

SkillsUSA 2012 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.

[Download additional contest files here.](#)



Contestant's Guidelines

1. Safety is of primary concern during the contest.
 - a. It is mandatory that you wear safety glasses any time that you're working on an appliance. If you forget, the judge will remind you to put them on. During the first rotation, judges will not deduct points from your score if they have to remind you to put your glasses on. After the first rotation, we will continue to remind you but will also assess a five point deduction if you do not have your safety glasses on when you begin to diagnose the product or begin your brazing exercise.
 - b. Live voltage checks will be closely monitored by the judges. If the judge feels that you are doing something unsafe, he/she will ask you to stop. If you hear the word "STOP," stop whatever you're doing immediately. The judge will let you know what you were doing incorrectly.
 - c. The judge will also stop you if he/she feels that you are about to damage the product.
 - d. Any incidents that may require medical attention must be reported immediately to the nearest judge.
2. Each rotation of the contest will last exactly 30 minutes and begin with a two minute contestant/judge interaction that is designed to simulate the dialogue that normally occurs between a technician and a customer. Your judge will describe the product failure much like the customer would. For example, the judge will make comments such as "Doesn't cool" or "Oven isn't heating." Use this time wisely and ask as many questions as you can to help you pinpoint the failure down to a particular area or sub assembly of the product. The two minute interaction does not count towards the 30 minute contest time.
3. Once you've finished diagnosing the product, let the judge know your findings. Do not begin reassembling the product until after that he/she has notated your end time. Remember that one of the tie-breakers is time so, as soon as you feel confident that you've identified the failure, let the judge know.
4. If you complete your diagnosis early and have discussed your findings with the judge, you can go ahead and begin reassembling the product. NOTE: For those requiring the full 30 minutes for diagnosis, we will allow time to reassemble the product after the rotation time has ended. Do not cut your diagnosis time short. If you need the full 30 minutes, take the full 30 minutes.
5. Be prepared to use the wiring schematic to show how you arrived at your diagnosis. Points will be deducted if you cannot explain how you arrived at your diagnosis, even if your diagnosis is correct.

(See Back Page)

6. A five minute warning will be given prior to the conclusion of each rotation. At the end of the 30 minutes, we will announce that time is up and ask you to stop any further diagnosis. Although you might not have completed the diagnosis, the judge will ask you to explain what you were doing and award you points if he/she feels that you were on the right track.
7. We will announce when it's time for you to rotate to the next contest station and every contestant will rotate at the same time.
8. If you complete your diagnosis and reassembly of the product before the 30 minutes are up, the judge will ask you to sit in the chair that is provided until it's time to rotate to the next station. During this time, DO NOT speak to anyone but the judge. Speaking to spectators as they walk by is not allowed and points will be deducted for infractions of this rule.
9. If you complete your station before the 30 minutes are up stay in that station and set in the chair provided facing away from the contest area. Do not try to look into other contest stations during this time. If you do points could be deducted.
10. Box lunches will be provided for everyone. We will be breaking for lunch as a unit. During lunch, talking between contestants or to spectators is not allowed.
11. Should you need to visit the restroom at any time during the contest, let your judge know and he/she will ask a member from the courtesy corps to escort you to the restroom facilities.
12. If you smoke, we will make arrangements to escort all of the smokers to a designated smoking area during the lunch break. This will be the only time that smoking by contestants will be allowed.
13. Let the Chairman or Co-Chairman of any special medical needs you may have before you leave this meeting.
14. After the contest, the judges will take turns explaining each of the failures to the group, cover the correct procedure for correctly diagnosing these failures and to answer any questions you may have about the contest.
15. Let's have a safe and enjoyable contest.



**Major Appliance & Refrigeration
Technology Technical
Committee Members**



SkillsUSA Championship Contest Contestant's Instructions and Work Sheet



Station #6– 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.



YOU MUST FILL-IN ALL HIGHLIGHTED AREAS PRINT CLEARLY

The logo of the Instituto de Física de São Carlos (IFSC) is displayed. It features a blue silhouette of a classical building with a triangular pediment. Below the building, the letters 'IFSC' are written in a large, bold, white serif font, set against a blue background.

IN HOME SERVICE PROFESSIONAL

[illegible]



**Major Appliance & Refrigeration
Technology**

**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***





**Major Appliance & Refrigeration
Technology Technical
Committee Members**



marcone
Our Passion is Product Support





**Major Appliance &
Refrigeration Technology**

Customer Relations Assessment Test

ANSWER SHEET

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

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





**Major Appliance & Refrigeration
Technology Technical
Committee Members**

