

SkillsUSA 2011 Contest Projects

Major Appliance Technology

Click the “Print this Section” button above to automatically print the specifications for this contest. Make sure your printer is turned on before pressing the button.

Major Appliance Technology

Please note there will be a name changed phased into this contest the New name will be.

Major Appliance & Refrigeration Technology

In the Technical Standards under Purpose:

To evaluate each contestant's preparation for employment and to recognize outstanding students in the excellence and professionalism in the field of appliance and refrigeration repair technology.

Eligibility:

Open to active SkillsUSA members enrolled in programs with appliance repair technology within it's career objective.



**Major Appliance & Refrigeration
Technology**

Station #1– Vertical or Horizontal Axis Washer Diagnosis

Time Allotted-30 Minutes

This exercise tests your ability to accurately diagnose an electro/mechanical failure in a vertical axis or horizontal axis washing machine.

1. You must be able to read and follow the wiring schematic for the appliance being used.
2. You must be able to use a Volt Ohm Meter, Amp-meter, Multi-meter and other test equipment appropriate for appliance diagnosis.
3. You must be able to use common hand tools to disassemble, reassemble and access components in the appliance being used.
4. You must be able to use appropriate test equipment to locate defective components causing the appliance failure.
5. You must be able to report your diagnosis to the judge. Be prepared to explain how you arrived at your diagnosis and to show what steps you took to verify your diagnosis, including showing what voltage, resistance and other readings that were taken by utilizing the appliance's wiring schematic.
6. You must be able to reassemble the appliance, making sure that no additional faults or failures have been introduced into the appliance.

NOTES: You must be able to:

1. Use all tools necessary.
2. Use wiring schematics and technical data sheets.
3. Work safely
4. Wear safety glasses and gloves anytime the appliance is accessed.

***INDUSTRY AND EDUCATION
WORKING TOGETHER FOR THE
COMMON GOOD OF THE
APPLIANCE SERVICE INDUSTRY
A TRUE PARTNERSHIP***



IN HOME SERVICE PROFESSIONAL

SkillsUSA

Major Appliance & Refrigeration Technology

YOU MUST FILL-IN ALL HIGHLIGHTED AREAS PRINT CLEARLY

☒ **WARRANTY** ☐ **PART WARRANTY** ☐ **SPECIAL AUTHORIZATION#** ☐ **OTHER**

BRAND Any Brand		PRODUCT TYPE Washer	
MODEL NUMBER		SERIAL NUMBER	

SERVICE INVOICE NO.

M08966Z-1

FIRST INITIAL K	MIDDLE INITIAL C	LAST NAME MISSOURI
STREET ADDRESS 7 2 0 5 W 8 0 t h S T R E E T		
CITY O V E R L A N D P K	STATE K S	ZIP CODE 6 6 2 0 4
HOME PHONE NUMBER 9 1 3 - 5 5 5 - 1 2 1 2		

DATE PURCHASED	10	10	10
DATE CALL RECEIVED	06	27	11
DATE REPAIRED			

CUSTOMER'S REQUEST:	DEFECT CODE
---------------------	-------------

<input type="checkbox"/> NOT HOME	<input type="checkbox"/> LACK PART	<input type="checkbox"/> CALL BACK
-----------------------------------	------------------------------------	------------------------------------

SERVICE PERFORMED: <input type="checkbox"/> ILLUSTRATE DETAIL OF PROBLEM ON REVERSE SIDE	MFG. CODE/REF.
--	----------------

TIME STARTED	TIME COMPLETED
TIME COMPLETED	TIME COMPLETED
TOTAL TIME	TOTAL TIME
1	

SELLING DEALER/DISTRIBUTOR Main Appliance	CITY Overland Park	STATE KS
---	------------------------------	--------------------

BEFORE	AFTER
--------	-------

QUANTITY	FAULT / JOB CODE	PART NUMBER	DESCRIPTION	INVOICE NUMBER	PART COST	EXTENSION

MAG. / MOTOR / SEALED UNIT NO. OLD	SERVICE AGREEMENT NUMBER	I AUTHORIZED A CHARGE TO MY CREDIT CARD CARD NAME
MAG. / MOTOR / SEALED UNIT NO. NEW	SERVICE AGREEMENT EXP. DATE	
SERVICE NUMBER	SERVICE STATE NUMBER	CARD NUMBER
		EXP. DATE AUTH. NO.

SUB TOTAL	
HANDLING	
TOTAL PARTS	

CUSTOMER'S SIGNATURE	DATE	CUSTOMER'S SIGNATURE	DATE
----------------------	------	----------------------	------

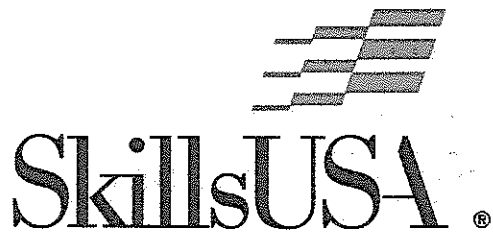
TRIP CHARGE	
COMPLETED CALL	
LABOR	
DIAGNOSTIC FEE	
TOTAL LABOR	

CONTESTANT NUMBER
DATE

ESTIMATE OF REPAIR	
PARTS	
LABOR	
SALON TAX	
ESTIMATE TOTAL	
REVISED EST. OF REPAIR	
PARTS	
LABOR	
SALON TAX	
REV. EST. TOTAL	

TRAVEL	
STATE TAX	
LOCAL TAX	
TOTAL	
METHOD OF PAYMENT	
CASH	
CHECK #	
OTHER	

ACCOUNT NUMBER	TRANSMITTAL NUMBER	INTERNAL CONTROL NO.	AUDITED BY	OTHER
----------------	--------------------	----------------------	------------	-------



Major Appliance & Refrigeration
Technology Technical
Committee Members



Haier®



SkillsUSA

Major Appliance & Refrigeration Technology Judge's Score Sheet

Contestant # _____

Date _____

Allocated Time 30 Minutes

Start Time _____ End Time _____ Total Minutes _____

Diagnostic Skills Range: 0-70	Soft Skills Use of Tools Range: 0-5	Safety Use of Equipment Range: 0-10
60-70 Excellent	5 Excellent	9-10 Excellent
50-59 About Average	4 About Average	7-8 About Average
40-49 Average	2-3 Average	5-6 Average
0-39 Below Average	0-1 Below Average	0-4 Below Average

SCORING SECTION

Evaluation Items	Possible Points	Points Awarded	Comments
Soft Skills	5		
Safety	10		
Use of Tools	5		
Use of Equipment	10		
Diagnostic Skills	70		
TOTAL SCORE	100		

Contestant's Diagnosis:

Additional Comments:

Judge's Information: Your Signature: _____

Please Print Your Name: _____

Company/Association Representing: _____





Major Appliance & Refrigeration Technology

STATION #2

Basic Knowledge Assessment Test

Do not open this booklet until instructed to do so.

DO NOT MAKE ANY MARKS IN THIS
BOOKLET



IN HOME SERVICE PROFESSIONAL

1. What is the result of a drain hose being placed too deeply into a standpipe?
 - a. Unacceptable noise.
 - b. Slow drain.
 - c. Siphon effect.
 - d. No Drain.
2. For best results, liquid chlorine bleach should be added when?
 - a. As the wash water is coming in.
 - b. After the wash water has stopped coming in.
 - c. After the wash agitation starts.
 - d. After 5 minutes of wash agitation.
3. On a standard, timer driven washer, when is the timer motor energized?
 - a. As soon as the timer is pulled to the "on" position.
 - b. After the unit begins to fill.
 - c. After the unit is full of water.
 - d. After the drive motor is energized.
4. The High Limit Thermostat, on a dryer, is:
 - a. a normally open switch.
 - b. a normally closed switch.
 - c. a single pole, double throw switch.
 - d. not used on a dryer.
5. If the radiant heat sensor in a dryer were stuck closed:
 - a. the ignitor would never shut off.
 - b. the ignitor would never turn on.
 - c. the heating element would never shut off.
 - d. the heating element would never turn on.
6. The idler in a dryer does what?
 - a. Controls the speed of the drum.
 - b. Controls the speed of the blower.
 - c. Keeps the motor at a constant speed.
 - d. Keeps tension on the belt to maintain drum speed.
7. What do Water Level Switches actually sense?
 - a. Weight of the water.
 - b. Weight of the load.
 - c. Water pressure.
 - d. Air pressure.

8. The automatic clothes drying process uses three basic principles to accomplish drying; heat, air movement and tumbling. Of these three, which one is, by far, the leading cause of long dry complaints?

- a. Heat.
- b. Air movement.
- c. Tumbling.
- b. The cause is usually a problem in the electrical system.

9. How many complete on and off cycles should the oven go through before determining calibration needed on an oven thermostat?

- a. 1
- b. 3
- c. 5
- d. 9

10. An oven safety valve is:

- a. a temperature controlling device that maintains a relatively specific temperature within the oven cavity.
- b. a fuse that blows if any unsafe condition is encountered during operation of the oven.
- c. a device that controls the flow of gas to the oven burner(s).
- d. a device that reduces incoming gas pressure to the proper operating pressure for the oven.

11. On ranges with electronic controls, what component monitors the temperature of the oven?

- a. sensor.
- b. thermal protector.
- c. thermostat bulb.
- d. electronic triac

12. A power transformer in a microwave oven consists of three windings:

- a. power, secondary and discharge.
- b. primary, filament and high voltage.
- c. primary, monitor and low voltage.
- d. monitor, doubler, and discharge.

