

LABCONCO CORPORATION

8811 Prospect Avenue
Kansas City, MO 64132

(800) 821-5525 | +1 (816) 333-8811

labconco@labconco.com

Please read this manual before
operating equipment

Original Instructions

User's Manual



Capture BT™ Fuming Chamber

2015 - Present

317000x

Copyright © 2015, 2018, 2019 Labconco Corporation. The information contained in this manual and the accompanying products are copyrighted and all rights reserved by Labconco Corporation. Labconco Corporation reserves the right to make periodic design changes without obligation to notify any person or entity of such change.

Warranty

Labconco Corporation provides a warranty to the original buyer for the repair or replacement of parts and reasonable labor as a result of normal and proper use of the equipment with compatible chemicals. Broken glassware and maintenance items, such as filters, gaskets, light bulbs, finishes and lubrication are not warranted. Excluded from warranty are products with improper installation, erratic electrical or utility supply, unauthorized repair and products used with incompatible chemicals.

The warranty for CApture™ BT Fuming Chambers will expire one year from date of installation or two years from date of shipment from Labconco, whichever is sooner. Warranty is non-transferable and only applies to the owner (organization) of record.

Buyer is exclusively responsible for the set-up, installation, verification, decontamination or calibration of equipment. This limited warranty covers parts and labor, but not transportation and insurance charges. If the failure is determined to be covered under this warranty, the dealer or Labconco Corporation will authorize repair or replacement of all defective parts to restore the unit to operation. Repairs may be completed by 3rd party service agents approved by Labconco Corporation. Labconco Corporation reserves the rights to limit this warranty based on a service agent's travel, working hours, the site's entry restrictions and unobstructed access to serviceable components of the product.

Under no circumstances shall Labconco Corporation be liable for indirect, consequential, or special damages of any kind. This warranty is exclusive and in lieu of all other warranties whether oral, or implied.

Returned or Damaged Goods

Do not return goods without the prior authorization from Labconco. Unauthorized returns will not be accepted. If your shipment was damaged in transit, you must file a claim directly with the freight carrier. Labconco Corporation and its dealers are not responsible for shipping damages.

The United States Interstate Commerce Commission rules require that claims be filed with the delivery carrier within fifteen (15) days of delivery.

Limitation of Liability

The disposal and/or emission of substances used in connection with this equipment may be governed by various federal, state, or local regulations. All users of this equipment are required to become familiar with any regulations that apply in the user's area concerning the dumping of waste materials in or upon water, land, or air and to comply with such regulations. Labconco Corporation is held harmless with respect to user's compliance with such regulations.

Contacting Labconco Corporation

If you have questions that are not addressed in this manual, or if you need technical assistance, contact Labconco's Customer Service Department or Labconco's Product Service Department at 1 (800) 821-5525 or +1 (816) 333-8811, between the hours of 7:30 a.m. and 5:30 p.m., Central Standard Time.

TABLE OF CONTENTS

CHAPTER 1: INTRODUCTION	6
CHAPTER 2: PREREQUISITES	7
Space Requirements	7
Clearance – Operational	7
Clearance – Service	8
Location Requirements	8
Exhaust Requirements	8
Electrical Requirements	8
CHAPTER 3: GETTING STARTED	9
Unpacking the cabinet	9-10
Cabinet Installation	10
Initial Operational Checks	11
CHAPTER 4: PERFORMANCE FEATURES AND SAFETY	
PRECAUTIONS	12
Directional Airflow	13
Main Carbon Pre-Filter	14
Main Carbon Filter	14
Humidity Filter	14
Blowers	14
LED Light	14
Heat Plate	14
Humidifier	15
Safety Precautions	16-18
Carbon Filter Life	18-19
CHAPTER 5: USING THE CABINET	20
Initial Cabinet Set-Up	20
Initial Cabinet Cleaning	21
Main Menu & Control Buttons	21-22
Humidifier Water Fill	22
Cabinet Configuration	23-24
Loading Evidence	24-25

CA Fuming – Program Set-Up	26-31
CA Fuming – Maintenance Notifications	31-32
CA Fuming – Program Run	33-37
Humidify – Program Set-Up	38-39
CHAPTER 6: MAINTAINING THE CABINET	40
Routine Maintenance Schedule	40-44
Weekly	40-41
Every 50 Cycles (or more often)	41-43
Every 100 Cycles (or more often)	44
Every 500 Cycles (or more often)	45-47
Additional Maintenance	48
Tubing Clean Out	48
Cleaning Cycle	49
Service Parts – Upper Compartment	50
Service Parts – Side Compartment	51-56
Service Parts – Humidity Sensor Housing	57
Service Parts – Humidifier Assembly	58-59
Service Parts – CA Chamber Assembly	60-61
Moving the Cabinet	62-63
CHAPTER 7: TROUBLESHOOTING	64
Troubleshooting	64-65
Diagnostic Mode	66-67
Manual Override of Main Door Lock	68
RH Sensor Calibration	69
Humidity Timeout	70
APPENDIX A: COMPONENTS & WIRING DIAGRAMS	71-73
APPENDIX B: DIMENSIONS	74-75
APPENDIX C: SPECIFICATIONS	76
APPENDIX D: FILTERS	77
APPENDIX E: ACCESSORIES	78-80

Chapter 1:

Introduction

Congratulations on the purchase of a Labconco CApture BT Fuming Chamber. The cabinet is designed to protect you and the room environment from Cyanoacrylate vapors produced while fuming evidence with CA glues. The CApture BT Fuming Chamber is the result of years of experience in manufacturing laboratory equipment, and users like you suggested many of its features to us.

The CApture BT Fuming Chamber models offer many unique features to enhance performance and flexibility. To take full advantage of them, please acquaint yourself with this manual and keep it handy for future reference. Always follow all safety instructions in this manual, and on the cabinet itself. If you are unfamiliar with how Fuming Chambers operate, please review *Chapter 4: Performance Features and Safety Precautions* before you begin using the cabinet. Even if you are an experienced user, please review *Chapter 5: Using the Cabinet*; it describes the cabinet's features so that you can use it efficiently.

This manual and other technical information is available in PDF format at our website: www.labconco.com.

If the unit is not operated as specified in this manual it may impair the protection provided by the unit.

Si l'unité n'est pas utilisée comme spécifié dans ce manuel il peut diminuer la protection fournie par l'unité.



CAUTION – See Manual. When this symbol is on the unit it indicates a caution that is detailed in this manual.

ATTENTION - Voir manuel. Lorsque ce symbole est allumé l'appareil, il indique une mise en garde qui est indiqué dans ce manuel.

Chapter 2: Prerequisites

Before you install the CAPture BT Fuming Chamber, you need to plan the site for installation. Examine the location where you intend to install the cabinet. You must be certain that the area is level and of solid construction. In addition, a source of electrical power must be located near the installation site.

Carefully read this chapter to learn:

- Location requirements.
- Electrical power requirements.
- Exhaust requirements.
- Service utility requirements.
- Space requirements.

Refer to *Appendix C: Specifications*, for complete cabinet electrical and environmental conditions, specifications and requirements.

Space Requirements

The dimensions for the CAPture BT Fuming Chamber are shown in *Appendix B: Dimensions*.

Clearance – Operational

A minimum clearance of at least 2 inches (50 mm) behind the cabinet. There should be 36 inches (914 mm) clearance at the front of the cabinet to allow the door to swing open without hitting any obstructions.

Clearance – Service

A minimum clearance of at least 6 inches (150 mm) is suggested on the top of the cabinet, 12 inches (300 mm) on the right side for service, and 2 inches (50 mm) behind the cabinet. There should be 36 inches (914 mm) clearance at the front of the cabinet to allow the door to swing open without hitting any obstructions.

Location Requirements

Note: The cabinet is equipped with leg levelers (if not attached to the accessory stand) to ease level cabinet installation. It should be located on a flat surface for proper cabinet alignment and door operation. The surface must support 500 lbs. (227 kg).



Cabinet placement must not block access to the Power Cord in back of the unit, so that it can be reached for disconnect.

Exhaust Requirements

The CAPture BT Fuming Chamber does not require exhaust ducting. The unit filters the chamber air through a pre-filter and a main carbon filter to remove Cyanoacrylate vapors. Clean exhaust air from the cabinet is recirculated back into the room.

Electrical Requirements

All models have the following electrical requirements:

Table 2-1

Model #	Requirements	Plug Config.
31700-00	115 VAC, 60 Hz, 8 Amps	115v (US)
31700-01	230 VAC, 50/60 Hz, 4 Amps	230v (US)
31700-02	230 VAC, 50/60 Hz, 4 Amps	230v (Schuko)
31700-03	230 VAC, 50/60 Hz, 4 Amps	230v (UK)
31700-04	230 VAC, 50/60 Hz, 4 Amps	230v (China/Aus)
31700-05	230 VAC, 50/60 Hz, 4 Amps	230v (India)

Note: An outlet with a circuit breaker rated at minimum 10 amps for 115 volt models (5 amps for 230 volt models) should be located as close as possible to the right, rear side of the cabinet. Power cords supplied with the CAPture BT Fuming Chamber are 10 feet (3m) long.



Do not use any detachable power cord that is not adequately rated for the unit.

Ne pas utiliser un fil électrique amovible qui n'est pas du tension nominale de l'appareil.

Chapter 3: Getting Started

Now that the installation site is properly planned, you are ready to inspect and install the CApture BT Fuming Chamber. This chapter covers how to:

- Unpack and move the cabinet.
- Install the cabinet.
- Connect the electrical supply source.

Tools required for installing the cabinet include two 1/2" wrenches, a flat-blade screwdriver, a #2 Phillips screwdriver, and scissors or a box knife.



Note: The cabinet weighs approximately 250 lbs. (114 kg). The shipping pallet allows for lifting with a mechanical lift truck or floor jack. If you must lift the product manually, use at least four (4) persons and follow safe-lifting guidelines.

Unpacking the Cabinet

Carefully remove the outer carton and inspect the cabinet for damage that may have occurred in transit. If the cabinet is damaged, take several photographs and notify the delivery carrier immediately and retain the entire shipment intact for inspection by the carrier.

Note: United States Interstate Commerce Commission rules require that claims be filed with the delivery carrier within fifteen (15) days of delivery.

Do not return goods without the prior authorization of Labconco. Unauthorized returns will not be accepted.

If the cabinet was damaged in transit, you must file a claim directly with the freight carrier. Labconco Corporation and its dealers are not responsible for shipping damages.

Chapter 3: Getting Started

Do not discard the carton or packing material for the cabinet until all of the components have been checked, installed and tested. Carefully remove plastic wrapping around the cabinet, open the cabinet door and remove the white parts box. Close and latch the cabinet door after retrieving the box.

The cabinet is secured to the pallet by four (4) bolts. To remove the cabinet, remove the four (4) bolts from underneath the top skid boards that are holding the cabinet to the skid (use 1/2" wrench). You do not need to save these bolts and washers. In the white parts box, are four (4) leveling legs. If the cabinet is not going to be mounted on the accessory stand, screw these into the holes the shipping bolts came out of by tipping the cabinet slightly. Always have at least two (2) additional persons help with tipping of the cabinet, and always follow safe-lifting practices. *Note – cabinet is heavier on the right side.* If the cabinet is to be installed on the accessory stand, see the instruction sheet included with the accessory stand for installation of the cabinet onto the stand. The cabinet can now be removed from the pallet.

After removing the cabinet from the pallet, carefully remove any remaining packaging materials, including wrapping and shipping spacers. Leave the shipping tape on all doors and drawers in place until cabinet is in its final location.

Cabinet Installation

After the CAPture BT Fuming Chamber has been removed from its pallet and positioned in its final location, you must:

1. Remove any tape securing doors, drawers and other items.
2. Retrieve the power cord from the white parts box.

Note: The following are located in the white parts box:

- **User's Manual – on USB Thumbdrive (hard copy not included)**
- **Power Cord**
- **Product Registration Card**
- **Three (3) samples of Security Tags**

If you did not receive one or more of the components listed for the cabinet, or if any of the components are damaged, contact Labconco Corporation immediately for further instructions.

3. Plug the power cord into the back of the cabinet, and then into an appropriate outlet.

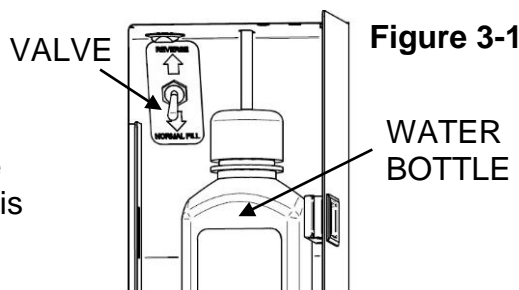
Initial Operational Checks

Prior to use with evidence, you should perform the following steps and operational tests to ensure the cabinet is operating properly:

- Electrical System Check
 - ✓ After plugging the power cord into the top, back of the unit, and into an appropriate wall outlet, turn the power switch on (located on front of main control panel – see Fig. 5-2).
 - ✓ The Display Screen should show the CAPture BT logo, and then go to the Main Menu Screen. You should hear a single beep after turning the power switch on. The interior cabinet light should also come on.
 - ✓ If the above checks are good, the electrical systems are working, and you can turn the unit back off.
- Pre-Run Steps (may be performed during *Initial Cabinet Set-up* – see Chapter 5)
 - ✓ Make sure the power cord is plugged into the top, back of the unit, and into an appropriate wall power outlet.
 - ✓ Locate the Water Bottle inside the Door labeled “H2O”. Remove the Water Bottle and fill it with water (Tap Water, RO Filtered or Distilled Water are all acceptable to use).
 - ✓ Replace the Water Bottle in the holder and make sure the water line hose goes back through the hole in the Water Bottle Lid and the end of the hose reaches to the bottom, inside the Water Bottle.
 - ✓ Turn the power switch on (located on the front of the main control panel). You should hear the water pump turn on and see the water level slowly dropping in the Water Bottle. The pump should run for approximately 60-90 seconds, and will remove approximately one-third to one-half of the water from the Water Bottle.

IMPORTANT

Make sure the valve behind the Water Bottle is flipped to the down position, which is NORMAL FILL, as shown in Fig. 3-1.



