



Commercial Kitchen Hood System Acceptance Test Checklist

INFORMATION HANDOUT C-10

4.29.2020

General

This document's intent is to provide contractors with guidelines outlining the expectations and procedures for how the Everett Fire Marshal's Office will conduct an acceptance test of a commercial kitchen hood system. This document addresses the most common aspects of a commercial kitchen hood system acceptance tests, in cases where this document does not address a device or operation used with your system IFC, NFPA 17A & 96, and/or Manufacturer Specifications will be used to determine testing criteria.

General

	PASS	FAIL	N/A
1. Fire Alarm Tech? - In buildings that are equipped with a fire alarm system, the system installer as well as the fire alarm tech shall be present during acceptance testing.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Approved Plans - The installing contractor shall have the approved/stamped set of plans and the specific system installation manual located at the job site.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Check Plans - Verify that the suppression system, piping, and cooking equipment are the same type/style identified on the approved plans.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. NFPA 17A Report - Prior to final approval the installing contractor shall complete, sign, and provide a copy of the NFPA 17A acceptance test report.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Appliance Signage - Signage shall be provided on the exhaust hood or system cabinet, indicating the type and arrangement of cooking appliances protected by the automatic fire-extinguishing system. Signage shall indicate appliances from left to right, be durable, and the size, color, and lettering that allows it to be legible from where an inspector may be standing to view the sign.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Building Fire Alarm System

	PASS	FAIL	N/A
1. Fire Alarm - In buildings that are equipped with a fire alarm system, the suppression system shall be interconnected so that the actuation of the extinguishing system will sound the fire alarm and all notification devices.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Portable Fire Extinguisher

- | | PASS | FAIL | N/A |
|---|--------------------------|--------------------------|--------------------------|
| 1. Class K - Class K Portable Fire Extinguisher(s) are required and shall comply with the following: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <ul style="list-style-type: none">• Located no more than thirty (30) feet distance of travel from cooking equipment.• Located along the path of egress.• Placed in a conspicuous locations.• Have a sign/placard placed near states that the fire protection system shall be activated prior to using the fire extinguisher. | | | |
| 2. Solid fuel cooking appliances , whether or not under a hood shall be provided with a minimum of a 2.5-gallon or two 1.5-gallon Class K Portable Fire Extinguishers. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Manual Actuators (Pull Stations)

- | | PASS | FAIL | N/A |
|---|--------------------------|--------------------------|--------------------------|
| 1. Manual Actuator - At least one Manual Actuator complying with the following shall be provided for each system: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <ul style="list-style-type: none">• Located in an accessible, unobstructed location in a path of egress.• Located a minimum of ten (10) feet to a maximum of twenty (20) feet from the system.• Installed at a height not more than 48 inches and not less than 42 inches above the floor.• Have a force of less than 40 lb and a movement of less than 14 inches to secure operation.• Provided with markings that indicate operating and the hazards they protect. These instructions may include the use of pictographs. (Example "PULL" or "In Case of FIRE, PULL") | | | |

Cooking Equipment/Appliances

- | | PASS | FAIL | N/A |
|--|--------------------------|--------------------------|--------------------------|
| 1. Type & Location - Ensure that all appliances under the hood are the approved type and location as shown on the plans. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Listed - All cooking equipment shall be listed by a testing laboratory and installed in accordance with the terms of their listings and the manufacturer's instructions. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Fryer Spacing - All deep-fat fryers shall be installed with at least a 16-inch space between the fryer and surface flames from adjacent cooking equipment.
Exception: Where a steel or tempered glass baffle plate is installed at a minimum 8-inches in height between the fryer and surface flames of the adjacent appliance. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

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|----|--|--------------------------|--------------------------|--------------------------|
| 4. | Movable Equipment - Cooking equipment that are movable (casters or wheels) for the purpose of maintenance and cleaning shall be provided to ensure that it is properly returned and positioned for nozzle coverage. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. | Tethering Devices - Gas cooking equipment shall be provided with an approved tethering device. When casters are used, an approved heavy-duty, quick-disconnect, flexible gas lines must also be provided. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. | Equipment Spacing - Ensure that appliances spacing shall comply with the following: <ul style="list-style-type: none"> • Cooking equipment must be spaced at least 6 inches apart from other cooking equipment. • Cooking equipment must be spaced at least 6 inches from walls. • The hood must overhang or extend a horizontal distance not less than 6-inches beyond the outer edges of the cooking surfaces. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Piping