13. A loose electrical connection at a terminal block can cause:

- 1. Overheating of the terminal block
 - 2. A drop in the applied voltage to the device connected to the terminal block
 - 3. A fire
 - 4. Intermittent operation of the device connected to the terminal block
- a. All the statements apply
 - b. Only statement 1 applies
 - c. Only statements 1, 3, and 4 apply
 - d. Only statement 4 applies

14. A capacitor that you suspect is shorted can be checked with a multimeter by
- Setting the scale to the highest VDC scale and measuring the DC voltage across the positive and negative terminals of the capacitor
 - Setting the scale to highest VAC scale and measuring the AC voltage across the positive and negative terminals of the capacitor
 - Discharging the capacitor, disconnecting the capacitor from the circuit, setting the meter to the highest Ohm scale, connecting one meter lead to the positive terminal, the other to the negative terminal and then reversing the leads
 - Leaving the capacitor in the circuit, discharging the capacitor, setting the meter to the highest Ohm scale, connecting one meter lead to the positive terminal, the other to the negative terminal and then reversing the leads
15. What temperature is required for an oven to self-clean?
- 500' F to 600' F
 - 600' F to 750' F
 - 850' F to 900' F
 - 1500' F to 1600' F
16. When checking the resistance on an infinite switch that is turned on High, you get readings of; zero ohms from L1 to H1, zero ohms from L2 to H2 and zero ohms from H1 to P. What should you do?
- Replace the switch, it has a short.
 - Replace the switch, it has an open contact.
 - Check the spark module wiring.
 - Look elsewhere in the circuit for the problem.
17. A recovery pump is used to
- Evacuate a sealed system to insure that there is no moisture left in the refrigerant tubing or compressor after a repair
 - Pressurize a system to check for leaks
 - Transfer refrigerant from a sealed system into an EPA certified refrigerant storage container
 - Recover the oil from a compressor before discarding the compressor
18. Higher than normal low side pressure on a refrigerator sealed system could indicate a(n)
- restriction
 - lower than normal heat load
 - low charge
 - inefficient compressor

19. Adaptive defrost is a system that:
- a. can be added to units that do not have automatic defrost systems.
 - b. initiates a defrost after monitoring several factors since the last defrost cycle
 - c. increases power consumption
 - d. will initiate a defrost cycle after every compressor run cycle.
20. Customer complaint: "Refrigerator section is too cold" What would you check first?
- a. sealed system
 - b. controls & settings
 - c. defrost system
 - d. power input
21. Which of the following components is in the low pressure side of the system?
- a. Evaporator
 - b. Heat loop
 - c. Drier
 - d. Condenser
22. When finished repairing a sealed system it is acceptable to leave line taps on
- a. both the hi and low side of the system, as long as they are brazed on.
 - b. only the hi side of the system
 - c. only the low side of the system
 - d. it is not acceptable to leave a tap on the system
23. What are the 2 conditions that a compressor overload protector provides protection against?
- a. High Amperage & Heat
 - b. High Amperage & Low Voltage
 - c. Heat & High Voltage
 - d. Open Compressor Winding & High Amperage
24. To braze the same size steel and copper tubing together you should swag the _____ piece of tubing.
- a. Steel
 - b. Copper
 - c. Doesn't matter
 - d. It can not be done.
25. To properly activate dishwasher detergent, the incoming water temperature
- a. Should be at least 120°F
 - b. Should be at least 140°F
 - c. Should be at least 160°F
 - d. Is not important since the dishwasher has an internal heater

26. Low incoming water temperature will have what effect on the performance of a dishwasher?

- a. No effect
- b. Poor cleaning and drying
- c. Poor cleaning only, drying is accomplished by the heater
- d. Poor drying only, the detergent will work in any temperature

27. The primary function of the safety float switch found on most dishwashers with a timed fill feature is

- a. To protect the dishwasher from under-filling
- b. To prevent overfilling
- c. To stop the heater from energizing unless there is water in the wash tub
- d. To signal the main control board that the lower wash arm is rotating

28. To properly clean dishes, three things are necessary:

- a. Heated water, fresh detergent and mechanical action
- b. Jet Dri, heated water and fresh detergent
- c. Mechanical action, Jet Dri and water
- d. Fresh detergent, Jet Dri and mechanical action

29. If a dishwasher only has one motor and it is a bi-directional motor, how is the drain cycle achieved?

- a. By stopping the motor.
- b. By reversing the motor.
- c. By opening a valve.
- d. By adding more water to start a siphon effect.

30. If a dishwasher has two door switches, what do they make and break?

- a. Line and Neutral.
- b. Line and Ground.
- c. Neutral and Ground.
- d. Line 1 and Line 2.

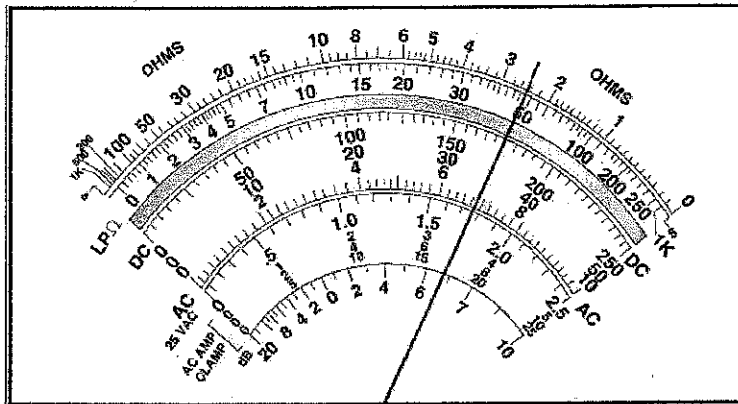
31. What is the result of a chemical unbalance and the glassware appears cloudy or rainbow-like? It cannot be washed or cleaned off. When wet, the glassware appears crystal clear, but the cloudiness reappears when it is dried.

- a. Spotting
- b. Silica filming
- c. Etching
- d. Residue

32. On a dishwasher that uses a separate start relay, what energizes the relay?

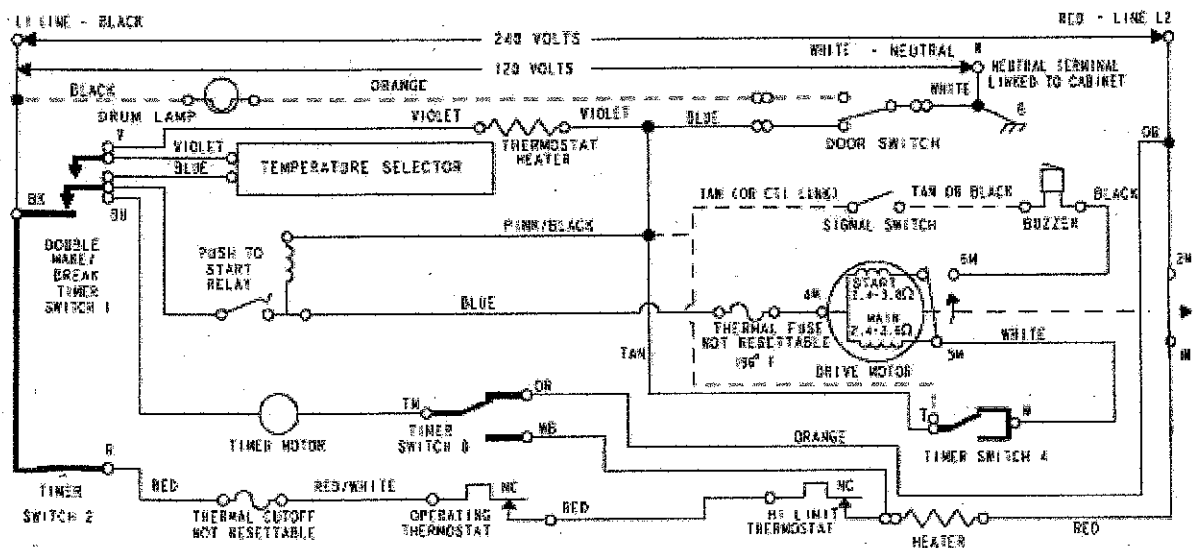
- a. The current draw of the motor.
- b. A start switch in the motor.
- c. A 120VAC power source, usually a timer.
- d. A low voltage power source, usually an electronic control.

37. What is the correct ohm reading of this meter with the range set at R X 1K.



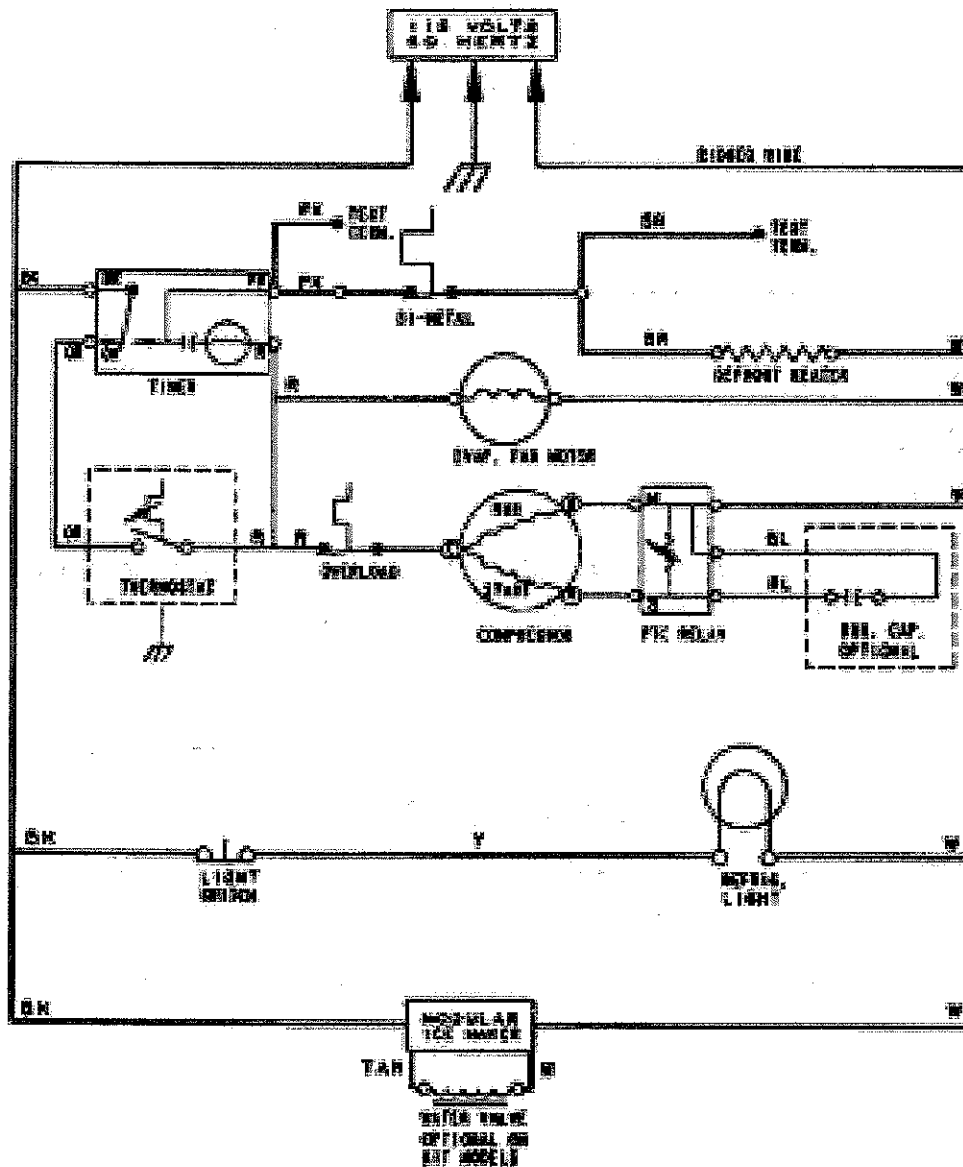
- a. 25
- b. 250
- c. 2,500
- d. 25,000

38. In the schematic below what is the voltage across the operating thermostat at the red/white and red wire if the dryer is heating and running.



