

**Skyline College Automotive Technology  
Tool List by Type Across Categories**

1/9/2019

**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".

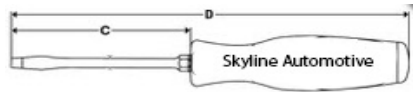
**Acceptable Brands for the Required Basic Tool Set**

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

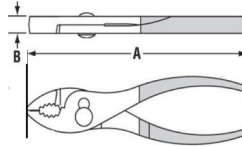
**Screw Driver, Plier & Cutter Dimensions**

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.

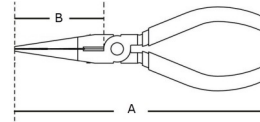
	Small	Medium	Large
Dimension C	≈ 3"	≈ 4"	≈ 8"
Dimension D	≈ 7"	≈ 9"	≈ 13.5"



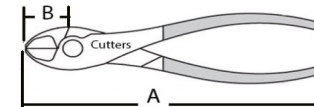
Slip Joint Pliers	
Dimension A	≈ 8 1/4"
Dimension B	≈ 7/16"



Needle Nose Pliers	
Dimension A	≈ 8"
Dimension B	≈ 2 1/4"



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



Quantity	Description	Required Basic	Recommended									
			Basic	Electrical	Engine Perf	Drivetrain	Engine	Brake & Chassis	PDI	A/C	Maintenance	
1	3/8" drive ratchet. (recommended long handle flex head)	x										
1	3/8" drive shallow socket set. 8mm to 19mm 6 pt.	x										
1	3/8" drive deep socket set. 8mm to 19mm 6 pt.	x										
1	3/8" drive shallow and deep socket set. 1/4" to 7/8" 6 pt.		x									
1	3/8" drive 6 point spark plug socket. 13/16"				x			x				x
1	3/8" drive 6 point spark plug socket 5/8"				x			x				x
1	3/8" drive 6 point spark plug socket. 14 mm.				x			x				x
1	3/8" drive 6 point deep spark plug socket. 14 mm.				x			x				x
1	3/8" drive 6 point spark plug socket. 18 mm.				x			x				x
1	3/8" drive 6 pt. universal socket set. (7/16" to 3/4")						x	x	x			
1	3/8" and 1/4" drive torx bit set. T-8 to T-55						x					
1	3/8" drive 7 pc metric hex bit socket set. 4mm - 10mm.						x	x	x			
1	3/8" drive metric swivel socket set. 10mm - 19mm, 6 point. (shallow)						x	x	x			
1	3/8" drive extension set including 4 extensions--(1 1/2", 3", 6" and 10")	x										
1	3/8" drive extension. 36" long.						x					
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.	x										
1	1/2" drive long handled flex head ratchet		x			x	x	x				
1	1/2" drive extension kit with at least 3 extensions		x			x		x				
1	1/2" drive metric socket set 12mm - 24mm 6 pt. (shallow)		x			x	x	x	x			
1	1/2" Dr. impact socket set 6 pt. (3/8"-1") 11 pcs. shallow.							x	x			
1	1/2" Dr Universal Joint							x				
1	1/2" Dr 36" Breaker Bar							x				