- | | | PASS | FAIL | N/A |
|----|---|--------------------------|--------------------------|--------------------------|
| 1. | Specifications - Pipe, tubing, hose, fitting, hangers, and supports shall be in accordance with the manufacturer's design, installation, and maintenance manual. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. | Tightness - Piping shall be physically checked for tightness. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. | Pipe Penetrations - All penetrations into and out of the ventilation hood and/or duct is done with a listed seal off device that is liquid tight. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Nozzles

- | | | PASS | FAIL | N/A |
|----|--|--------------------------|--------------------------|--------------------------|
| 1. | As Per Plans - Ensure that all discharge nozzles are the type specified in the plans, permanently marked for identification, and listed for the intended use. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. | Distance - Inspect each type of nozzle and the required length from nozzle to heat source. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. | Placement & Positioning - Verify that all discharge nozzles placement, position, and orientation is per the specific installation manual and for the specific appliance. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. | Caps - Discharge nozzles shall be provided with caps or other suitable devices to prevent the entrance of grease vapors, moisture, environmental contaminants, or other foreign materials into the piping. The caps or other devices shall blow off, blow open, or blow out upon agent discharge. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. | Obstructions - Address any obstructions such as shelves, hanging cooking equipment, etc. that may impede the discharge and application of the system. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Fusible Links/Detectors

	PASS	FAIL	N/A
1. Specifications - All fusible links shall be positioned in brackets per manufacturer's specifications.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Placement - Verify that a fusible links or heat detectors are provided above each protected cooking appliance and at or within 12 inches of duct opening in accordance with the extinguishing system manufacturer's design, installation, and maintenance manual. (A single listed detection device shall be permitted for more than one appliance when installed in accordance with the system's listing.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Temperature - Ensure that the appropriate temperature fusible links that is indicated on the plans are installed in the system.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Markings - The year of manufacture shall be stamped on all fusible links, and also marked on the system inspection tag.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Agent Tanks & Mechanical Control Heads

	PASS	FAIL	N/A
1. Agent Tanks - Verify that all Agent Tanks comply with all of the following: <ul style="list-style-type: none">• Tanks provided on site are the same model as indicated on approved plans.• Quantity of tanks match approved plans.• Tanks are labeled UL300.• Tanks are filled to correct volume.• Tanks are fastened securely to their mounting brackets.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Control Heads - Verify Control Heads comply with the following: <ul style="list-style-type: none">• Listed devices• Located in a safe location free from damage, high temperatures, and accessible.• Provided with a visual indicator to show that the system is in a ready condition or is in need of recharging.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Grease Filters & Grease Drip Trays

	PASS	FAIL	N/A
1. Grease Filters – Grease filters shall meet all of the following:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none">• Listed in accordance with UL 1046, and stamped on the frame of the filter UL 1046.• Constructed of noncombustible material.• Arranged so that all exhaust air passes through the grease filters.• Shall be easily accessible for removal.• Installed at an angle not less than 45 degrees from the horizontal.• Filters shall be clearly designated to the orientation to drain grease, or the hood shall be constructed so that filters cannot be installed in the wrong orientation.			
2. Drip Tray & Container - Beneath the lower edge of grease filters shall be a grease drip tray pitched to drain into an enclosed metal container having a capacity at a minimum size needed to collect grease and not to exceeding 1-gallon.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Gas Valve

	PASS	FAIL	N/A
1. Listings - Gas valve shall be listed, visible, accessible and is provided with an open/closed indicator.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Operations - On actuation of any cooking equipment fire-extinguishing system, all sources of fuel that produce heat to all equipment protected by the system shall be shut down. Gas appliances not requiring protection but located under the same ventilation equipment shall also be shut off.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Resetting - Shutoff devices shall require manual resetting prior to fuel being restored.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Electrical

