

## 2021 SkillsUSA Florida Automotive Service Technology - Tools and Materials

### Air Conditioning Workstation

<b>Shop Equipment</b>	Vehicle with normally operating Air Conditioning System.
<b>Tools &amp; Misc</b>	Air Conditioning System Gauges or Recovery/Recharge A/C machine appropriate to the refrigerant type in the vehicle provided.
	Thermometer for measuring both A/C outlet temperature and ambient temperature under the hood of the vehicle.
	Any hand tools required to access the A/C pressure fittings on the vehicle provided.

### Front Brake Rotor Station

<b>Shop Equipment</b>	Vehicle with front disc brakes.
	Vehicle lift rated for the vehicle being used.
	Vehicle should be on the lift with one front wheel removed for the student.
<b>Tools &amp; Misc</b>	Repair manual or specifications sheet for the front brake rotors of the vehicle being used. Must have rotor minimum thickness readings, rotor run-out specifications, and thickness variation specifications for that vehicle.
	Disc brake micrometer or other suitable micrometer.
	Correct style washers to place behind lug nuts when securing rotor for run-out measurements.
	Dial indicator for reading lateral run-out.
	Fine emery paper for cleaning any rust or particles from the rotor before measurements.
	Shop rags to wipe off equipment if necessary.

### Rear Brake Drum Workstation

<b>Shop Equipment</b>	Provide a Brake Drum on a bench for the student.
<b>Tools &amp; Misc</b>	Repair manual or specifications sheet for the rear brake drums of the vehicle it is from. Must have Brake drum maximum diameter specifications and drum run-out specifications for that vehicle.
	Brake drum micrometer or other suitable drum measurement tool.
	Fine emery paper for cleaning any rust or particles from the drum before measurements.
	Shop rags to wipe off brake drum or measurement tools if needed.

### Cylinder Head Workstation

<b>Shop Equipment</b>	Cylinder head with both intake and exhaust manifolds removed, placed on a bench for the student with the appropriate tools necessary to perform workstation.
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<b>Tools &amp; Misc</b>	Repair Manual Specifications for the Cylinder Head being used for this workstation.
	Straightedge for checking cylinder head for warpage.
	Feeler gauges.
	Shop rags to clean cylinder head surfaces and tools.

### DVOM Workstation

<b>Shop Equipment</b>	Vehicle with operating taillight circuit.
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<b>Tools &amp; Misc</b>	Wiring schematic for this vehicle's lighting system
	DVOM capable of voltage and current flow measurements.
	Any tools that may be required to removed any panels that would need to be removed for access to rear taillight connectors and wiring.
	T-Pins or other small connector back-probe tools.
	Any tools necessary to remove a wire from the taillight connector for the purpose of inserting a DVOM in series with the circuit for current flow measurements
	Assorted jumper wires for connecting meter leads to jumper wires.