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Quantity	Description	Required Basic	Recommended								
			Basic	Electrical	Engine Perf	Drivetrain	Engine	Brake & Chassis	PDI	A/C	Maintenance
1	1/2" Impact Flip-Socket (19-21mm) Thin wall if available							X	X		
1	1/2" Drive impact 6 point Axle nut set. (29mm, 30mm, 34mm, 35mm, 36mm)					X		X			
1	1/4" drive deep sockets metric 5mm-15mm 6pt			X							
1	1/4" drive deep sockets standard 3/16" - 9/16" 6pt			X							
1	Ratcheting screwdriver			X							
1	1/4" drive box or something to keep the 1/4" drive tools in.			X							
1	1/4" drive long shank driver w/female square dr			X							
1	1/4" drive ratchet			X							
1	1/4" drive 6 pc knurled extension set (1-1/4" - 11")			X							
1	1/4" drive universal joint			X							
1	1/4" drive 12 pc metric 6 point shallow socket (5mm - 15mm)			X							
1	Socket rail Minimum length 10"			X							
1	1/4" drive socket rail clips (11 minimum for the above rail)			X							
1	24 oz. Ball peen hammer.	X									
1	Bronze tip hammer. 24 oz.						X				
1	40 oz. dead-blow ball peen hammer							X			
1	Combination wrench set. 12 pt. 10mm to 19mm	X									
1	Combination wrench set. 12 pt. 3/8" to 3/4"		X								
1	8mm or 5/16" Combination wrench <b>6 pt.</b>	X									
1	Combination wrench 12pt. 20mm							X			
1	Combination wrench 12pt. 21mm							X			
1	Combination wrench 12pt. 22mm							X			
1	Combination wrench 12pt. 23mm							X			
1	Combination wrench 12pt. 24mm							X			
1	Flare nut wrench 6 piece set - Metric (Includes sizes: 9-11mm, 10-12mm, 13-14mm, 15-17mm, 16-18mm, 19-21mm)							X			
1	Flair nut wrench set (1/4" to 13/16) 5 pcs.							X			
1	3/8" Dr. Flex-head torque wrench approximaely 20-100lb.ft. Electronic or click				X	X	X	X			
1	1/2" Dr. Flex-head torque wrench approximately 40-250lb.ft. Electronic or click					X	X	X	X		
1	3/8" Dr. Dial torque wrench 0 - 300lb. Inch.					X					
1	12v test light			X	X	X					
1	Automotive digital multimeter kit (Fluke 88 or similar) <i>Includes: Meter, inductive pick-up, temp. probe, storage case</i>			X	X	X		X			
1	Scantool (Recommend: Snap-on, Matco, Bosch or Autel brands)			X	X	X		X			
1	Digital Storage Oscilloscope (Recommend: AES Wave Uscope master kit)			X	X	X		X			
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.	X									
1	24" or larger pry bar	X									
1	Pinch bar 38"							X			
1	36" Pry Bar w/Handle					X	X	X			
1	Pliers set. Standard size including Cutters, needle nose and slip joint.	X									
1	12" Adjustable Joint Pliers	X									
1	Convertible Snap ring pliers set with round ends.					X					
1	Snap ring pliers set with Flat tips					X					
1	Feeler gauge set. .0015" to .035". 35 blades.					X	X				
1	Vise grip flex bar 0-1" dial indicator set.					X					
1	6" digital type calipers					X	X				
1	6" metal machinist rule. US and Metric		X								

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Quantity	Description	Required Basic	Recommended								
			Basic	Electrical	Engine Perf	Drivetrain	Engine	Brake & Chassis	PDI	A/C	Maintenance
1	Spark plug gap tool		x		x			x			
1	Feeler gauge set. 45 degree bent .006" to .030". 25 blades.							x			
1	Thermometer									x	x
1	Brake Pad measuring gauge										x
1	Battery specific gravity tester - thexton			x							x
1	3/8" Dr. high torque power ratchet (air or electric)						x	x	x		
1	1/2" drive impact gun (air or electric)						x	x	x	x	
1	3/8"drive impact gun (air or electric)						x	x	x		
1	Pick set 4 piece with handles.	x									
1	2 1/4" round telescoping inspection mirror	x									
1	Tire pressure gauge	x									x
1	Hex ball Air Chuck and shop nipple	x									x
1	Mini flashlight		x								
1	Magnetic pickup tool. 2 lb. lift. Maximum extension 26 "		x								
1	Metal gasket scrapper.		x				x	x			
1	Remote starter switch			x							
1	Battery brush			x							x
1	Jumper wire set - assorted lengths			x	x	x					
1	Mighty Mite vacuum pump				x						
1	Injector test light kit				x						
1	Compression gauge set				x			x			
1	Vacuum & fuel pump for carburetor pressure gauge set				x						
1	High pressure injection fuel pressure gauge Set				x						
1	Modified spark plug - similar to Kent Moore (ignition spark tester electronic)				x						
1	Folding hex wrench set. (.050" to 3/16")						x	x			
1	Metric folding hex wrench set. (1.5mm to 6mm)						x	x			
1	Blow gun. (non-restrictive) rubber tip.						x	x			
1	Tapered bronze punch. 10" long, 3/8" tip diameter.						x	x			
1	Tire valve stem tool								x		x
1	Tire tread depth gauge								x		x
1	Brake service tool set (includes: spring pliers, 29° x 45° adjusting tool, 8x10mm bleeder wrench, double ended spring cap socket, and 1/4" handle)								x		
1	Cooling System Pressure Tester									x	
1	Radiator Adaptor kit									x	
1	Radiator Cap Adaptor kit									x	
1	Anti-Freeze Tester									x	x
1	Oil filter wrench or wrench kit (band, claw, spider or canister type)										x
1	19mm torque stick less than 70 foot pound.										x
1	21mm torque stick less than 70 foot pound.										x

The following list are the same tools only listed by class category instead of by tool type.