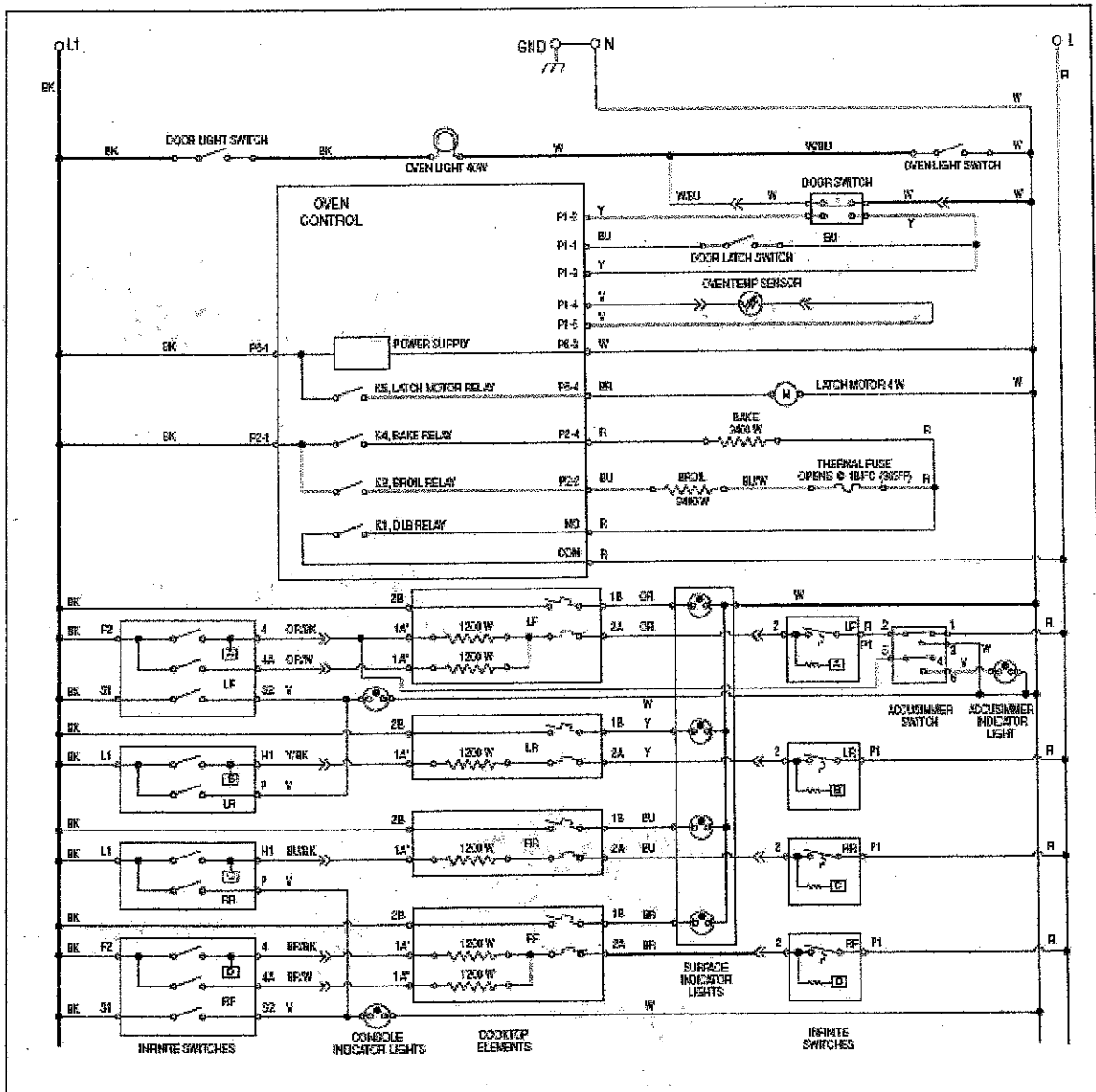
- a. 240 VAC
- b. 120VAC
- c. 0 VAC
- d. 220 VAC

39. In the schematic below when this unit is in the defrost cycle what component is the neutral supplied through to the defrost timer motor.



- Evaporator fan moter
- Compressor start winding
- Compressor running winding
- Thermostat

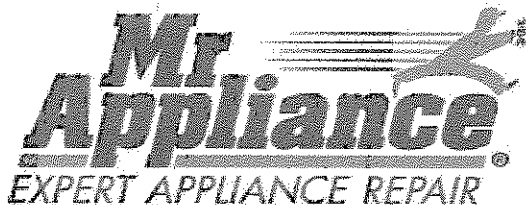
40. In the schematic below if the right front burner is on what would the voltage be the surface indicator light.



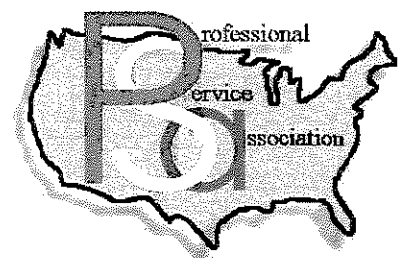
- a. 240 VAC
- b. 120VAC
- c. 0 VAC
- d. 220 VAC



Major Appliance & Refrigeration
Technology
Technical Committee Members



Haier.





Station #2– Technical Written Test

Time Allotted-30 Minutes

This test shows the contestants basic knowledge of all major appliances used in the SkillsUSA Major Appliance & Refrigeration Technology National Championship contest.

1. The contestant must follow all instructions given by the judge and supplied on the answer sheet.
2. The contestants may not talk to each other once the test period has started.
3. The contestant must fill in all answers completely no Xs or check marks.

Example: (A) (B) (C) ●

4. The contestants should not spend too much time on a question. If they are not sure of the answer skip it and go back to it later.
5. The contestant must use pencil provided when answering test questions.

***INDUSTRY AND EDUCATION
WORKING TOGETHER FOR THE
COMMON GOOD OF THE
APPLIANCE SERVICE INDUSTRY
A TRUE PARTNERSHIP***



IN HOME SERVICE PROFESSIONAL

CONTESTANT'S ANSWER SHEET

Fill in your answer completely NO Xs or CHECK MARKS

EXAMPLE: 1. (A) (B) (C) ●

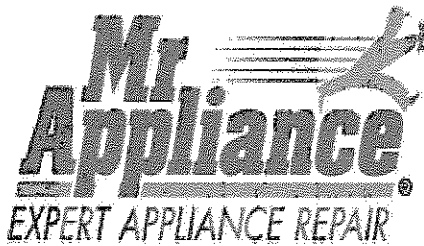
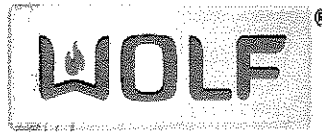
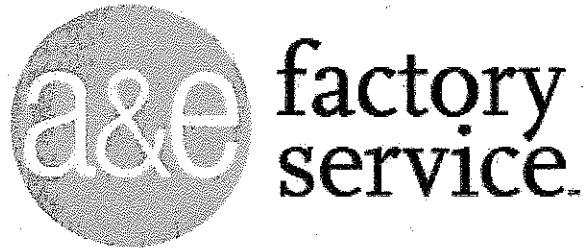
1. (A) (B) (C) (D)	18. (A) (B) (C) (D)	35. (A) (B) (C) (D)
2. (A) (B) (C) (D)	19. (A) (B) (C) (D)	36. (A) (B) (C) (D)
3. (A) (B) (C) (D)	20. (A) (B) (C) (D)	37. (A) (B) (C) (D)
4. (A) (B) (C) (D)	21. (A) (B) (C) (D)	38. (A) (B) (C) (D)
5. (A) (B) (C) (D)	22. (A) (B) (C) (D)	39. (A) (B) (C) (D)
6. (A) (B) (C) (D)	23. (A) (B) (C) (D)	40. (A) (B) (C) (D)
7. (A) (B) (C) (D)	24. (A) (B) (C) (D)	Contestant # _____
8. (A) (B) (C) (D)	25. (A) (B) (C) (D)	Start Time _____
9. (A) (B) (C) (D)	26. (A) (B) (C) (D)	End Time _____
10. (A) (B) (C) (D)	27. (A) (B) (C) (D)	
11. (A) (B) (C) (D)	28. (A) (B) (C) (D)	
12. (A) (B) (C) (D)	29. (A) (B) (C) (D)	
13. (A) (B) (C) (D)	30. (A) (B) (C) (D)	
14. (A) (B) (C) (D)	31. (A) (B) (C) (D)	
15. (A) (B) (C) (D)	32. (A) (B) (C) (D)	
16. (A) (B) (C) (D)	33. (A) (B) (C) (D)	
17. (A) (B) (C) (D)	34. (A) (B) (C) (D)	

2.5 X CORRECT ANSWERS _____ = TOTAL SCORE _____

Judge's Information:	Your Signature: _____
	Please Print Your Name: _____
	Company/Association Representing: _____



Major Appliance & Refrigeration
Technology Technical
Committee Members



Haier





Station #3— Dishwasher Diagnosis

Time Allotted-30 Minutes

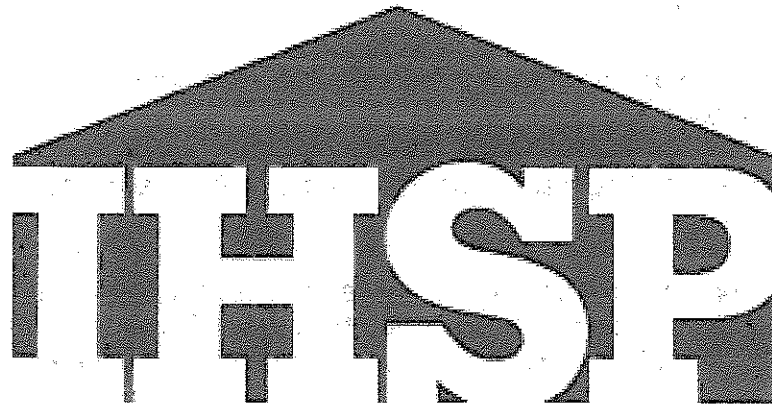
This exercise tests the ability of the contestant to accurately diagnose an electro/mechanical failure in a dishwasher.