Chapter 4:

Performance Features and Safety Precautions

The CAPture BT Fuming Chamber operates using the following principles:

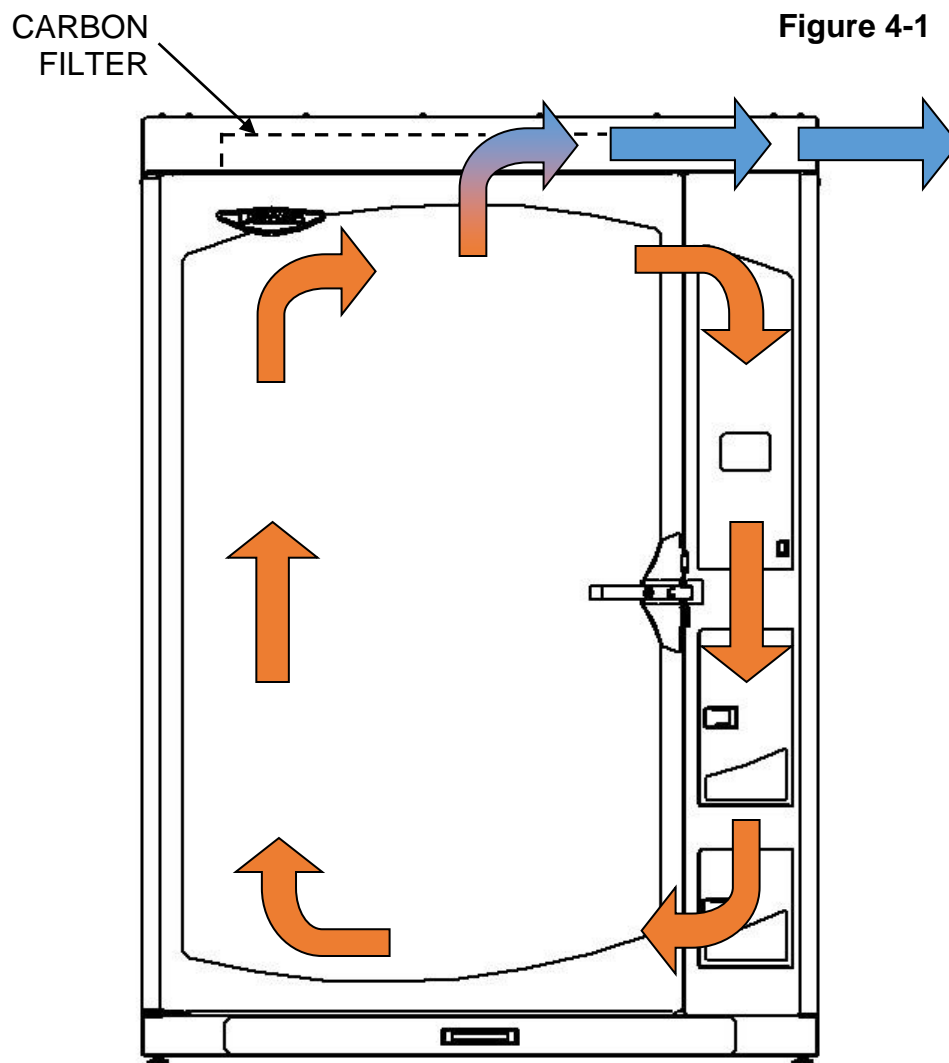
- Directional airflow.
- Pre-filtration of Cyanoacrylate fumes before the Main Carbon Filter.
- Filtration and retention of Cyanoacrylate fumes by the Main Carbon Filter and Humidity Filter, which contain granular activated carbon.

The major components in the cabinet are:

- The Pre-Filter.
- The granular activated Carbon Filters.
- The Recirculation Blower to move air through the cabinet during Humidify and Fuming Cycles.
- The Exhaust Blower to remove Cyanoacrylate fumes from the cabinet during the Exhaust, or Purge, Cycle.
- The LED Light.
- The CA Heat Plate Chamber for volatilizing Cyanoacrylate (CA).
- The Humidifier Chamber for adding humidity to the chamber.

Directional Airflow

Directional airflow plays a critical role in CAPture BT Fuming Chamber performance. During a Humidity or Fuming Cycle, air is recirculated within the sealed cabinet. The Recirculation Blower pulls air in from the top of the cabinet, and returns it at the bottom of the cabinet (shown in Fig. 4-1). During the Exhaust or Purge Cycle, the Exhaust Blower pulls air from inside the cabinet through a Pre-Filter and Main Carbon Filter, located above the top of the cabinet. The Exhaust Blower then pushes the filtered air back into the room via slot openings located in the back, right side of the cabinet (shown in Fig. 4-1).



Main Carbon Pre-Filter

Located beneath the Main Carbon Filter is a Pre-Filter (see Fig. 4-2). During an Exhaust or Purge Cycle, this Pre-Filter removes CA vapor before it reaches the Main Carbon Filter. Changing this Pre-Filter regularly, depending on usage, is important. See *Chapter 6: Maintaining the Cabinet* for instructions. See *Appendix A* for reorder part numbers.

Main Carbon Filter

The Main Carbon Filter uses granular activated carbon to remove Cyanoacrylate fumes from the air before exhausting (see Fig. 4-2).

Changing this Carbon Filter and the Humidity Filter when prompted by the Display Screen is very important! Always change both filters at the same time! See *Chapter 6: Maintaining the Cabinet* for instructions. See *Appendix A* for reorder part numbers.



Humidity Filter

Located inside the right side compartment (behind right side service panel) is the Humidity Filter (see Fig. 4-2). This Filter protects the Humidifier from Cyanoacrylate. **Changing this Filter and the Main Carbon Filter when prompted by the Display Screen is very important!** See *Chapter 6: Maintaining the Cabinet* for instructions. See *Appendix A* for reorder part numbers.

Blowers

The Recirculation Blower and Exhaust Blower operate independently, and move air through various areas of the cabinet (see Fig. 4-2).

LED Light

The internal light for illuminating work in the CAPture BT Fuming Chamber is an energy-efficient LED (see Fig. 4-2). This provides light for viewing developing prints, and a flashing effect when a Cycle is complete to alert that evidence is ready to be removed. The cabinet's LED Light will stay on while any program is running, and while Main Door is open. The LED light will go off after 15 minutes of inactivity.

Hot Plate

The CAPture BT Fuming Chamber has an integral hot plate (see Fig. 4-2) for volatilizing Cyanoacrylate in a disposable tin. The hot plate is user-controllable via the Program Settings, from 100 °F (38 °C) up to a maximum temperature of 425 °F (218 °C).

Humidifier

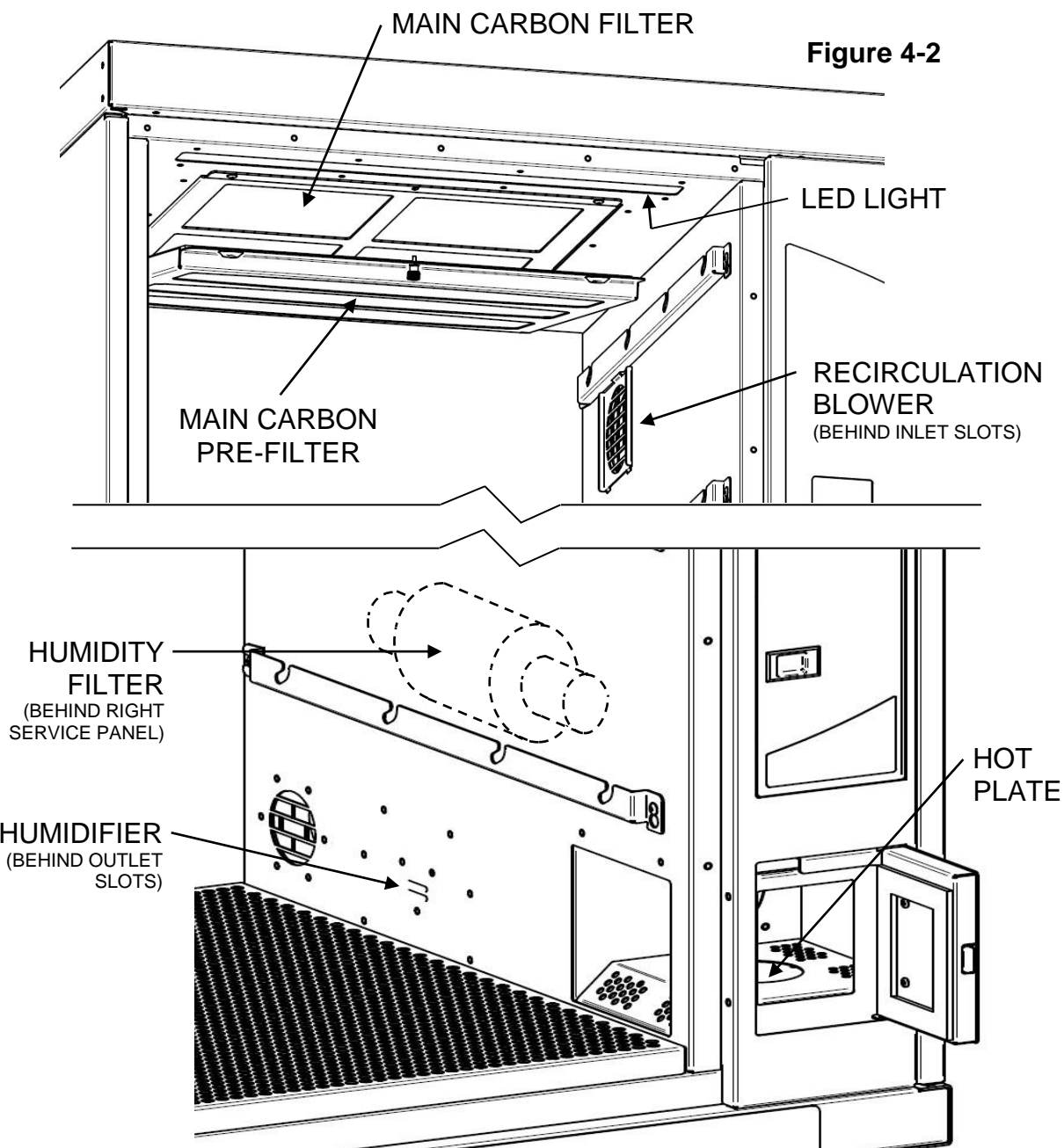


The CAPture BT Fuming Chamber has an integral Humidifier for raising the humidity in the cabinet during a Humidity Cycle or before a Fuming Cycle begins. The Humidifier is user-controllable via the Program Settings, and can raise the humidity in the cabinet to a maximum Relative Humidity of 80% (displayed in 1% increments).

NOTE

HUMIDITY LEVEL CAN ONLY BE INCREASED FROM AMBIENT, NOT DECREASED

Identifying the components described is important. See Fig. 4-2 below. See *Chapter 6: Maintaining the Cabinet* for detailed instructions on changing the various Filters.



Safety Precautions

For all models:

If the unit is not operated as specified in this manual it may impair the protection provided by the unit.

Si l'unité n'est pas utilisée comme spécifié dans ce manuel il peut diminuer la protection fournie par l'unité.

CAUTION – See Manual. When this symbol is on the unit it indicates a caution that is detailed in this manual.



ATTENTION - Voir manuel. Lorsque ce symbole est allumé l'appareil, il indique une mise en garde qui est indiqué dans ce manuel.



CAUTION – Hot Surface.

AVERTIR – Surface Chaude.



Do not use any detachable power cord that is not adequately rated for the unit.

Ne pas utiliser un fil électrique amovible qui n'est pas du tension nominale de l'appareil.



Do NOT contact blower wheel while still in motion.

NE PAS être en contact avec la roué du ventilateur tant qu'il est en marche.



Ensure that the cabinet is connected to electrical service in accordance with local and national electrical codes. Failure to do so may create a fire or electrical hazard. Do not remove or service any electrical components without first disconnecting the cabinet from electrical service.



NEVER use this cabinet as a chemical storage cabinet.



When handling evidence, or working in the cabinet, always wear proper personal protective equipment (PPE). Proper PPE should provide skin, eye, and breathing protection from CA fumes and contact with liquid CA. Never wear cotton gloves when working with CA.

NEVER attempt to process evidence containing flammable gases or solvents in the cabinet – the Hot Plate is an ignition source. An open flame should NOT be used in the cabinet.

Chapter 4: Performance Features and Safety Precautions

Carbon Filters only remove vapors, biohazards may pass through the filter. Avoid puncturing the Carbon Filters during installation or normal operation. If you suspect that a Carbon Filter has been damaged, DO NOT use the cabinet; contact Labconco at 800-821-5525 or 816-333-8811 for further information.

The Main Carbon Filter and Humidifier Filter will gradually accumulate Cyanoacrylate (CA) from the fuming cycles run in the cabinet. The rate and amount of accumulation will depend upon the amount of CA used, the frequency of Fuming Cycles, and factors described in section **Carbon Filter Life** on the following page. **ALWAYS replace BOTH the Main Carbon Filter AND the Humidifier Filter when prompted to do so by the Display** with new Filters from Labconco. NEVER reset the Carbon Filter Life Gauge without actually replacing the Filters with new filters from Labconco.



Do not operate the cabinet without all of the appropriate filters in place. If Cyanoacrylate is detected coming out of either Carbon Filter, it needs to be replaced, even if the Display prompt to replace the filters has not yet prompted the user to change the Carbon Filters.



Never exceed maximum weight limits for the Hanging Bar, Perforated Floor, Drawer, or Accessory Shelves. Weight limits are listed in the table to the right.

Item (each)	Weight Limit lbs. (kg)
Hanging Bar	15 (6.8)
Perforated Floor	50 (22.7)
Drawer	10 (4.5)
Full Shelf (Acces.)	25 (11.3)
Half Shelf (Acces.)	15 (6.8)

When cleaning the cabinet interior:



- Always wear appropriate personal protective equipment (PPE).
- NEVER use high pressure water to clean the liner.
- NEVER spray disinfectants into the blower intake at the top, right side of the interior liner; this may damage the blower.
- Avoid splashing any cleaning solution on skin or clothing.
- Ensure adequate room ventilation & use Cleaning Cycle (see *Chapter 6: Maintaining the Cabinet*).
- Carefully follow any cleaning solution's safety instructions.
- Always dispose of cleaning solutions in accordance with local and national laws.
- **DO NOT allow bleach or disinfectants with high concentrations of free chlorine to contact the stainless steel components of the cabinet. Free chlorine will corrode stainless steel after extended contact.**



When handling used filters or pre-filters, always wear appropriate personal protective equipment (PPE).



Never tip the cabinet after installation. Water in the humidifier could spill – damaging internal components. See *Chapter 6: Maintaining the Cabinet* for instructions on removing the water from the Humidifier Basin before tipping or moving the cabinet, or contact Labconco at 800-821-5525 or 816-333-8811 for further information.



Before removing service panels, disconnect cabinet from ALL POWER. Wait at least 1 minute after disconnecting power cord before opening service panels, in order to allow any moving parts to come to a complete stop.

Use only Cyanoacrylate (CA) based glues approved for fingerprint fuming. **ALWAYS place the liquid CA glue into a disposable tin, and place the tin onto the Heat Plate. NEVER place liquid CA directly onto the Heat Plate.** Never place other chemicals, liquids, solids or items on the Hot Plate or into the CA Chamber.

Carbon Filter Life

It is **very** important to change **both** Carbon Filters in the CAPture BT Fuming Chamber when prompted (see **Changing the Carbon Filters** section in *Chapter 6*) or sooner if Cyanoacrylate (CA) fumes are detected emitting from the cabinet's exhaust. **Never** unseal the protective bag around a Carbon Filter before it is ready to be installed in the unit. Review the chart below to determine the appropriate number of Filter Life Cycles for your unit.

