1
Battery brush	1
Pocket flashlight	1
Automotive digital multimeter kit (Fluke 88 or equivalent) <i>Includes: Meter, inductive pick-up, temp. probe, storage case</i>	1
1/4" drive deep sockets metric 5mm-15mm 6pt	1
1/4" drive deep sockets standard 3/16" - 9/16" 6pt	1
Ratcheting screwdriver	1
1/4" drive box or something to keep the 1/4" drive tools in.	1
1/4" drive long shank driver w/female square dr	1
1/4" drive ratchet	1
1/4" drive 2" knurled extension	1
1/4" drive 4" knurled extension	1
1/4" drive 6" knurled extension	1
1/4" drive universal joint	1
1/4" drive 7mm metric 6 point shallow socket	1
1/4" drive 8mm metric 6 point shallow socket	1
1/4" drive 9mm metric 6 point shallow socket	1
1/4" drive 10mm metric 6 point shallow socket	1
1/4" drive 11mm metric 6 point shallow socket	1
1/4" drive 12mm metric 6 point shallow socket	1
1/4" drive 13mm metric 6 point shallow socket	1
1/4" drive 14mm metric 6 point shallow socket	1
Socket rail Minimum length 10"	1
1/4" drive socket rail clips (11 minimum for the above rail)	1
Battery tester - thexton	1
Jumper wire set - assorted lengths	1

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<b>ENGINE PERFORMANCE TOOLS</b>	
<b>Description of Tools</b>	<b>Quantity</b>
Mighty Mite vacuum pump	1
Spark plug gap tool - conventional	1
Spark plug gap tool - electronic	1
Modified spark plug - similar to Kent Moore (ignition spark tester electronic)	1
Injector test light kit	1
Compression gauge set	1
Vacuum & fuel pump for carburetor pressure gauge set	1
High pressure injection fuel pressure gauge Set	1
3/8" Dr. Flex-head torque wrench approximaely 20-100lb.ft. Electronic or click	1
3/8" drive spark plug socket. 13/16"	1
3/8" drive spark plug socket 5/8"	1
<b>TRANSMISSIONS &amp; DRIVE TRAIN TOOLS</b>	
<b>Description of Tools</b>	<b>Quantity</b>
Convertible Snap ring pliers set with round ends.	1
Snap ring pliers set with Flat tips	1
3/8" drive extension. 36" long.	1
3/8" drive metric swivel socket set. 10mm - 19mm, 6 point. (shallow)	1
Folding hex wrench set. (.050" to 3/16")	1
Metric folding hex wrench set. (1.5mm to 6mm)	1
Blow gun. (non-restrictive) rubber tip.	1
Tapered bronze punch. 10" long, 3/8" tip diameter.	1
Feeler gauge set. .0015" to .035". 35 blades.	1
Vise grip dial indicator set.	1
6" digital type calipers (metal frame)	1
1/2" Dr. Flex-head torque wrench approximately 40-250lb.ft. Electronic or click	1
3/8" Dr. Flex-head torque wrench approximately 20-100lb.ft. Electronic or click	1
3/8" Dr. Dial torque wrench 0 - 300lb. Inch.	1
3/8" Dr. high torque air ratchet	1
3/8" drive universal socket set. 6 pt. (7/16" to 3/4")	1
3/8" drive universal socket set. 6 pt. (10mm to 19 mm) (shallow)	1
3/8" and 1/4" drive torx bits. T-8 to T-55	1
1/2" drive impact gun	1