1. You must be able to read and follow the wiring schematic for the appliance being used.
2. You must be able to use a Volt Ohm Meter, Amp-meter, Multi-meter and other test equipment appropriate for appliance diagnosis.
3. You must be able to use common hand tools to disassemble, reassemble and access components in the appliance being used
4. You must be able to use appropriate test equipment to locate defective components causing the appliance failure.
5. You must be able to report your diagnosis to the judge. Be prepared to explain how you arrived at your diagnosis and to show what steps you took to verify your diagnosis, including showing what voltage, resistance and other readings that were taken by utilizing the appliance's wiring schematic.
6. You must be able to reassemble the appliance, making sure that no additional faults or failures have been introduced into the appliance.

NOTES: You must be able to:

1. Use all tools necessary.
2. Use wiring schematics and technical data sheets.
3. Work safely
4. Wear safety glasses anytime the appliance is accessed.

***INDUSTRY AND EDUCATION
WORKING TOGETHER FOR THE
COMMON GOOD OF THE
APPLIANCE SERVICE INDUSTRY
A TRUE PARTNERSHIP***



IN HOME SERVICE PROFESSIONAL

SkillsUSA.

Major Appliance & Refrigeration Technology

YOU MUST FILL-IN ALL HIGHLIGHTED AREAS PRINT CLEARLY

☒ **WARRANTY** ☐ **PART WARRANTY** ☐ **SPECIAL AUTHORIZATION#** ☐ **OTHER**

BRAND Any Brand		PRODUCT TYPE Dishwasher	
MODEL NUMBER		SERIAL NUMBER	

SERVICE INVOICE NO.

M08966Z-1

FIRST INITIAL	MIDDLE INITIAL	LAST NAME
K	C	MISSOURI
STREET ADDRESS		
7 2 0 5 W 8 0 t h S T R E E T		
CITY		
O V E R L A N D P K		
STATE	ZIP CODE	
K S	6 6 2 0 4	
HOME PHONE NUMBER		
9 1 3 - 5 5 5 - 1 2 1 2		

DATE PURCHASED		
10	10	10
DATE CALL RECEIVED		
06	27	11
DATE REPAIRED		

CUSTOMER'S REQUEST:	DEFECT CODE
----------------------------	--------------------

<input type="checkbox"/> NOT HOME	<input type="checkbox"/> LACK PART	<input type="checkbox"/> CALL BACK
TIME STARTED	TIME STARTED	
TIME COMPLETED	TIME COMPLETED	
TOTAL TIME	TOTAL TIME	

SERVICE PERFORMED: <input type="checkbox"/> ILLUSTRATE DETAIL OF PROBLEM ON REVERSE SIDE	MFG. CODE/REF.
--	-----------------------

SELLING DEALER/DISTRIBUTOR	CITY	STATE
Main Appliance	Overland Park	KS

BEFORE	AFTER
---------------	--------------

QUANTITY	FAULT / JOB CODE	PART NUMBER	DESCRIPTION	INVOICE NUMBER	PART COST	EXTENSION

WNO. / MOTOR / SEALED UNIT NO. OLD	SERVICE AGREEMENT NUMBER	PAINTER'S CARD TO BE CREDIT CARD CARD NAME	
WNO. / MOTOR / SEALED UNIT NO. NEW	SERVICE AGREEMENT EXP. DATE	CARD NUMBER	
SERVICE NUMBER	SERVICE STATE NUMBER	EXP. DATE	AUTH. NO.

SUB TOTAL	
HANDLING	
TOTAL PARTS	
TRIP CHARGE	
COMPLETED CALL LABOUR	
DIAGNOSTIC FEE	
TOTAL LABOUR	
TRAVEL	
STATE TAX	
LOCAL TAX	
TOTAL	

CUSTOMER'S SIGNATURE	DATE	CUSTOMER'S SIGNATURE	DATE
-----------------------------	-------------	-----------------------------	-------------

I hereby certify the above service has been performed as stated.

CONTESTANT NUMBER
DATE

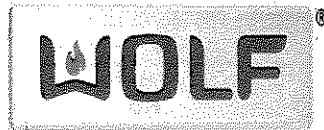
ESTIMATE OF REPAIR		
PARTS		
LABOR		
SALES TAX		
ESTIMATE TOTAL		
REVISED EST. OF REPAIR		
PARTS		
LABOR		
SALES TAX		
REV. EST. TOTAL		

METHOD OF PAYMENT	CASH
CHARGE	CHECK

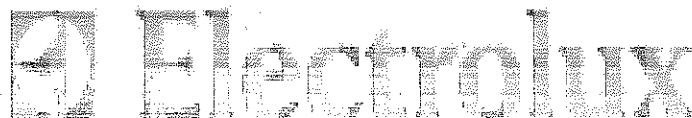
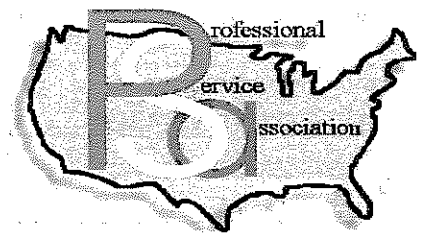
ACCOUNT NUMBER	TRANSMITTAL NUMBER	INTERNAL CONTROL NO.	AUDITED BY	OTHER
-----------------------	---------------------------	-----------------------------	-------------------	--------------



Major Appliance & Refrigeration
Technology Technical
Committee Members



Haier®



SkillsUSA

Major Appliance & Refrigeration Technology Judge's Score Sheet

Contestant # _____

Date _____

Allotted Time 30 Minutes

Start Time _____ End Time _____ Total Minutes _____

Diagnostic Skills Range: 0-70	Soft Skills Use of Tools Range: 0-5	Safety Use of Equipment Range: 0-10
60-70 Excellent	5 Excellent	9-10 Excellent
50-59 About Average	4 About Average	7-8 About Average
40-49 Average	2-3 Average	5-6 Average
0-39 Below Average	0-1 Below Average	0-4 Below Average

SCORING SECTION

Evaluation Items	Possible Points	Points Awarded	Comments
Soft Skills	5		
Safety	10		
Use of Tools	5		
Use of Equipment	10		
Diagnostic Skills	70		
TOTAL SCORE	100		

Contestant's Diagnosis:

Additional Comments:

Judge's Information: Your Signature: _____

Please Print Your Name: _____

Company/Association Representing: _____

C

C

C

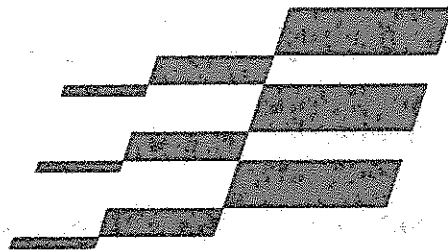


Station #4— Employability Skills/Job Interview

Time Allotted-30 Minutes

This station will allow you to show your employability skills by filling out an employee job application, presenting your resume, and by participating in a oral interview.

1. You must follow all instructions given by your judge.
2. You must present a complete resume' to your judge.
3. You will completely fill out a employee job application.
15 Minutes Allotted Time
4. You will participate in a oral interview conducted by your judge.
15 Minutes Allotted Time



SkillsUSA®

**Major Appliance & Refrigeration Technology
Employability Skills/Job Interview**

PLEASE NOTE: It is important that you complete all parts of the application. If your application is incomplete or does not clearly show the experience and/or training required, your application may not be accepted. If you have no information to enter in a section, please write N/A.

Name and Address							
Name (First, MI, Last) Joe Contestant				Contestant Number			
Mailing Address							
City, State, and Zip Code							
Telephone				Alternate Phone			
If under 18, please list age				Email			
Job Type							
Days/hours available to work							
<input type="checkbox"/> I have no preference.	<input type="checkbox"/> Mon.	<input type="checkbox"/> Tues.	<input type="checkbox"/> Wed.	<input type="checkbox"/> Thurs.	<input type="checkbox"/> Fri.	<input type="checkbox"/> Sat.	<input type="checkbox"/> Sun.
I am seeking a:		<input type="checkbox"/> Full-time job		<input type="checkbox"/> Part-time job		<input type="checkbox"/> Full- or Part-time	
How many hours can you work weekly?				Can you work nights?		Date available to begin	
Additional Information							
Have you ever been employed by this organization in the past?						<input type="checkbox"/> Yes	<input type="checkbox"/> No
I certify that I am a U.S. citizen, permanent resident, or a foreign national with authorization to work in the United States.						<input type="checkbox"/> Yes	<input type="checkbox"/> No
Have you ever been convicted of, or entered a plea of guilty, no contest, or had a withheld judgment to a felony?						<input type="checkbox"/> Yes	<input type="checkbox"/> No
If Yes, please explain:							
Do you have a driver's license? <input type="checkbox"/> Yes <input type="checkbox"/> No				Driver's license number		Issued in what state?	
Have you had any accidents during the past three years?						How many?	
Have you had any moving violations during the past three years?						How many?	

