Operations & Service Manual FSH-2 & FSH-2A-99

Model: FSH-2A-99

Model: FSH-2

GILES™

Responsive. Reliable.

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LIMITED WARRANTY

- Subject to the terms and conditions of this Limited Warranty as herein stated, all Giles Enterprises Inc. (hereafter referred to as "Giles") food service equipment and parts purchased new from an authorized Giles representative are warranted as to defects in material or workmanship for a period of twenty-four (24) months from the date of installation, provided, however, that with regard to labor costs in connection with this warranty, see below. All installations must be made by a qualified installing agency in accordance with all applicable codes and/or regulations in the jurisdiction in which installed. Limited warranty coverage is extended only to the original owner and is void if the unit is resold.

- During the Limited Warranty period, Giles will replace or recondition, at its factory, any part or parts of this unit which Giles inspectors judge defective, provided the unit has been properly installed, subjected to normal usage, and operated and maintained in accordance with specified procedures. This Limited Warranty does not cover cosmetic damage, and damage due to acts of God, accident, misuse, alteration, negligence, abuse, or use of unorthodox repair methods. All parts replaced under this Limited Warranty carry only the unexpired term of this Limited Warranty. Limited Warranty service may be furnished only by an authorized Giles service representative.

- If Limited Warranty service is requested, Giles will dispatch factory-authorized service representatives to inspect, repair, recondition, or replace units of its manufacture with such labor being rendered without cost to owner for twenty-four (24) months from the date of installation. Otherwise, service, including labor and transportation charges or other expenses, in connection with the removal or installation of any part or parts supplied under this Limited Warranty, are specified on the original sales contract between the purchaser and the authorized Giles representative.

- **Failure to use Giles OEM replacement parts and Giles OEM filters may void this Warranty.**

- Giles reserves the right to change or improve its equipment and/or parts in any way without obligation to alter such equipment or parts previously manufactured.

- Giles makes no further warranties, express or implied, including implied warranties of merchantability or fitness for a particular purpose, and has no other obligation or liability not specifically stated herein.

- Repair or replacement as provided under this limited warranty is the exclusive remedy. Giles shall not be liable for any incidental or consequential damages for breach of any express or implied warranty on this product, except to the extent prohibited by applicable law. Any implied warranty of merchantability or fitness for a particular purpose on this product is limited in duration to the duration of this limited warranty.

- Used Giles food service equipment or parts, or Giles food service equipment or parts not purchased from an authorized Giles representative, carry no warranties, express or implied.

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Safety Overview:

The information contained in this manual has been prepared to describe the proper procedures for safely installing, operating and maintaining ***Giles Food Service Equipment***.

Throughout the manual, safety precautions are identified by a hazard alert symbol and key words such as ***DANGER***, ***WARNING*** or ***CAUTION***. Alert information precedes the tasks to which it applies. Suggested, recommended, or other noteworthy information is identified as ***NOTES***, or will be noted as ***IMPORTANT!***. Additionally, certain words are used to indicate a specific meaning, or to add emphasis as follows:

Shall: understood to be mandatory.
Should: understood to be advisory.
May: understood to be permissive.
Will: indicates a future event or condition to occur.

 **Hazard Alert Symbols** are used in conjunction with key words, such as ***DANGER***, ***WARNING***, or ***CAUTION***, to alert Users to potential personal injury hazards and/or poor operating practices. These will immediately precede precautionary measures pertaining to avoiding such hazards or practices. Adhere to all information following these symbols to avoid possible injury, or even death. Failure to do so may also void the factory warranty.

 ***This product can expose users to chemicals including lead, nickel, aluminum, brass, carbon, copper or BPA which are known in the state of California to cause cancer, birth defects and other reproductive harm. For more information go to: www.p65warnings.ca.gov.***

Indicates an imminently hazardous situation which, if not avoided, will result in serious personal injury, even death.

Indicates a potentially hazardous situation which, if not avoided, could result in serious injury, even death.

Indicates a potentially hazardous situation which, if not avoided, may result in minor to moderate injury. This notification is also used as an alert to unsafe practices.

If used without the safety alert symbol, indicates a potentially hazardous situation which, if not avoided, may result in equipment and/or property damage, and may void the factory warranty.

NOTE or IMPORTANT!
Identifies suggested, recommended, or other important information.

Specific Safety Precautions:

For your safety, please observe the following precautions when operating or servicing this *GILES* food service equipment. Adhering to the following important safety information will help to prevent personal injury and/or damage to the equipment.

⚠ DANGER

- Before cleaning or performing maintenance, place power switch in the **[OFF]** position. To remove all power from the appliance, unplug power cord or turn **OFF** power at the electrical panel supplying the unit.
- Failure to place ***Power Switch*** in the **[OFF]** position when replacing filters, could result in equipment damage, electrical shock and/or serious personal injury.
- ***DO NOT*** wash down interior or exterior of hood with water from a spray hose.
- Failure to comply with **DANGER** notices will result in serious injury, even death; or damage to equipment and/or property and may void the factory warranty.

⚠ WARNING

- **Ventless/recirculating hoods are *not* suitable for every commercial food service application. Failure to fully comply with all site requirements and installation limitations as outlined in the *GFSE Hood Approval Letter and this Manual*, may result in poor or highly unsatisfactory hood performance.**
- Prior to installation, consult a qualified electrician to ensure that installation will comply with all electrical requirements and codes.
- **The unit must be adequately and properly grounded. Improper grounding may result in electrical shock to the user. Always refer to local electrical code to ensure proper grounding of this or any other electrical equipment.**
- **Check the rating label on the unit to determine the proper power supply required. Always consult with an electrician, or other qualified service technician, to ensure that circuit breakers and wiring are of sufficient rating and gauge to power this equipment. A wiring diagram has been provided with the unit as an aid for technicians. The unit must be installed and electrically grounded in accordance with local codes, or in the absence of local codes, in accordance with the National Electrical Code, NFPA 70.**
- Improper installation, alterations of the unit, or improper service/maintenance could result in serious injury, even death; equipment and/or property damage; and will potentially void the factory warranty.
- ***DO NOT*** use or store flammable liquids, or materials that produce flammable vapors, in the vicinity of this or any other appliance!
- Failure to comply with **WARNING** notices could result in serious injury, even death; damage to equipment and/or property; and will potentially void the factory warranty.

Specific Safety Precautions:

⚠CAUTION

- Exercise care when removing wooden crate framework and the unit from shipping pallet. These units are top-heavy and extreme care must be taken when moving the unit into position.
- Once located, be sure unit is properly leveled and anchored.
- **DO NOT** operate the appliance, unless the intended function of components and all operating procedures are fully understood (see ***Section 3***). Once you have read and fully understand ***Section 3***, closely follow the instructions presented in this Manual to avoid equipment damage or malfunction.
- The appliance is not intended to be used by persons (including children) with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, unless they have been given adequate instruction and/or supervision concerning use by a person responsible for their safety. Children should be kept clear of the appliance.
- When working in a kitchen environment, take necessary precautions to avoid injury due to **HOT** cooking appliances, utensils, tools, etc. As applicable, always wear thermal protection, such as oven mitts or gloves, when handling hot pans, utensils or foods.
- Failure to comply with **CAUTION** notices may result in minor to moderate personal injury, damage to equipment or property, and potentially void the warranty.

CAUTION

- Some components and controls are impact-sensitive. To avoid damage and maintain proper operation, exercise care when moving items and working near the hood.
- Handle the Electronic Air Cleaner (E.A.C.) cell carefully. ***DO NOT*** bend the collection plates (fins) or break the ionizer wires, as this will significantly reduce the performance of the air cleaning system and can eventually cause power supplying the fryer beneath hood to be shutdown.
- ***DO NOT*** attempt to dry the E.A.C. cell after cleaning by installing it and running the hood. ***NEVER PLACE A WET E.A.C. CELL INTO THE HOOD, as doing so*** **can potentially damage the system and cause improper operation. Such damage is *NOT* cover by the factory warranty**.
- When cleaning the appliance:
  - **DO NOT** steam clean hood.
  - **DO NOT** clean with products containing chlorine, or other corrosive chemicals.
  - **DO NOT** use abrasive products, steel wool or scouring pads.
  - **DO NOT** use oven cleaner products.
- ***DO NOT*** alter, add attachments, or otherwise modify this equipment! ***DO NOT*** attach any type of ductwork extensions to the hood exhaust in an attempt to redirect airflow.
- Failure to comply with **CAUTION** notices may result in damage to equipment or property. Such damages are ***NOT*** covered by the factory warranty.

Specific Safety Precautions:

NOTE:

- When received, If damage to the shipping pallet is evident, immediately and thoroughly inspect the equipment and accessories. Notify the freight company of any damages. Generally, negotiating freight damage claims shall be the responsibility of the Purchaser/Customer.
- Comply with all appropriate state and/or local heath regulations regarding cleaning and sanitation of any foodservice equipment.
- To clean difficult surface areas, having excessive build-up of grease residue, *GILES* recommends using a mild, biodegradable, non-toxic degreasing cleaner such as ***Simple Green® Crystal Foaming Spray Degreaser/Cleaner***.
- *GILES* assumes no responsibility in regard to code compliance for installation and use of ventless recirculating ventilation equipment. The customer is responsible for obtaining all of the necessary approvals from ***Authorities Having Jurisdiction (AHJ)*** concerning use of this equipment.

1. Introduction

Thank you for purchasing a *GILES* Free Standing Ventless Recirculating Hood, ***Model FSH-2 or FSH-2A-99*** manufactured by Giles Enterprises, Inc., Montgomery, Alabama (USA), hereafter referred to as *"Giles"*. Giles Ventless Hood technology is the result of extensive engineering, research and development. Every unit is thoroughly inspected and tested prior to shipment to ensure they operate flawlessly after installation. With proper care and maintenance these units should provide years of trouble-free service.

The hood is listed for use with fryers & pressure fryers, to remove grease-laden cooking vapors, as well as helping to control objectionable odors which may be generated during cooking. It utilizes an electronic air cleaner (E.A.C.), which electrically charges grease particulate in the air stream, then electrostatically captures it on collection plates as the air passes through. An activated charcoal filter provides a final filter stage to help control cooking odor in the recirculated air.

To help protect your investment, we recommend taking a few moments to read this Manual and familiarize yourself with proper installation, cleaning, and maintenance procedures. Adhering to these recommended procedures minimizes the potential for costly downtime and equipment repairs.

Please retain this manual for future reference.

1.01 Construction

Primarily Series 430 stainless steel and aluminized steel, where applicable.

1.02 Standard Features

Three Stage Filtration: Three (3) different filters remove particulate and grease-laden vapor from the air stream.

Extinguishing System: Built-in fire extinguishing system protects against accidental fire in the fryer underneath the hood. ***Final field set up, charging and commissioning is the responsibility of the purchaser.***

EAC Cleaning Timer: ***(FSH-2A-99 Only)*** Preset timer alerts user when it is time to clean the Electronic Air Cleaner (E.A.C.) collector cell. ***DAILY*** cleaning is important to maintain peak air cleaning performance. If cell is not cleaned in a timely manner, the timer system can shutdown the hood/fryer, and prevent further operation until cell is cleaned.

Push-To-Start Power: Hood/fryer combination will not automatically restart when power is restored after an interruption. Power switch must be pressed to start. Complies with code requirements in some jurisdictions.

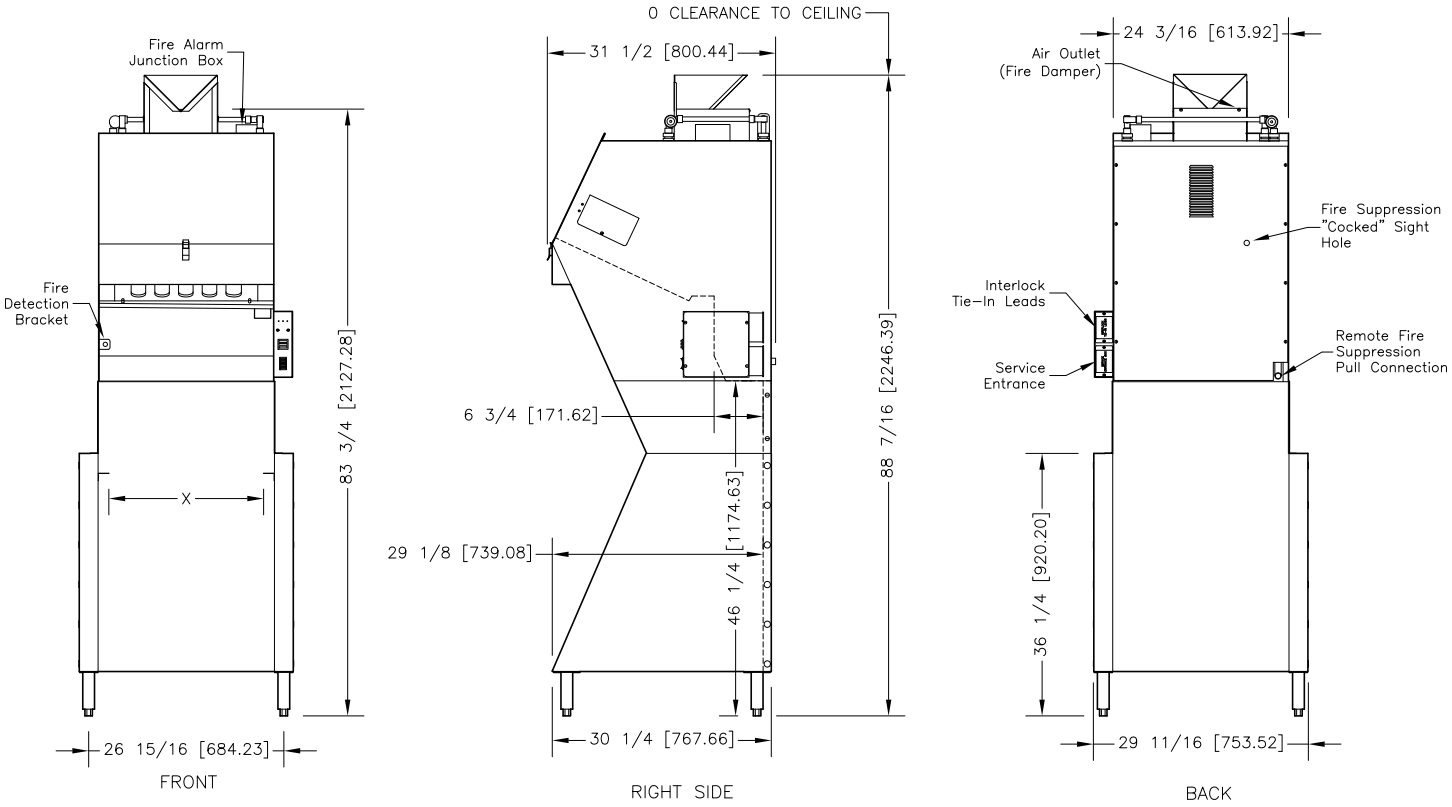
1.03 Optional Features

Appliance Receptacle: ***(FSH-2A-99 Only)*** Built-in, interlocked, NEMA 15-50R power receptacle for the cooking appliance. Plug appliance power cord directly into hood, can help minimize on-site installation work. ***Maximum appliance load = 50 amps***.

HEPA Filter Model: Hood model equipped with replacable HEPA filter as an alternative to the Electronic Air Cleaner system.

1.04 Specifications

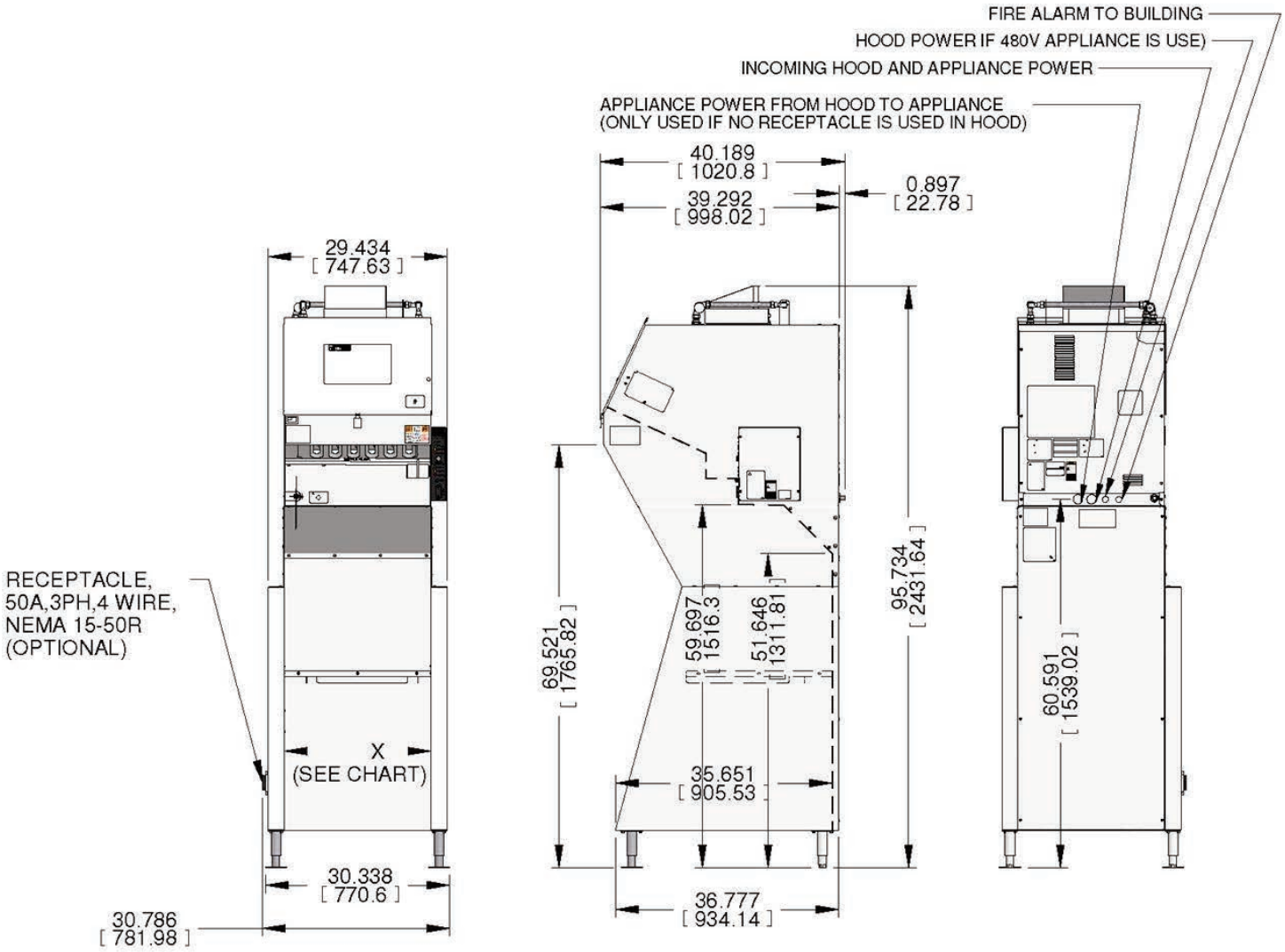
1.04.1 Overall Dimensions: FSH-2



INCHES [mm]

DOCKING OPENING WIDTH "X"	
BRACKET LETTER DESIGNATION	INCHES [mm]
A	24 [610]
B	20-1/8 [511]
C	18-5/8 [473]
D	16-1/8 [410]
E	15-5/8 [397]
F	15-1/8 [384]
G	14-1/8 [359]
H	10-1/8 [257]

1.04.2 Overall Dimensions: FSH-2A-99



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F	15-1/8 [384]
G	14-1/8 [359]
H	10-1/8 [257]

1.05 Agency Certifications

HEPA Filter version CE listed

1.06 Unit Weight

Model	Weights	
	Crated - lbs [kg]	Uncrated - lbs [kg]
FSH-2	405 [184]	327 [148]
FSH-2A-99	595 [270]	495 [225]

2. Installation

This section summarizes procedures necessary for proper equipment installation. To help avoid personal injury or equipment damage, be sure to adhere to all of these recommended procedures.