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<b>ENGINE TOOLS</b>	
<b>Description of Tools</b>	<b>Quantity</b>
Folding hex wrench set. (.050" to 3/16")	1
Metric folding hex wrench set. (1.5mm to 6mm)	1
Blow gun. (non-restrictive) rubber tip.	1
Bronze tip hammer. 24 oz.	1
Tapered bronze punch. 10" long, 3/8" tip diameter.	1
3/8" drive spark plug socket. 13/16"	1
3/8" drive spark plug socket 5/8"	1
Feeler gauge set. .0015" to .035". 35 blades.	1
Vise grip dial indicator set.	1
6" digital type calipers (metal frame)	1
1/2" Dr. Flex-head torque wrench approximately 40-250lb.ft. Electronic or click	1
3/8" Dr. Flex-head torque wrench approximately 20-100lb.ft. Electronic or click	1
3/8" Dr. high torque air ratchet Electronic or click	1
3/8" Dr. shallow impact swivel socket set 6 pt. (3/8"-3/4") 7 pcs.	1
3/8" drive universal socket set. 6 pt. (7/16" to 3/4") 6 pcs. (shallow)	1
3/8" drive universal socket set. 6 pt. (10 to 17 mm) 6 pcs. (shallow)	1
3/8" drive 36" extension bar.	1
3/8" and 1/4" drive torx bits. T-8 to T-55	1
<b>BRAKE AND CHASSIS TOOLS</b>	
<b>Description of Tools</b>	<b>Quantity</b>
Flare nut wrench 6 piece set - Metric (Includes sizes: 9-11mm, 10-12mm, 13-14mm, 15-17mm, 16-18mm, 19-21mm)	1
Pinch bar 38"	1
1/2" breaker bar approximately 24"	1
Combination wrench 12pt. 20mm	1
Combination wrench 12pt. 21mm	1
Combination wrench 12pt. 22mm	1
Combination wrench 12pt. 23mm	1
Combination wrench 12pt. 24mm	1
40 oz. dead-blow ball peen hammer	1
1/2" Dr. impact socket set 6 pt. (3/8"-1") 11 pcs. shallow.	1
Flair nut wrench set (1/4 " to 13/16) 5 pcs.	1
6" metal machinist rule. US and Metric	1
Tire gauge 20-100 psi	1
Tire valve stem tool	1
Tire tread depth gauge	1
Air chuck	1
Brake service tool set (includes: spring pliers, 29°x45° adjusting tool, 8x10mm bleeder wrench, double ended spring cap socket, and 1/4" handle)	1
1/2" Dr Socket Set Metric 6 pt. Std (12-24mm)	1
1/2" Dr Universal Joint	1
1/2" Dr Flex-Ratchet	1
1/2" Dr 24" Breaker Bar	1
1/2" Dr 10" Extension	1
1/2" Dr 2" Extension	1
1/2" Dr 5" Extension	1
Dead Blow Ball Peen Hammer - 40oz	1
36" Pry Bar w/Handle	1

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<b>Pre-Delivery Service</b>	
<b>Description of Tools</b>	<b>Quantity</b>
1/2" Air or Electric Impact Gun	1
Protective Vinyl Boot for Air Gun above	1
1/2" Dr Impact Sockets Metric 10-24mm Std	1
Extension 3"	1
Extension 6"	1
1/2" Impact Flip-Socket (19-21mm) Thin wall if available	1
<b>Heating and Cooling</b>	
<b>Description of Tools</b>	<b>Quantity</b>
Thermometer	1
Cooling System Pressure Tester	1
Radiator Adaptor	1
Radiator Cap Adaptor	1
Anti-Freeze Tester	1
<b>Maintenance</b>	
<b>Description of Tools</b>	<b>Quantity</b>
Tire inflator with gauge	1
Oil filter wrench or wrench kit (band, claw, spider or canister type)	1
1/2" drive torque wrench up to approx. 250 foot pounds. Electronic or click	1
Flip socket and extension kit. 19mm/21mm. Thin wall if available	1
1/2" drive long handled ratchet wrench	1
Cooling system pressure tester	1
Brake Pad measuring gauge	1
6" metal machinist rule with inch and metric	1
Tire tread depth gauge	1
1/2" impact gun	1
19mm torque stick less than 70 foot pound.	1
21mm torque stick less than 70 foot pound.	1