		Avg. Cycles per Day		
		1-2	3-4	5+
Avg. Grams CA per Cycle	<1.5	500	400	350
	1.5-2.5	400	350	300
	2.5+	350	300	250

Additional factors that will reduce Filter Life:

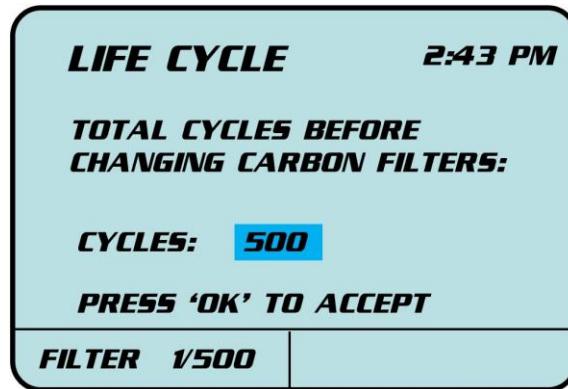
- Not regularly cleaning CA deposits on the inside of the chamber
- Not replacing the Pre-Filter regularly
- Enabling the Standby Purge feature, which helps remove CA fumes

NOTE!

MAINTAIN
PASSWORD
WITH
RESPONSIBLE
PARTY ONLY

On the Main Menu, Select **SERVICE**, press 'OK'. The password is: 'UP' 'DOWN' 'LEFT' 'RIGHT' 'OK'. Press buttons in proper order to gain access to the **SERVICE** menu. After entering the password, select **LIFE CYCLE**, and press 'OK'. The Life Cycle menu (Fig. 4-3) is displayed:

Figure 4-3



Using the UP/DOWN Buttons, adjust the Filter Life Cycle number as desired between 200 and 500 Cycles in 50 Cycle increments. Press **'OK'** to accept.

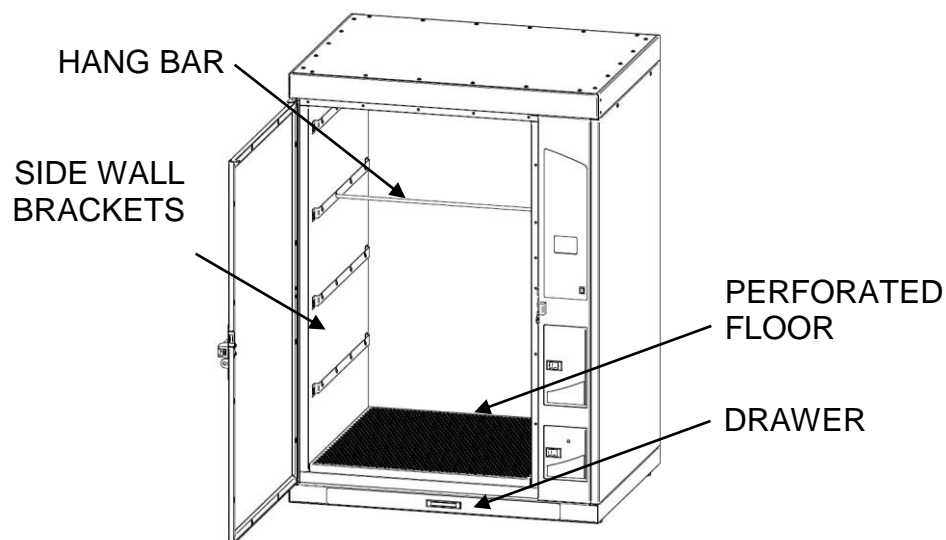
Chapter 5: Using the Cabinet

Initial Cabinet Set-Up

Once the CAPture BT Fuming Chamber has been installed in its final location, the following steps must be performed before running the cabinet:

1. Remove tape from all doors and bottom drawer, and any remaining packaging material from around the cabinet.
2. Remove the Perforated Floor from inside the main chamber, remove foam sheeting from around Floor, then re-install Floor as shown in Fig. 5-1.
3. Remove the four (4) Hang Bars (shipped inside the Drawer) from their foam sheeting, and place them as desired in the Side Wall Brackets (see Fig. 5-1).

Figure 5-1



Initial Cabinet Cleaning

It is recommended to wipe down the inside of the main chamber with a dry cloth before fuming evidence to ensure fingerprints from installation on the stainless steel walls or inside of the glass door do not attract CA fumes. (Do **NOT** use chlorine-based solutions to clean the unit!)

The internal surfaces of glass (Main Door and Light Cover) have been pre-treated with RainX™ at the factory to reduce the attraction of CA fumes, and allow for easier cleaning of the glass after fuming in the chamber. If desired, any glass treatment will need to be reapplied on a regular basis (approximately every 100 cycles) after fuming in the cabinet, see *Chapter 6: Maintaining the Cabinet*.

Main Menu & Control Buttons

Once the cabinet is ready for operation, familiarize yourself with the Menu Navigation and the Control Buttons located around the Display Screen. See Figs. 5-2 & 5-3.

Figure 5-2

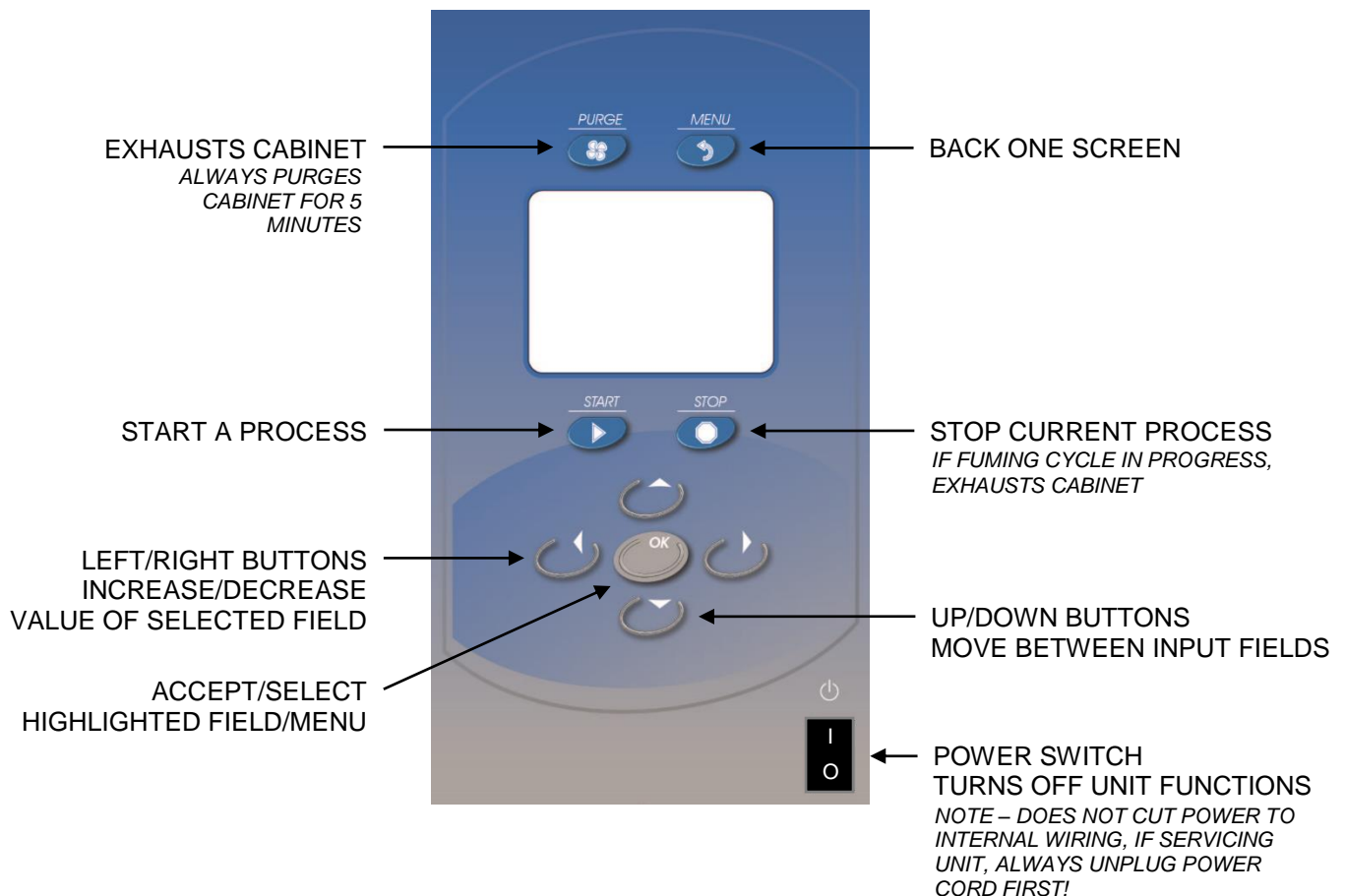
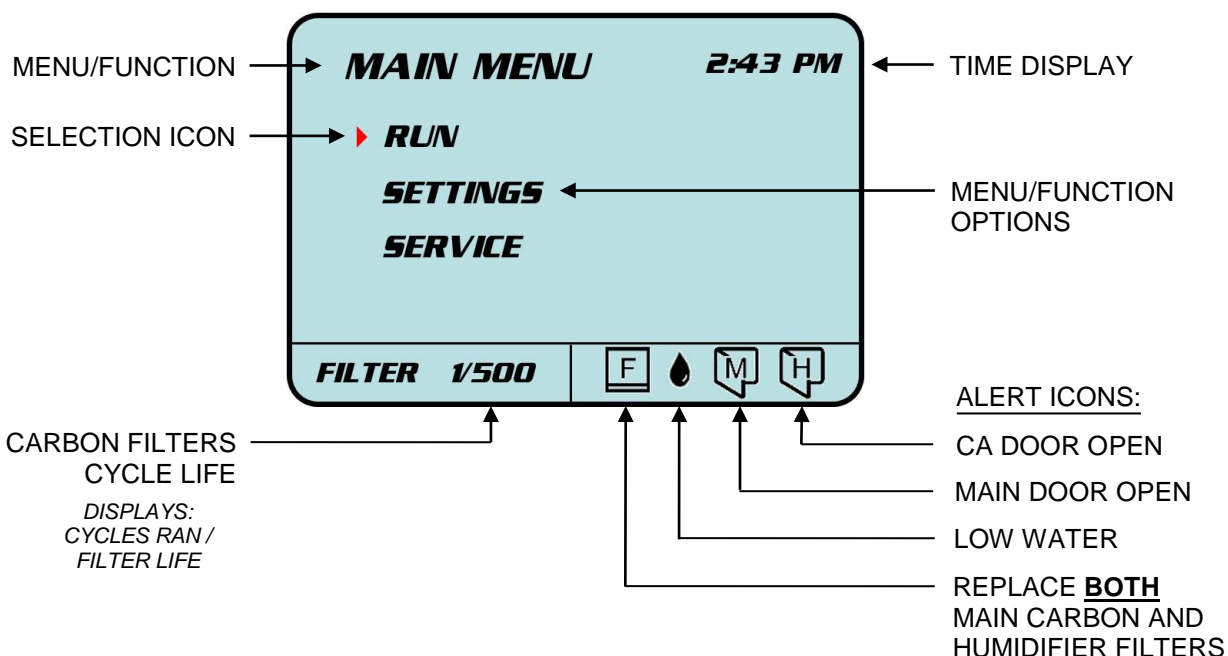


Figure 5-3



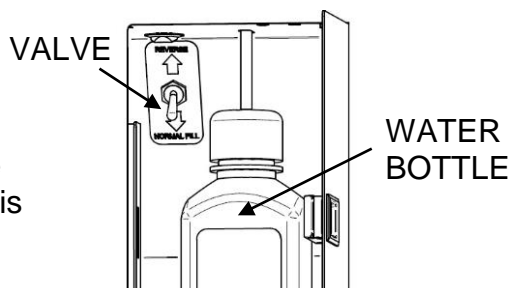
Humidifier Water Fill

If the Water Bottle that supplies the Humidifier has not already been filled from the *Initial Operational Checks* section in Chapter 3, fill the Water Bottle with approximately 500 mL (half a Liter) of water. Tap water, RO filtered or distilled water are all acceptable to use. Replace the Water Bottle in the holder and make sure the water line hose goes back through the hole in the Water Bottle Lid and the end of the hose reaches to the bottom, inside of the Water Bottle.

If the Water Bottle is empty, and the unit's Power Switch is turned on, you will hear a pump running. This pump delivers Distilled Water to the Humidifier from the Water Bottle. The pump will run until the proper amount of Distilled Water is delivered to the Humidifier.

IMPORTANT

Make sure the valve behind the Water Bottle is flipped to the down position, which is **NORMAL FILL**, as shown to the right.

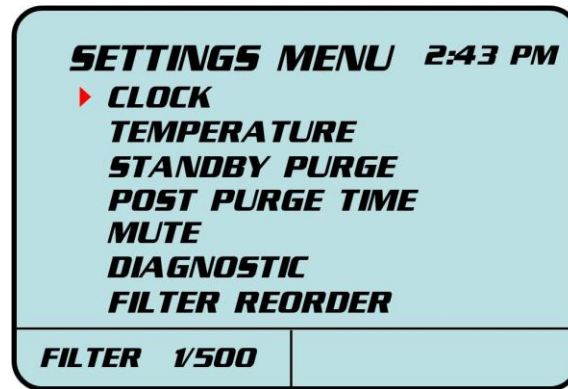


Cabinet Configuration

Before using the Cabinet to process evidence, it is recommended that you configure the Cabinet's settings to your preference.

On the Main Menu screen, Select **SETTINGS** by moving the red arrow down to Settings menu option, and press '**OK**'. The Settings Menu (see Fig. 5-4) displays seven sub-menus, several of which can be configured to user preference as described below:

Figure 5-4



Clock: Set to 12-Hour or 24-Hour display preference. Then, set local time.

Temperature: Set to Fahrenheit or Celsius, as desired.

Standby Purge: When ENABLED, this function purges the chamber for 5 minutes every 2 hours. This occurs at regular intervals on every even hour, but only when the Power Switch (see Fig. 5-2) is ON. This function will not start if a program is running. This purge reduces the build-up of CA fumes that accumulate inside the cabinet as CA deposits continually outgas. Selecting NIGHT will only enable this function between 7pm and 5am.

Post Purge Time: This function keeps the blowers on after the Main Door is opened, following the completion of a Fuming Cycle. This pulls lingering CA vapors away from the user while removing evidence. There are three settings: 0, 5, or 10 minutes. Selecting '0' will turn the blowers off when Main Door is opened, selecting '5' or '10' will keep blowers on for 5 or 10 minutes after Main Door is opened. Closing Main Door turns blowers off.

Mute: When YES selected, the keypad buttons will not beep when pushed.

Chapter 5: Using The Cabinet

Diagnostic: Allows internal component function to be tested for troubleshooting (see *Chapter 7: Troubleshooting* for more details).

Filter Reorder: Filter part numbers and Labconco Service phone number.

Loading Evidence

Loading evidence into the main chamber is the first step to running a process cycle in the CAPture BT Fuming Chamber. Evidence should be evenly distributed with a minimal amount of evidence surface in contact with any surface inside the cabinet, for maximum surface coverage with CA fumes.