Installation is the Purchaser's responsibility. It is advisable to engage the services of a professional commercial kitchen equipment specialist, licensed electrician, and qualified HVAC contractor to assist with the details of installation. Call *Giles Technical Support* @ 800.554.4537, if assistance is required.

2.01 Location

IMPORTANT!!
Before installing the GILES Recirculating/Ventless Hood system ensure that, A). all necessary approvals from local code authorities have been obtained, B). the fryer to be used with the hood is within the hood's listing limitations, as stated in Section 2.04, and C). the installation site complies with the specific requirements and limitations outlined in the *GFSE Recirculating/Ventless Hood Approval Letter (HAL)*. The *HAL* is available for review or download at www.gfse.com under the *SUPPORT* tab in *VENTLESS DOCUMENTS*.

To ensure satisfactory hood performance after installation, the intended site MUST comply with minimum requirements for kitchen size (>300 sq ft), ceiling height, fresh outdoor air make-up, supplemental exhaust ventilation, clearances, etc. as stipulated in Giles' Hood Approval Letter.

- **MAXIMUM of 1 hood per 300 sq ft of commercial kitchen space.**
- **Fresh outside air make-up must be equal to a MINIMUM of 15 complete room air exchanges per hour.**
- **Giles makes no representations as to the proper design or layout of an establishment in which the ventless hood will be used. Further, Giles does not perform site inspections prior to installation of any of its units.**
- When operating, the hood produces a sound level of approximately **65 dB**.

⚠ CAUTION

- ***DO NOT ALTER, ADD ATTACHMENTS OR OTHERWISE MODIFY THIS EQUIPMENT.***
- ***Failure to comply with installation requirements as specified by the Giles Hood Approval Letter will void the factory warranty.***

1. Before unpacking, review dimensions and clearances shown in ***Section 1.04.1*** or ***1.04.2***, and determine whether the location selected is suitable.
2. Keep the unit and the surrounding area free and clear of combustible materials.
3. Do not obstruct the openings around the exhaust air diverter atop the hood. No minimum clearance (0") is required between air diverter and the ceiling, but it is advisable to provide some clearance (>3") to make moving the unit easier should the need arise.
4. Provide adequate space for future servicing and proper operation.
5. Hood is equipped with adjustable leveling legs. After final positioning, adjust the legs to level the unit, side to side, front to back and corner to corner.
6. Before operating, make sure the unit is secured in position and will not move. The front legs of a ***FSH-2A-99 Hood*** have floor plates for securing the unit to the floor.

2.02 Unpacking

!! IMPORTANT NOTE:

If the palletized unit showed any signs of damage, you should have immediately inspected the equipment and any other packed accessories, and promptly notified the freight company of any and all damages. ***Typically, it is the customer's responsibility to claim freight damage*.**

⚠CAUTION

- The unit is very heavy and somewhat top-heavy! Exercise due caution when handling to avoid personal injury or damage to the equipment. Take precautions necessary to avoid damaging the hood stand or legs.
- Exercise care when removing the protective wooden framework from around the unit to avoid exposed nails or staples.
- Failure to comply with these **CAUTION** notices may result in minor to moderate injury, damage to equipment or property, and void the warranty.

Unit is shipped on a wooden pallet, secured by high-tensile plastic strapping and wrapped with machine-applied stretch wrap. A wooden framework is built around the unit for added protection. Unpack unit as follows:

1. Position the unit in an area that provides adequate space for unpacking activities.
2. Remove the plastic stretch wrap, strapping and other packaging materials, as necessary.
3. Carefully remove wooden supports and/or framework that might be attached.
4. The carton containing the empty ***1-1/2 gal. wet chemical suppressant tank*** is generally secured on top of the hood. Locate carton and retain for safe keeping ... it will be needed by the ***Ansul Service Technician*** for field set-up of the fire suppression system.
5. To avoid damage, unit is shipped without the adjustable legs installed. The legs are packaged in a separate carton ... be sure to secure and retain, see ***Adjustable Leg Installation*** below.
6. Carefully remove the unit from the shipping pallet. The hood is very heavy and somewhat top-heavy, see ***Section 1.06, Unit Weight***. Great care should be taken when lifting or moving the unit to avoid personal injury or equipment damage.

Adjustable Leg Installation

1. Obtain the adjustable legs. ***For the Model FSH-2A-99, two (2) legs are floor-plate style; the other two (2) are standard style***.
2. With appliance resting on a stable surface, have two helpers tilt the unit forward and hold.
3. Install the two (2) rear legs *(standard)* into thread holes on bottom of side stand, screw in clockwise until hand tight. ***Take care not to cross-thread*** ... leg should turn fairly easy until tight.
4. Have helpers tilt unit backward onto the installed rear legs, giving access to front of stand. Repeat the process for front two (2) Legs *(floor-plate).*

2.03 Electrical Specification (Hood Only)

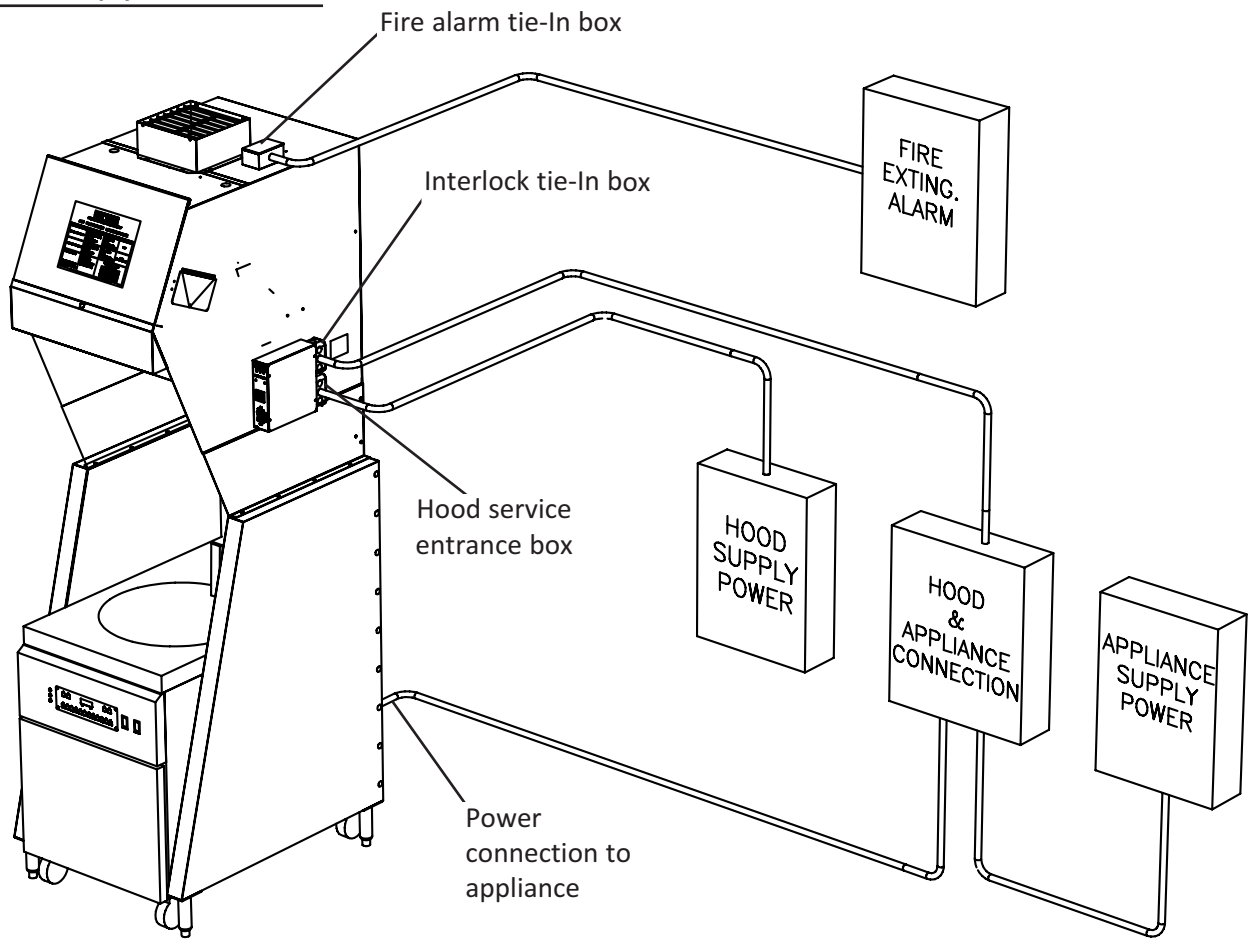
⚠WARNING

- **Food service equipment must be properly grounded in accordance with local code, or in the absence of local code, with the *National Electrical Code, ANSI/NFPA 70*. Improper grounding may result in electrical shock to users. Check local electrical code to ensure proper grounding.**
- **Always consult a certified electrician, or other qualified service technician, prior to installation to ensure the available electrical circuit is of sufficient rating to power the hood and fryer load.**
- **Improper installation, adjustment, alteration, service/maintenance could result in serious injury or possible death, equipment or property damage, and could void the factory warranty.**

Hood Electrical Requirements (Hood Only)					
Unit	Voltage	Hz	Phase	Amps	Breaker
FSH-2	208-240	60	1	5	10
FSH-2A-99	208-240	60	1	5	10

2.03.1 Electrical Connections

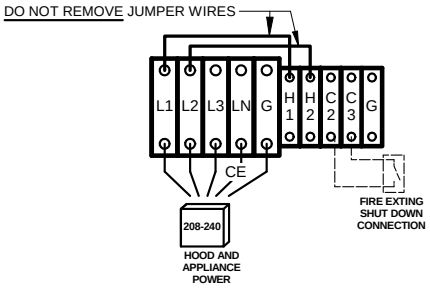
Figure 2.03.1 (A) Model FSH-2



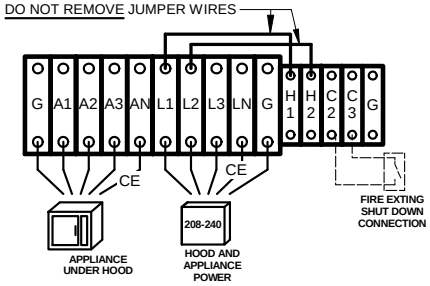
2.03.1 Electrical Connections - continued

Figure 2.03.1 (B) Model FSH-2A-99

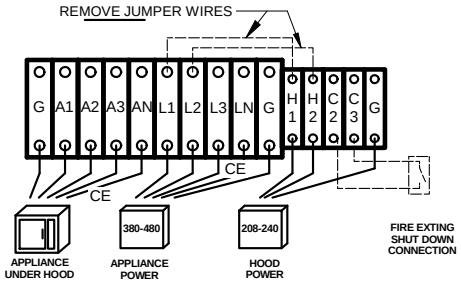
208-240 HOOD WITH APPLIANCE RECEPTICLE

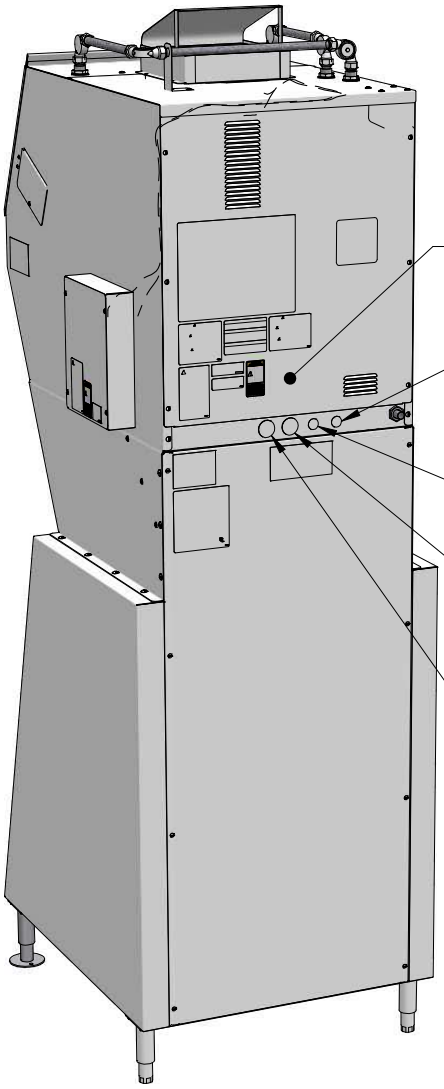


208-240V APPLIANCE POWER NO APPLIANCE RECEPTICLE WITH HOOD



380-480V APPLIANCE POWER NO APPLIANCE RECEPTICLE WITH HOOD





TERMINAL BLOCKS LOCATED BEHIND THIS PANEL

FIRE EXTINGUISHER SWITCH

HOOD ONLY POWER (IN) 380V-480V APPLIANCE ONLY

HOOD AND APPLIANCE POWER (IN) OR 380V-480V APPLIANCE POWER (IN)

APPLIANCE POWER (OUT) HOOD WITHOUT APPLIANCE RECEPTACLE

2.03.2 Hood Power Connection

IMPORTANT!
Electrical installation materials (breakers, conduit & fittings, wire, etc.) and labor shall be provided by the customer. Work should be performed by a qualified professional electrical contactor.

Installation must comply with all local code requirements. Giles assumes no responsibility with respect to code compliance regarding installation and use of this equipment.

Model FSH-2:

1. Install appropriate circuit breakers in main electrical panel supplying power for the hood. See ***Section 2.03***. for required circuit breakers. Breaker size given is for the hood only. Appliance requires separate power supply, see ***Figure 2.03.1 (A)***.
2. Remove cover on service entrance box and run appropriate size conduit and wire from box to the electrical panel supplying hood power. Allow sufficient length of wire and conduit to provide slack needed to properly access unit for cleaning and service.
3. Make all appropriate connections.
4. Reinstall box cover.

Model FSH-2A-99:

1. Install appropriate circuit breakers in main electrical panel supplying hood power. See ***Section 2.03***. for required circuit breakers. ***Breaker size given is for the hood only***.
2. Some ***FSH-2A-99*** models provide an interlocked power receptacle for the appliance located in the left-side hood leg or on the rear panel, see ***Figure 2.03.1 (B).*** When installing a hood with the interlocked receptacle, the breaker size shall be determined by the electrical load of the appliance being placed under the Hood ***(max. load is 50A).***
2. Remove the upper rear panel to access terminal blocks. Remove one of the large hole plugs and install an appropriate conduit connector. Route appropriately sized flexible conduit and wire from the electrical panel supplying hood power. Allow sufficient length of wire and conduit to provide slack needed to access unit for cleaning and service.
3. Make all appropriate connections as shown in ***Figure 2.03.1 (B)***.
4. Reinstall rear panel.

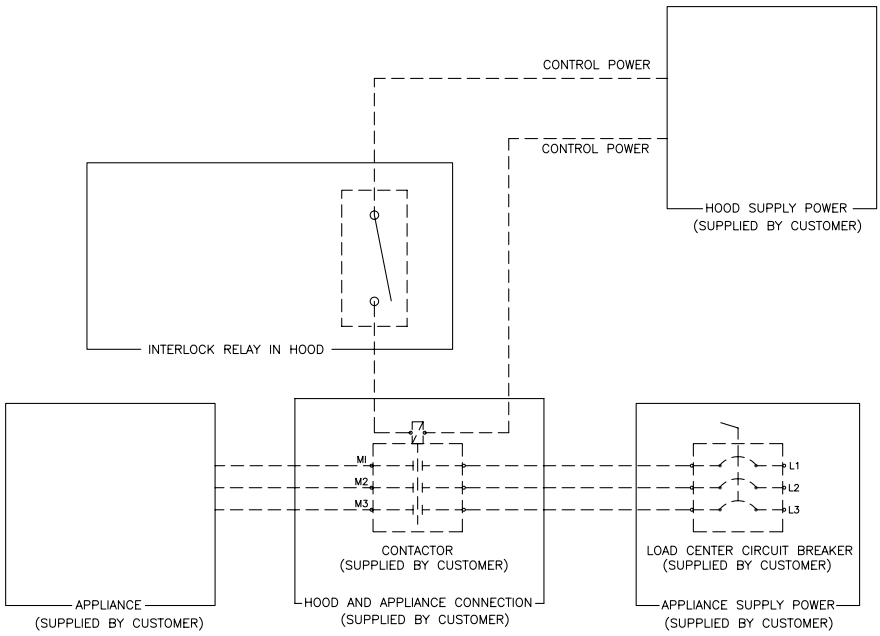
2.03.3 Hood & Appliance Interlock Connection

Safety interlocks will disable power supplied to the appliance under the hood if any of the following conditions occur:

- Filter becomes excessively dirty or air flow through hood is obstructed.
- Filter is missing or not installed correctly.
- The fire extinguishing system has been activated, or is not armed.
- Filter access cover is removed or not installed correctly (hood blower will also shutdown).