You may find the same tool duplicated because it can be classified in more than one class category.

Skyline College Tool List by Category

1/9/2019

Quantity	Description	Required Basic	Recommended							
			Basic	Electrical	Engine Perf	Drivetrain	Engine	Brake & Chassis	PDI	A/C
<b>Required Basic Tools</b>										
1	3/8" drive ratchet. (recommended long handle flex head)	x								
1	3/8" drive shallow socket set. 8mm to 19mm 6 pt.	x								
1	3/8" drive deep socket set. 8mm to 19mm 6 pt.	x								
1	3/8" drive extension set including 4 extensions--(1 1/2", 3", 6" and 10")	x								
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.	x								
1	24 oz. Ball peen hammer.	x								
1	Combination wrench set. 12 pt. 10mm to 19mm	x								
1	8mm or 5/16" Combination wrench <b>6 pt.</b>	x								
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.	x								
1	24" or larger pry bar	x								
1	Pliers set. Standard size including Cutters, needle nose and slip joint.	x								
1	12" Adjustable Joint Pliers	x								
1	Pick set 4 piece with handles.	x								
1	2 1/4" round telescoping inspection mirror	x								
1	Tire pressure gauge	x								
1	Hex ball Air Chuck and shop nipple	x								

**Basic Tools**

1	3/8" drive shallow and deep socket set. 1/4" to 7/8" 6 pt.		x
1	1/2" drive long handled flex head ratchet		x
1	1/2" drive extension kit with at least 3 extensions		x
1	1/2" drive metric socket set 12mm - 24mm 6 pt. (shallow)		x
1	Combination wrench set. 12 pt. 3/8" to 3/4"		x
1	6" metal machinist rule. US and Metric		x
1	Spark plug gap tool		x
1	Mini flashlight		x
1	Magnetic pickup tool. 2 lb. lift. Maximum extension 26 "		x
1	Metal gasket scraper.		x

**Electrical**

1	1/4" drive deep sockets metric 5mm-15mm 6pt		x
1	1/4" drive deep sockets standard 3/16" - 9/16" 6pt		x
1	Ratcheting screwdriver		x
1	1/4" drive box or something to keep the 1/4" drive tools in.		x
1	1/4" drive long shank driver w/female square dr		x
1	1/4" drive ratchet		x
1	1/4" drive 6 pc knurled extension set (1-1/4" - 11")		x
1	1/4" drive universal joint		x
1	1/4" drive 12 pc metric 6 point shallow socket (5mm - 15mm)		x
1	Socket rail Minimum length 10"		x
1	1/4" drive socket rail clips (11 minimum for the above rail)		x
1	12v test light		x
1	Automotive digital multimeter kit (Fluke 88 or similar)		x
1	Scantool (Recommend: Snap-on, Matco, Bosch or Autel brands)		x
1	Digital Storage Oscilloscope (Recommend: AES Wave Uscope master kit)		x
1	Battery specific gravity tester - thexton		x
1	Remote starter switch		x
1	Battery brush		x
1	Jumper wire set - assorted lengths		x