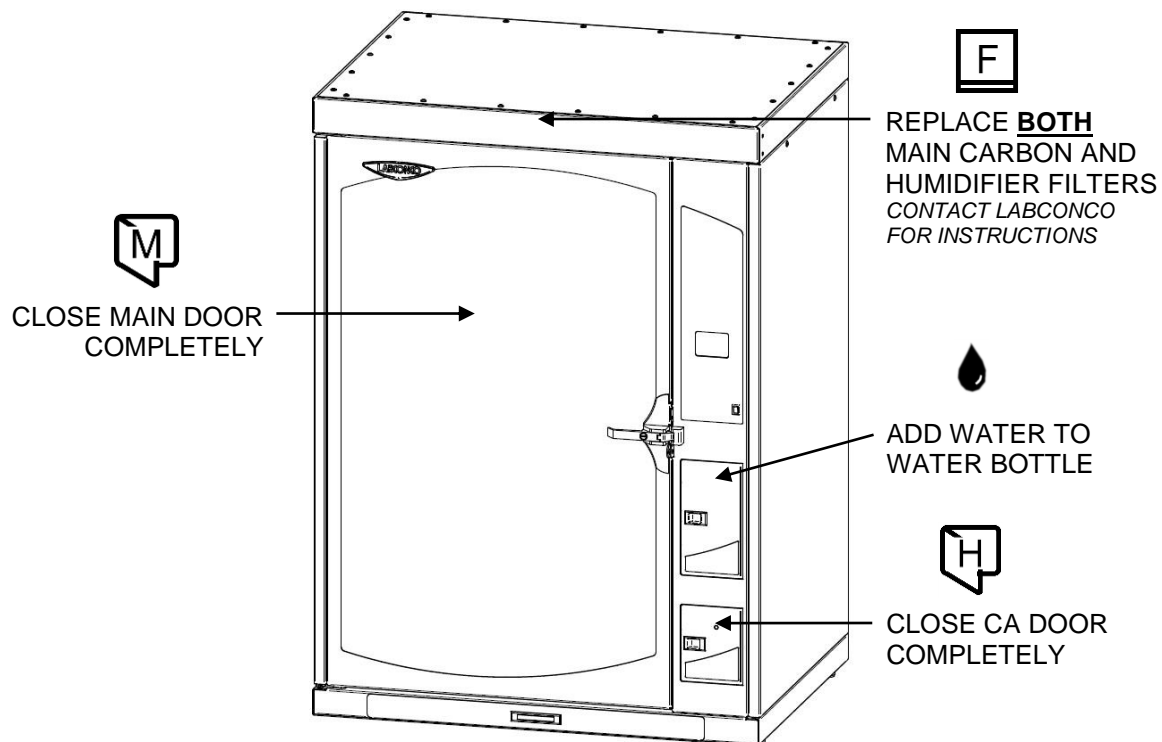
Evidence may be set on the Perforated Floor, leaned against an internal wall, hung from bars, or positioned accordingly on any accessory shelf options available. Do not exceed weight limits of the Hang Bars or Accessory Shelves (see **Safety Precautions** in *Chapter 4* or *Appendix D: Accessories*).

If the cabinet is in sleep mode (screen is black), when the Main Door is opened (or any button pressed), the cabinet will automatically wake up, and the internal cabinet light will illuminate. While loading evidence, the Main Door will be open, and the internal light will remain on as long as the Main Door is open.

Evidence should not touch or rest against any part of the Main Door. The Main Door should open and close freely. Evidence should be positioned as close to the center of the main chamber as possible; however, evidence will process evenly throughout the chamber.

After all evidence is loaded into the chamber, close and latch the Main Door. Resolve any Alert Icons, if present (see Fig. 5-5).

Figure 5-5

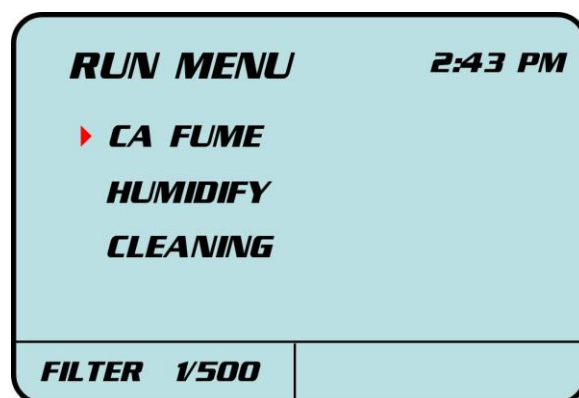


CA Fuming – Program Set-up

If fuming evidence with Cyanoacrylate, you are ready to select the Program, and adjust the program parameters as desired. The CAPture BT Fuming Chamber can also Humidify older evidence to rehydrate prints without running the fuming cycle. See *Humidify Program* section later in this chapter.

On the Main Menu screen, Select **RUN** by moving the red arrow to Run menu option, and press '**OK**'. The Run Menu (see Fig. 5-6) displays three sub-menus, which offer three types of cycles. The Humidify and Cleaning cycles are described in other sections.

Figure 5-6



On the Run Menu screen (above), Select **CA FUME** by moving the red arrow to CA Fume menu option, and press '**OK**'. The Run > CA Fume Menu (see Fig. 5-7) displays all Program Parameters.

Figure 5-7



Chapter 5: Using The Cabinet

The Program Parameters (shown in Fig. 5-7) can be adjusted to desired levels within certain minimum and maximum values. Programs 1-3 are factory defaults for running common fuming cycles. The parameters can be modified in the first three programs, and a cycle ran; however, the modifications will not be saved, and will revert back to the factory default parameters. Programs 4-20 will save modifications to the program parameters. The modifications will be saved once a cycle has begun.

To browse through the programs, move the red arrow to **PROGRAM #** using the UP/DOWN Buttons. Then, use the RIGHT/LEFT Buttons to change the Program # to the desired program.

The CA Fume Parameters can be selected by using the UP/DOWN Buttons to highlight the desired parameter, then use the RIGHT/LEFT Buttons to change the selected parameter value. The parameters are described below:

Grams CA **Min – 0.0** **Max – 99.9**

This parameter is for user reference only, and will be displayed on the following screen just before the Fuming Cycle is initiated. Reminds user how much CA to place in the tin to achieve consistent development results.

Humidity **Min – 20 %** **Max – 80 %**

This parameter sets the desired level of relative humidity the cabinet will achieve before entering the Fuming stage of the program. Adding humidity to a desired level rehydrates prints, which allows for better CA polymerization, which improves print development. Set in 1% increments.

RH Dwell **Min – 0:00** **Max – 99:30**

This parameter sets the desired dwell time between when the desired relative humidity level is reached in the cabinet, and when the Fuming portion of the program begins. If set to 0:00 the Fuming portion will begin immediately after the desired relative humidity level is reached. Set in 30 second increments.

CA Heat **Min – 100 °F (38 °C)** **Max – 425 °F (218 °C)**

This parameter sets the temperature of the hot plate upon which the tin of CA will be placed. CA begins to volatilize quickly around 170 °F (77 °C); however, some users prefer higher temperatures to expedite volatilizing of liquid CA into fumes. Set in 1 °C (~2 °F) increments.

Chapter 5: Using The Cabinet

Fume **Min – 0:00** **Max – 99:30**

This parameter sets the duration of the Fuming stage. Time begins on this stage when the Hot Plate turns on, not when the desired temperature is reached. Set in 30 second increments.

Purge **Min – 4:00** **Max – 10:00**

This parameter sets the duration of the Purge, or Exhaust, stage of the program. Under ideal conditions with nominal CA glue in the glue tin, chamber purges completely in 4 min. Set in 30 second increments.

Chapter 5: Using The Cabinet

Programs 1 through 3 offer three factory default options for common CA fuming methods. These first three programs can be modified, and then run; however, the program changes will not be saved. You can modify and save changes to Programs 4 through 20. The default parameters for Programs 1 through 3 are listed below in Table 5-1 along with a description for their use.

Table 5-1

	Program #1	Program #2	Program #3
Grams CA	2.5	2.5	2.7
Humidity	80%	80%	75%
RH Dwell	0:00	2:00	0:00
CA Heat	350 °F (177 °C)	250 °F (121 °C)	250 °F (121 °C)
Fume	10:00	18:00	17:00
Purge	5:00	5:00	5:00
Description	New Prints, Faster Run Time	Older Prints, More Dwell Time	Dye Staining (Lumicyano™)

It is recommended to use a low viscosity Cyanoacrylate (very fluid like water) for best results. Default Programs 1 and 2 are developed for use with a low viscosity Cyanoacrylate. Arrowhead Forensics A-2601 CA was used to develop these first two programs. Using a different CA, particularly a higher viscosity CA, may require adjustments to the program parameters for best results.

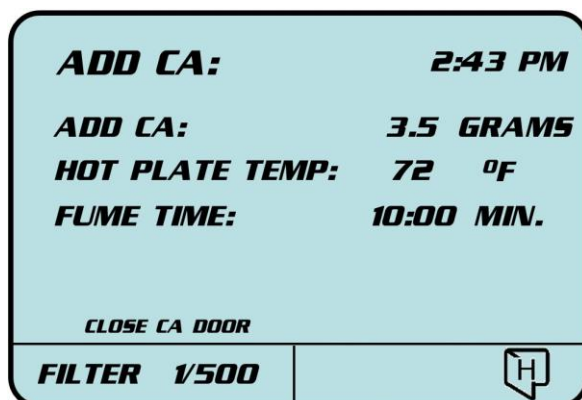
Program 3 is developed for use with Lumicyano™, which is a CA product with a dye that fluoresces under a special laser and curved orange photography filter system. This product can provide better contrast for developed fingerprints. Using a different CA product with dye stain may require adjustments to the program parameters for best results.

There are several factors that affect the outcome of the CA fuming process. These preset Program options are just a helpful starting point for the end user. You will need to test these setting and make adjustments as needed due to the specific glue, or environment you are operating in.

Chapter 5: Using The Cabinet

Once the Program Parameters are set as desired, press '**OK**'. The screen will change to **ADD CA**, which displays the Grams of CA to place in the tin, the current Hot Plate Temperature, and the Fume Time selected by the user in the previous menu screen (see Fig. 5-8).

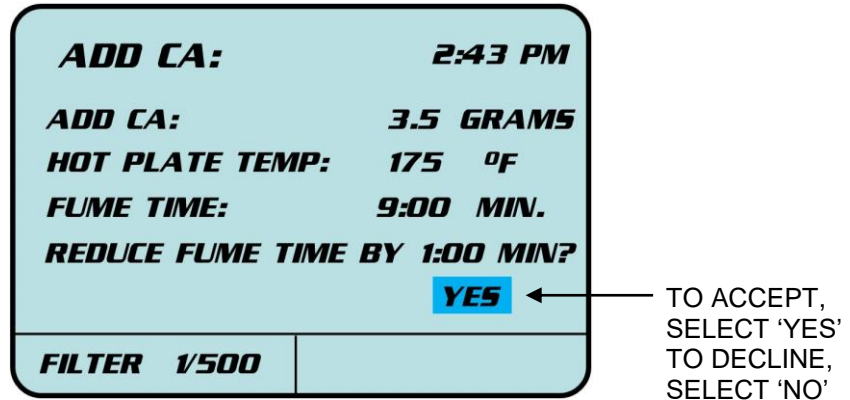
Figure 5-8



Any Alerts must be resolved before you can press 'START' to begin the Fuming Cycle. As shown above in Fig. 5-8, the screen will prompt you to resolve the Alert (see **Loading Evidence** earlier in this Chapter).

The current Hot Plate Temperature is important to know, because if running several fuming cycles in succession, the Hot Plate temperature may be elevated from the previous cycle. If the Hot Plate is above 125 °F (52 °C), a Fume Time adjustment recommendation will be displayed (see Fig. 5-9). This is a reduction of the desired fume time by a pre-determined amount based on the Hot Plate's elevated temperature. This feature reduces the Fume Time because the Hot Plate will reach volatilizing temperature more quickly by starting at an elevated temperature. This feature allows the user to achieve consistent results even with a Hot Plate that starts at an elevated temperature. The suggested Fume Time reduction can be accepted or declined. If accepted, the Fume Time displayed will be the reduced time, if declined, the Fume Time displayed will remain at the original, user-selected value.

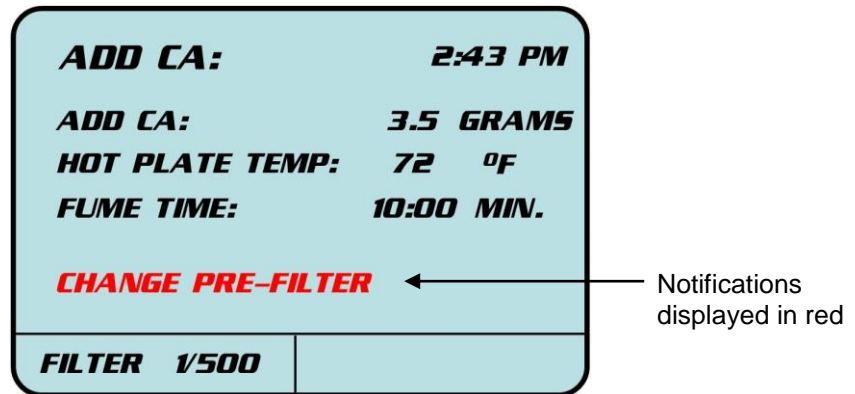
Figure 5-9



CA Fuming – Maintenance Notifications

If maintenance is required to the CApture BT Fuming Chamber, you will receive a notification on the **ADD CA** screen before you begin a Fuming Cycle (see Fig. 5-10).

Figure 5-10



This is just a reminder notification, not an error or alert. Alerts are shown in the bottom right corner, and a Fuming Cycle cannot begin if an Alert is shown. If a notification is displayed, the Fuming Cycle will still begin when the **'START'** button is pressed.

The maintenance notification will be displayed in red text as shown above in Fig. 5-10. See *Chapter 6: Maintaining the Cabinet* for instructions on performing the maintenance as notified.

The maintenance notification will be displayed based on the number of Fuming Cycles that have been run in the unit. The frequency corresponds to the Routine Maintenance section in

Chapter 5: Using The Cabinet

Chapter 6. These Routine Maintenance operations may need to be performed more frequently than what is listed in Chapter 6 of this manual, or before the maintenance notification is displayed on the screen. The frequency of maintenance is based upon several factors, including, but not limited to, how much CA glue is used, and how long the Fuming Cycles last. For more information on when to perform routine maintenance, please see *Chapter 6: Maintaining the Cabinet*.

If evidence is already loaded in the chamber when a maintenance notification is displayed on the **ADD CA** screen, it is recommended to start the current cycle, and then remove all evidence after the cycle is complete. Then, perform the maintenance after the cycle, when the chamber is empty.

CA Fuming – Program Run

Once the CA Fuming Program Parameters have been established, and you are at the **ADD CA** menu screen, the fuming cycle is ready to begin. Any alerts must be resolved, as described in **Loading Evidence** earlier in this Chapter. And, take note of any routine maintenance to be completed after the current cycle is finished and all evidence removed.

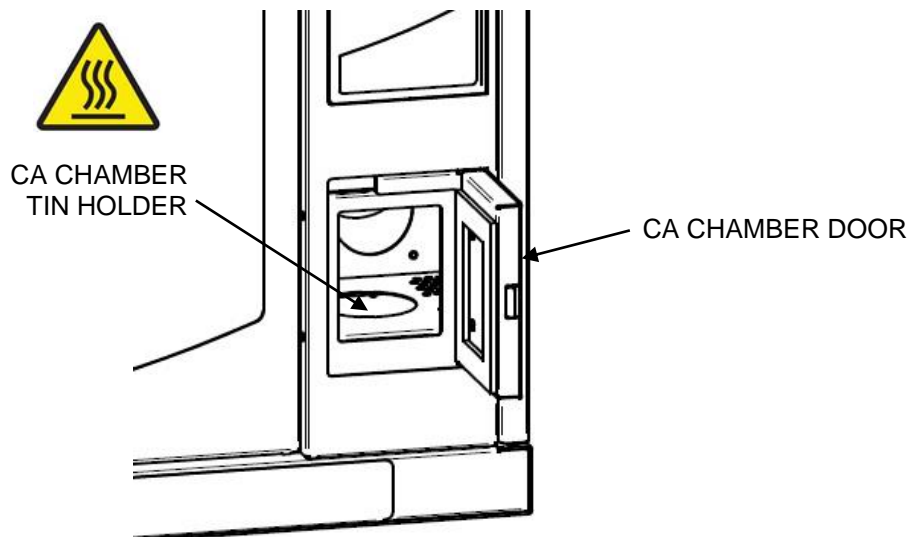
It is recommended to place a test print on a small piece of material (clean plastic or glass slides work well for this test print) inside the chamber on every Fuming Cycle to ensure proper print development.

Before starting the fuming cycle, measure the proper amount of CA into a Tin. It is recommended to use a calibrated balance to measure the amount of CA placed into the tin for consistent results. Place the tin inside the CA Chamber Tin Holder (see Fig. 5-11), close the CA Chamber Door.



NEVER PLACE CA GLUE DIRECTLY ON THE HOT PLATE!!!
This can damage the unit! If CA glue is accidentally spilled on the Hot Plate, clean it off immediately!

Figure 5-11

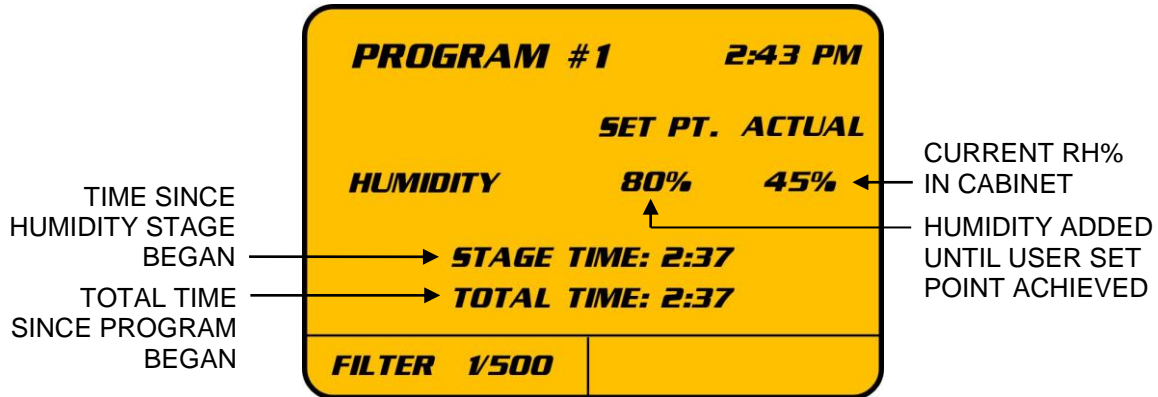


To begin the fuming cycle, press the **'START'** Button.

Chapter 5: Using The Cabinet

Once the program begins, the first stage of the fuming cycle is **HUMIDITY**. The screen will display the following information (see Fig. 5-12) during this stage:

Figure 5-12

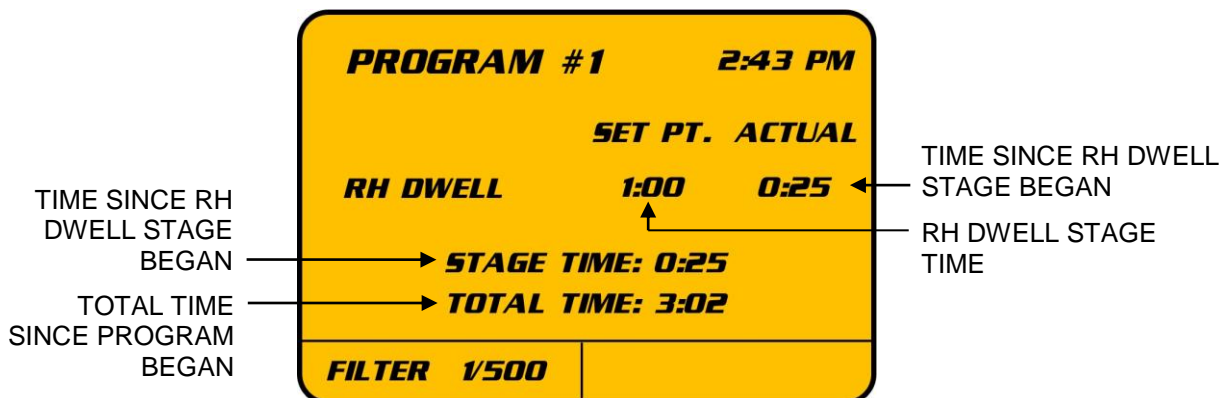


NOTE
HUMIDITY LEVEL CAN ONLY BE INCREASED FROM AMBIENT, NOT DECREASED

During the Humidity stage, you may see water vapor entering the chamber from the lower, right side wall. This is normal. The displayed Humidity value may drop slightly in the first minute until air is circulated thoroughly. The humidity level increases approximately 2%-3% per minute. When operating normally, the maximum relative humidity of 80% should be reached in less than 35 minutes. If the desired relative humidity level is not reached in a pre-set amount of time, the program will stop and display an error screen. See *Chapter 7: Troubleshooting* if this timeout occurs.

Once the desired relative humidity level is achieved, the program will move to the RH Dwell stage, if this stage is enabled by entering a time other than 0:00. The screen will display the following information (see Fig. 5-13) during this stage:

Figure 5-13

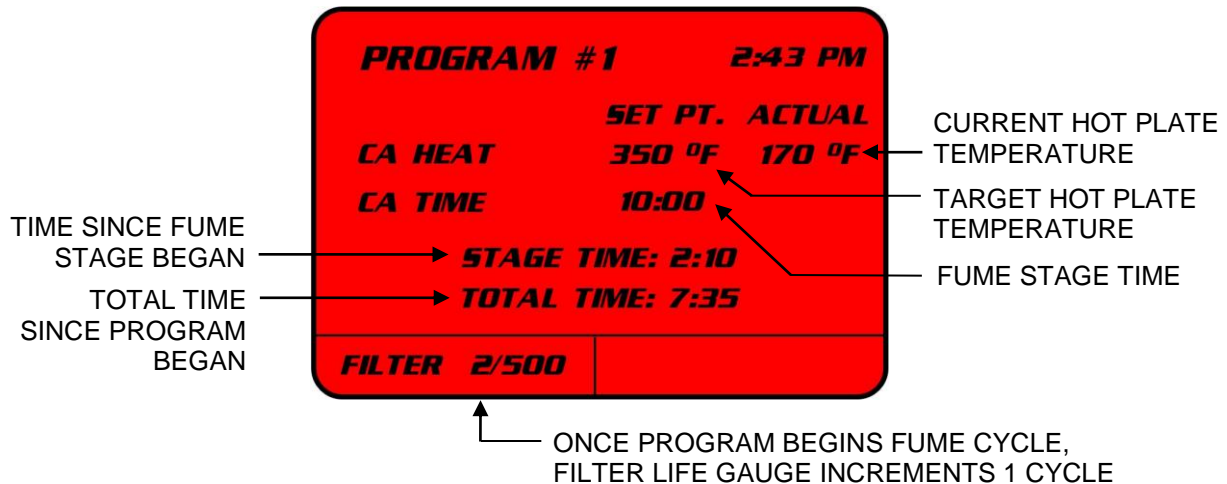


Chapter 5: Using The Cabinet

During the RH Dwell stage, the air is circulated inside the cabinet. Additional humidity will not be added during this stage, so do **NOT** open the Main Door or the CA Chamber Door.

After the RH Dwell stage is complete (or after the Humidity Stage is complete, if no RH Dwell stage was selected), the program will move to the Fuming stage. The screen will display the following information (see Fig. 5-14) during this stage:

Figure 5-14



When the Fuming stage begins, both the Main Door and the CA Chamber Door will lock. They remain locked until the program is complete. This prevents opening the doors once CA fumes are present. If a power outage occurs while the doors are locked, they will remain locked. See *Chapter 7: Troubleshooting* for instructions to manually override the Main Door Lock so that evidence can be removed to protect it from over-fuming.

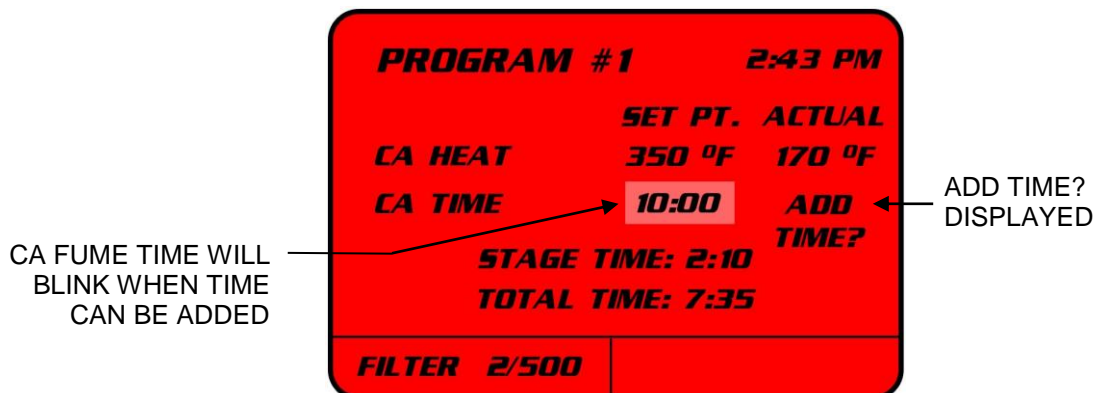
The Stage Time shown during the Fuming Stage is from the beginning of the stage, or when the Hot Plate begins to heat, not when the Hot Plate reaches the desired temperature. The Fuming Stage is dependent only upon the Stage Time entered in the program parameters, and will end when the Stage Time is reached. The Hot Plate temperature will increase until the program parameter set point is reached, and maintain that temperature, within 10 °F (5 °C), until the Fume Stage is complete. If evidence begins to over-process, before the Fuming stage is complete, you can press the **'STOP'** or **'PURGE'** button. Once the Fuming stage begins, pressing **'STOP'** will initiate a 5 minute purge (same as pressing **'PURGE'**) to remove CA fumes from the cabinet. Note – if you press **'STOP'** before the Fuming stage begins, the unit will stop without purging.

Chapter 5: Using The Cabinet

If evidence is not processed enough as the end of the Fuming stage nears, you can add more time to the Fuming stage. However, you must add time before the Fuming stage ends. Once the Purge stage begins, no more time can be added.

To add time to the Fuming stage while still fuming, press the **'UP'** button once. The text **'ADD TIME?'** will be displayed on the Fuming stage screen, as shown below in Fig. 5-14b:

Figure 5-14b



The **'CA TIME'** field will blink. If the **'UP'** button is not pressed within 5 seconds, the **'ADD TIME?'** text will disappear, and no change to the Fume Time will be made. Once the **'ADD TIME?'** text is displayed, each additional press of the **'UP'** button will add 30 seconds to the Fume Time.

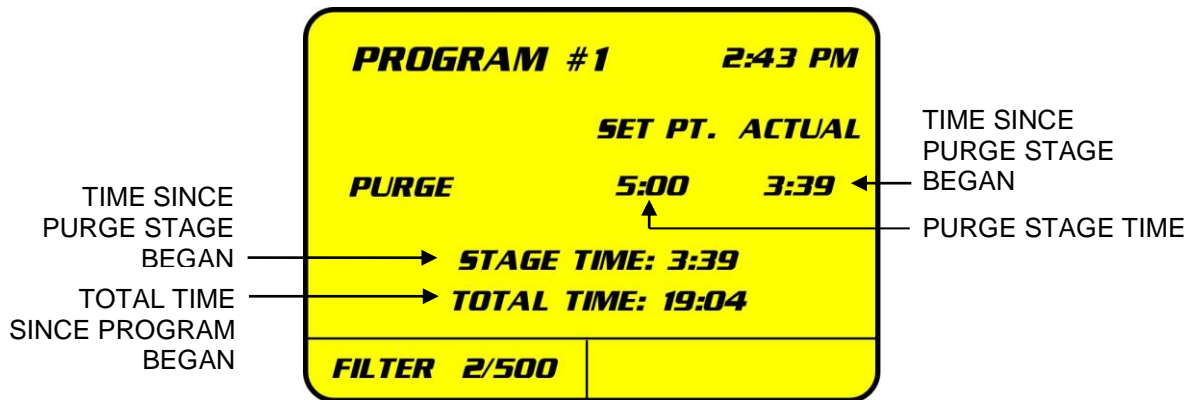
It is recommended to only add 30 or 60 seconds of time, and then watch for print development. Additional time can be added again, if necessary; however, time cannot be removed.

If additional time is added to the Fume stage, it will not be saved to the Program Parameters. Make appropriate adjustments to the Fuming stage time in the Program Parameters if a longer Fume time is desired for future runs.

Chapter 5: Using The Cabinet

After the Fume stage is complete, the program will move to the Purge stage. The screen will display the following information (see Fig. 5-15) during this stage:

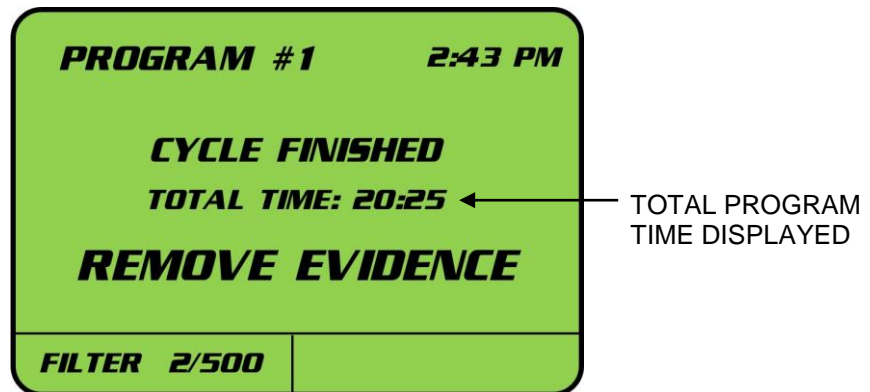
Figure 5-15



The Purge stage is the final stage in a Fuming Cycle. During this stage, you will hear the exhaust blower turn on to pull the fumes inside the cabinet through the Main Carbon Filter. This stage has a minimum time of 4:00 to ensure all CA vapors are removed. Until this stage is complete, the doors will remain locked.