School	Location (mailing address)	Years Completed	Major	Degree or Diploma
High School				
College or Business/Trade School				
Military				
Have you even been in the Armed Forces?		<input type="checkbox"/> Yes	<input type="checkbox"/> No	Date entered
Are you now a member of the National Guard?		<input type="checkbox"/> Yes	<input type="checkbox"/> No	Discharge date
Specialty				

Please list ALL work experience beginning with your most recent job held. Attach additional sheets if necessary.

Company	Name of last supervisor	Hrs/week
Address	Start Date	Starting Salary
City, State, and Zip Code	End Date	Final Salary
Phone number	Your last job title	

Reason for leaving (be specific)

List the jobs you held, duties performed, skills used or learned, advancements or promotions while you worked at this company.

May we contact this employer? ☐ Yes ☐ No

Company	Name of last supervisor	Hrs/week
Address	Start Date	Starting Salary
City, State, and Zip Code	End Date	Final Salary
Phone number	Your last job title	

Reason for leaving (be specific)

List the jobs you held, duties performed, skills used or learned, advancements or promotions while you worked at this company.

May we contact this employer? ☐ Yes ☐ No

Company	Name of last supervisor	Hrs/week
Address	Start Date	Starting Salary
City, State, and Zip Code	End Date	Final Salary
Phone number	Your last job title	

Reason for leaving (be specific)

List the jobs you held, duties performed, skills used or learned, advancements or promotions while you worked at this company.

May we contact this employer? ☐ Yes ☐ No

References

Please include name, phone number, and circumstances of your acquaintance. Exclude relatives and former employers.

1.

2.

3.

4.

I certify that all answers and statements on this application are true and complete to the best of my knowledge. I understand that, should this application contain any false or misleading information, my application may be rejected or my employment with this company terminated.

Signature

Date



**Major Appliance & Refrigeration Technology
Employability Skills/Job Interview**

Contestant # _____

Date _____

Allotted Time 30 Minutes

Start Time _____ End Time _____ Total Minutes _____

General Questions

- Tell me about your recent work experience(s).
- What strengths and weaknesses would you bring to this position?
- What is your understanding of this position and what skills do you bring to the position?
- What types of job responsibilities do you find to be most rewarding? Why?
- What types of job responsibilities do you find to be most frustrating? Why?
- Tell me about your computer skills and what type of software you are experienced with.
- What type of management style do you prefer (hands-on, frequent supervision, minimal supervision, etc.) and why?

Evaluation Items	Possible Points	Points Awarded	Comments
Completeness of Application	25		
Neatness of Application	25		
Response to Questions	25		
Overall Employability Skills	25		
Resume Submitted	Yes or No		
TOTAL SCORE	100		

Additional Comments:

Judge's Information: Your Signature: _____

Please Print Your Name: _____

Company/Association Representing: _____



Station #5– Refrigerator Diagnosis

Time Allotted-30 Minutes

This exercise tests your ability to accurately diagnose an electro/mechanical failure in a refrigerator.

1. You must be able to read and follow the wiring schematic for the appliance being used.
2. You must be able to use a Volt Ohm Meter, Amp-meter, Multi-meter and other test equipment appropriate for appliance diagnosis.
3. You must be able to use common hand tools to disassemble, reassemble and access components in the appliance being used.
4. You must be able to use appropriate test equipment to locate defective components causing the appliance failure.
5. You must be able to report your diagnosis to the judge. Be prepared to explain how you arrived at your diagnosis and to show what steps you took to verify your diagnosis, including showing what voltage, resistance and other readings that were taken by utilizing the appliance's wiring schematic.
6. You must be able to reassemble the appliance, making sure that no additional faults or failures have been introduced into the appliance.

NOTES: You must be able to:

1. Use all tools necessary.
2. Use wiring schematics and technical data sheets.
3. Work safely
4. Wear safety glasses anytime the appliance is accessed.

***INDUSTRY AND EDUCATION
WORKING TOGETHER FOR THE
COMMON GOOD OF THE
APPLIANCE SERVICE INDUSTRY
A TRUE PARTNERSHIP***



IN HOME SERVICE PROFESSIONAL

SkillsUSA

Major Appliance & Refrigeration Technology

YOU MUST FILL-IN ALL HIGHLIGHTED AREAS PRINT CLEARLY

☒ **WARRANTY** ☐ **PART WARRANTY** ☐ **SPECIAL AUTHORIZATION#** ☐ **OTHER**

BRAND Any Brand		PRODUCT TYPE Refrigerator	
MODEL NUMBER		SERIAL NUMBER	

SERVICE INVOICE NO.

M08966Z-1

FIRST INITIAL K	MIDDLE INITIAL C	LAST NAME MISSOURI
STREET ADDRESS 7205 W 80th STREET		
CITY OVERLAND	PK STATE KS	ZIP CODE 66204
HOME PHONE NUMBER 913-555-1212		

DATE PURCHASED		
10	10	10
DATE CALL RECEIVED		
06	27	11
DATE REPAIRED		

CUSTOMER'S REQUEST: **DEFECT CODE**

☐ **NOT HOME** ☐ **LACK PART** ☐ **CALL BACK**

SERVICE PERFORMED: ☐ **ILLUSTRATE DETAIL OF PROBLEM ON REVERSE SIDE** **MFG. CODE/REF.**

TIME STARTED	TIME STARTED
TIME COMPLETED	TIME COMPLETED
TOTAL TIME	TOTAL TIME

SELLING DEALER/DISTRIBUTOR Main Appliance	CITY Overland Park	STATE KS
--	---------------------------	-----------------

BEFORE	AFTER
---------------	--------------

QUANTITY	PART / JOB CODE	PART NUMBER	DESCRIPTION	INVOICE NUMBER	PART COST	EXTENSION

MAG. / MOTOR / SEALER UNIT NO. OLD	SERVICE AGREEMENT NUMBER	PAYEE REF. A CHARGE TO MY CREDIT CARD
MAG. / MOTOR / SEALER UNIT NO. NEW	SERVICE AGREEMENT EXP. DATE	CARD NAME
SERVICE NUMBER	SERVICE STATE NUMBER	CARD NUMBER
		EXP. DATE AUTH. NO.

SUB TOTAL	
HANDLING	
TOTAL PARTS	

CUSTOMER'S SIGNATURE **DATE** **CUSTOMER'S SIGNATURE** **DATE**

TRIP CHARGE	
COMPLETED CALL LABOR	
DIAGNOSTIC FEE	
TOTAL LABOR	

I hereby certify that the above service has been performed & made good

CONTESTANT NUMBER
DATE

ESTIMATE OF REPAIR

PARTS	
LABOR	
SALES TAX	
ESTIMATE TOTAL	
REVISED EST. OF REPAIR	
PARTS	
LABOR	
SALES TAX	
REV. EST. TOTAL	

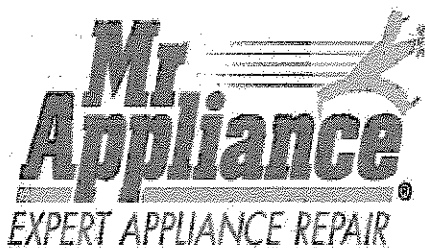
TRAVEL	
STATE TAX	
LOCAL TAX	
TOTAL	

METHOD OF PAYMENT ☐ **CASH** ☐ **CHECK#**

ACCOUNT NUMBER	TRANSMITTAL NUMBER	INTERNAL CONTROL NO.	APPROVED BY	OTHER
-----------------------	---------------------------	-----------------------------	--------------------	--------------



Major Appliance & Refrigeration
Technology Technical
Committee Members



Haier®



SkillsUSA.

Major Appliance & Refrigeration Technology Judge's Score Sheet

Contestant # _____

Date _____

Allotted Time 30 Minutes

Start Time _____ End Time _____ Total Minutes _____

Diagnostic Skills Range: 0-70	Soft Skills Use of Tools Range: 0-5	Safety Use of Equipment Range: 0-10
60-70 Excellent	5 Excellent	9-10 Excellent
50-59 About Average	4 About Average	7-8 About Average
40-49 Average	2-3 Average	5-6 Average
0-39 Below Average	0-1 Below Average	0-4 Below Average

SCORING SECTION

Evaluation Items	Possible Points	Points Awarded	Comments
Soft Skills	5		
Safety	10		
Use of Tools	5		
Use of Equipment	10		
Diagnostic Skills	70		
TOTAL SCORE	100		

Contestant's Diagnosis:

Additional Comments:

Judge's Information: Your Signature: _____

Please Print Your Name: _____

Company/Association Representing: _____



Major Appliance & Refrigeration
Technology Technical
Committee Members



Haier®





Station #6— Electric Free Standing Range Diagnosis

Time Allotted-30 Minutes

This exercise tests your ability to accurately diagnose an electro/mechanical failure in an electric free standing range.

1. You must be able to read and follow the wiring schematic for the appliance being used.
2. You must be able to use a Volt Ohm Meter, Amp-meter, Multi-meter and other test equipment appropriate for appliance diagnosis.
3. You must be able to use common hand tools to disassemble, reassemble and access components in the appliance being used.
4. You must be able to use appropriate test equipment to locate defective components causing the appliance failure.
5. You must be able to report your diagnosis to the judge. Be prepared to explain how you arrived at your diagnosis and to show what steps you took to verify your diagnosis, including showing what voltage, resistance and other readings that were taken by utilizing the appliance's wiring schematic.
6. You must be able to reassemble the appliance, making sure that no additional faults or failures have been introduced into the appliance.

NOTES: You must be able to:

1. Use all tools necessary.
2. Use wiring schematics and technical data sheets.
3. Work safely
4. Wear safety glasses anytime the appliance is accessed.

***INDUSTRY AND EDUCATION
WORKING TOGETHER FOR THE
COMMON GOOD OF THE
APPLIANCE SERVICE INDUSTRY
A TRUE PARTNERSHIP***



IN HOME SERVICE PROFESSIONAL

SkillsUSA.