Model FSH-2:

1. The ***Model FSH-2 Hood*** requires a separate, field installed, interlocking circuit with an appropriately sized contactor, connected as shown by this diagram. **Customer supplied.**
2. Remove Cover from Interlock Tie-In Box and run appropriately sized conduit and wire to a hood & appliance connection box ***(supplied by customer)***. Allow enough conduit and wire so the hood can be accessed for cleaning and servicing.
3. Make appropriate connections. See diagram.
4. Reinstall Interlock Tie-In Box Cover.



Model FSH-2A-99:

1. The appliance interlock contactor feature is built-in on this model Hood. Refer to ***Figure 2.03.1 (B)*** and the wiring diagram supplied with the unit for field wiring information.

2.03.4 Equipotential Bonding

An equipotential bonding lug is provided on this Hood so that it can be electrically bonded to the equipment being operated under it and/or other pieces of equipment being operated in the same workspace. The purpose is to minimize the possibility of a potential difference between two pieces of equipment that could result in electrical shock or electrocution of persons who might possibly touch two pieces of equipment at the same time.

2.03.5 Fire Alarm Connection

Allows for connection of hood to the building fire alarm control system so that any activation of the hood's fire extinguishing system will activate the facility fire alarm.

1. Refer to ***Figures 2.03.1 (A) & (B)*** and run appropriate size conduit and wire from the indicated location on the unit to the building's fire alarm control system. Allow enough conduit and wire so the hood can be accessed for cleaning and servicing.
2. Make appropriate connections.
3. Reinstall cover or rear panel.

2.04 Limitations & Clearances

The following sections describe various appliance limitations and required clearances for appliances to be placed underneath the hood. ***FSH-2 & FSH-2A-99*** ventless recirculating hoods are only listed for use with ***fryers*** that comply with the following limitations.

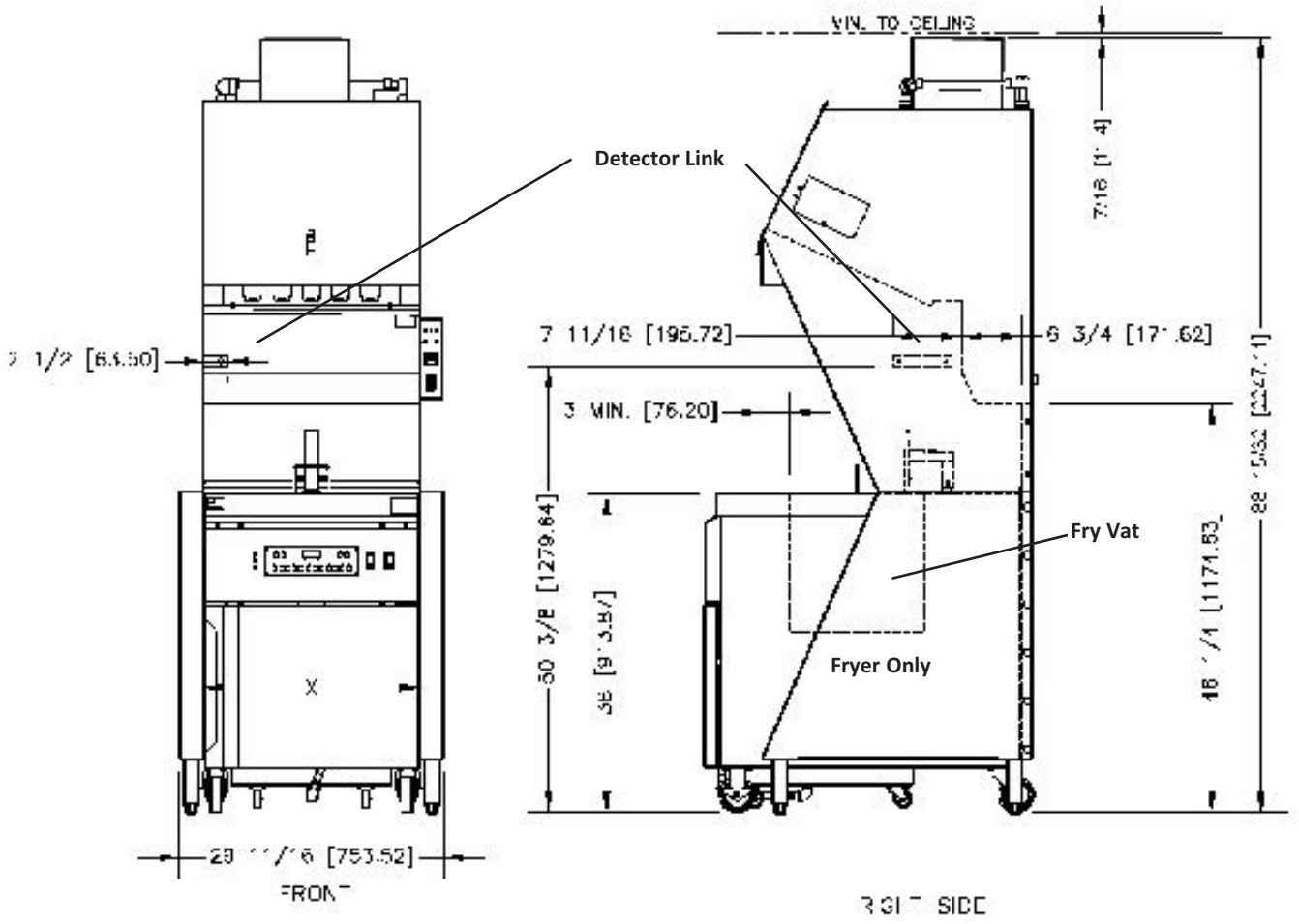
ONLY electrically heated fryers may be used ... Gas heated or equipment not meeting the specifications below are not approved.

⚠WARNING ***These hoods can be used with ELECTRIC FRYERS ONLY ... USE WITH GAS FRYERS IS NOT APPROVED!! and can create an inhalation hazard due to carbon monoxide build-up.***

2.04.1 Fryer Limitations

Model	Max. Fryer kW	Max. Shortening Capacity lbs [kg]	Max Cooking Surface sq in [sq m]
FSH-2	20	110 [49.9]	380 [.25]
FSH-2A-99	20	110 [49.9]	380 [.25]

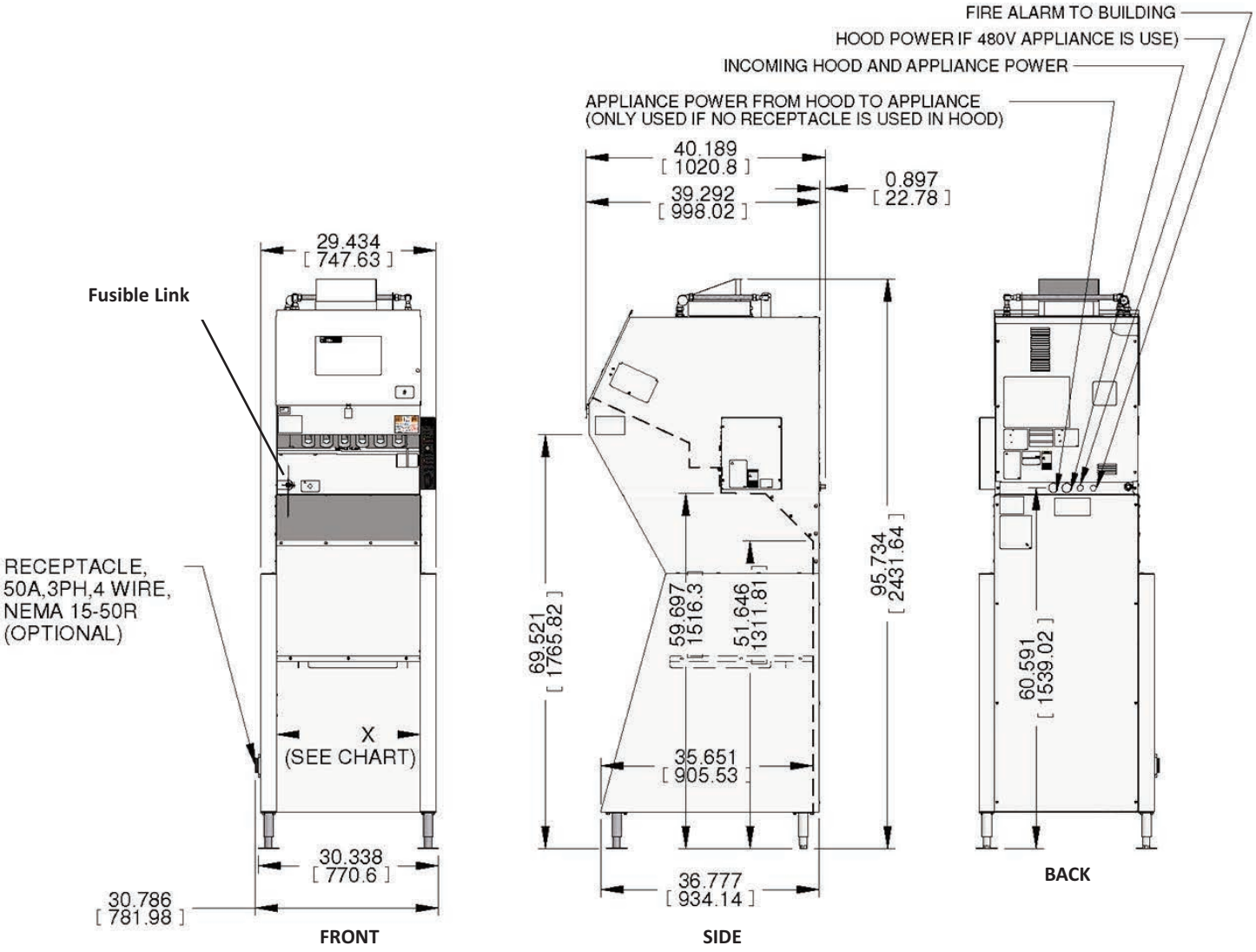
2.04.2 Fryer Clearance: FSH-2



INCHES [mm]

DOCKING OPENING WIDTH "X"	
BRACKET LETTER DESIGNATION	INCHES [mm]
A	24 [610]
B	20-1/8 [511]
C	18-5/8 [473]
D	16-1/8 [410]
E	15-5/8 [397]
F	15-1/8 [384]
G	14-1/8 [359]
H	10-1/8 [257]

2.04.3 Fryer Clearance: FSH-2A-99



INCHES [mm]

DOCKING OPENING WIDTH "X"	
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A	24 [610]
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C	18-5/8 [473]
D	16-1/8 [410]
E	15-5/8 [397]
F	15-1/8 [384]
G	14-1/8 [359]
H	10-1/8 [257]

2.05 Fire Suppression System

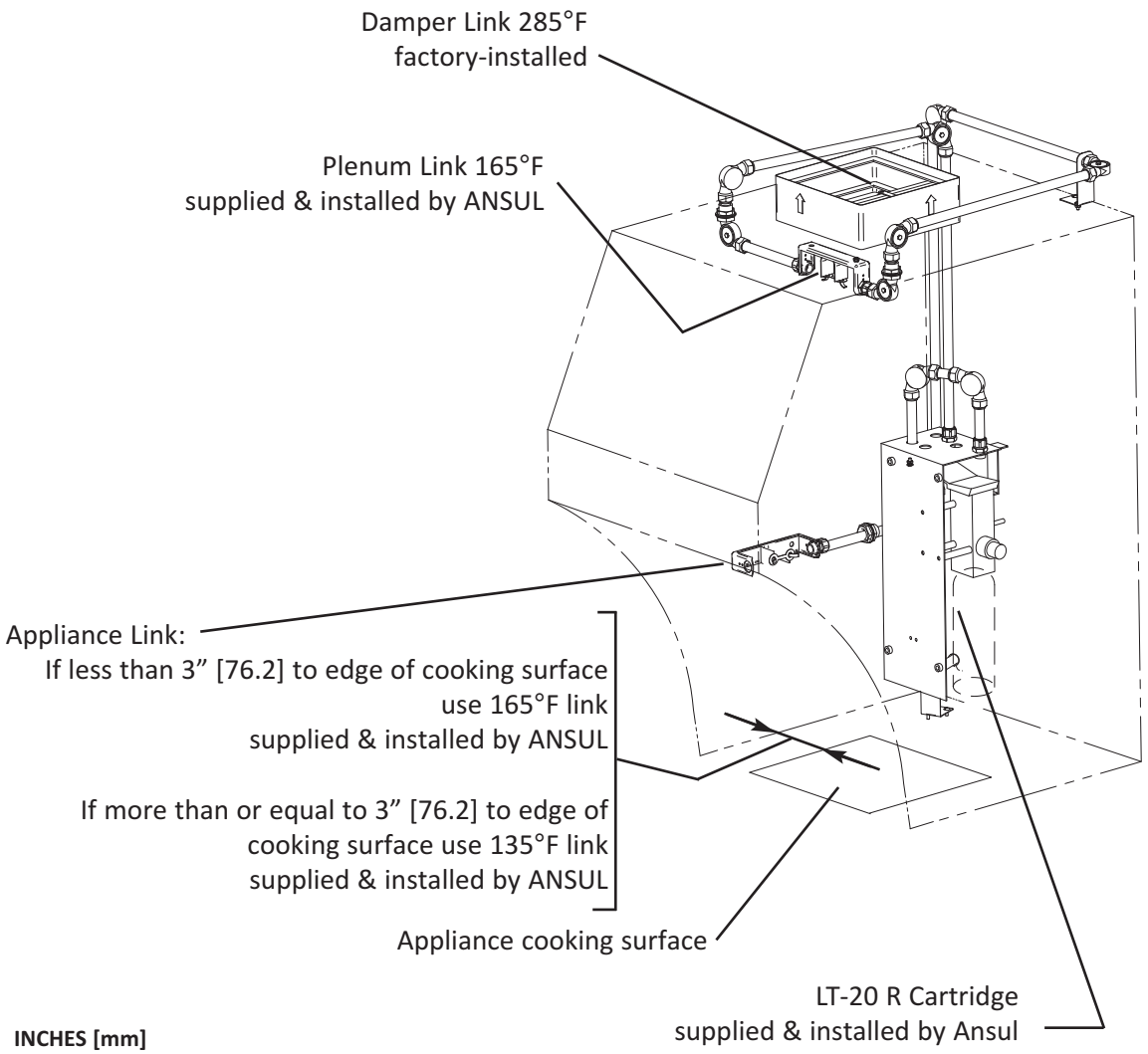
The fire suppression system used in the *Giles Ventless Hood* is the ***ANSUL® R-102 Restaurant Fire Suppression System (Standard UL 710B Listed)***. ***Final field set-up, charging, certification and arming of the system must be performed by an authorized Ansul distributor in accordance with the system listing.***

The fire suppression system is designed and UL-listed to provide fire protection for cooking appliances such as fryers. It a mechanical system that automatically protects 24 hours per day. The factory-installed system includes piping, nozzles (appliance & plenum), Automan release mechanism, detector link brackets, conduit for link cabling, exhaust outlet fire damper and a 1-1/2 gal. stainless steel tank

.