After the Purge stage is complete, the Fuming Cycle has finished. The screen will display the following information (see Fig. 5-16) after this stage:

Figure 5-16



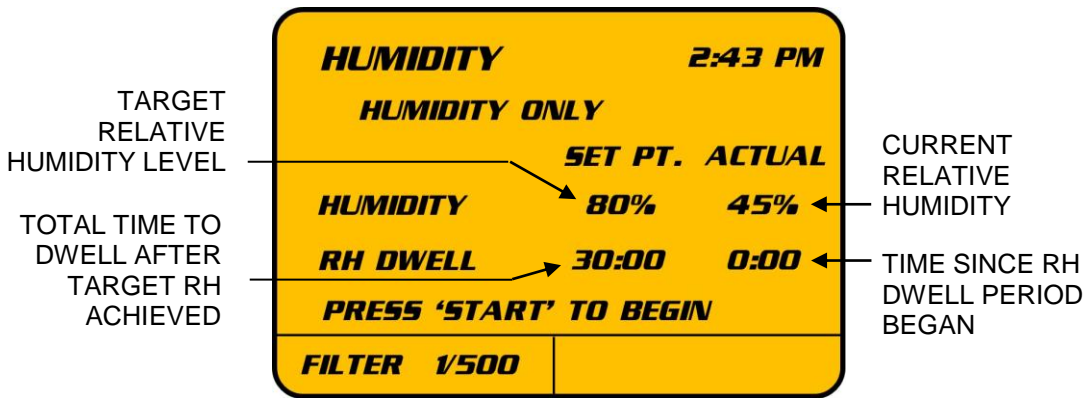
After the Fuming Cycle is complete, this screen will be displayed, along with an audible beep and flashing cabinet light, for 30 minutes or until the Main Door is opened. Upon completion of the Fuming Cycle the doors will unlock automatically, so that evidence and the used CA tin can be removed.

Humidify – Program Set-up

If re-humidifying prints, you can utilize the Humidify Cycle functionality to raise the cabinet's relative humidity to any user-selectable level, up to 80% maximum, and hold it at that level for a user-selectable time period.

On the Main Menu screen, Select **RUN** by moving the red arrow to Run menu option, and press '**OK**'. The Run Menu (see Fig. 5-6) displays three sub-menus, which offer three types of cycles. Select **HUMIDIFY** by moving the red arrow to Humidify menu option, and press '**OK**'. The Humidity Menu (see Fig. 5-17) will be displayed:

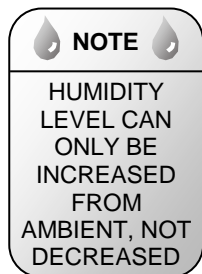
Figure 5-17



The Set Point values for Humidity and RH Dwell can be adjusted to desired levels. The selected value will blink, and you can move between the Humidity Set Point value, and the RH Dwell Set Point value with the UP/DOWN Buttons. Use the RIGHT/LEFT Buttons to increase or decrease the selected value. When the values are set to user preference, press '**START**' Button to begin the Humidify Program. The RH Dwell time will not begin until the target RH level is achieved. While the Humidify Cycle is running, the following screen will be displayed (Fig. 5-18):

Figure 5-18

HUMIDITY		2:43 PM
HUMIDITY ONLY		
	SET PT.	ACTUAL
HUMIDITY	80%	80%
RH DWELL	30:00	14:51
PRESS 'STOP' TO END EARLY		
FILTER 1/500		



During the Humidity stage, you may see water vapor entering the chamber from the lower, right side wall. This is normal. The displayed Humidity value may drop slightly in the first minute until air is circulated thoroughly. The humidity level increases approximately 2%-3% per minute. When operating normally, the maximum relative humidity of 80% should be reached in less than 35 minutes. If the desired relative humidity level is not reached in a pre-set amount of time, the program will stop and display an error screen. See *Chapter 7: Troubleshooting* if this timeout occurs.

Once the desired relative humidity level is achieved, the program will move to the RH Dwell stage, if this stage is enabled by entering a time other than 0:00. During the RH Dwell stage, the air is circulated inside the cabinet. Additional humidity will not be added during this stage, so do **NOT** open the Main Door or the CA Chamber Door.

After the Humidify Cycle is complete, this screen (Fig. 5-19) will be displayed, along with an audible beep and flashing cabinet light, for 30 minutes or until the Main Door is opened.

Figure 5-19

HUMIDITY		2:43 PM
HUMIDITY ONLY		
	SET PT.	ACTUAL
HUMIDITY	80%	80%
RH DWELL	30:00	30:00
CYCLE FINISHED		
FILTER 1/500		

Chapter 6:

Maintaining the Cabinet

The common service operations necessary to maintain the CApture BT Fuming Chamber for optimal performance are listed below.

Routine Maintenance Schedule

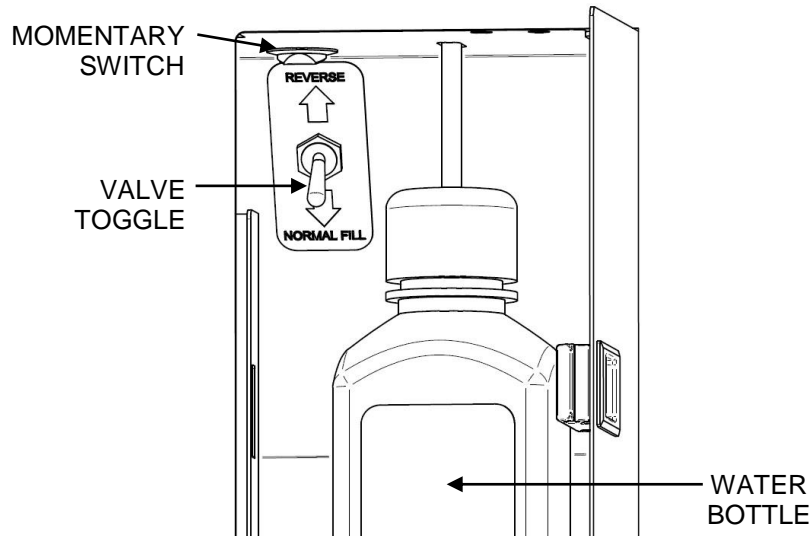
Weekly

- Replace water in Humidifier Basin and Water Bottle. This is important to do weekly, especially before the cabinet will sit unused for several days (typically on a Friday before sitting unused over the weekend). This step must be performed at least once weekly.

See the steps below and on the following page for the procedure to empty the Humidifier Basin and Water Bottle.

1. Open the Water Bottle Door, locate the Valve Toggle (see Fig. 6-1 on next page) on the back wall, just to the left of the Water Bottle. Next, flip the Valve Toggle “up” which reverses water flow back into the Water Bottle.
2. Make sure the unit is plugged in, and Main Power Switch is ON.
3. Locate the Momentary Switch (see Fig. 6-1) on the top panel inside Water Bottle Compartment. Press and hold this switch for approximately 15 seconds. When the switch is pressed, you should hear the Water Pump turn on, and see the water level in the Bottle rising. Release the Switch, Water Pump should continue to run on its own, if not, hold Switch for another 5 seconds.
4. When air bubbles are seen coming from hose inside Water Bottle, turn the Main Power Switch OFF. Empty the Water Bottle of all water. Flip the Valve Toggle back “down” to the NORMAL FILL position. Replace Water Bottle. Before using cabinet again, fill Water Bottle with water.

Figure 6-1



Every 50 Cycles (or more frequently if required)

- Using an appropriate glass cleaner, clean outside of the glass of the Main Door. Wipe down outside of unit with dry cloth to remove dust.
- While cleaning inside the chamber you can run a **CLEANING** Cycle to pull vapors away from the user. See *Cleaning Cycle* section later in this chapter. Using a suitable cleaning solution, surface clean the inside of the cabinet to remove built up CA deposits. This includes the inside of the Main Door glass, the glass of the Cabinet Light, and inside the CA Chamber.
 - To reach all internal surfaces inside the chamber for cleaning, remove any Hanging Rods, accessory shelves, or other accessories. Clean these parts in the same manner as the inside surfaces of the chamber.
 - Also, to reach all internal surfaces, remove the Shelf Brackets & Perforated Floor. Clean these parts in the same manner as the inside surfaces of the chamber. To remove the eight (8) Shelf Brackets, loosen front screw on each bracket, lift bracket up & rotate out. See Fig. 6-2 on following pages.

Chapter 6: Maintaining the Cabinet

Note – Using alcohol-based cleaners may require scraping the CA deposits off. To avoid this, consider using an oil-based Stainless Steel Cleaner & Polish. The mineral oil and acetone in these cleaners removes CA deposits quickly, and the residue from the cleaner reduces CA build up in future Fuming Cycles. One such product is “Stainless Steel Cleaner and Polish” (p/n SW841R) made by Sprayway - www.spraywayretail.com. This specific product is not endorsed or guaranteed by Labconco.

- Replace the Main Carbon Pre-filter. See Fig. 6-3 on following page.

Figure 6-2

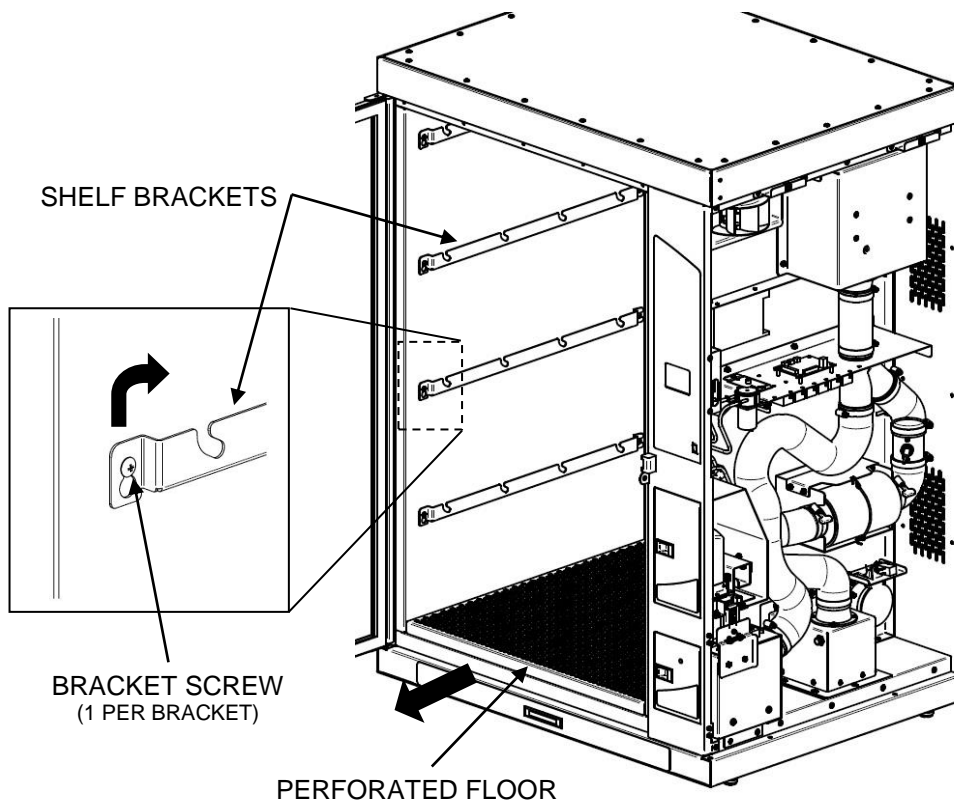
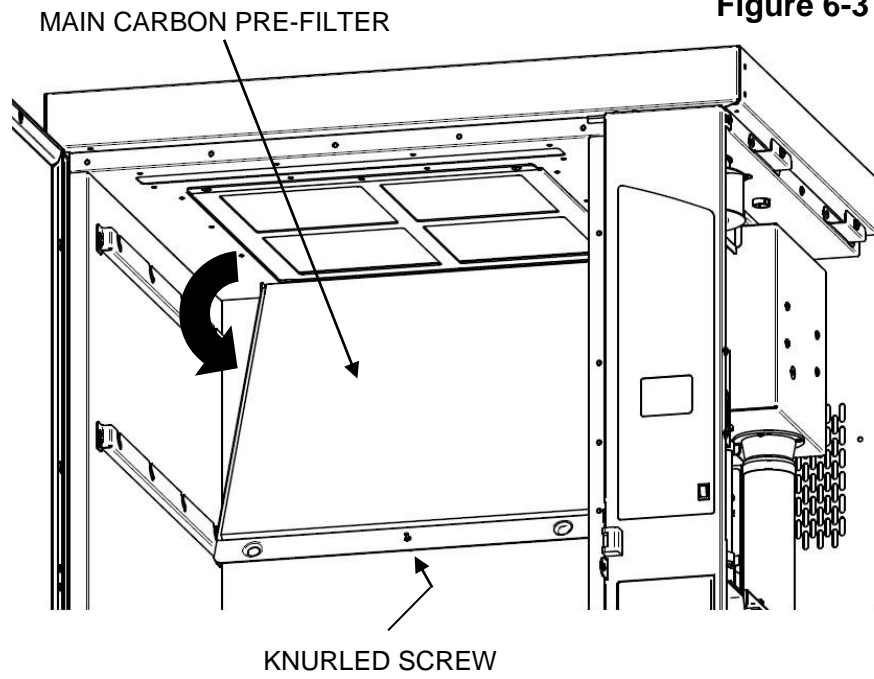


Figure 6-3



Every 100 Cycles (or more frequently if required)

- After cleaning the inside of the Main Door & Cabinet Light glass cover with a cleaning solution, use 70% ethanol (or a suitable alcohol-based solution) to completely remove any residue left on the glass from the cleaning compounds used to remove the CA deposits. Allow glass to dry completely. Retreat inside of Main Door glass & cabinet light glass cover with RainX™. Follow application instructions provided with the RainX™ to treat the glass properly.



IMPORTANT! Before performing the next maintenance step (Cleaning Blower Intake), unplug the unit from all electrical power by disconnecting the power cord! Failure to remove all electrical power can result in damage to the unit, and personal injury!

- Clean Blower Intake to remove CA deposits on the Intake Cover and on the Recirculation Blower itself. The Shelf Brackets should be removed, which expose the Fastening Screw for the Blower Intake Cover. Loosen this screw and remove Blower Intake Cover (See Fig. 6-4a). Clean the Blower Intake Cover using the same methods described above for the internal stainless steel walls & brackets of the chamber. Using a shop-vac, or filtered vacuum, with brush extension, vacuum the white deposits of CA off of the Recirculation Blower (see Fig. 6-4b). If a brush extension is not available, use small brush to remove the deposits of CA while holding the vacuum hose near the brush. Reassemble Blower Intake Cover and tighten Fastening Screw when finished.

