

Automotive and Related Technology Required Materials and Tools

Required Uniform



- Head Safety glasses/goggles
- Top Advanced Transportation and Manufacturing shop shirt | **quantity: 3-5**
- Bottom black pants
- Footwear closed toe, closed heel, slip resistant, and oil resistant shoes/boots

Required Textbooks

- ISBN: 978-0133994612 | Automotive Technology, Principles, Diagnosis & Service, 5th edition (2015)
- ISBN: 978-1934855508 | A1 Engine Repair: Motor Age Training Self Study Guide (2011)
- ISBN: 978-1934855645 | ASE A7 Heating & A/C Study guide by Motor Age Training (2016)

Recommended

Laptop or tablet

General Tools List

PART 1 | Tools used in multiple courses

TOOL	TOOL DETAIL	course numbers					
		113	114	121	122	123	135
<input type="checkbox"/> Cylinder leak down tester / cylinder compression tester				X		X	
<input type="checkbox"/> Dial indicator with flexible mount		X	X				
<input type="checkbox"/> Digital Volt - Ohm - Meter (DVOM)					X	X	X
<input type="checkbox"/> Flashlight	Telescoping gauge			X			X
<input type="checkbox"/> Hand vacuum pump kit with gauge	MityVac #4000		X			X	
<input type="checkbox"/> Heavy-duty remote starter switch	MAC# SS25 or equivalent				X	X	
<input type="checkbox"/> Micrometer	Sizes: 0" to 1"	X	X	X			
<input type="checkbox"/> Thread pitch gauge (metric)	Range: 2.0mm – .40mm	X		X			
<input type="checkbox"/> Thread pitch gauge (standard)	Range 4 to 42	X		X			
<input type="checkbox"/> Snap ring pliers set (Truarc)		X	X				
<input type="checkbox"/> Vernier caliper (dial/digital optional)	Size: 0 – 6"	X		X			

PART 2 | Tools used in all courses

TOOL	TOOL DETAIL
<input type="checkbox"/> Adjustable pliers	Size: 9" (<i>Channel-Lock™</i>)
<input type="checkbox"/> Adjustable wrench	Size: 10"
<input type="checkbox"/> Ball peen hammer	Size: 24 ounce
<input type="checkbox"/> Bar, rolling head	Size: 18"
<input type="checkbox"/> Caliper (dial/digital optional)	Size: 6"
<input type="checkbox"/> Center punch	Size: 1/2" X 4 1/2"
<input type="checkbox"/> Cold chisel	Size: 5/8" cut
<input type="checkbox"/> Combination wrench set	Sizes: 1/4" to 1"
<input type="checkbox"/> Combination wrench set	Sizes: 6 mm to 19 mm
<input type="checkbox"/> Common pliers	Size: 6"
<input type="checkbox"/> Diagonal cutting pliers	Size: 7"
<input type="checkbox"/> Feeler gauge set	Sizes: .0015" to .035" (MAC # FG002 or equivalent)
<input type="checkbox"/> Feeler gauge set	Sizes: .038mm to .889mm (MAC # FG002 or equivalent)
<input type="checkbox"/> File handles (2 each)	
<input type="checkbox"/> Gasket scraper	
<input type="checkbox"/> Hacksaw	
<input type="checkbox"/> Hacksaw blades	Sizes: 18 tooth & 32 tooth
<input type="checkbox"/> Metric socket set	1/4" drive Sizes: 5 mm to 14 mm (6 point)
<input type="checkbox"/> Metric socket set	3/8" drive Sizes: 6 mm to 19 mm (6 point)
<input type="checkbox"/> Metric socket set	1/2" drive Sizes: 10 mm to 27 mm (6 point)
<input type="checkbox"/> Mill file	Size: 11 1/2"

TOOL	TOOL DETAIL
<input type="checkbox"/> Needle nose pliers	Size: 6"
<input type="checkbox"/> Nylon parts cleaning brush	
<input type="checkbox"/> Pin punch set	
<input type="checkbox"/> Screw driver	Size: 4" flat blade
<input type="checkbox"/> Screw driver	Size: 6" flat blade
<input type="checkbox"/> Screw driver	Size: 8" flat blade
<input type="checkbox"/> Screw driver	Size: 12" flat blade
<input type="checkbox"/> Screw driver	Size: 4" Phillips #1
<input type="checkbox"/> Screw driver	Size: 4" Phillips #2
<input type="checkbox"/> Socket adapter	Sizes: 3/8" drive to 1/2" drive
<input type="checkbox"/> Socket adapter	Sizes: 1/2" drive to 3/8" drive
<input type="checkbox"/> Socket adapter	Sizes: 1/4" drive to 3/8" drive
<input type="checkbox"/> Soft face hammer	Size: 24 ounce
<input type="checkbox"/> Spark plug gap gauge, wire type	
<input type="checkbox"/> Spark plug sockets	3/8" drive Sizes: 5/8" & 13/16"
<input type="checkbox"/> Steel rule	Size: 6" with cross bar (combination inches & metric)
<input type="checkbox"/> Toolbox or rollaway cart w/secure lock	
<input type="checkbox"/> Trigger type oil can	
<input type="checkbox"/> Vise Grip™ pliers set	

Specialty Tools | First and Second Semesters

AUTOTRK 100 | Conditioning Systems Theory, Inspection Repair

TOOL	TOOL DETAIL
<input type="checkbox"/> Air Conditioning R134a gauge set	
<input type="checkbox"/> Dial thermometer	