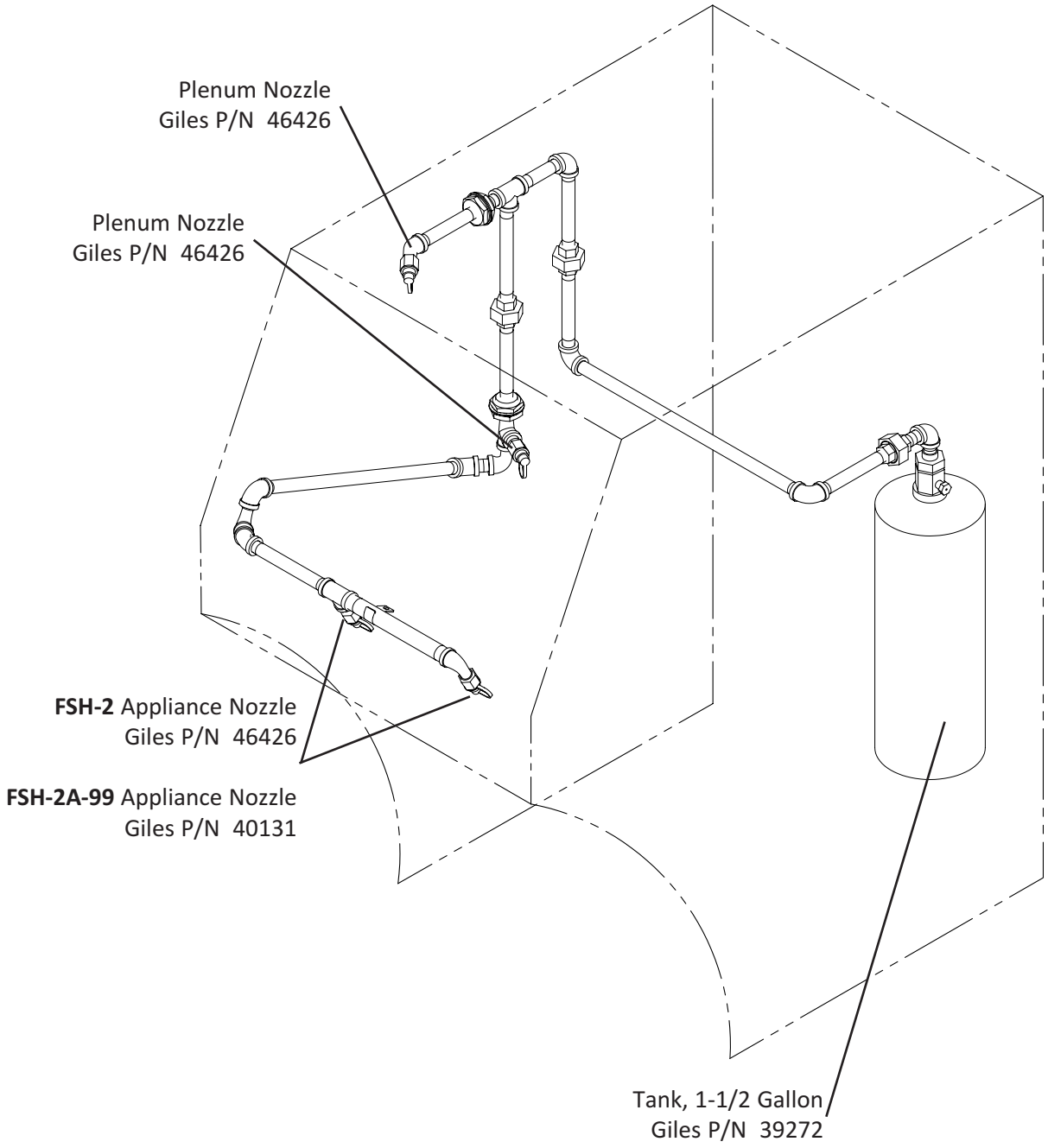
Field set-up by an Ansul agent includes, but may not be limited to, installation of proper fusible detector links and cabling, filling provided tank with wet chemical suppressant and installing, installation of remote manual activation station, installing a compressed gas discharge cartridge, testing, certifying and arming the system. ***Parts and labor necessary for system field set-up is the responsibility of the customer and is not included with hood purchase***.

2.05.1 Detector Links & Gas Cartridge Location



2.05.2 Fire Extinguisher Nozzles & Tank Location

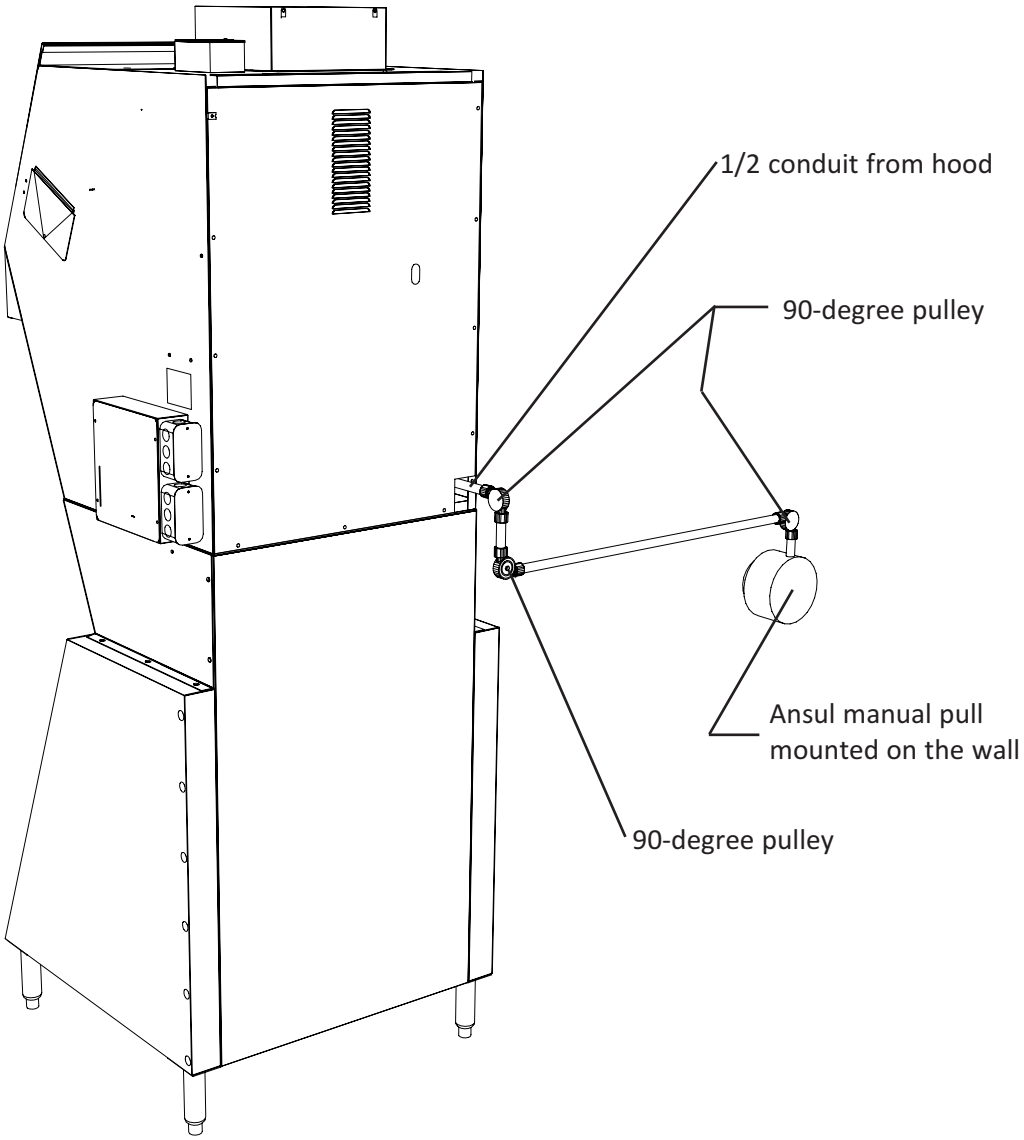
All nozzles are factory-installed and aligned in the proper operating position. ***DO NOT MOVE OR ADJUST.***



2.05.3 Remote Manual Activation Station (Customer Supplied)

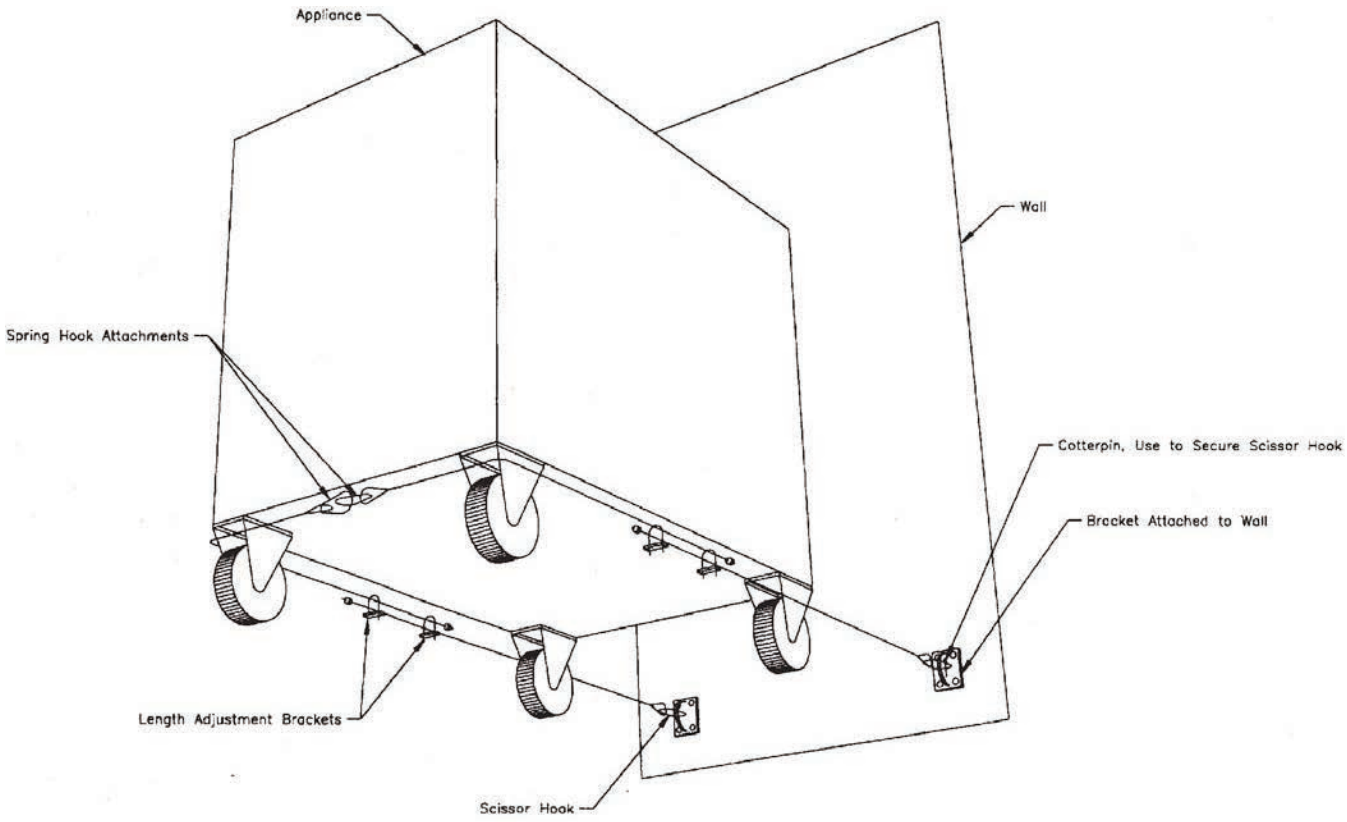
Hood requires use of the ANSUL® R-102 Standard for a Manual Activation System. The manual pull station must be conspicuously mounted near a path of egress and connected to the hood. Manual activation system is used to activate the fire extinguishing system from a remote location. It is to be supplied and installed by an authorized Ansul agent **(customer supplied)**.

The following illustration depicts a typical installation. This basic configuration allows the hood to be moved away from the wall for cleaning and servicing without removing the manual pull from the wall, or accidently causing the system to discharge.



2.06 Restraining Device (Customer Supplied)

The fryer placed under this hood must be secured so that it can not move from under the Hood. The following diagram shows an example of a typical suitable restraining device. It must be appropriate for the appliance being used and will vary depending on the make and model of Fryer. ***Restraining device is <u>not</u> supplied with the hood.***

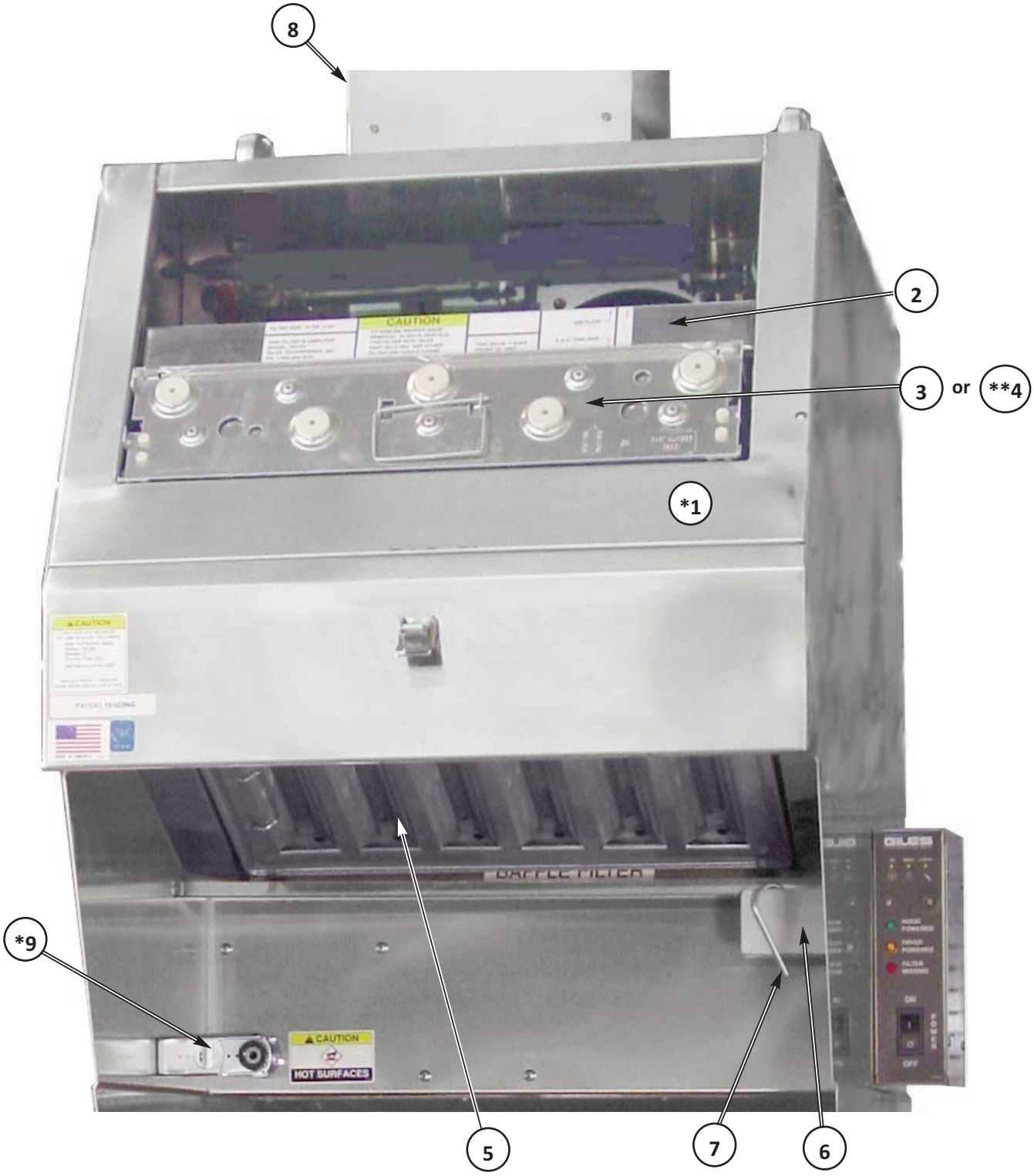


Note: Be sure to maintain minimum and maximum clearances (see *Section 2.04.2 or 2.04.3* after the Restraining Device is installed.

3. Overview

The following provides a brief overview of the components, functions, and accessories of the ***Free Standing Ventless Hood, Model FSH-2, FSH-2A-99***. Please review this section carefully before proceeding further.

3.01 Filter Chamber & Hood Front



* Not Shown

** CE Listed Models must use HEPA Filter

3.01 Filter Chamber & Hood Front

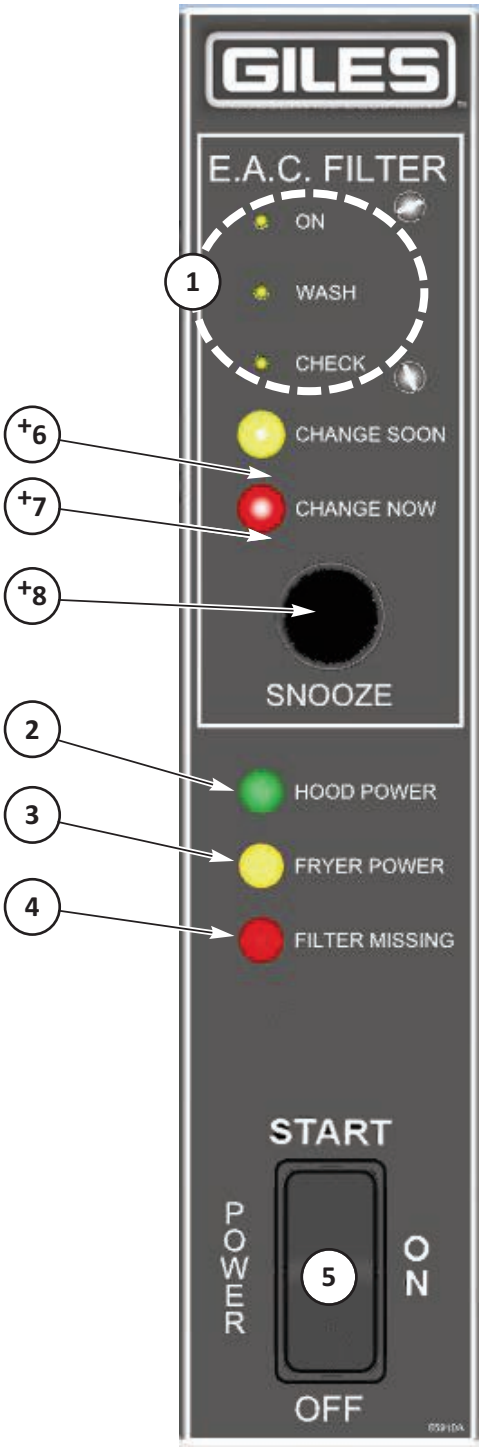
Item	Description	Function
*1	Filter Access Cover	Provides access to the filter chamber and plenum area. Hood will not operate unless this cover is in place and properly latched.
2	Charcoal Filter	Helps to control undesirable aromas generated during cooking. It should be replaced monthly (approx). ***NEVER attempt to clean filter*.** Keep a spare filter *(Giles #30248)* for quick exchange to avoid lost time! ***NO FILTER COMPLETELY ELIMINATES COOKING ODOR.***
3	Electronic Air Cleaner (E.A.C.) Collection Cell	The E.A.C. system is an electronic air cleaner that electrostatically captures grease-laden vapor and smoke particulate generated by cooking. **Power must be turned OFF before removing the EAC Cell for cleaning. To maintain best air cleaning performance, the cell must be cleaned daily. Fryer under hood will be disabled if EAC Cell is missing, excessively dirty, or experiencing other faults.**
**4	HEPA Filter **(CE or Optional)**	*CE listed models or as option*: EAC system is replaced by a high-efficiency *HEPA Filter*. The filter ***CANNOT*** be cleaned and must be replaced periodically to maintain acceptable performance. **Fryer under hood will be disabled if the HEPA Filter is missing or becomes clogged. Location of a HEPA Filter is reverse of what is shown ... charcoal filter will be below the HEPA filter.**
5	Baffle Filter	First stage of the air cleaning system. Easily removed for daily cleaning. **To prevent contact with electrical parts and avoid electrical shock, *DO NOT* remove the baffle filter while hood and fryer are powered.**
6	Grease Drip Cup	Captures and contains grease condensate generated by the baffle filter. It should be cleaned daily, or as needed.
7	Grease Drip Cup Safety Pin	Secures the grease drip cup in place to prevent it from unintentionally falling from the holding bracket.
8	Discharge Air Diverter Stack	Diverts hood exhaust discharge air to the sides and rear. Allows for operation of the unit in spaces with lower ceiling heights.
9	Appliance Detector Link	Detects fire in the fryer and trips the fire extinguishing system. Be careful not to hit or bump this link. Doing so may cause the fire extinguishing system to inadvertently discharge.