	PASS	FAIL	N/A
1. Compliance - Electrical wiring and equipment shall be installed in accordance with NFPA 70, National Electrical Code.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Operations - On actuation of any cooking equipment fire-extinguishing system, all sources of electric power to all equipment protected by the system and makeup air suppling the hood shall be shut down.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Resetting - Shutoff devices shall require manual resetting prior to power being restored.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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|----|---|--------------------------|--------------------------|--------------------------|
| 4. | Exhaust Fan - Exhaust fans and dampers shall not be required to be shut down on system actuation as the systems have been tested under both zero- and high-velocity flow conditions. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|----|---|--------------------------|--------------------------|--------------------------|

Functional/Discharge Test

Part 1 – Manual Functional/Discharge Test:

PASS FAIL N/A

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|-----|---|--------------------------|--------------------------|--------------------------|
| 1. | Fire Alarm Tech - If the building is equipped with a fire alarm system, a fire alarm tech shall be present so that the test can be done at one time. Also ensure that the fire alarm monitoring company have been notified and the system is on test. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. | Nitrogen or Dry Air - The manual functional discharge test shall be performed on the piping network using nitrogen or dry air at a pressure not to exceed the normal operating pressure of the extinguishing system. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. | Balloons - Balloons shall be placed on all discharge nozzles to indicate that the lines are clear, and air can move freely through the lines. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. | Activate Manual Actuator - Initiate the test by having a member of the kitchen staff or the contractor pull the manual actuator (pull station) to the system. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. | Force & Movement of Actuator - Verify that the manual actuator has a force less than 40 lb and a movement of less than 14 inches to secure operation. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. | Balloon Volumes - All of the balloons shall inflate but may inflate at different volumes depending on the flow rates of the nozzles. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. | Fire Alarm Activation - If the building is equipped with a fire alarm system, did the activation of the system activate local notification device/bell and activate an alarm signal (clearly illustrating the type and location of alarm) at the fire alarm panel? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. | Power & Fuel Shutdown - Did the activation of the system shut down power and fuel supply to All equipment protected under the hood and the makeup air suppling the hood? Does it have to be manually reset after system activation? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. | Exhaust Fan - Did the activation of the system turn on or keep on the exhaust fan and did they continue to operate during and after then system discharge? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. | Visual Indicator - Did the visual indicator on the control head illustrate that the system has operated? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Part 2 – Automatic Functional Test:

PASS FAIL N/A

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|----|---|--------------------------|--------------------------|--------------------------|
| 1. | Reset System - The contractor shall reset the system and ensure that the equipment under the hood is on and power/gas is being supplied. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. | Activate Fusible Link - Initiate the automatic functional test by having the contractor activate the most remote fusible link or detector. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. | Fire Alarm Activation - If the building is equipped with a fire alarm system, did the activation of the system activate local notification device/bell and activate an alarm signal (clearly illustrating the type and location of alarm) at the fire alarm panel? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. | Power & Fuel Shutdown - Did the activation of the system shut down power and fuel supply to ALL equipment protected under the hood and the makeup air supplying the hood? Does it have to be manually reset after system activation? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. | Exhaust Fan - Did the activation of the system turn on or keep on the exhaust fan and did they continue to operate during and after then system discharge? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. | Visual Indicator - Did the visual indicator on the control head illustrate that the system has operated? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Returning System to Operational Condition

PASS FAIL N/A

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|----|--|--------------------------|--------------------------|--------------------------|
| 1. | Operational Conditions - After completion of all functional testing, the following shall be done to return the system to operational conditions: <ul style="list-style-type: none">• Each agent tank shall be reconnected.• All power/gas has been restored.• If the system is connected to an alarm, the alarm shall be taken off test.• All cooking equipment shall be in its approved locations.• All grease filters shall be installed.• The contractor verifies that the system is fully operational. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. | NFPA 17 Report - Prior to final approval the installing contractor shall complete, sign, and provide a copy of the NFPA 17A acceptance test report. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |