Automotive Service Technology

ELIGIBILITY
Open to active SkillsUSA members enrolled in technical education programs with automotive technology as the occupational objective

CLOTHING/PPE REQUIREMENTS
- Blue/Black Dickies style work pants
- Non slip work boots
- Button up dickies style work shirt
- Z-87 Safety Glasses

* Clothing should not have your school or name printed on them.
Note: At the district level if a student is not able to wear the official SkillsUSA attire he/she may wear an outfit that would be acceptable in their specific field of study. Please keep in mind that official SkillsUSA attire will be required at the state and national level.

EQUIPMENT AND MATERIALS: SUPPLIED BY HOST
- Hunter Hawkeye alignment machine
- Megatech Auto Electric Trainer
- Fluke 115
- Starret 0-1" Micrometers
- Shopkeypro
- Autel Maxisys Elite
- Autel Maxisys
- Fowler dial indicator magnetic base 0-1" in .001 increments.
- Feeler Gauge (Metric/Standard)
- Micromate telescoping bore gauge
- Snap-on straight edge
- Blue-Point dial caliper (Standard)
- Blue Point soldering gun (R460B)
- Robinair R134 AC machine (34288)

EQUIPMENT AND MATERIALS: SUPPLIED BY CONTESTANT
- one page typed resume
- Pen
- Proof of Training - signed

SAFETY REQUIREMENTS:
Both the instructor and the contestant certify by agreeing to enter this contest that the contestant has received instruction and has satisfactorily passed an examination on the safe use of all power tools. Proof of training form will be submitted. Further they agree that SkillsUSA, WMCTC and responsibility relating to personal injuries resulting from their use. Contestants will be removed from competition if proper training has not been provided and/or they are using the equipment in an unsafe manner.

SCOPE OF THE CONTEST: (Defined by the National Competition Regulations)
(District Competitions are meant to be a scaled down version of National Competition. It is important for the students to participate in a competition that will reflect a cross-section of the industry skills needed to prepare them for the state and national levels)

KNOWLEDGE PERFORMANCE
(**ASE A1 thru A8)** The Contestant will take a 25 question ASE style exam based on the A1 through A8 ASE areas. *15 min*

SKILL PERFORMANCE

1. **(ASE A4, AST 7.0)** The contestant will need to be able to describe alignment angles and the effect they will have on tire wear. Also, contestants will need to be able to adjust toe. *15 min.*

2. **(ASE A6, AST 6.0)** The contestant will need to be able to identify, build, and diagnose simple electrical circuits using a DMM, and a Megatech trainer. *15 min*

3. (**ASE A3, AST 8.0)** The contestant will need to be able to measure backlash and set backlash on a rear wheel drive differential using a dial indicator, micrometer and shim packs or preload adjusters. *15 min*

4. (**ASE 8, AST 2.0)** The contestant will need to be able to diagnose a check engine light using a scan tool, DMM, and diagnostic service information. *15 min*

5. (**ASE A1, AST 11.0)** The contestant will make engine measurements using precision measuring tools, such as dial caliper, micrometer, dial indicator, telescoping bore gauge, feeler gauge, straight edge and compare them to specification. *15 min*

6. (**ASE A6, AST 6.0)** The contestant will be able to perform a wiring repair using a soldering gun, heat shrink, electrical tape and solder. Contestants will need to be able to repair a weather pack connector. Additionally, all contestants will need to perform a butt connector repair. *15 min*

7. (**ASE A2, AST 10.0)** The contestant will need to be able to disassemble and reassemble an automatic transmission clutch pack and identify the associated parts. The contestant will need to be able to disassemble and reassemble a planetary gear set and identify the associated parts. Also, the contestant will need to be able to disassemble and reassemble a front pump and identify the associated parts. *15 min*

8. (**ASE A7, AST 1.0)** The contestant will need to diagnose an AC system on a vehicle using AC pressure gauges, DMM, and scan tool. *15 min*

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Score Sheet

Stations	Description	Points Possible
ASE Test		25
Alignment		75
Rear Differential		80
Check Engine Light		50
Precision Engine Measuring		75
Wiring Repair		60
Automatic Transmission Repair		90
AC System Diagnosis		30
Electrical Circuit Design		50
	SUBTOTAL = 535	
No Resume	Deduction -10	
Safety Penalty	Deduction -10	
Clothing Penalty	Deduction -5	
	TOTAL	

Note: No cell phones or other electronic devices may be used at any time during a competition; this includes using a calculator function on a cell phone for competitions in which calculators are permitted.

Note:Scorecards should only be used as guidance. Changes may occur.