*** Not Shown**

**** CE Listed Models require HEPA Filter**

3.02 Control Box w/Timer

NOTE: Timer feature is NOT included on FSH-2 Models.



*Not present on HEPA Filter Models

3.02 Control Box w/Timer

Item	Description	Function
1	E.A.C. Filter Status Indicators **[ON]** **[WASH]** **[CHECK]**	LED light cluster indicates status of the Electronic Air Cleaner (E.A.C.) system. **[ON] -** Turns **ON** when hood is powered-up. Indicates that the E.A.C. system is powered and functioning normally to clean the air. This is the only light **ON** when operating normally. **[WASH] -** Indicates excessive grease film build-up on collector fins (dirty), collector cell is missing, poor connection, missing ionizer wires, etc. Approximately 2 minutes after this light turns **ON**, an intermittent (beeping) alarm tone sounds and power to fryer is shutdown. ***IMPORTANT! Do not rely on this indicator as a signal for routine cleaning; cell must be cleaned daily to maintain peak performance and extend useful life of charcoal filters.*** **[CHECK] -** Indicates that collector cell has stopped operating properly; is damaged & shorted to ground, fins are shorted due to excessive moisture, etc. No alarm sounds & the fryer remains powered, but electronic air cleaning is not functioning. ***Discontinue operation & inspect.***
2	**HOOD POWER**	Indicates that hood is powered and running.
3	**FRYER POWER**	Indicates that power is being supplied to the fryer under the hood.
4	**FILTER MISSING**	Indicates that baffle and/or charcoal filter is missing or improperly installed.
5	Power Switch ***PUSH-TO-START***	Turns hood power **ON** and **OFF**. When hood fan is running sufficiently to provide capture, power is supplied to the fryer. To start hood, press and momentarily hold the top ***START*** portion of the switch; release when fan starts and switch springs back to remain **ON**. Hood must be restarted in this manner after any lost of power.
*6	**CHANGE SOON**	Illuminates when the EAC Cleaning Timer enters **[WARNING]** mode. The cell needs to be cleaned (or exchanged with a clean standby) within the next ***24 hours***.
*7	**CHANGE NOW**	Illuminates when the EAC Cleaning Timer enters **[TIMEOUT]** mode. Allowed time between cleanings (or exchange) has expired. The cell must immediately be cleaned (or exchanged). An audible alarm sounds and both hood and fryer are locked out, preventing continued operation until the appropriate activities are performed.
*8	**SNOOZE**	Pressing this button delays **[TIMEOUT]** mode for ***2 hours***, thus allowing the hood and fryer to continue operating to finish a cook cycle or meet customer demand. Two (2) snooze cycles are allowed, then shutdown proceeds.

*** Not present on HEPA Filter Models**

3.03 Items Included w/Hood

Part	Description/Part Number	Function
	Baffle Filter **P/N 42300**	Removes large particle contaminant from the air stream.
	EAC Filter P/N 20520 ***Replaced by P/N 41254 HEPA Filter for CE listed models or for Model with HEPA Option***	Removes smoke and fine particle contaminant from the air stream.
	Charcoal Filter **P/N 30248**	Helps to control cooking odors in the recirculated air.

3.03 Items Included w/Hood

Part	Description/Part Number	Function
	***(1) Sample Can*** Foaming Crystal Cleaner/Degreaser **P/N 41510** ***12-count Case*** **NSF approved**	Foaming spray degreaser for cleaning EAC collector cell. Sample can of *GILES* recommended collector cell cleaner. It is readily available from Giles and on-line distributors, as well as many nationwide retail outlets.

4. Operation

This section explains Hood operation and filter maintenance procedures.
The Control Box depicted in this Manual shows elements of the E.A.C. Cleaning Timer feature. If you purchased the FSH-2 Hood, these controls WILL NOT be present, as that particular model is not equipped with this function.

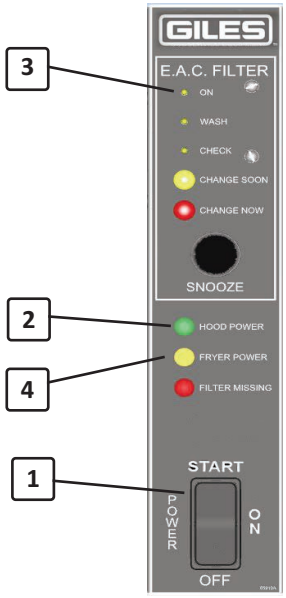
4.01 Hood Operation

This section describes starting the ventless hood. Be sure that all filters are in place and properly seated before proceeding. ***Hood will not start unless the Filter Access Cover is in position and secured properly***.

To Start the Hood:

1. Press and momentarily hold the top **[START]** portion of the ***Power Switch*** ① until the hood blower starts running. Release and switch will spring back to remain **ON**.
2. The green **HOOD POWER** light ② and the small **EAC [ON]** light ③ should turn **ON**. A constant tone alarm may sound briefly and stop as the fan reaches full speed.
3. At that time, the amber **FRYER POWERED** light ④ should turn **ON** to indicate that power is now being supplied to the fryer and it is ready for use.

Should this sequence not occur or should any other lights turn **ON, see the *Section 7, Troubleshooting*** for possible cause and corrective action.



To Shutdown the Hood:

1. Press the bottom **[OFF]** portion of the ***Power Switch*** ①.
2. Blower stops and all indicator lights turn **OFF**.
3. Power to the fryer is shutdown.

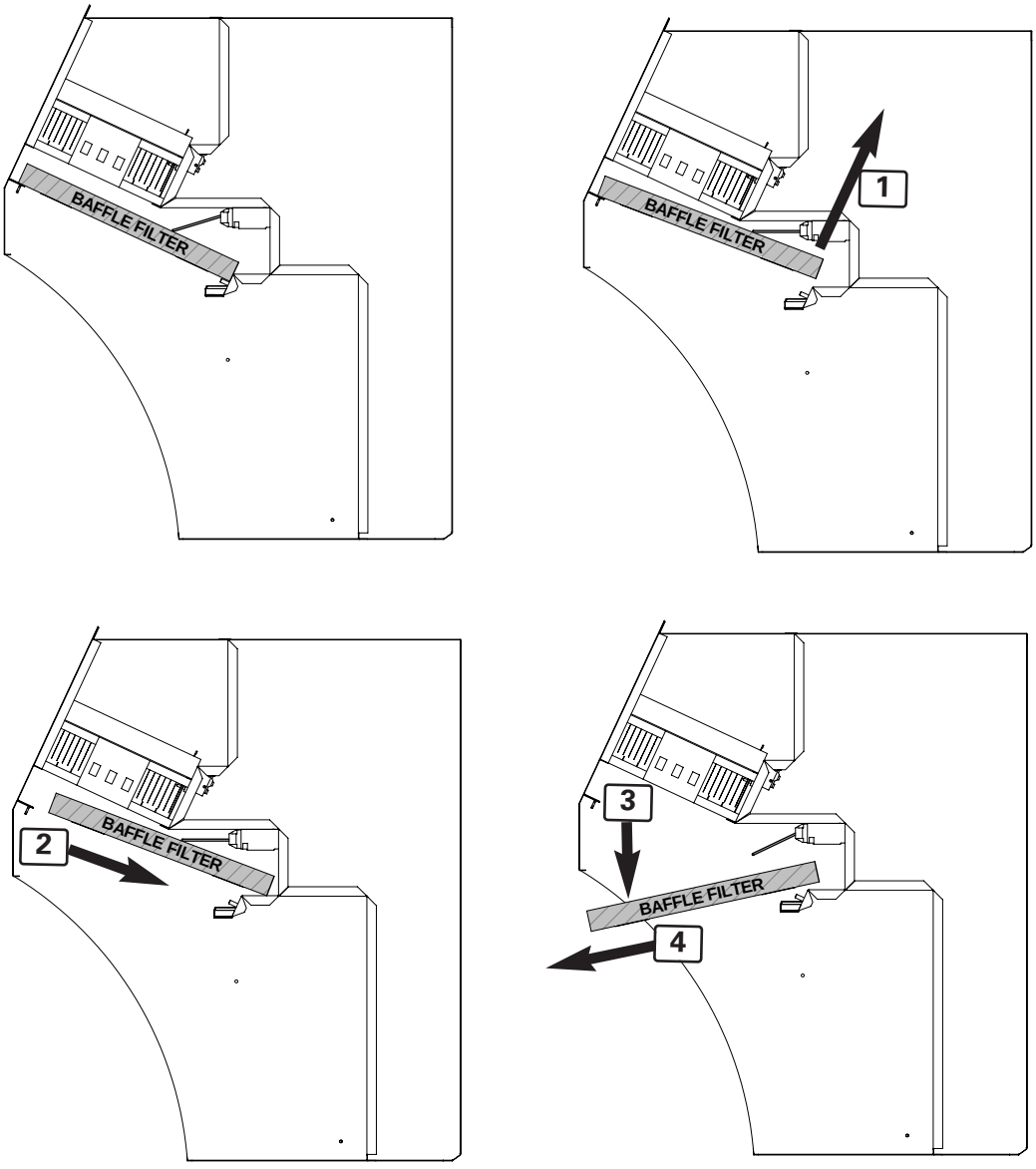
4.02 Filter System, Filter Maintenance & Filter Alarms

4.02.1 Ventless Hood Filter Table

Filter	When to Clean/Replace	How to Remove	How to Clean	How to Install
Baffle Filter	Clean daily	Section 4.02.2	Section 5.01.1	Section 4.02.3
E.A.C. Collector Cell	Clean daily	Section 4.02.4	Section 5.01.2	Section 4.02.5
HEPA Filter **(Optional)**	Change as needed ***DO NOT CLEAN***	Section 4.02.4	***DO NOT ATTEMPT TO CLEAN...REPLACE ONLY!*** Section 5.01.4	Section 4.02.5
Charcoal Filter	Replace every 30 to 40 days (approx),	Section 4.02.6	***DO NOT ATTEMPT TO CLEAN...REPLACE ONLY!*** Section 5.01.3	Section 4.02.6

4.02.2 Baffle Filter Removal

The Baffle Filter has sharp exposed edges, which may cause cuts. Use due caution when handling and cleaning. Heavy duty rubber gloves are advised.



Turn OFF hood power ...

①Lift rear edge of filter enough to clear the edge of ***rear support channel***.

②Slide filter toward the back of the hood, allowing front edge to slide free of ***front support ledge***.

③Drop front edge down to clear ***Front Header Panel***.

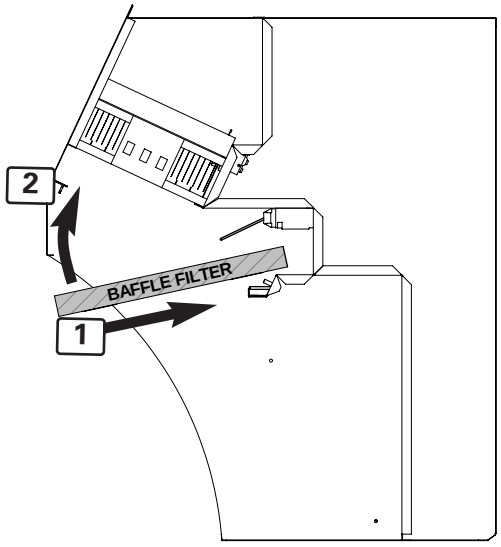
④Remove filter from hood.

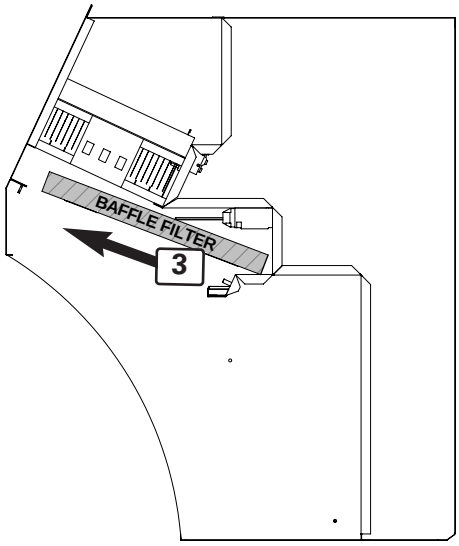
4.02.3 Baffle Filter Installation

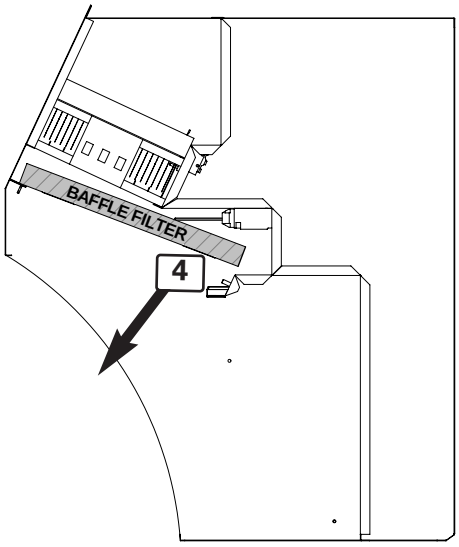
WARNING

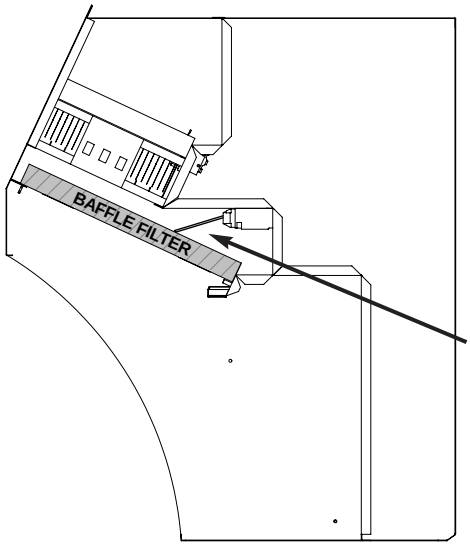
Sharp edges
Watch your fingers

The Baffle Filter has sharp exposed edges, which may cause cuts. Use due caution when handling and cleaning. Heavy duty rubber gloves are advised.









Switch arm must be actuated by the Baffle Filter when installed, as shown

① Insert back edge of filter into hood ***(to the back wall)***.

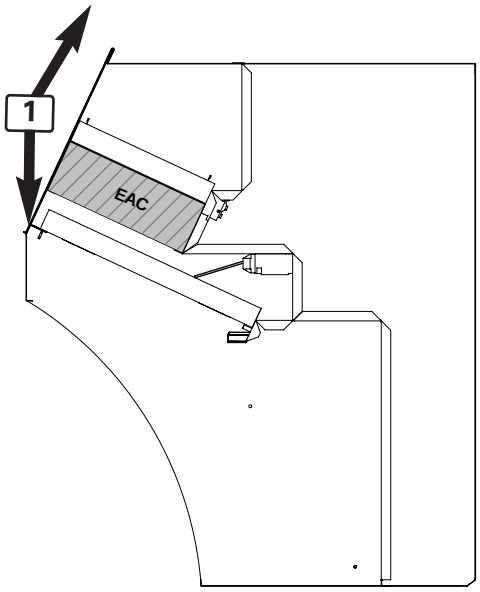
② Lift front edge up behind ***Front Header Panel***.

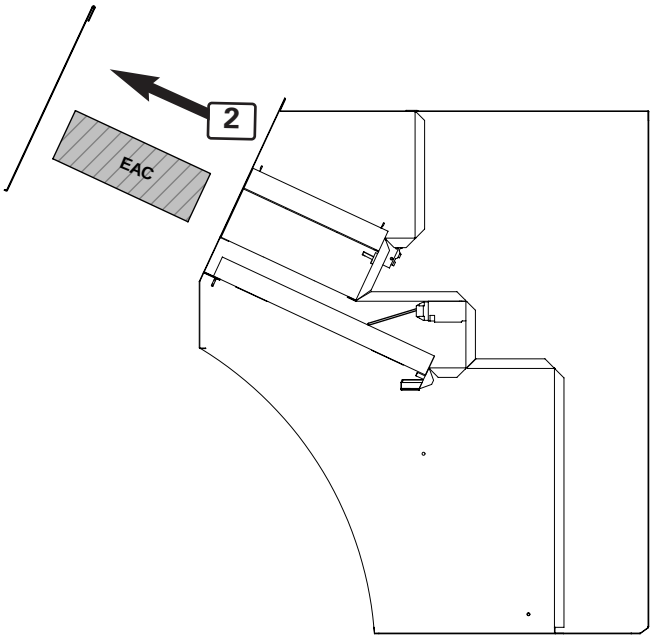
③ Pull filter forward until front edge rests on ***support ledge*** inside ***front panel***.

④ Allow back edge to drop down and rest on ***studs in the rear channel***.

IMPORTANT! ***As shown above, the filter body must engage and actuate the curved actuator lever located at the rear of hood, on the right side. Filter must be installed so that the slats/slots are vertical, NOT horizontal.***

4.02.4 E.A.C. Collector Cell / HEPA Filter Removal

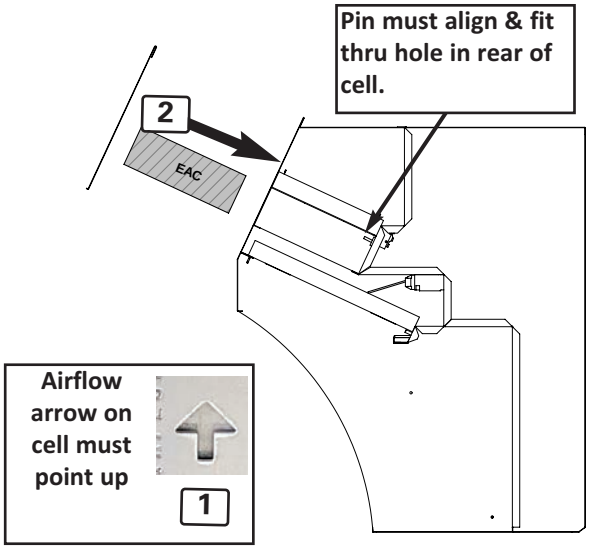




① Unlatch ***Access Cover*** and lift off.

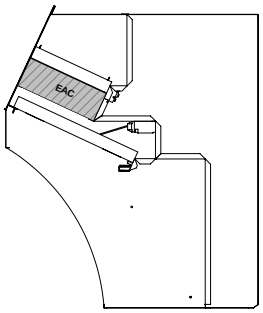
② Grasp ***E.A.C. Collector Cell / HEPA Filter*** and pull straight out, at a slightly upward angle.

4.02.5 E.A.C. Collector Cell / HEPA Filter Installation



① Ensure the airflow indicator arrow points **[UP]** & the cell's ***Contact Pad*** faces to the ***right side***.

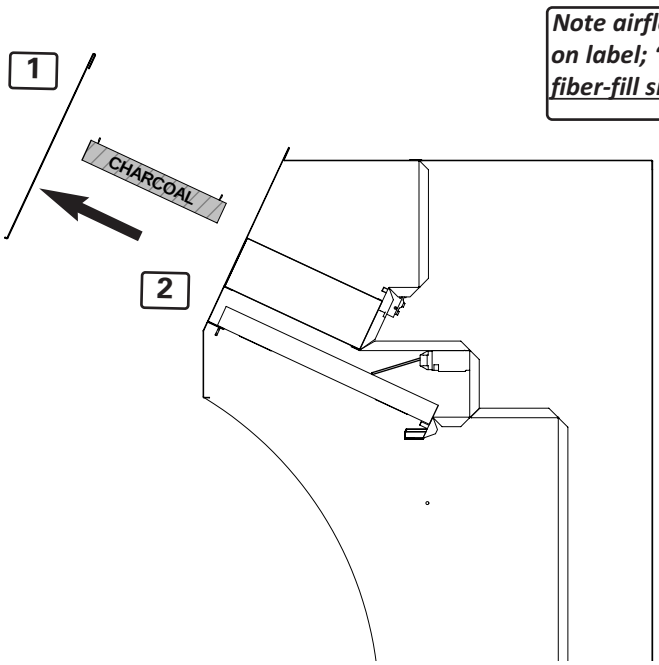
② Align cell (or filter) in ***guides*** and slide into hood. If installed properly, cell is flush with hood front. ***If not, cell is not installed incorrectly***.



③ Replace ***Access Cover*** and latch.

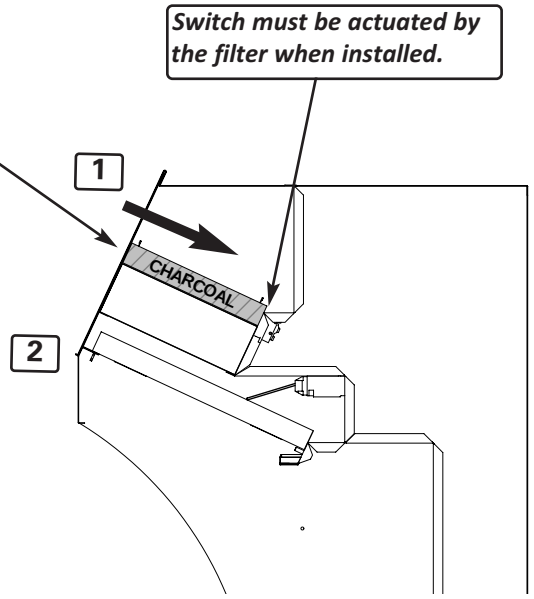
NOTE: HEPA Filter models ONLY - charcoal filter is located prior to the HEPA, such that air passes through it first before the HEPA filter. When installed, the filter must properly engage a proofing switch located on the back wall.

4.02.6 Charcoal Filter Removal & Installation



① Unlatch Access Cover and lift off.

② Grasp charcoal filter and pull straight out, at an slight upward angle.



① Align in guide channels, slide straight into hood. Filter must fit flush with front. ***Blue fiber-fill side must face upward.***

② Replace and latch cover.

NOTE: HEPA Filter models ONLY - charcoal filter is located prior to the HEPA, such that air passes through it first before the HEPA filter. When installed, the filter must properly engage a proofing switch located on the back wall.

4.03 Hood Filter Alarms

4.03.1 Baffle or Charcoal [or HEPA] Filter Missing

If either, or all, of the ***baffle, charcoal, HEPA*** filters is not in place, or not positioned correctly, the red **[FILTER MISSING]** light will turn **ON.** Power to the fryer under the hood is **shutdown** until the condition is corrected; the amber **[FRYER POWER]** light turns **OFF**. No audible alarm will sound.

- Hood fan continues running.
- Check to confirm that all filters are in place. See ***Sections 4.02.3 - 4.02.5 - 4.02.6, Filter Installations.***
- Remove and reinstall filters to ensure that they are seated properly in the guides and are pushed fully into the filter compartment so that the cover fits properly. Each filter must also actuate a proofing switch. Charcoal and HEPA filter switches are in the rear wall. Baffle filter switch is a lever switch on the right side under the hood.

4.03.2 Baffle or Charcoal [or HEPA] Filter Clogged

If any filter becomes clogged, or there are other conditions that obstruct airflow, causing it to fall below the minimum required to provide effective capture of cooking vapors**,** power to the fryer under hood is shutdown, the amber **[FRYER POWER]** light turns **OFF** and a constant (steady) tone audible alarm sounds until corrective action is taken.

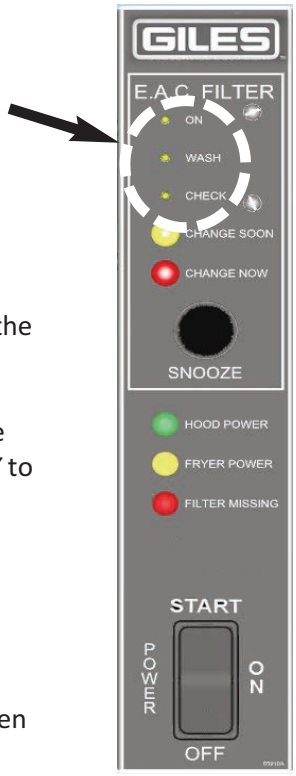
- Hood fan continues running.
- Clean the baffle filter, see **Section *4.04.1, Baffle Filter Cleaning*.**
- Replace charcoal or HEPA filter with fresh new, see **Section *4.03.5, Charcoal Filter Maintenance*.**
- Inspect Hood plenum to ensure that no other obstructions exist.
- Check the hood exhaust outlet and be sure that nothing is obstructing it or the surrounding area.

NOTE: There is no indicator light for clogged filter, only an audible alarm tone.

4.03.3 E.A.C. Filter Status & Alarm

Three LED lights on the control panel indicate the operational status of the *Electronic Air Cleaner (E.A.C.)* system.

[ON] Indicates that the E.A.C. cell is installed, powered and operating. It is th only light **ON** when the system is operating normally.



[WASH] This light turns **ON** to indicate:

- Filter cell is not installed or is mis-aligned.
- Collection fins contain excessive amount of captured grease residue.
- There is poor contact the contact plate inside hood.
- Too many Ionizer wires are missing.

When the **[WASH]** light is **ON**, an alarm condition exists and air cleaner is not functioning. After approximately two (2) minutes, an intermittent (beeping) alarm tone begins sounding and shortly thereafter, power to the fryer under the hood is shutdown; the **[FRYER POWER]** light turns **OFF**.

[WASH} light is ***NOT*** intented to be used as a signal for routine cleaning of the cell, ***DO NOT use as such***. Typically, the collection cell must be cleaned ***DAILY*** to ensure optimum performance. See ***Section 5.01.2, EAC Filter Cell Cleaning.***

[CHECK] This light turns **ON** to indicate:

- Ionizer wire broken and touching cell frame.
- Cell is damaged and has shorted to ground.
- Collection fins are shorted because of excessive moisture.

When **[CHECK]** light is **ON,** system is no longer functioning to clean the air, even though the hood continues to run and fryer remains powered. ***DO NOT CONTINUE TO USE FRYER WHEN THIS CONDITION EXIST!***

The following actions may clear the alarm condition:

1. Turn **OFF** hood ***Power Switch***.
2. Remove the E.A.C. cell and clean as described in ***Section 5.01.2***.
3. Inspect the cell for broken or missing ionizer wires, bent fins, or other damage. Ionizer wires are replaceable (when ordering replacements, note length ... available in ***16" or 20"***). Bent fins may be gently straightened by hand, such that no fin is touching an adjacent fin. A cell with excessive damage (broken frame, badly bent frame, broken insulators, etc) must be replaced.
4. Inspect the E.A.C. contact plate inside hood. Clean grease accumulation away with a mild degreasing cleaner and dry thoroughly.
5. Replace filter cell *(**Section 4.02.5**)* and restart Hood ***(Section 4.01)***. If the condition persist, contact a qualified service technician.

   If none of the LED lights turn **ON** when hood is started, the power supply may be faulty ... service is required.

4.04 E.A.C. Filter Cell Cleaning Timer [FSH-2A-99; E.A.C. MODEL ONLY]

The Model ***FSH-2A-99 Hood*** is equipped with an ***E.A.C. Filter Cell Cleaning Timer***. The feature is intended to help user maintain a proper cleaning routine for the sustainable ***E.A.C. Collector Cell***. Timely cleaning is essential for ensuring that the hood continues to effectively remove grease-laden cooking vapors from the recirculated air.

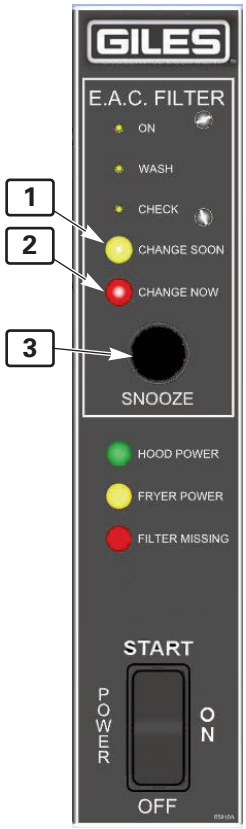
After a preset period, the timer signals that the collector cell should to be cleaned *(or if available, exchanged with a clean standby cell)*. If cleaning *(exchange)* is not completed within the alloted timeframe, timeout occurs and power to the fryer is ***shutdown*** and remains locked-out until cleaning is performed. After necessary filter maintenance is performed, timer automatically resets and normal operation is restored ... a fresh countdown begins.

Should a shutdown occur during a peak demand period or while cooking is in progress, a **SNOOZE** feature is provided to temporarily postpone shutdown and continue operation for a short period.

Timer indicators and **[SNOOZE]** control button are located on the hood control box panel. ***Not included on FSH-2 model hood***.

Timer Operation:

NOTE: Does not apply to unit with HEPA Filter.



① **CHANGE SOON**

The amber indicator turns **ON** when timer enters **[WARNING]** mode. If the collector cell is cleaned *(exchanged)* within the next ***24 hours***, timer automatically resets and begins a new countdown. Normal operation continues without interruption.

② **CHANGE NOW**

The red indicator turns **ON** when timer enters **[TIMEOUT]** mode, signaling that alloted time between cleanings has expired. An audible alarm sounds, and fryer power is ***shutdown***. Power is ***locked out*** until cell cleaning *(exchange)* is completed. The Hood **[POWER]** and **[FRYER POWER]** lights will turn **OFF**.

Placing ***Power Switch*** in the **[OFF]** position silences the alarm. Returning switch to **[ON]** does not restart the hood unless timer is reset by cleaning the cell.

③ **SNOOZE Button**

In the event that **[TIMEOUT]** occurs during a period of high customer demand or while a cooking cycle is in progress, the **SNOOZE** feature may be used to back out of **[TIMEOUT]** mode. Pressing the **[SNOOZE]** button temporarily places timer back into **[WARNING]** mode for ***two (2) hours,*** allowing continued operation.

Two (2) snooze periods can be used. During the second snooze period, the **[CHANGE SOON]** light flashes, indicating final snooze period. After a second period expires, fryer is once again locked-out until the E.A.C. cell is cleaned *(exchanged)*.

NOTE: [SNOOZE] Button is only effective if the timer is in [TIMEOUT] mode and the red [CHANGE NOW] light is ON.

NOTES:

5. Cleaning & Maintenance

This section explains the various cleaning and maintenance procedures needed to keep the Hood operating safely and at peak performance.

⚠ CAUTION

- •• ***DO NOT*** steam clean Hood or spray with water.
- •• ***DO NOT*** use products containing chlorine or caustic chemicals.
- •• ***DO NOT*** use abrasive products, steel wool or scouring pads.

Before performing any cleaning activities, disconnect Hood and Appliance power at the main breaker.

5.01 Filter Cleaning & Maintenance

The following sections describe the necessary procedures for cleaning and maintaining the Hood filters. Conscientious adherence to these procedures is essential for maintaining optimum and satisfactory performance.

5.01.1 Baffle Filter Cleaning

Stainless steel baffle filter is fabricated from thin guage metal that has potential to present sharp edges. Exercise due care when handling and cleaning the filter to avoid injury. ***It is recommended that heavy-duty rubber gloves be worn.***

Generally, the grease baffle filter should be cleaned daily. Remove and clean in sink with a mild, bio-degradable, degreasing cleaner ***(Giles recommends Simple Green® Crystal Foaming Spray Cleaner)***. Rinse and dry thoroughly. Reinstall dry filter in the unit. Baffle filter may be washed in a dishwasher.

Ensure that Filters are completely dry before reinstalling in Hood. NEVER PLACE WET FILTER INTO THE HOOD!

5.01.2 E.A.C. Filter Cell Cleaning

The E.A.C. collector cell contains parts fabricated from thin gauge sheet metal that can potentially have sharp edges, which may cause cuts if not handled properly. To avoid injury, exercise due care when handling and/or cleaning the cell. ***It is recommended that heavy-duty rubber gloves be worn as a precaution.***

The E.A.C. collector cell is sustainable and renewable; it should last for years if cleaned and handled properly. To maintain peak performance, It ***MUST BE CLEANED DAILY***; not doing so can lead to an interruption of hood/fryer operation, premature failure of the electronic system, or reduced life of consumable charcoal filters. Follow the procedures detailed below for effective cleaning.

IMPORTANT: The cell CANNOT withstand washing in commercial dishwashing equipment, and some commercial cleaners/detergents will cause oxidation, or create a layer of contamination, on collection fins that can lead to system malfunction and result in interruption of power to the fryer being served by the ventless hood.

Continued on Next Page

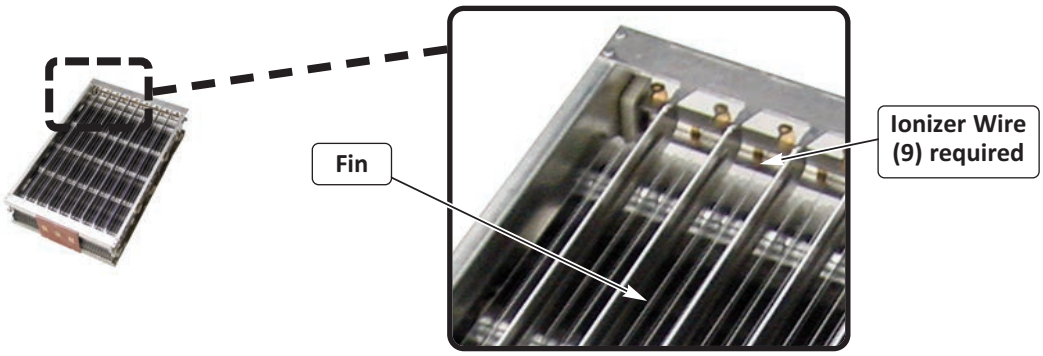
5.01.2 E.A.C. Filter Cell Cleaning - continued

Two (2) different cleaning methods are endorsed by *GILES Food Service,* as follows.

- Preferred ***spray foam method*** utilizes ***Simple Green® Crystal Foaming Spray Cleaner/Degreaser.*** A readily available foaming aerosol that is an exceptionally effective cleaner, as well as being safe for use on aluminum (**NSF approved,** food-grade, non-toxic, and biodegradable). Cleaning the E.A.C. cell is quick and easy with this convenient ready-to-use cleaner. A complimentary sample is supplied with new equipment. It can be ordered from *Giles,* ***item #41510 (12-count case)*** or is also available from various on-line sources and retail outlets. When used as directed, a case of cleaner should approximately be a 4 to 5 week supply, depending on equipment model.
- Alternative ***soaking method*** uses a diluted solution of ***Simple Green® Pro-HD*** and water**.** Although not as convenient as the spray method, requiring more planning and time, the procedure has proven to be very satisfactory for cleaning E.A.C. collector cells for many years. This product has the same characteristics of the spray product, but requires mixing with water before use ... ***dilution factor is 1:12***, e.g. mix 1/2 gal. of cleaner with 6 gals. of water.