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1/9/2019

Quantity	Description	Required Basic	Recommended							
			Basic	Electrical	Engine Perf	Drivetrain	Engine	Brake & Chassis	PDI	A/C
<b>Engine Performance</b>										
1	3/8" drive 6 point spark plug socket. 13/16"									x
1	3/8" drive 6 point spark plug socket 5/8"									x
1	3/8" drive 6 point spark plug socket. 14 mm.									x
1	3/8" drive 6 point deep spark plug socket. 14 mm.									x
1	3/8" drive 6 point spart plug socket. 18 mm.									x
1	3/8" Dr. Flex-head torque wrench approximaely 20-100lb.ft. Electronic or click									x
1	12v test light									x
1	Automotive digital multimeter kit (Fluke 88 or similar)					x				x
1	Scantool (Recommend: Snap-on, Matco, Bosch or Autel brands)					x				x
1	Digital Storage Oscilloscope (Recommend: AES Wave Uscope master kit)					x				x
1	Spark plug gap tool			x						x
1	Jumper wire set - assorted lengths					x				x
1	Mighty Mite vacuum pump									x
1	Injector test light kit									x
1	Compression gauge set									x
1	Vacuum & fuel pump for carburetor pressure gauge set									x
1	High pressure injection fuel pressure gauge Set									x
1	Modified spark plug - similar to Kent Moore (ignition spark tester electronic)									x
<b>Drive Trains</b>										
1	3/8" drive 6 pt. universal socket set. (7/16" to 3/4")									x
1	3/8" and 1/4" drive torx bit set. T-8 to T-55									x
1	3/8" drive 7 pc metric hex bit socket set. 4mm - 10mm.									x
1	3/8" drive metric swivel socket set. 10mm - 19mm, 6 point. (shallow)									x
1	3/8" drive extension. 36" long.									x
1	1/2" drive long handled flex head ratchet					x				x
1	1/2" drive extension kit with at least 3 extensions					x				x
1	1/2" drive metric socket set 12mm - 24mm 6 pt. (shallow)					x				x
1	1/2" Drive impact 6 point Axle nut set. (29mm, 30mm, 34mm, 35mm, 36mm)									x
1	3/8" Dr. Flex-head torque wrench approximaely 20-100lb.ft. Electronic or click							x		x
1	1/2" Dr. Flex-head torque wrench approximately 40-250lb.ft. Electronic or click									x
1	3/8" Dr. Dial torque wrench 0 - 300lb. Inch.									x
1	12v test light							x		x
1	Automotive digital multimeter kit (Fluke 88 or similar)							x		x
1	Scantool (Recommend: Snap-on, Matco, Bosch or Autel brands)							x		x
1	Digital Storage Oscilloscope (Recommend: AES Wave Uscope master kit)							x		x
1	36" Pry Bar w/Handle									x
1	Convertible Snap ring pliers set with round ends.									x
1	Snap ring pliers set with Flat tips									x
1	Feeler gauge set. .0015" to .035". 35 blades.									x
1	Vise grip flex bar 0-1" dial indicator set.									x
1	6" digital type calipers									x
1	3/8" Dr. high torque power ratchet (air or electric)									x
1	1/2" drive impact gun (air or electric)									x
1	3/8"drive impact gun (air or electric)									x
1	Metal gasket scrapper.					x				x
1	Jumper wire set - assorted lengths							x		x
1	Folding hex wrench set. (.050" to 3/16")									x
1	Metric folding hex wrench set. (1.5mm to 6mm)									x
1	Blow gun. (non-restrictive) rubber tip.									x
1	Tapered bronze punch. 10" long, 3/8" tip diameter.									x

Quantity	Description	Required Basic	Recommended							
			Basic	Electrical	Engine Perf	Drivetrain	Engine	Brake & Chassis	PDI	A/C
<b>Engine Repair</b>										
1	3/8" drive 6 point spark plug socket. 13/16"					x			x	
1	3/8" drive 6 point spark plug socket 5/8"					x			x	
1	3/8" drive 6 point spark plug socket. 14 mm.					x			x	
1	3/8" drive 6 point deep spark plug socket. 14 mm.					x			x	
1	3/8" drive 6 point spart plug socket. 18 mm.					x			x	
1	3/8" drive 6 pt. universal socket set. (7/16" to 3/4")						x		x	
1	3/8" drive 7 pc metric hex bit socket set. 4mm - 10mm.						x		x	
1	3/8" drive metric swivel socket set. 10mm - 19mm, 6 point. (shallow)						x		x	
1	1/2" drive long handled flex head ratchet		x				x		x	
1	1/2" drive metric socket set 12mm - 24mm 6 pt. (shallow)		x				x		x	
1	Bronze tip hammer. 24 oz.								x	
1	3/8" Dr. Flex-head torque wrench approximaely 20-100lb.ft. Electronic or click					x	x		x	
1	1/2" Dr. Flex-head torque wrench approximately 40-250lb.ft. Electronic or click						x		x	
1	36" Pry Bar w/Handle						x		x	
1	Feeler gauge set. .0015" to .035". 35 blades.						x		x	
1	6" digital type calipers						x		x	
1	Spark plug gap tool		x						x	
1	Feeler gauge set. 45 degree bent .006" to .030". 25 blades.								x	
1	3/8" Dr. high torque power ratchet (air or electric)						x		x	
1	1/2" drive impact gun (air or electric)						x		x	
1	3/8"drive impact gun (air or electric)						x		x	
1	Metal gasket scraper.		x				x		x	
1	Compression gauge set						x		x	
1	Folding hex wrench set. (.050" to 3/16")						x		x	
1	Metric folding hex wrench set. (1.5mm to 6mm)						x		x	
1	Blow gun. (non-restrictive) rubber tip.						x		x	
1	Tapered bronze punch. 10" long, 3/8" tip diameter.						x		x	