AUTORTK 113 | Drive Train Components Principles & Practices

TOOL	TOOL DETAIL
<input type="checkbox"/> Adapter	Size: 3/8" Male to 1/4" Female square drive
<input type="checkbox"/> Adapter	Size: 1/2" Male to 3/8" Female square drive
<input type="checkbox"/> Rubber-tipped air nozzle	Amflo #201 & Coupler #CP21
<input type="checkbox"/> Snap ring pliers (flat type)	MAC tool #TP15P !ONLY!
<input type="checkbox"/> Check General List PART 1 for additional tools used	See column 113

AUTORTK 114 | Steering, Suspension, Brakes, Principles & Practices

TOOL	TOOL DETAIL
<input type="checkbox"/> Air hose	
<input type="checkbox"/> Brake fluid tester	
<input type="checkbox"/> Disk brake micrometer	.300" to 1.300"
<input type="checkbox"/> Drop light	110 volt
<input type="checkbox"/> Fender Cover	quantity: 2
<input type="checkbox"/> Spoon set - Brake adjusting	
<input type="checkbox"/> Tire inflator	
<input type="checkbox"/> Tire pressure gauge (dial type/digital optional)	
<input type="checkbox"/> Tire Tread Depth gauge	
<input type="checkbox"/> Tire Valve Stem Removal Tool	
<input type="checkbox"/> Torque wrench	1/2" drive
<input type="checkbox"/> Wheel lug socket set	
<input type="checkbox"/> Check General List PART 1 for additional tools	See column 114

AUTORTK 121 | Basic Engine Theory, Inspection & Repair

TOOL	TOOL DETAIL
<input type="checkbox"/> Compression tester	
<input type="checkbox"/> Piston ring compressor set	
<input type="checkbox"/> Piston ring expander	
<input type="checkbox"/> Ruler	6" (combination standard & metric)
<input type="checkbox"/> Telescopic magnet	
<input type="checkbox"/> Vacuum gauge	
<input type="checkbox"/> Check General List PART 1 for additional tools	See column 121

AUTORTK 122 | Electrical/Electronic Systems Theory, Inspection & Repair

TOOL	TOOL DETAIL
<input type="checkbox"/> 12 volt test light	
<input type="checkbox"/> 16 gauge Jumper wires with alligator clips	quantity: 8 Min. length: 3 Feet
<input type="checkbox"/> Wire crimpers/wire stripper	MAC tool #TCT 2000 or equivalent
<input type="checkbox"/> Check General List PART 1 for additional tools	See column 122

AUTORTK 123 | Fuel & Emissions Systems Theory, Inspection & Repair

TOOL	TOOL DETAIL
<input type="checkbox"/> Check General List PART 1 for additional tools	See column 123

Specialty Tools | Third and Fourth Semesters

AUTORTK 135 | Computer Control and Fuel Injection Heating and Air

TOOL	TOOL DETAIL
<input type="checkbox"/> Back Probe Pins	quantity: 4
<input type="checkbox"/> PCM scanner	
<input type="checkbox"/> Check General List PART 1 for additional tools	See column 135

LIVE SHOP COURSES

- AUTORTK 130 | Automotive Theory and Repair I
- AUTORTK 131 | Automotive Theory and Repair II
- AUTORTK 140 | Automotive Theory and Repair IV
- AUTORTK 141 | Automotive Theory and Repair V
- AUTORTK 142 | Automotive Theory and Repair VI

TOOL	TOOL DETAIL
<input type="checkbox"/> 18" Breaker bar	1/2" drive
<input type="checkbox"/> Air hose	Size: 25'
<input type="checkbox"/> Allen wrench set	Standard
<input type="checkbox"/> Allen wrench set	Metric
<input type="checkbox"/> Ball peen hammer	Sizes: 8oz, 10oz, & 16oz
<input type="checkbox"/> Cape chisel	
<input type="checkbox"/> Drift punch set	
<input type="checkbox"/> Extensions	3/8" drive Sizes: 4", 6", 10", & 18"
<input type="checkbox"/> Extensions	1/2" drive Sizes: 6" – 12"
<input type="checkbox"/> Extension cord	12' 110 volt
<input type="checkbox"/> Impact wrench (air operated)	Size: 1/2" drive
<input type="checkbox"/> Line wrench set	Metric
<input type="checkbox"/> Line wrench set	Standard
<input type="checkbox"/> Nut drivers (standard)	Sizes: 3/16", 1/4", 9/32", 5/16", 11/32", & 3/8"
<input type="checkbox"/> Socket set	1/4" drive w/ratchet & extensions (3" & 6") Sizes: 3/32" to 1/2"
<input type="checkbox"/> Socket set	3/8" drive w/ratchet & extensions (3" & 6") Sizes: 1/4" to 3/4"
<input type="checkbox"/> Socket set	1/2" drive w/ratchet & extensions (3" & 6") Sizes: 3/8" to 1 1/8"
<input type="checkbox"/> Torx screwdrivers	Sizes: #10 to #50
<input type="checkbox"/> Torque wrench	Inch Pound (in. lb.)
<input type="checkbox"/> Torque wrench	Foot Pound (ft. lb.)
<input type="checkbox"/> Vice Grip Pliers™ set	