With proper care, cleaning, and handling, the E.A.C. collector cell is sustainable, designed to provide years of service.

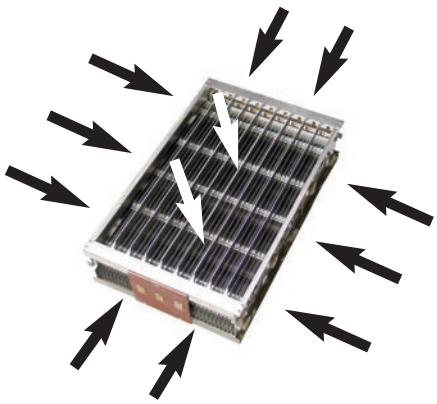
CAUTION **While handling and cleaning the cell, take care not to bend the collection fins or break the fine ionizer wires that are stretched across the face of the cell. Bent fins and broken/missing wires can prevent the electronic collection system from performing properly. System faults and alarms will occur that can potentially interrupt operation.**



Damage from abusive handling and/or improper maintenance may not be covered by the factory warranty.

A. Preferred Cleaning Method - Spray Cleaner

1. Remove collector cell from hood (see ***Section 4.02.4***) and lay on a drain board, or other suitable surface.
2. Hold can at the appropriate distance and spray ***Simple Green® Crystal Foaming Degreaser*** onto the E.A.C. cell, completely covering all surfaces ... collection fins, contact plate, brass fittings and inside corners of frame. Turn cell over and apply to the other side in like manner, ensuring that both sides of all collector fins are completely covered with the foam.
3. Allow foam to soak for ***5 to 10 minutes***. In cases of extreme build-up, a second application may be required after rinsing.



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5.01.2 E.A.C. Filter Cell Cleaning - continued

4. Carefully move cell to sink and rinse thoroughly, using hot water spray. ***Rinse ONLY, DO NOT scrub with brushes.***

5. Stand cell upright on end on a drain board, w/contact plate up ... allow it to drain and air dry overnight. The cell must be completely dry before being replaced in hood unit. If desired, a small electric fan can be used to blow across the cell to help expedite drying.

6. Before replacing cell in the hood, inspect for broken/missing ionizer wires and bent fins. Broken or missing wires need to be replaced promptly. Bent fins may be straightened by hand so that no fins are touching adjacent fins.

IMPORTANT! ONLY Simple Green® Crystal Foaming Cleaner/Degreaser is recommended by GILES for cleaning the E.A.C. cell in this manner. Other spray cleaners have not been evaluated and may contain corrosive ingredients that may damage the metal, causing cell to fail or not perform properly. Such damages are not covered by the factory warranty.

B. Alternate Cleaning Method - Soaking

The factory-recommended product to use for cleaning the E.A.C. cell in this manner is ***Simple Green® Pro-HD.*** It is a readily available, biodegradable, non-toxic degreasing cleaner that is safe for use on aluminum. It performs well to clean the cell when diluted at a ***1:12 ratio*** *(e.g. 1/2 gal. cleaner to 6 gals ambient water)*.

DO NOT use DISHWASHING DETERGENTS or CORROSIVE CLEANERS as they can contain ingredients that may damage the metal cell components, causing failure or unsatisfactory performance. Such damages are not covered by the factory warranty.

1. Cleaning with this method requires a suitable, leakproof container, such as a tall trash bin, recycle bin, plastic tote, etc. that is large enough to hold the cell along with enough degreasing solution to completely cover and soak it, either standing on end, on edge, or lying flat.

2. Fill the container with fresh water to a level that will cover the cell. Measure water as filling and note the quantity. Add ***Simple Green® Pro-HD*** in the ***ratio of 1:12*** to the water ***(e.g. 8 gals of water would require .67 gals (2 qts+21 ozs) degreaser***. Stir solution to mix.

3. After preparing a quantity of degreaser solution sufficient to completely cover the cell in the soaking container, hold cell by the contact plate**,** frame, or handle and carefully place it into the solution. Be sure that it is fully submerged.

4. Allow cell to soak for approximately ***20 minutes (no more than 30 mins)***, then lift it slightly and briefly agitate it in the solution to help dislodge grease residue.

5. Carefully remove cell from container and follow ***Steps 4 thru 6*** as detailed in ***Method (A)***.

NOTE:
The degreasing solution may be used multiple times ... cover container with a lid or other suitable cover when not in use to prevent contamination. Discard and replenish solution when a greasy film seems to remain visible, floating on the liquid. When soaking, always ensure that solution completely covers the cell ... add some water if needed.

5.01.3 Charcoal Filter Maintenance

CAUTION

Charcoal Filter is a single-use, disposable filter. NEVER attempt to clean and reuse; doing so can cause damage to the unit.

Charcoal filter is a consumable item which must be replaced periodically (see ***Sections 4.02.6, Removal & 4.02.7, Installation***). It ***CANNOT*** be cleaned and reused. Typical replacement cycle is every **30 to 40 days**, depending on usage.

Use *GILES* replacement ***Item No. 30248***. Write the replacement date on new filter.

IMPORTANT: Failure to use Giles OEM parts and OEM replacement filters may void the factory warranty.

5.01.4 HEPA Filter Maintenance [FSH-2A-99; HEPA MODEL ONLY]

The ***FSH-2A-99 Hood*** is available equipped with a replaceable ***HEPA Filter*** as an alternative to the electronic air cleaning (E.A.C.) system with sustainable collector cell.

The ***HEPA Filter*** is a consumable item which must be replaced periodically (see ***Sections 4.02.5, Removal & 4.02.5, Installation***). ***It CANNOT be cleaned and reused.*** Typical replacement cycle can vary significantly depending on the cooking activities (quantity and types of food cooked each operating day). A **HEPA** filter should probably have a useful service life of approximately **3 to 4 months**, depending on usage.

If a **HEPA** filter has been in service for a period of time and a clogged filter alarm condition occurs ***(see Section 4.03.2)***, first replace the charcoal filter. If the alarm clears, that is an indication that the **HEPA** filter if still serviceable. Should the alarm ***NOT*** clear with the new charcoal filter, the filter probably needs to be replace. ***DO NOT attempt to clean and reuse the HEPA filter.***

Use *GILES* replacement ***Item No. 41254***. Write the replacement date on new filter.

IMPORTANT: Failure to use Giles OEM parts and OEM replacement filters may void the factory warranty.

5.02 General Hood Cleaning

Following sections describe procedures for general Hood cleaning.

CAUTION

DO NOT wash down Hood with water from a spray hose.
DO NOT steam clean or use any type pressure washing equipment.
DO NOT use products containing chlorine or other caustic chemicals.
DO NOT use abrasive products, steel wool or scouring pads.

The factory-recommended product to use for general cleaning/degreasing of this equipment is ***Simple Green® Crystal Foaming Spray Cleaner/Degreaser***, a readily available, biodegradable, non-toxic effective degreasing cleaner.

Continued on Next Page

Cleaning & Maintenance

5.02.1 Weekly Hood Cleaning

Exterior: Use a good quality stainless steel cleaner to clean all external stainless steel surfaces.

Inside Skirt Section: Use a mild, non-toxic, degreasing cleaner (see recommendation above) to clean the inside surfaces of the hood skirt section directly above the appliance

Weekly Cleaning should also include cleaning the baffle filter and E.A.C. collector cell as explained in ***Section 5.01***.

5.02.2 Quarterly Hood Cleaning

To maintain effectiveness and performance, the hood should be deep cleaned, at a minimum, every 3 months.

1. Disconnect power to the unit, preferably at the circuit breaker.
2. Unplug and remove cooking appliance from under Hood.
3. Remove all filters.
4. Use a soft cloth, or sponge, and a mild bio-degradable degreasing cleaner ***(Simple Green® Crystal Foaming Spray Cleaner)*** to clean inside the entire hood plenum, removing grease film accumulation from surfaces.
5. Inspect the hood fan and, if possible, clean any grease build-up from the blades using degreaser and a small brush (use cleaner sparingly). **NOTE: When restarting hood after cleaning, hold a cardboard box, or other suitable item, over the exhaust outlet to catch residue/cleaner which may be discharged from the blower.**

5. Thoroughly clean the under-hood area and all exterior surfaces with mild degreaser or a good quality stainless steel cleaner.
6. Allow hood to thoroughly dry or wipe dry with clean dry cloth.
7. Clean baffle filter and E.A.C. collector cell see ***Sections 5.01.*** If necessary, obtain a fresh new charcoal filter **...** reinstall all filters.
8. Restore power and reposition the cooking appliance.

5.03 Hood Maintenance

This section explains periodic maintenance procedures for the ventless hood system. Adhering of these procedures will help to maintain the unit's continuing performance.

A **Maintenance and Service Log** is provided in this manual, see ***Section 5.05***.

Continued on Next Page

5.03.1 Monthly Hood Interlock Inspection (Can Generally be Performed by User)

Hood design incorporates various interlock switches to ensure that the unit will shutdown if certain conditions exist which are not consistent with safe and effective operation. The interlocks should be inspected and tested ***MONTHLY*** as described below. Use the **Maintenance & Service Log** to record completion of testing. If problems are detected, contact *GILES* or an authorized service provider.

1. **Door Interlock Test:** Start hood. With hood running, unlatch and slightly lift the bottom lip of the filter access cover to confirm that hood powers **OFF** when cover is lifted and the fryer under the hood turns **OFF**, or cannot be turned **ON**.b

2. **Baffle Filter Test:** Remove baffle filter then turn **ON** hood power. Verify that the red **[FILTER MISSING]** light turns **ON** and the **[FRYER POWER]** light turns **OFF**. Check to ensure that fryer under hood will not turn **ON**. Reinstall the baffle filter. See ***Sections 4.02.2 & 4.02.3, Removal & Installation***.

3. **Charcoal (and HEPA) Filter Test:** Same procedure as ***#2*** except perform for the charcoal filter. Reinstall filter. See ***Sections 4.02.6, 4.02.7, Removal & Installation***. Same procedure applies for a *HEPA filter*, if equipped.

4. **E.A.C. Filter Test (N/A for HEPA Filter Version):** Same procedure as ***#2 & #3*** except remove the E.A.C. collector cell, close and latch filter cover. Turn **ON** hood power. Verify that **[WASH]** light is **ON,** along with the amber **[FRYER POWER]** light. Wait approx. two (2) minutes. A beeping tone alarm should begin sounding. Shortly, the **[FRYER POWER]** light should turn **OFF.** Check to ensure that fryer under Hood will not turn **ON**. Reinstall the E.A.C. cell. See ***Section 4.02.4. & 4.02.5, Removal & Installation***.

5. **Filter Clogged Test:** ***Perform this test ONLY after installing new Charcoal Filter*.** Start hood normally and allow to run. Use cardboard or other material to completely block Hood exhaust outlet, holding it firmly in place so that no air is escaping**.** Within a few seconds, a continuous tone alarm should begin sounding and the **[FRYER POWER]** light should turn **OFF.** Check to ensure that fryer under Hood will not turn **ON**. Remove the obstruction; the alarm should silence and the **[FRYER POWER]** light should turn **ON** again.

Should any of these tests fail to yield the described results, contact a factory-authorized service company and have the unit evaluated and repaired. Any *Giles Manufacturer's Representative* can provide information about nearby authorized service providers, or call ***GILES Services*** **at 800-554-4537** for assistance in locating a Representative or service provider.

5.04 Fire Suppression System Maintenance

The self-contained fire extinguishing system in the hood must be maintained in accordance with the ***Standard for Wet Chemical Extinguishing Systems, NFPA 17A*** and with the instructions of the system installer.

All inspection, maintenance, troubleshooting, repairs and general servicing of the fire extinguishing system must be performed by an authorized ***Ansul® Distributor/Dealer***. Required maintenance activities are described in the subsequent sections.

Continued on Next Page

5.04.1 Semi-Annual (6-Mo) Fire Suppression System Inspection & Maintenance

Service and inspection of the fire suppression system must be performed by a qualified ***Ansul® Distributor/Dealer***. As a minimum, field inspection of the system must be conducted semi-annually (every 6 months) and shall consist of the following:

- Confirm that the fire hazard potential has not changed.
- Inspect suppressant storage tank for chemical level and charge pressure.
- Inspect and test the Automan release mechanism.
- Check all nozzles to ensure they are free of grease build-up. Confirm that all nozzle blow-off caps are in place and in good condition; replace as needed. See ***Section 2.05.2, Fire Extinguisher Nozzle Locations***.
- Inspect and test the remote manual activation station for function and wear.
- Install test detector link; cut to test automatic actuation.
- Inspect and clean detector links. Confirm that detector links are of the correct temperature rating. See ***Section 2.05.1, Fire Suppression Detector Links & Location***.
- Inspect link conduit and wire cable for wear at pulleys and detectors; replace if necessary.
- Record maintenance date and service performed in a permanent file, and sign-off on tag attached to system in a conspicuous location.

5.04.2 Annual (12-Mo) Fire Suppression System Inspection & Maintenance

Same as ***Semi-Annual Inspection & Maintenance*** except:

- All detector links must be replaced with new. See ***Section 2.05.1, Fire Suppression Detector Link Specification & Location.***

5.04.3 12-Year Fire Suppression System Inspection & Maintenance

Same as ***Annual Inspection & Maintenance*** except:

- Replace wet-chemical fire suppressant.
- Hydrostatic test and certify suppressant tank and compressed gas charging cartridge. As alternative components can be replaced with new.
- Flow test the regulator.

 Cleaning & Maintenance

5.05 Inspection & Maintenance Log

Check								Initial/Date	Check								Initial/Date
✓	✓	✓	✓	✓				RT 1-2-15	1	2	3	4	5				
1	2	3	4	5					1	2	3	4	5				
1	2	3	4	5	6				1	2	3	4	5	6			
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1	2	3	4	5	6	7			1	2	3	4	5	6	7		

1	Door Check	Section 5.03.1
2	Baffle Filter Check	Section 5.03.1
3	EAC Filter Check	Section 5.03.1
4	Charcoal Filter Check (and HEPA)	Section 5.03.1
5	Filter Clogged	Section 5.03.1
6	Quarterly Cleaning	Section 5.02.2
7*	Semi-Annual Fire Suppression System	Section 5.04.1
8*	Annual Fire Suppression System	Section 5.04.2

*** Must be performed by an authorized Ansul® Service Agent***

6. Troubleshooting

This section describes troubleshooting procedures for the ***FSH-2, FSH-2A-99 Ventless Hoods***. Refer to the wiring diagram provided with the unit as needed for more detailed analysis.

⚠ DANGER

- Electrical troubleshooting procedures should be performed **ONLY** by qualified service personnel. Death or serious injury will result from contact with energized electrical components.

6-01. Troubleshooting Procedures

Problem	Probable Cause	Corrective Action
Hood will not turn ON	a. Filter Access Cover not properly postioned & latched.	Confirm cover properly positioned.
	b. ***START*** portion of power switch not held until hood starts	Press & momenterily hold ***START*** portion of switch until blower starts.
	c. Power switch is faulty	Replace switch.
	c. Improper supply voltage	Connect to proper electrical supply.
	e. Not properly connected to power source.	Confirm connections & correct.
	f. Blown fuse or tripped circuit breaker.	Check fuse in hood or breaker at main electrical panel.
[FILTER MISSING] light ON at start-up	a. Baffle or charcoal filter not installed or not properly seated	Install filter and/or check filter positioning inside hood.
EAC [WASH] light ON & intermittent (beeping) alarm sounding	a. Excessive film build-up on fins	Clean the EAC cell, ***Section 4.04.2***
	b. EAC cell is not installed	Install EAC cell
	c. Poor connection at contact plate inside hood.	Check cell position, clean contacts.
	d. Faulty EAC contact plate	Have plate inspected, replace if needed.
	e. Missing ionizer wires	Replace wires, (9) required.
EAC [CHECK] light ON; no alarm sounding	a. EAC shorted to ground (damaged)	Replace or repair the EAC cell.
	b. High voltage wires shorted to ground.	Correct shorted condition.
	c. Collector fins shorted out due to excessive moisture.	Eliminiate condensation causes - cold air being drawn into hood, etc.

6-01. Troubleshooting Procedures - continued

Problem	Probable Cause	Corrective Action
Fryer will not power-up: • **[HOOD POWER]** light **ON** • **[FILTER MISSING]** light **ON** • **[FRYER POWER]** light **OFF**	a. Baffle filter is missing or not properly installed	Install filter / check positioning.
	b. Charcoal filter is missing or not properly installed	Install filter / check positioning.
	c. Faulty filter switches.	Test & replace as needed.
Fryer will not power-up: • **[HOOD POWER]** light **ON** • **[FILTER MISSING]** light **OFFN** • **[FRYER POWER]** light **OFF** • No alarm sounding	a. Fire Suppression system is not armed.	Contact Ansul service company.
	b. Ansul switch is faulty	Contact Ansul service company.
Fryer will not power-up: • **[HOOD POWER]** light **ON** • **Continuous (steady) tone** alarm sounding. • **[FRYER POWER]** light **OFF**	a. Baffle or charcoal filter clogged	Replace charcoal filter with new • Clean baffle filter.
	b. Hood exhaust outlet excessively block	Clear of any obstructions.
	c. Vacuum switch is out of adjustment	Test & adjust vacuum switch.
	d. Kinked or blocked vacuum line	Remove vacuum line kinks or blockage.
	e. Fan running slow or blades are loaded with grease build-up.	Check voltage and inspect blower; clean if needed
Fryer will not power-up: • **[HOOD POWERED]** light **ON** • **[WASH]** light **ON** • **Intermittent (beeping) tone** alarm sounding. • **[FRYER POWER]** light **OFF**	a. Excessive grease film built up on collector fins; too dirty	Clean the EAC cell, ***Section 4.04.2***.
	b. EAC cell is not installed	Install clean EAC cell.
	c. EAC driver board is faulty	Test & replace EAC power supply if needed.
	d. Poor connection at contact plate; dirty contacts, mis-alignment, faulty contacts.	Check cell position, clean contacts, inspect contact plate & replace if needed.
	e. Ionizer wire(s) missing	Replace missing wire(s)
Fryer is ON: • **[HOOD POWER]** light **ON** • **[CHECK]** light **ON** • ***No*** *alarm sounding, but cell is* ***NOT*** *cleaning air*.	a. Ionizer wire broken & touching chassis.	Replace ionizer wire.
	b. Collector fins shorted to ground by moisture.	Dry cell, determine cause of moisture, cool air being drawn into hood creating condensation.