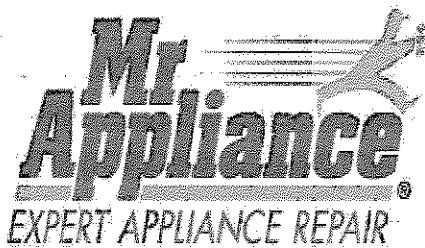
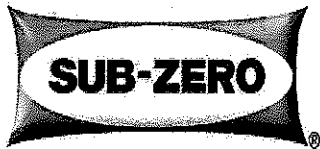
Major Appliance & Refrigeration Technology

YOU MUST FILL-IN ALL HIGHLIGHTED AREAS PRINT CLEARLY

<input checked="" type="checkbox"/> WARRANTY <input type="checkbox"/> PART WARRANTY <input type="checkbox"/> SPECIAL AUTHORIZATION# <input type="checkbox"/> OTHER		SERVICE INVOICE NO. <div style="border: 1px solid black; padding: 2px; display: inline-block;">M08966Z-1</div>	
BRAND Any Brand		PRODUCT TYPE Electric Range	
MODEL NUMBER		SERIAL NUMBER	
FIRST INITIAL K MIDDLE INITIAL C LAST NAME M I S S O U R I			
STREET ADDRESS 7 2 0 5 W 8 0 t h S T R E E T			
CITY O V E R L A N D P K		STATE K S	ZIP CODE 6 6 2 0 4
HOME PHONE NUMBER 9 1 3 - 5 5 5 - 1 2 1 2			
CUSTOMER'S REQUEST:		DEFECT CODE	
SERVICE PERFORMED: <input type="checkbox"/> ILLUSTRATE DETAIL OF PROBLEM ON REVERSE SIDE		MFG. CODE/REF.	
SELLING DEALER/DISTRIBUTOR Main Appliance		CITY Overland Park STATE KS	
QUANTITY		FAULT / JOB CODE	
PART NUMBER		DESCRIPTION	
INVOICE NUMBER		PART COST	
EXTENSION		BEFORE	
AFTER		EXTENSION	
MAID. / MOTOR / SEALED UNIT NO. OLD		SERVICE AGREEMENT NUMBER	
MAID. / MOTOR / SEALED UNIT NO. NEW		SERVICE AGREEMENT EXP. DATE	
SERVICE NUMBER		SERVICE STATE NUMBER	
EXP. DATE		AUTH. NO.	
CUSTOMER'S SIGNATURE		CUSTOMER'S SIGNATURE	
DATE		DATE	
CONTESTANT NUMBER		ESTIMATE OF REPAIR	
DATE		REVISD EST. OF REPAIR	
ACCOUNT NUMBER		TRANSMITTEE NUMBER	
INTERNAL CONTROL NO.		AUDITED BY	
OTHER		OTHER	



Major Appliance & Refrigeration
Technology Technical
Committee Members



Haier®



SkillsUSA.

Major Appliance & Refrigeration Technology Judge's Score Sheet

Contestant # _____

Date _____

Allotted Time 30 Minutes

Start Time _____ End Time _____ Total Minutes _____

Diagnostic Skills Range: 0-70	Soft Skills Use of Tools Range: 0-5	Safety Use of Equipment Range: 0-10
60-70 Excellent	5 Excellent	9-10 Excellent
50-59 About Average	4 About Average	7-8 About Average
40-49 Average	2-3 Average	5-6 Average
0-39 Below Average	0-1 Below Average	0-4 Below Average

SCORING SECTION

Evaluation Items	Possible Points	Points Awarded	Comments
Soft Skills	5		
Safety	10		
Use of Tools	5		
Use of Equipment	10		
Diagnostic Skills	70		
TOTAL SCORE	100		

Contestant's Diagnosis:

Additional Comments:

Judge's Information: Your Signature: _____

Please Print Your Name: _____

Company/Association Representing: _____



**Major Appliance & Refrigeration
Technology**

Station #7– Brazing Exercise

Time Allotted-30 Minutes

This exercise tests your ability to accurately fabricate and properly braze various sizes and types of tubing commonly used in refrigeration sealed systems.

1. You must be able to read and follow the instructions that come with the project.
2. You must be able to select, measure, cut, swage and bend tubing per the projects specifications.
3. You must be able to use common tools associated with brazing tubing cutter, swaging tools, tubing bender, reamer and air-acetylene torch.
4. You must demonstrate your understanding of proper preparation of copper and steel tubing before brazing. Proper sanding, swaging, cutting of cap tube and pinch joints of tubing.
5. You must strive for aesthetically pleasing brazed joints and to maintain the size and shape of the project to as close to the specifications as possible.
6. You must be able to correctly join the copper to copper and copper to steel tubing using the appropriate brazing material and flux to create a leak free assembly.

NOTES: You must be able to:

1. Use all tools necessary.
2. Follow the projects specifications sheet.
3. Work safely
4. Wear safety glasses at all times

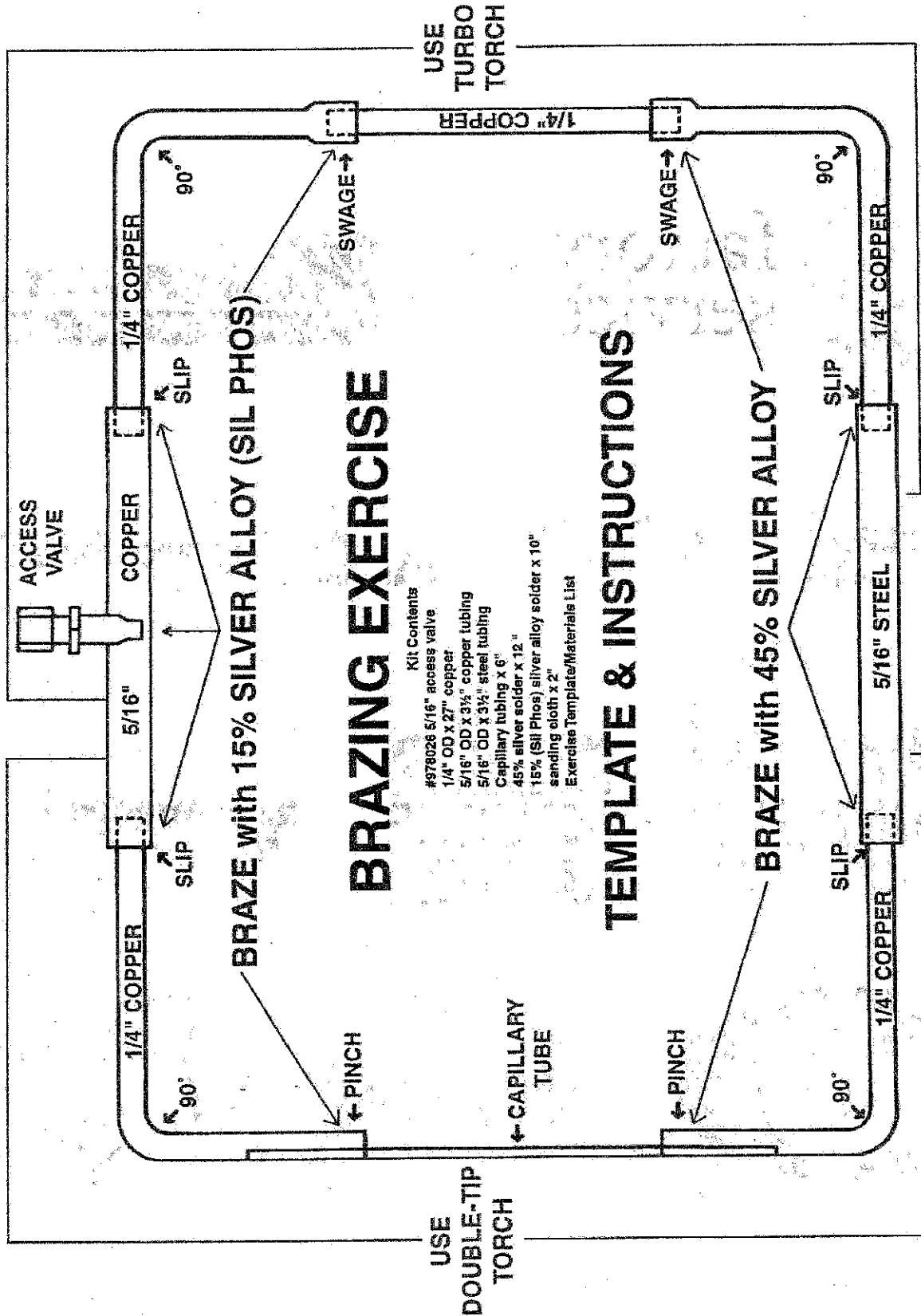
***INDUSTRY AND EDUCATION
WORKING TOGETHER FOR THE
COMMON GOOD OF THE
APPLIANCE SERVICE INDUSTRY
A TRUE PARTNERSHIP***



IN HOME SERVICE PROFESSIONAL



Major Appliance & Refrigeration Technology

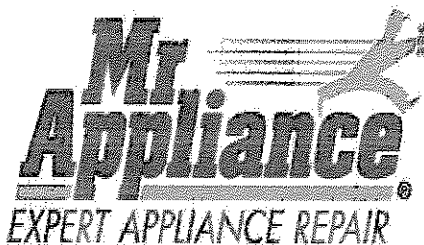


BRAZING EXERCISE

TEMPLATE & INSTRUCTIONS



Major Appliance & Refrigeration
Technology Technical
Committee Members



Haier®





Major Appliance & Refrigeration Technology Judge's Score Sheet

Contestant # _____

Date _____

Allotted Time 30 Minutes

Start Time _____

End Time _____

Total Minutes _____

Leaks Range: 0-40	Fabrication Use of Tools Range: 0-25	Safety Range: 0-10
31-40 Excellent	21-25 Excellent	9-10 Excellent
21-30 About Average	16-20 About Average	7-8 About Average
11-20 Average	8-15 Average	5-6 Average
0-10 Below Average	0-7 Below Average	0-4 Below Average

SCORING SECTION

Evaluation Items	Possible Points	Points Awarded	Comments
Safety	10		
Use of Tools	25		
Fabrication	25		
Leaks	40		
TOTAL SCORE	100		

Contestant's Diagnosis:

Additional Comments:

Judge's Information: Your Signature: _____

Please Print Your Name: _____

Company/Association Representing: _____



Station #8— Electric Clothes Dryer Diagnosis

Time Allotted-30 Minutes

This exercise tests the ability of the contestant to accurately diagnose an electro/mechanical failure in an electric clothes dryer.