<b>Brake and Chassis</b>										
1	3/8" drive 6 pt. universal socket set. (7/16" to 3/4")						x	x		x
1	3/8" drive 7 pc metric hex bit socket set. 4mm - 10mm.						x	x		x
1	3/8" drive metric swivel socket set. 10mm - 19mm, 6 point. (shallow)						x	x		x
1	1/2" drive long handled flex head ratchet		x				x	x		x
1	1/2" drive extension kit with at least 3 extensions		x				x			x
1	1/2" drive metric socket set 12mm - 24mm 6 pt. (shallow)		x				x	x		x
1	1/2" Dr. impact socket set 6 pt. (3/8"-1") 11 pcs. shallow.									x
1	1/2" Dr Universal Joint									x
1	1/2" Dr 36" Breaker Bar									x
1	1/2" Impact Flip-Socket (19-21mm) Thin wall if available									x
1	1/2" Drive impact 6 point Axle nut set. (29mm, 30mm, 34mm, 35mm, 36mm)						x			x
1	40 oz. dead-blow ball peen hammer									x
1	Combination wrench 12pt. 20mm									x
1	Combination wrench 12pt. 21mm									x
1	Combination wrench 12pt. 22mm									x
1	Combination wrench 12pt. 23mm									x
1	Combination wrench 12pt. 24mm									x
1	Flare nut wrench 6 piece set - Metric (Includes sizes: 9-11mm, 10-12mm, 13-14mm, 15-17mm, 16-18mm, 19-21mm)									x
1	Flair nut wrench set (1/4 " to 13/16) 5 pcs.									x
1	3/8" Dr. Flex-head torque wrench approximaely 20-100lb.ft. Electronic or click					x	x	x		x
1	1/2" Dr. Flex-head torque wrench approximately 40-250lb.ft. Electronic or click						x	x		x
1	Automotive digital multimeter kit (Fluke 88 or similar)					x	x	x		x
1	Scantool (Recommend: Snap-on, Matco, Bosch or Autel brands)					x	x	x		x
1	Digital Storage Oscilloscope (Recommend: AES Wave Uscope master kit)					x	x	x		x
1	Pinch bar 38"									x
1	36" Pry Bar w/Handle						x	x		x
1	3/8" Dr. high torque power ratchet (air or electric)						x	x		x
1	1/2" drive impact gun (air or electric)						x	x		x

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Quantity	Description	Required Basic	Recommended							PDI	A/C	Maintenance
			Basic	Electrical	Engine Perf	Drivetrain	Engine	Brake & Chassis				
<b>Brake and Chassis Continued</b>												
1	3/8"drive impact gun (air or electric)					x	x		x			
1	Tire valve stem tool								x			
1	Tire tread depth gauge								x			
1	Brake service tool set (includes: spring pliers, 29° x 45° adjusting tool, 8x10mm bleeder wrench, double ended spring cap socket, and 1/4" handle)								x			

<b>PDI</b>											
1	1/2" drive extension kit with at least 3 extensions		x			x			x	x	
1	1/2" drive metric socket set 12mm - 24mm 6 pt. (shallow)		x			x	x		x	x	
1	1/2" Dr. impact socket set 6 pt. (3/8"-1") 11 pcs. shallow.								x	x	
1	1/2" Impact Flip-Socket (19-21mm) Thin wall if available								x	x	
1	1/2" Dr. Flex-head torque wrench approximately 40-250lb.ft. Electronic or click					x	x		x	x	
1	1/2" drive impact gun (air or electric)					x	x		x	x	

<b>Air Conditioning</b>											
1	Thermometer										x
1	Cooling System Pressure Tester										x
1	Radiator Adaptor kit										x
1	Radiator Cap Adaptor kit										x
1	Anti-Freeze Tester										x

<b>Maintenance</b>											
1	3/8" drive 6 point spark plug socket. 13/16"				x		x				x
1	3/8" drive 6 point spark plug socket 5/8"				x		x				x
1	3/8" drive 6 point spark plug socket. 14 mm.				x		x				x
1	3/8" drive 6 point deep spark plug socket. 14 mm.				x		x				x
1	3/8" drive 6 point spart plug socket. 18 mm.				x		x				x
1	Thermometer									x	x
1	Brake Pad measuring gauge										x
1	Battery specific gravity tester - thexton				x						x
1	Tire pressure gauge	x									x
1	Hex ball Air Chuck and shop nipple	x									x
1	Battery brush				x						x
1	Tire valve stem tool								x		x
1	Tire tread depth gauge								x		x
1	Anti-Freeze Tester									x	x
1	Oil filter wrench or wrench kit (band, claw, spider or canister type)										x
1	19mm torque stick less than 70 foot pound.										x
1	21mm torque stick less than 70 foot pound.										x