Figure 6-4a

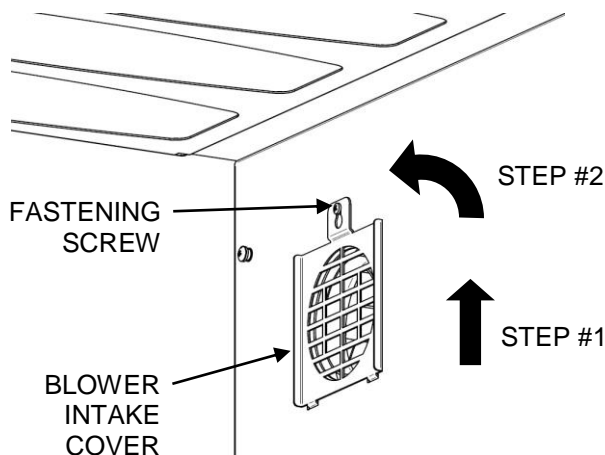
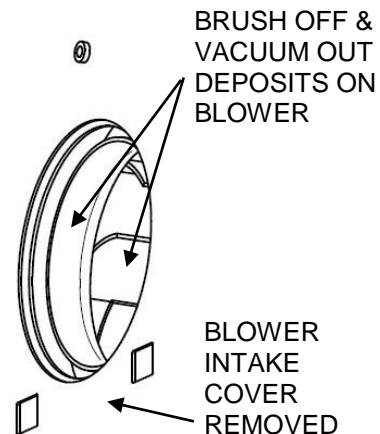


Figure 6-4b



Do NOT contact blower wheel while still in motion.

NE PAS être en contact avec la roué du ventilateur tant qu'il est en marche.

Changing the Carbon Filters

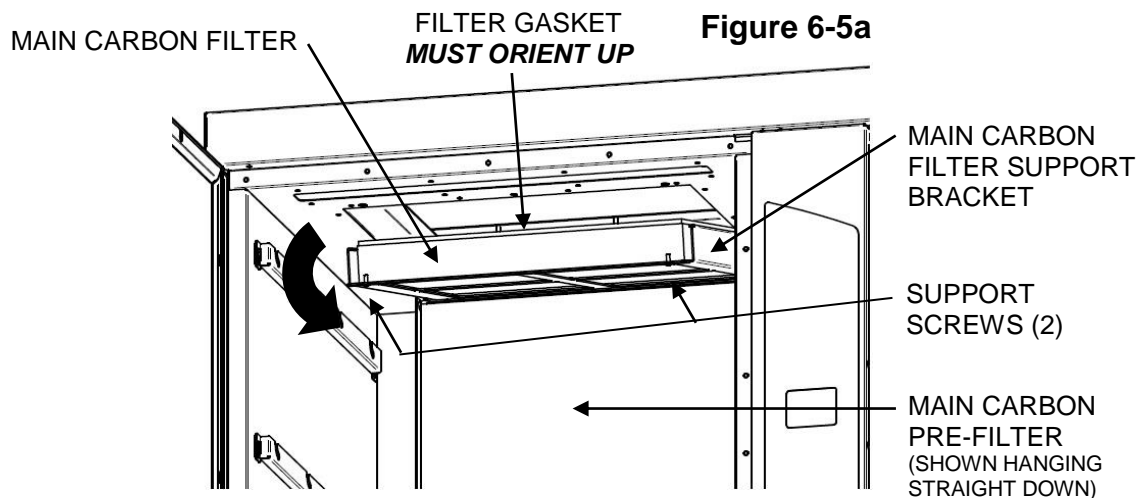
Every 500 Cycles (or more frequently if required)

See section: **Carbon Filter Life** in *Chapter 4*



When the Replace Filter Alert activates, or if Cyanoacrylate fumes are detected emitting from the cabinet's exhaust, replace **both** Carbon Filters as described below. See section **Carbon Filter Life** in Chapter 4 to understand factors that can reduce Carbon Filter Life.

Open the Main Carbon Pre-Filter as shown in Fig. 6-3. The Main Carbon Pre-Filter and its Bracket may be removed by picking the Bracket up and pulling forward. Or, it can be left to hang in place. Remove the two (2) Support Screws holding the Main Carbon Filter in place (see Fig. 6-5a). The Main Carbon Filter Support Bracket will rotate down approximately 15 degrees and stop on its own by internal stop pins. The Main Carbon Filter's gasket orients up, and may stick in place. Gently pull the front edge of the filter frame down to release the gasket seal. Slide the old filter out, replace with a new filter. Reverse the above steps to reassemble all components.

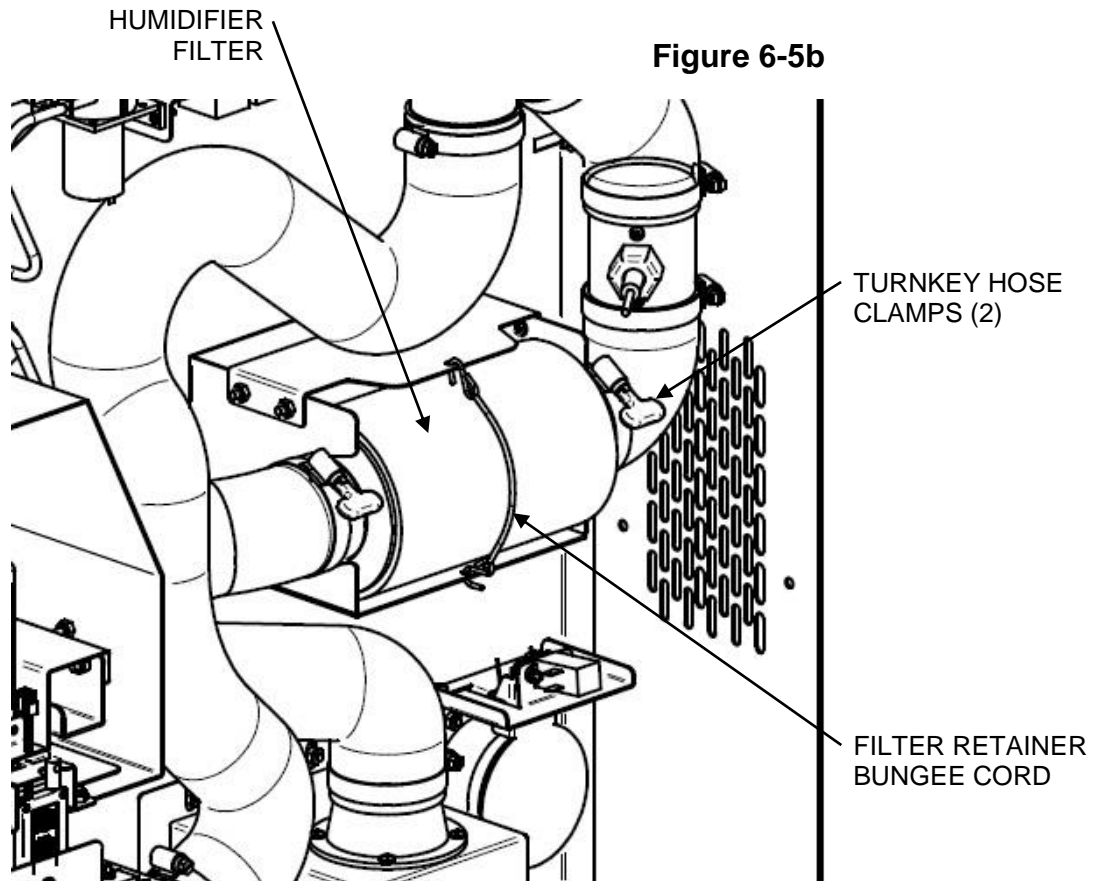


Next, unplug the power cord from the wall outlet, and then access the Humidifier Filter by removing the Right Side Service Panel (see Fig. 6-9 for reference on how to remove Right Side Service Panel).

Chapter 6: Maintaining the Cabinet

Locate the Humidifier Filter inside the Right Side Compartment (see Fig. 6-5b on following page). Loosen the two (2) Turnkey Hose Clamps on either side of the Humidifier Filter enough to slide the inlet and outlet hoses off of the Humidifier Filter. Unhook the Filter Retainer Bungee Cord from the bracket above the Filter, and slide the Humidifier Filter up and out.

Replace with a new Humidifier Filter (Filter is not orientation specific, it can go in either direction). Replace all components in reverse order to reassemble unit. **Take care to tighten the Turnkey Hose Clamps fully to ensure air does not leak out.**



Chapter 6: Maintaining the Cabinet

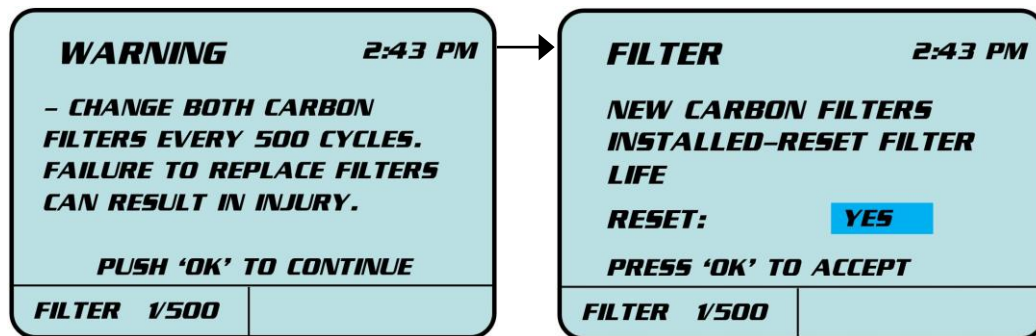
After new Carbon Filters are installed, the Filter Life Gauge needs to be reset to zero, in order to run a Fuming Cycle. On the Main Menu screen, Select **SERVICE**, and press '**OK**'. After entering the Servicer password, select **FILTER**, and press '**OK**'. Accept the Warning by pressing '**OK**', then select **YES** on reset option, and press '**OK**', to reset Filter Life (see Fig. 6-6).

NOTE!

MAINTAIN
PASSWORD
WITH
RESPONSIBLE
PARTY ONLY

The Servicer password should be maintained by a manager or responsible party only. The password is: '**UP**' '**DOWN**' '**LEFT**' '**RIGHT**' '**OK**'. Pressing these buttons in proper order will gain access to **SERVICE** menu.

Figure 6-6



Additional Maintenance

Tubing Clean Out

Over time the internal air paths within the tubing behind the Right Side Service Panel will accumulate CA. The CA will adhere to the internal walls of the tubing that sends air from the Recirculation Blower to the CA Chamber and Humidifier. The CA build-up is a white powder. If this build up is not cleaned out, air flow will reduce. The first symptom may be prolonged humidification times. If this happens, unplug the unit, remove the Right Side Service Panel (see *Service Parts – Side Cabinet* section later in this chapter) unclamp each piece of tubing (Items 3 & 13 in Fig. 6-11) and vacuum or otherwise clean out the CA build up. Always use proper PPE for eye, skin and breathing protection when cleaning CA residue, and always vacuum with a HEPA-filtered vacuum. If cleaning out the tubes is not desired, replacement tubes can be ordered, see *Service Parts – Side Cabinet* section for part numbers of Items 3 & 13 depicted in that section.

Cleaning Cycle

When cleaning the inside of the Cabinet, it may be desirable to pull vapors and fumes from the cleaning solutions and/or vapors from CA built up on the internal walls of the chamber away from the user. The CAPture BT Fuming Chamber has a Cleaning Cycle that can be enabled while the Main Door is open. This Cleaning Cycle turns the blowers on to pull vapors away from the user, and through the Main Carbon Filter.

To enable a Cleaning Cycle, on the Main Menu screen, Select **RUN** by moving the red arrow to Run menu option, and press '**OK**'. The Run Menu (see Fig. 5-6) displays three sub-menus, which offer three types of cycles. Select **CLEANING** by moving the red arrow to Cleaning menu option, and press '**OK**'. The Cleaning Menu (see Fig. 6-7) will be displayed:

Figure 6-7

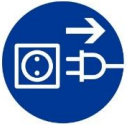


To start the Cleaning Cycle, press the '**START**' Button. The blowers will turn on, even if the Main Door and CA Chamber Door are open. The blowers will stay on for 30 minutes, or until '**STOP**' Button is pressed.



Do NOT run more than two (2) consecutive Cleaning Cycles. This can harm internal components! If more than one hour is required to clean the inside of the chamber, stop cleaning after two (2) consecutive Cleaning Cycles, wait 15 minutes, then another Cleaning Cycle can be run.

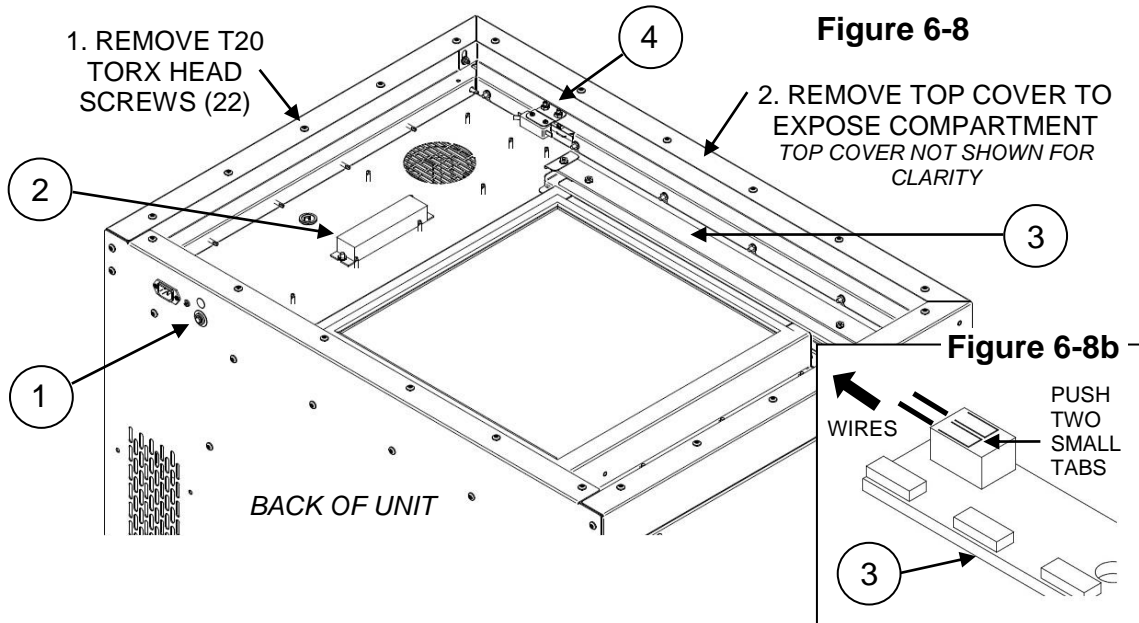
Service Parts – Upper Compartment



Serviceable parts are located in the upper compartment of the Capture BT Fuming Chamber. These components should not need to be maintained by the user, but if a failure occurs, these components can be replaced as follows:



ALWAYS UNPLUG POWER CORD BEFORE SERVICING UNIT!!!



1

Circuit Breaker – P/N 1327208 (115v, 1); P/N 1327209 (230v, 2)
Unscrew knurled nut on outside of cabinet, disconnect wires.

2

LED Driver – P/N 3181300
Remove two (2) nuts holding driver in place, disconnect all wires (NOTE - push down on two small tabs on LED Light Strip to release wires from Light Strip, see Fig. 6-8b above).

3

LED Light – P/N 3181100
Remove two (2) nuts and screws holding Aluminum Heat Sink Strip to the Support Bracket, disconnect wires as shown in Fig. 6-8b above. Separate LED Light Strip from Heat Sink Strip by removing screws & nuts.