1. You must be able to read and follow the wiring schematic for the appliance being used.
2. You must be able to use a Volt Ohm Meter, Amp-meter, Multi-meter and other test equipment appropriate for appliance diagnosis.
3. You must be able to use common hand tools to disassemble, reassemble and access components in the appliance being used.
4. You must be able to use appropriate test equipment to locate defective components causing the appliance failure.
5. You must be able to report your diagnosis to the judge. Be prepared to explain how you arrived at your diagnosis and to show what steps you took to verify your diagnosis, including showing what voltage, resistance and other readings that were taken by utilizing the appliance's wiring schematic.
6. You must be able to reassemble the appliance, making sure that no additional faults or failures have been introduced into the appliance.

NOTES: You must be able to:

1. Use all tools necessary.
2. Use wiring schematics and technical data sheets.
3. Work safely
4. Wear safety glasses anytime the appliance is accessed.

***INDUSTRY AND EDUCATION
WORKING TOGETHER FOR THE
COMMON GOOD OF THE
APPLIANCE SERVICE INDUSTRY
A TRUE PARTNERSHIP***



IN HOME SERVICE PROFESSIONAL

SkillsUSA.

Major Appliance & Refrigeration Technology

YOU MUST FILL-IN ALL HIGHLIGHTED AREAS PRINT CLEARLY

☒ **WARRANTY** ☐ **PART WARRANTY** ☐ **SPECIAL AUTHORIZATION#** ☐ **OTHER**

BRAND Any Brand	PRODUCT TYPE Electric Dryer
MODEL NUMBER	SERIAL NUMBER

SERVICE INVOICE NO.

M08966Z-1

FIRST INITIAL K	MIDDLE INITIAL C	LAST NAME MISSOURI
STREET ADDRESS 7 2 0 5 W 8 0 t h S T R E E T		
CITY O V E R L A N D P K	STATE K S	ZIP CODE 6 6 2 0 4
HOME PHONE NUMBER 9 1 3 - 5 5 5 - 1 2 1 2		

DATE PURCHASED 10 10 10
DATE CALL RECEIVED 06 27 11
DATE REPAIRED

CUSTOMER'S REQUEST:	DEFECT CODE
----------------------------	--------------------

<input type="checkbox"/> NOT HOME	<input type="checkbox"/> LACK PART	<input type="checkbox"/> CALL BACK
--	---	---

SERVICE PERFORMED: <input type="checkbox"/> ILLUSTRATE DETAIL OF PROBLEM ON REVERSE SIDE	MFG. CODE/REF.
--	-----------------------

TIME STARTED	TIME STARTED
TIME COMPLETED	TIME COMPLETED
TOTAL TIME	TOTAL TIME

SELLING DEALER/DISTRIBUTOR Main Appliance	CITY Overland Park	STATE KS
---	------------------------------	--------------------

BEFORE	AFTER
---------------	--------------

QUANTITY	FAULT / JOB CODE	PART NUMBER	DESCRIPTION	INVOICE NUMBER	PART COST	EXTENSION

WAG. / MOTOR / SEaled UNIT NO. OLD	SERVICE AGREEMENT NUMBER	WAG. / MOTOR / SEaled UNIT NO. NEW	SERVICE AGREEMENT EXP. DATE	SERVICE NUMBER	SERVICE STATE NUMBER
---	---------------------------------	---	------------------------------------	-----------------------	-----------------------------

WAG. / MOTOR / SEaled UNIT NO. NEW	SERVICE AGREEMENT EXP. DATE
---	------------------------------------

CUSTOMER'S SIGNATURE	DATE
-----------------------------	-------------

CUSTOMER'S SIGNATURE	DATE
-----------------------------	-------------

CONTESTANT NUMBER
DATE

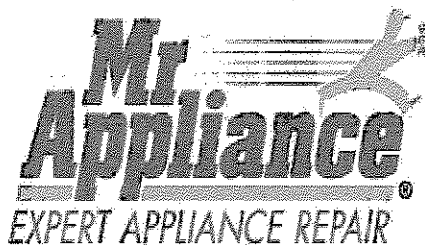
ESTIMATE OF REPAIR	
PARTS	
LABOR	
SALES TAX	
ESTIMATE TOTAL	
REVISED EST. OF REPAIR	
PARTS	
LABOR	
SALES TAX	
REV. EST. TOTAL	

SUB TOTAL	
HANDLING	
TOTAL PARTS	
TRIP CHARGE	
COMPLETED CALL	
LABOR	
DIAGNOSTIC FEE	
TOTAL LABOR	
TRAVEL	
STATE TAX	
LOCAL TAX	
TOTAL	
METHOD OF PAYMENT	
CASH	

ACCOUNT NUMBER	TRANSMITTAL NUMBER	INTERNAL CONTROL NO.	AUDITED BY	OTHER
-----------------------	---------------------------	-----------------------------	-------------------	--------------



Major Appliance & Refrigeration
Technology Technical
Committee Members



Haier®



SkillsUSA

Major Appliance & Refrigeration Technology Judge's Score Sheet

Contestant # _____

Date _____

Allotted Time 30 Minutes

Start Time _____

End Time _____

Total Minutes _____

Diagnostic Skills Range: 0-70	Soft Skills Use of Tools Range: 0-5	Safety Use of Equipment Range: 0-10
60-70 Excellent	5 Excellent	9-10 Excellent
50-59 About Average	4 About Average	7-8 About Average
40-49 Average	2-3 Average	5-6 Average
0-39 Below Average	0-1 Below Average	0-4 Below Average

SCORING SECTION

Evaluation Items	Possible Points	Points Awarded	Comments
Soft Skills	5		
Safety	10		
Use of Tools	5		
Use of Equipment	10		
Diagnostic Skills	70		
TOTAL SCORE	100		

Contestant's Diagnosis:

Additional Comments:

Judge's Information: Your Signature: _____

Please Print Your Name: _____

Company/Association Representing: _____





**Major Appliance & Refrigeration
Technology**

STATION #9

Customer Relations Assessment Test

Do not open this booklet until instructed to do so.

**DO NOT MAKE ANY MARKS IN THIS
BOOKLET**

1. When answering a customer questioning on an invoice about the cost of the repair:
 - a. You should listen carefully and explain in detail each cost in question.
 - b. You should immediately discount the charges, until the customer is satisfied.
 - c. You should tell them to call the service manager after you leave.
 - d. All of the above.
2. When the customer asks a question about their product you should:
 - a. Refer them to the use and care manual.
 - b. Refer them to the customer service 1-800 phone number.
 - c. You should attempt to answer the question as politely and correctly as possible.
 - d. All of the above.
3. While knocking at a customer's door you should:
 - a. Maintain a distance of about three feet and not crowd the door.
 - b. Try the door to see if it is unlocked.
 - c. Knock harder, if no one answers in thirty seconds.
 - d. All of the above.
4. You arrive at a call, only to find that the product in question is electronically, programmable and you have never seen this model before:
 - a. You should sit down and read the owner's manual cover to cover before you proceed.
 - b. You should tell the customer this is a model you have never seen before.
 - c. You should ask the customer to show you how they last programmed it before it stopped working, then go over the procedure from the owner's manual with the customer.
 - d. All of the above.
5. When repairing a customer's product in their home, you should:
 - a. Always make sure to protect the floor when moving products to repair.
 - b. Never place your tools directly on adjacent counters or furniture.
 - c. Protect the customer's property by using skid mats or customer care mats.
 - d. All of the above.
6. When arriving at a customer's home to repair a product, a teenage girl answers the door and invites you in:
 - a. You should tell the teenage girl that your company does not allow you to enter a home without an adult present.
 - b. Before you enter, ask if an adult is home to take care of authorization and payment of bills.
 - c. If no adult is at home, you should reschedule the call for a time when an adult will be home.
 - d. All of the above.
7. Educating customers to avoid or resolve product customer usage issues:
 - a. Is a manufacturer problem and should be referred to the manufacturer.
 - b. Can waste a lot of a IHSPs time needlessly.
 - c. Can usually be taken care of quickly by using the Use and Care Manual to educate the customer.
 - d. All of the above.

8. A customer arrives at your Service Center to purchase a part. The cost of the part is \$10.00. Which they promptly pay for while tell you that your competitor tried to charge them \$95.00 for the same part how would you handle this situation?
- You should encourage the customer to get even.
 - You should explain that you can only speak for your company and that your prices are based on fairness to the customer.
 - You should tell the customer that they been dealing with a crook and that they should report the matter to the Better Business Bureau.
 - All of the above.
9. Which statement(s) are true.
- First impressions are lasting impressions.
 - The customer will overlook bad customer service if the product is fixed correctly.
 - Customers have no problem waiting all day for an IHSP to show up to repair there product.
 - All of the above.
10. The most important part of an IHSP's job in ensuring that the customer is satisfied with:
- The IHSP's company.
 - The service call or repair.
 - The product.
 - All of the above.
11. What is customer satisfaction?
- Fixing the customer product.
 - Not breaking anything in the customer home.
 - The customer's impression the service provider has exceeded their service expectations.
 - All of the above.
12. Why is customer satisfaction important to a service company?
- To get kick backs from appliance dealers.
 - Builds customer loyalty.
 - To create a high customer base.
 - All of the above.
13. Why is customer satisfaction important to an IHSP?
- Makes your job more interesting.
 - Increase pay.
 - Possible promotional opportunities.
 - All of the above.
14. What ISHP behavior(s) will cause an unsatisfied customer.
- Explain the repair involved.
 - Demonstrate that the repair has solved the problem.
 - Parking in the customer drive with your service truck.
 - All of the above.