7. Parts List

This section lists some of the various parts that are available for replacement on the unit. This is not an all inclusive listing; please contact an authorized *Giles* representative or service agent concerning other parts that may be replaced in the field.

7.01 Parts Ordering & Service Information

If assistance or repairs are required, please contact a *GILES* Regional Representative to assist with locating an authorized service provider in your area. For further assistance you may contact the ***GILES Technical/Customer Service Support*** as follows:

IN THE UNITED STATES & CANADA call: **800.554.4537**

ALL OTHERS call: **334.272.1457**

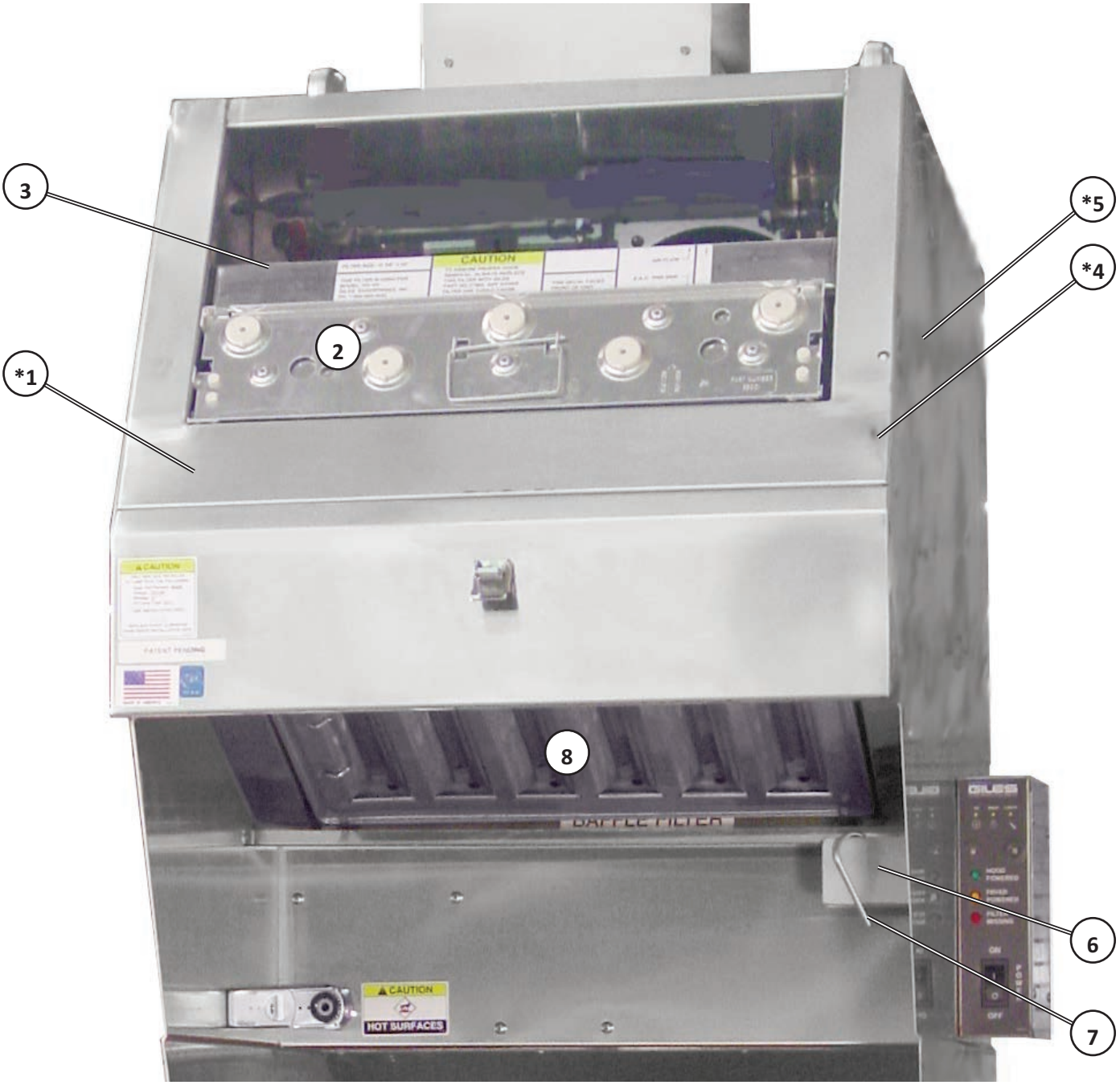
Normal business hours are 8:00 AM to 5:00 PM Central Time ... calls are handled by an automated answering system. Please follow the recorded prompts to route your call appropriately. If necessary after hours, leave a voicemail message and a representative should respond within 30 minutes.

Website: ***www.gfse.com*** Email: ***services@gfse.com***

Our goal at Giles is to provide the highest possible quality of service and assistance. To help us accomplish this, please have the following information readily available when calling, along with a brief description of the problem being experienced. Please record the unit information in the table below for quick reference.

Model:	
Serial Number:	
Voltage:	
Phase:	

7.02 Ventless Hood - Front



* Not shown

7.02 Parts List for Ventless Hood - Front

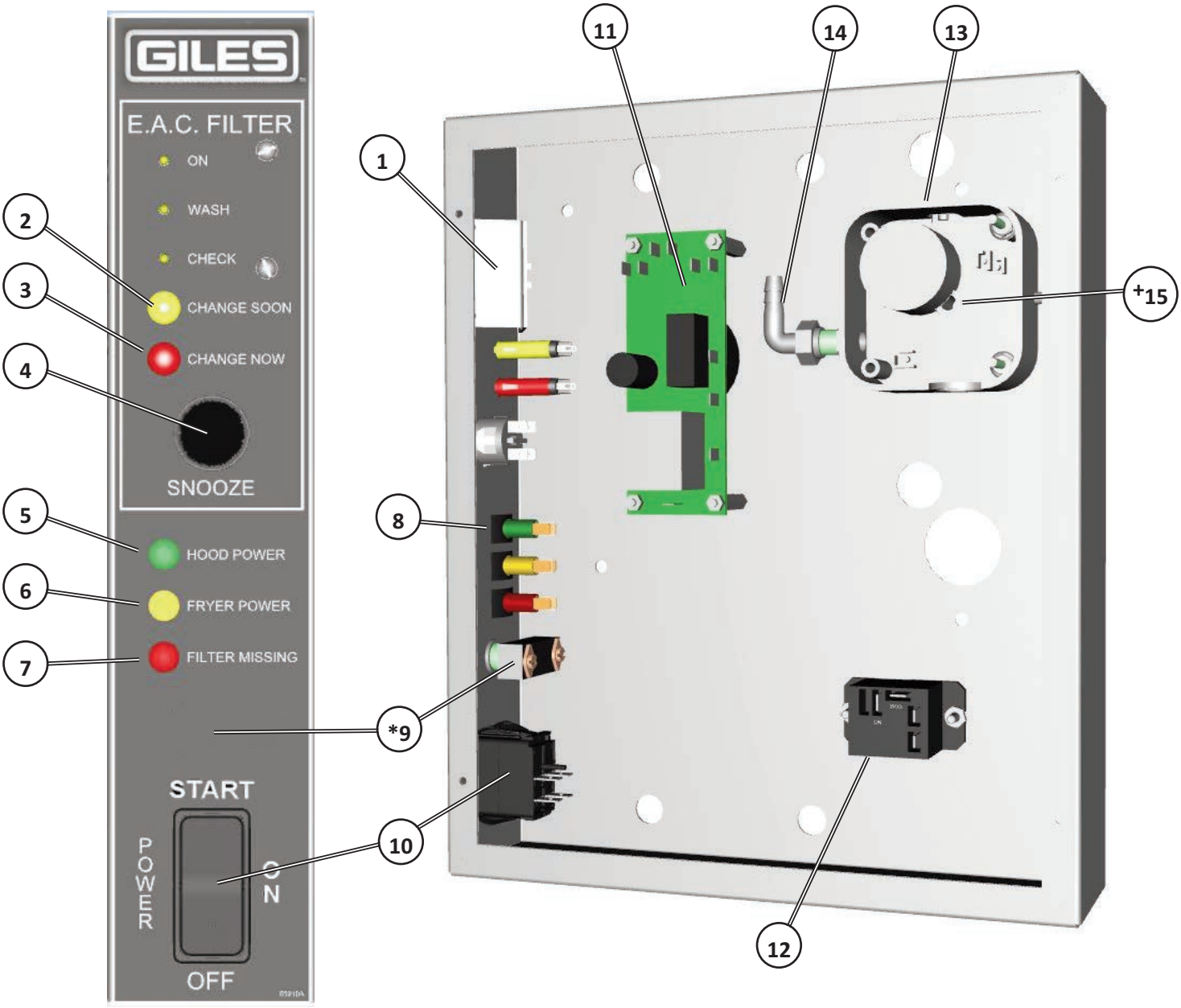
Item	Part No.	Qty.	Description
*1	90254	1	FILTER ACCESS PANEL Assembly
2	20520	1	EAC FILTER, 20”
	41254	1	HEPA FILTER, 20” **(FOR HEPA FILTER VERSION ONLY)**
3	30248	1	CHARCOAL FILTER, ASSY, 20” X 12-3/8”
*4	23200	1	SWITCH, SNAP ACTION, ROLLER TYPE
*5	21125	1	CONTACT BOARD, EAC
6	30206	1	DRIP CUP
7	34750	1	DRIP CUP SAFETY PIN
8	42300	1	BAFFLE FILTER, 20” X 20” X 2”, SS

NOTE:
Filter placement is opposite of this depiction in the HEPA Filter version of the hood ... Charcoal filter is located below the HEPA filter.

* **Not shown**

7.03 Control Box

Control Box on the Model FSH-2 Hood does not include the E.A.C. Cleaning Timer feature ... This is ONLY a feature on the Model FSH-2A-99 Hood.



** ILS Only*
+ Not Shown

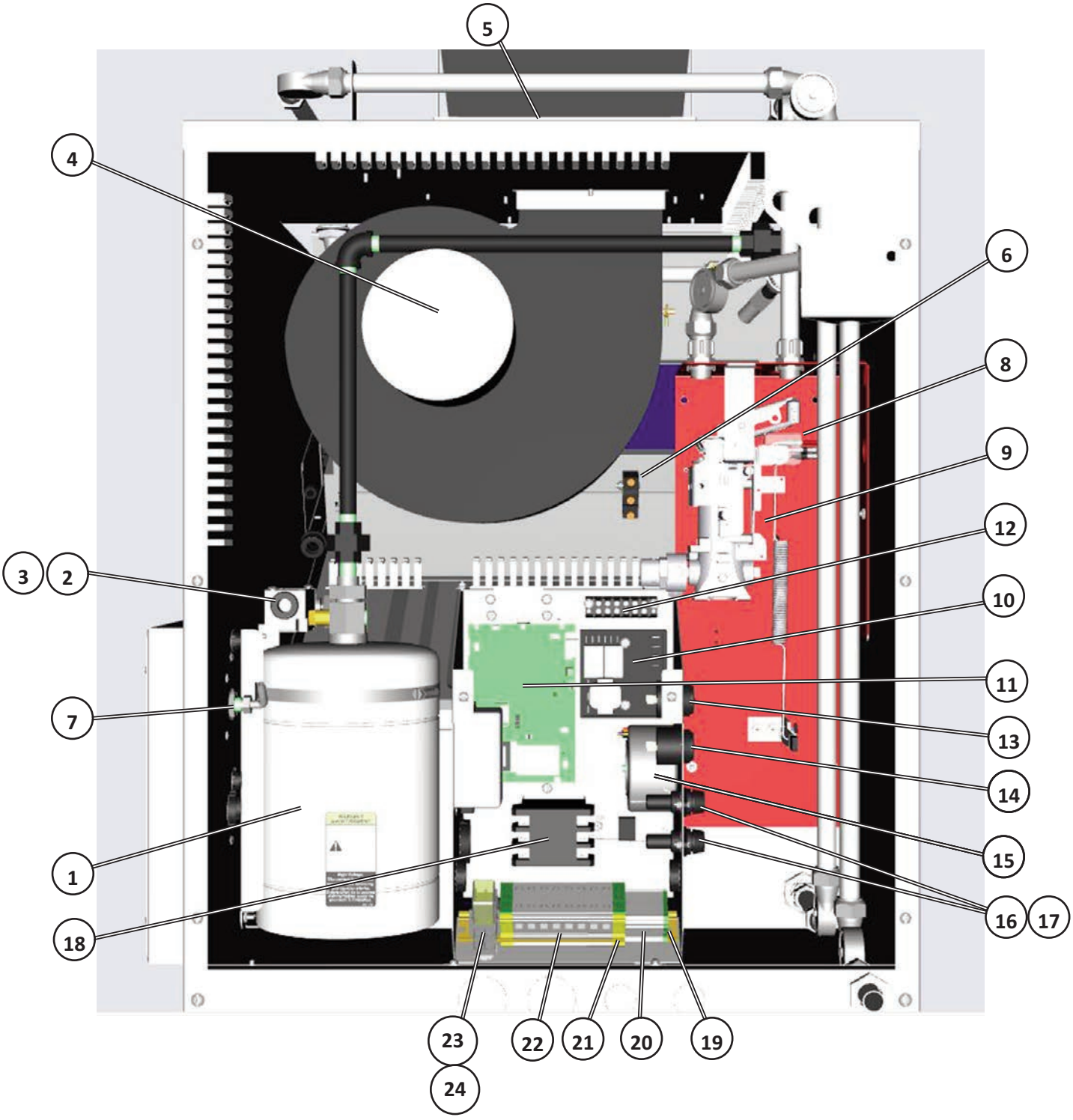
7.03 Parts List for Control Box

Item	Part No.	Qty.	Description
1	24209	1	L.E.D. CLUSTER, AIR FILTER, E.A.C.
2	20694	1	PILOT LIGHT, YELLOW, EAC TIMER
3	20693	1	PILOT LIGHT, RED, EAC TIMER
4	20692	1	SWITCH, MOMENTARY PUSH-BUTTON, EAC TIMER
5	20398	1	INDICATOR LIGHT, GREEN, 250V, 0.5W
6	20399	1	INDICATOR LIGHT, AMBER, 250V, 0.5W
7	20402	1	INDICATOR LIGHT, RED, 250V, 0.5W
8	20307	3	RETAINING CLIP, INDICATOR LIGHT
*9	23173	1	SWITCH, PUSH-BUTTON, MOMENTARY
10	21441	1	SWITCH, ROCKER, (ON)-0N-OFF, 250V, 20A
11	20572R	1	EAC TIMER BOARD, REPLACEMENT
12	21302	1	RELAY, SPST-NO, 240V
13	20390	1	SWITCH, VACUUM, 0.16 - 1.20 WC
14	40877	1	FITTING, 1/4 BARBED, 90-EL, NYL, 1/8 NPT
+15	40880	1	FITTING, 1/4 BARBED, 90-EL, NYL, 1/4 NPT

NOTE:
HEPA Filter version Control Box does no include Items 1, 2, 3, 4, 11 & 12.

** ILS Only*
+ Not Shown

7.04 Ventless Hood - Rear



7.04 Parts List for Ventless Hood - Rear

Item	Part No.	Qty.	Description
1	39272	1	TANK, ANSUL, 1.5-GAL SS
2	23778	1	SWITCH, SIDE ROTARY, 240V, 30A, W/O ARM
3	23779	1	ACTUATOR, ROTARY SWITCH
4	33589	1	BLOWER ASSEMBLY
5	41115	1	DAMPER, FIRE, 10 X 10, SHALLOW
6	24237	1 or 2	SWITCH, PLUNGER, 250V, 15A **(HEPA VERSION = 2)**
7	40880	1	FITTING, 1/4 BARBED, 90-EL, NYL, 1/4 NPT
8	20002	1	SWITCH, ANSUL, SHUTDOWN/ALARM, 15A, 120V
9	40132	1	BRACKET/RELEASE, AUTOMAN, ANSUL
10	23776	1	MODULE, AIR FILTER, ALARM & SHUTDOWN
11	21296	1	POWER PACK ASSY, W/DRIVER BRD, 120V
12	23751	1	TERMINAL BLOCK, 6-PL, 250V, 15A
13	22950	1	SONALERT, 250V, INTERMITTENT
14	23782	1	SONALERT, CONTINUOUS TONE, 250V
15	21337	1	TRANSFORMER, 230VAC >115VAC @ 0.86A
16	21950	2	HOLDER, FUSE, 300V, 15A, SC 0 TO 15
17	21900	2	FUSE, 15-AMP, SC-15
18	21151	1	CONTACTOR, 63-AMP, 3PH, 208/240V
18	20624	1	CONTACTOR, 60A RES, 4-POLE, 240V COIL **(HEPA VERSION ONLY)**
19	20320	1	TERMINAL BLOCK, GROUND, AWG 8-24
20	20319	4	TERMINAL BLOCK, 50 AMP, AWG 8-24
21	20304	2	TERMINAL BLOCK, GROUND, 4-12 GA WIRE
22	20303	8	TERMINAL BLOCK, 4-12 GA WIRE
23	20318	1	RELAY, 240 VAC, 10A, ELECTRO-MECH
24	20312	1	BASE, RELAY, PLUG-IN, DIN MOUNT

NOTE:
HEPA Filter version does no include Items 10, 11, 13 & 15.

Notes:

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