15. What communication skill(s) should an IHSP establish with a customer?
- Be a good listener, establish feedback with the customer, ask questions.
 - Assume the customer does not know what they are talking about.
 - Keep your mouth shut do not talk to the customer.
 - All of the above.
16. Thing(s) to avoid when talking to the customer:
- Avoid blaming the product.
 - Giving them a bill.
 - Feel free to discuss any topic with the customer.
 - All of the above
17. What word(s) should you never use with a customer?
- Reschedule
 - Order
 - Can't
 - All of the above
18. What is the best way(s) to exceed a customer's expectations?
- Wear protective shoe covers over your shoes when entering their house.
 - Order parts to repair their product
 - Reschedule their service call.
 - All of the above.
19. When is it a good practice to show the customer empathy?
- Depends on the customer attitude.
 - When you give them the bill.
 - Always
 - All of the above.
20. Which action(s) below will not help you win back a dissatisfied customer?
- Apologize sincerely.
 - Give them the name another service company.
 - Fix the problem quickly.
 - All of the above.
21. What can you do to defuse an angry customer?
- Don't lose your cool.
 - Find out the facts.
 - Suggest a way to fix the problem.
 - All of the above.
22. What is the most important behavior(s) in satisfying a customer on a service call.
- Not having to order parts.
 - Total cost of the repair.
 - Arrive at the customer's home on the scheduled day and time.
 - All of the above.

23. When dealing with a dissatisfied customer what is the best way(s) to resolve the issues?
- a. Give the customer everything and more.
 - b. Tell what you are going to do to resolve the issues.
 - c. Ask the customer what they would like you to do to resolve the issues.
 - d. All of the above.
24. What is the best way(s) to increase customer satisfaction by fixing the product on the first call.
- a. Read the service manual before you go on the service call.
 - b. Prescreen the call and take the parts with you that you think will fix the failure.
 - c. Call the tech line before you go to the customer's home.
 - d. All of the above.
25. What is the best way(s) to ensure that you have provide quality service to a customer.
- a. Call the customer after the service call has been completed.
 - b. Have your IHSP leave a survey card with the customer.
 - c. Mail a survey to the customer after the service call has been completed.
 - d. All of the above.

***INDUSTRY AND EDUCATION
WORKING TOGETHER FOR THE
COMMON GOOD OF THE
APPLIANCE SERVICE INDUSTRY
A TRUE PARTNERSHIP***



IN HOME SERVICE PROFESSIONAL



Major Appliance & Refrigeration
Technology Technical
Committee Members



Haier®



CONTESTANT'S ANSWER SHEET

Fill in your answer completely NO Xs or CHECK MARKS

EXAMPLE: 1. (A) (B) (C) ●

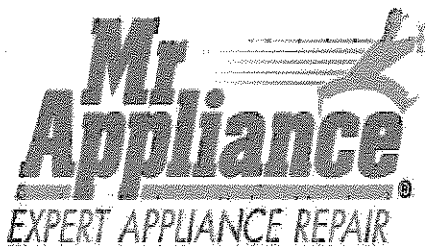
1. (A) (B) (C) (D)	11. (A) (B) (C) (D)	21. (A) (B) (C) (D)
2. (A) (B) (C) (D)	12. (A) (B) (C) (D)	22. (A) (B) (C) (D)
3. (A) (B) (C) (D)	13. (A) (B) (C) (D)	23. (A) (B) (C) (D)
4. (A) (B) (C) (D)	14. (A) (B) (C) (D)	24. (A) (B) (C) (D)
5. (A) (B) (C) (D)	15. (A) (B) (C) (D)	25. (A) (B) (C) (D)
6. (A) (B) (C) (D)	16. (A) (B) (C) (D)	
7. (A) (B) (C) (D)	17. (A) (B) (C) (D)	Contestant # _____
8. (A) (B) (C) (D)	18. (A) (B) (C) (D)	Start Time _____
9. (A) (B) (C) (D)	19. (A) (B) (C) (D)	End Time _____
10. (A) (B) (C) (D)	20. (A) (B) (C) (D)	

Evaluation Items	Possible Points	Points Awarded	Comments
Written Test	50		2 points X correct answers _____ = _____ Score
Judge/Contestant Interaction			
Pose and Focus	25		
Personality	25		
TOTAL SCORE	100		

Judge's Information:	Your Signature: _____
	Please Print Your Name: _____
	Company/Association Representing: _____



Major Appliance & Refrigeration
Technology Technical
Committee Members



Haier





Station #10— Microwave Oven Diagnosis

Time Allotted-30 Minutes

This exercise tests your ability to accurately diagnose an electro/mechanical failure in a microwave oven.

1. You must be able to read and follow the wiring schematic for the appliance being used.
2. You must be able to use a Volt Ohm Meter, Amp-meter, Multi-meter and other test equipment appropriate for appliance diagnosis.
3. You must be able to use common hand tools to disassemble, reassemble and access components in the appliance being used.
4. You must be able to use appropriate test equipment to locate defective components causing the appliance failure.
5. You must be able to report your diagnosis to the judge. Be prepared to explain how you arrived at your diagnosis and to show what steps you took to verify your diagnosis, including showing what voltage, resistance and other readings that were taken by utilizing the appliance's wiring schematic.
6. You must be able to reassemble the appliance, making sure that no additional faults or failures have been introduced into the appliance.

NOTES: You must be able to:

1. Use all tools necessary.
2. Use wiring schematics and technical data sheets.
3. Work safely
 - A. Exercise extreme caution around the **HIGH VOLTAGE SUPPLY.**
 - B. **Always discharge the capacitor** before attempting any diagnosis.
4. Wear safety glasses anytime the appliance is accessed.

***INDUSTRY AND EDUCATION
WORKING TOGETHER FOR THE
COMMON GOOD OF THE
APPLIANCE SERVICE INDUSTRY
A TRUE PARTNERSHIP***



IN HOME SERVICE PROFESSIONAL

SkillsUSA.

Major Appliance & Refrigeration Technology

YOU MUST FILL-IN ALL HIGHLIGHTED AREAS PRINT CLEARLY

☒ **WARRANTY** ☐ **PART WARRANTY** ☐ **SPECIAL AUTHORIZATION#** ☐ **OTHER**

BRAND Any Brand		PRODUCT TYPE Microwave Oven	
MODEL NUMBER		SERIAL NUMBER	

SERVICE INVOICE NO.

M08966Z-1

FIRST INITIAL	MIDDLE INITIAL	LAST NAME
K	C	MISSOURI
STREET ADDRESS		
7 2 0 5 W 8 0 t h S T R E E T		
CITY		
O V E R L A N D P K S T A T E K S		
ZIP CODE		
6 6 2 0 4		
HOME PHONE NUMBER		
9 1 3 - 5 5 5 - 1 2 1 2		

DATE PURCHASED		
10	10	10
DATE CALL RECEIVED		
06	27	11
DATE REPAIRED		

CUSTOMER'S REQUEST:	DEFECT CODE
----------------------------	--------------------

<input type="checkbox"/> NOT HOME	<input type="checkbox"/> LACK PART	<input type="checkbox"/> CALL BACK
--	---	---

SERVICE PERFORMED:	IFC CODE/REF.
ILLUSTRATE DETAIL OF PROBLEM ON REVERSE SIDE	

TIME STARTED	TIME STARTED
TIME COMPLETED	TIME COMPLETED
TOTAL TIME	TOTAL TIME

SELLING DEALER/DISTRIBUTOR	CITY	STATE
Main Appliance	Overland Park	KS

BEFORE	AFTER
---------------	--------------

QUANTITY	FAULT / JOB CODE	PART NUMBER	DESCRIPTION	INVOICE NUMBER	PART COST	EXTENSION

MAG. / MOTOR / SEALED UNIT NO. OLD	SERVICE AGREEMENT NUMBER	AUTHORIZATION & CHANGE TO BY CREDIT CARD	
		CARD NAME	
MAG. / MOTOR / SEALED UNIT NO. NEW	SERVICE AGREEMENT EXPI. DATE	CARD NUMBER	
SERVICE NUMBER	SERVICE STATE NUMBER	EXP. DATE	AUTH. NO.

SUB TOTAL	
HANDLING	
TOTAL PARTS	

TRIP CHARGE	
COMPLETED CALL LABOR	
DIAGNOSTIC FEE	
TOTAL LABOR	

The Repair Work Done Performed in A Skanner Detecting To Me
CUSTOMER'S SIGNATURE **DATE** **CUSTOMER'S SIGNATURE** **DATE**

(Warranty Claims) The Above Service Was Done (Performance & Parts) Good

CONTESTANT NUMBER
DATE

ESTIMATE OF REPAIR	
PARTS	
LABOR	
SALES TAX	
ESTIMATE TOTAL	
REVISED EST. OF REPAIR	
PARTS	
LABOR	
SALES TAX	
REV. EST. TOTAL	

TRAVEL	
STATE TAX	
LOCAL TAX	
TOTAL	

METHOD OF PAYMENT	CASH
CHECK #	

ACCOUNT NUMBER	TRANSMITTAL NUMBER	INTERNAL CONTROL NO.	AUDITED BY	OTHER



Major Appliance & Refrigeration
Technology Technical
Committee Members



Haier®



SkillsUSA.

Major Appliance & Refrigeration Technology Judge's Score Sheet

Contestant # _____

Date _____

Allocated Time 30 Minutes

Start Time _____ End Time _____ Total Minutes _____

Diagnostic Skills Range: 0-70	Soft Skills Use of Tools Range: 0-5	Safety Use of Equipment Range: 0-10
60-70 Excellent	5 Excellent	9-10 Excellent
50-59 About Average	4 About Average	7-8 About Average
40-49 Average	2-3 Average	5-6 Average
0-39 Below Average	0-1 Below Average	0-4 Below Average

SCORING SECTION

Evaluation Items	Possible Points	Points Awarded	Comments
Soft Skills	5		
Safety	10		
Use of Tools	5		
Use of Equipment	10		
Diagnostic Skills	70		
TOTAL SCORE	100		

Contestant's Diagnosis:

Additional Comments:

Judge's Information: Your Signature: _____

Please Print Your Name: _____

Company/Association Representing: _____