4

Main Door Limit Switch – P/N 3832300
Remove two (2) Nyloc Nuts holding Switch Bracket to Frame. Note wire locations on switch for correct reassembly, then disconnect wiring. Remove two (2) screws & nuts holding Limit Switch to Switch Bracket.

Service Parts – Side Compartment

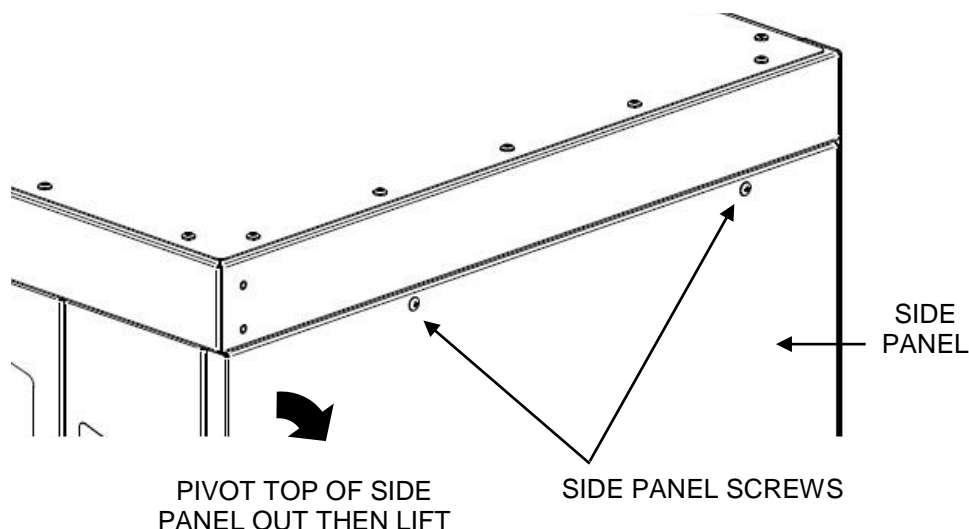


Serviceable parts are located in the side compartment of the CAPture BT Fuming Chamber. Other than the Humidifier Filter, these components should not need to be maintained by the user, but if a failure occurs, these components can be replaced as follows:

ALWAYS UNPLUG POWER CORD BEFORE SERVICING UNIT!!!



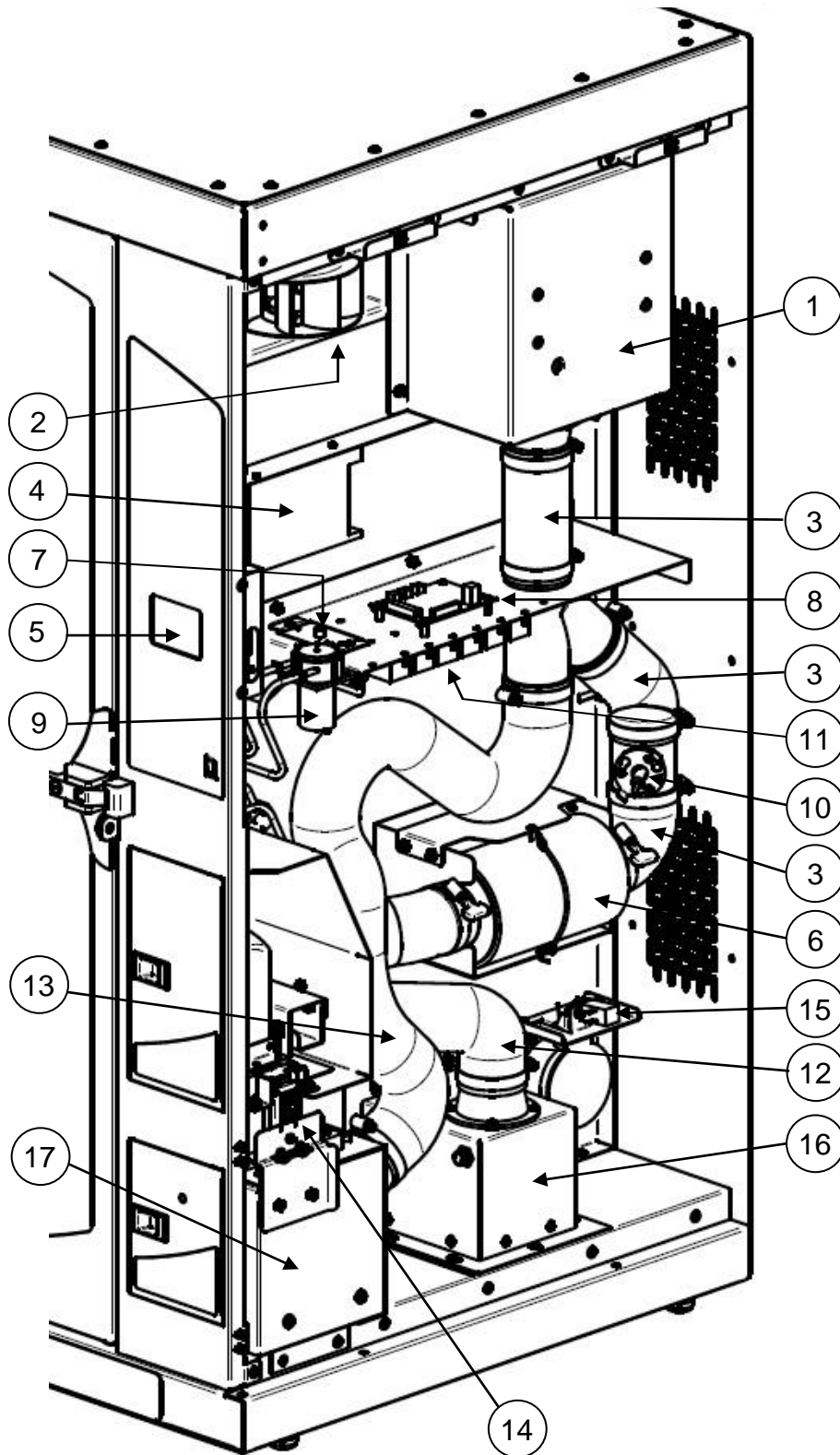
Figure 6-9



To remove the right Side Panel, locate and remove the two (2) Screws at the top of the right Side Panel. Pivot the top of the Side Panel away from the Cabinet. Then, lift Side Panel up to clear the pins at bottom of Side Panel from the holes in lower frame. See Fig. 6-9 above for reference. Save the Screws and Side Panel for reassembly. **Note – Side Panel is heavy!** Lay the Side Panel flat while it is removed from the Cabinet, so it cannot fall over.

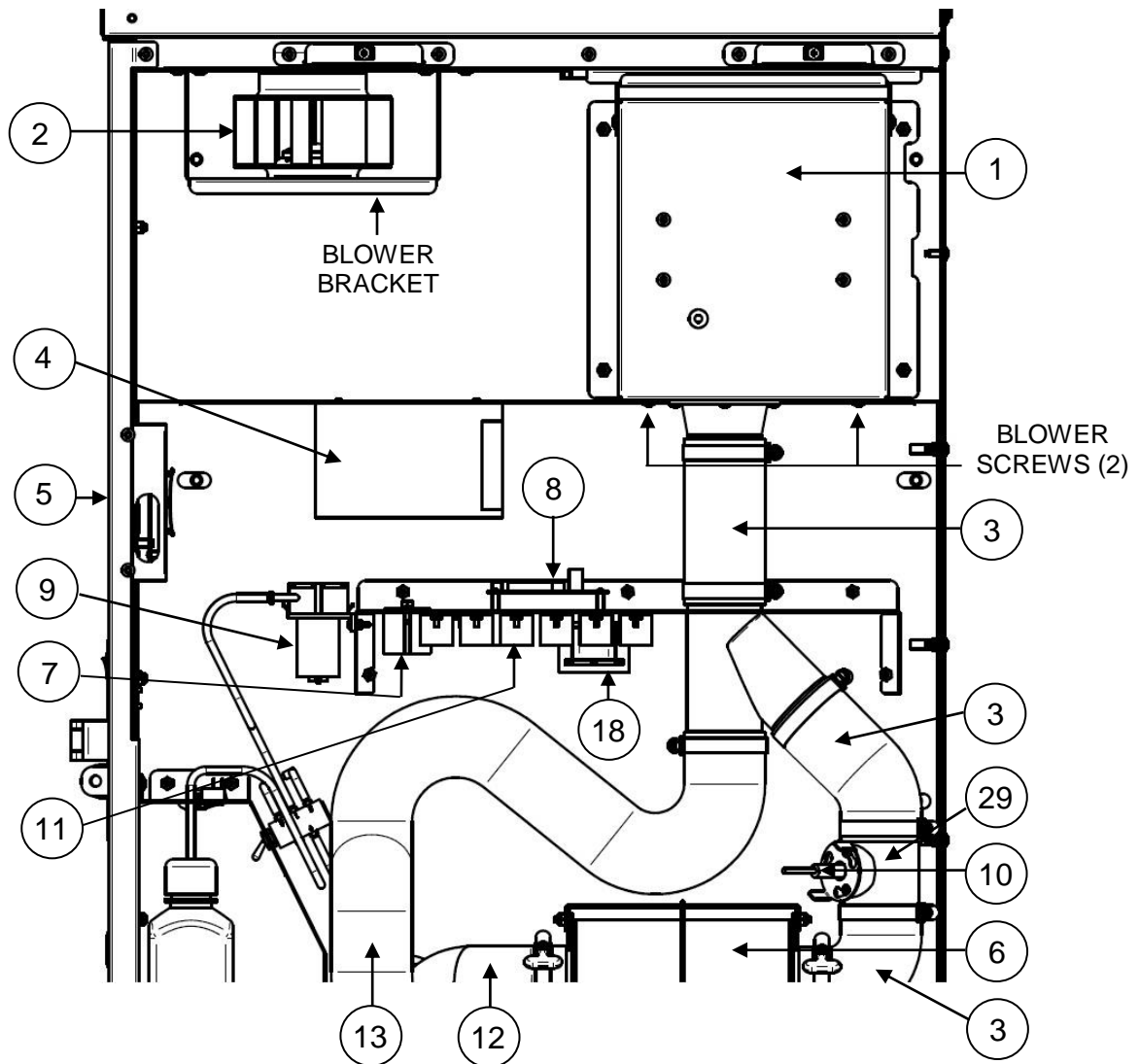
There are many service parts located behind the right Side Panel. Some of these are electrical components which can be easily damaged by rough handling and/or by static discharge. **If replacing an electrical component, always wear a Static Dissipative Wrist Band grounded to the cabinet frame and handle component(s) with extreme care, failure to do so can damage components!** If uncertain about servicing components behind the right Side Panel, or have service or part number questions, contact Labconco Service Department at 800-821-5525 or 816-333-8811. For troubleshooting assistance, see *Chapter 7: Troubleshooting*. A detailed list of service parts located behind the right Side Panel is located on the following pages.

Figure 6-10



See following pages for detailed descriptions and part numbers.

Figure 6-11

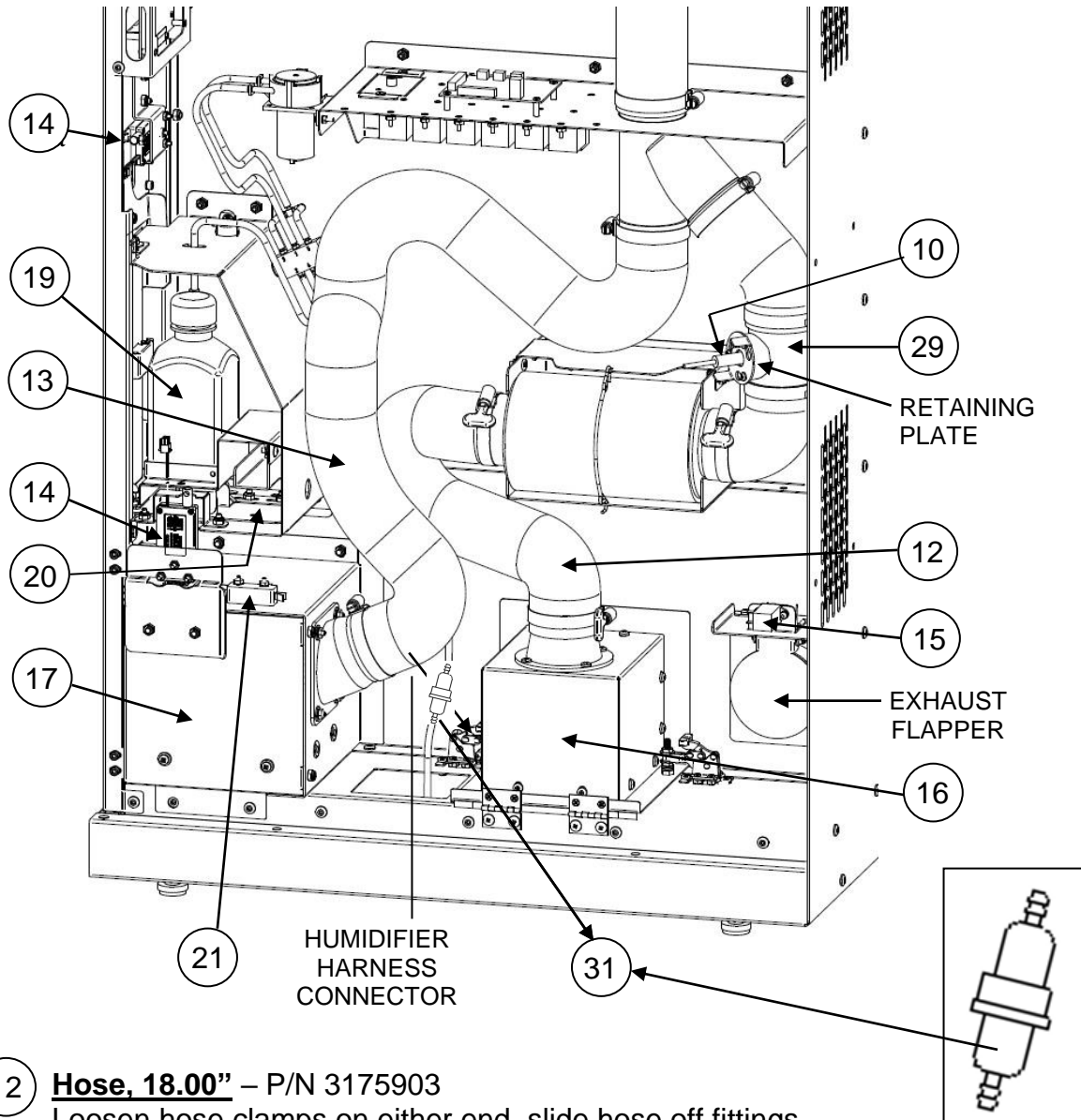


- 1 **Recirculation Blower** – P/N 3172000P
Disconnect hoses & wires, remove two (2) Blower Screws, pull up & out.
- 2 **Exhaust Blower** – P/N 6962000 (115v); 6962001 (230v)
Disconnect wires, remove four (4) screws underneath Blower Bracket.
- 3 **Hose, 5.50"** – P/N 3175901
Loosen hose clamps on either end, slide hose off fittings.
- 4 **Power Supply, 12VDC** – P/N 4586800
Remove three (3) screws on top side of Power Supply. Disconnect wires.

Chapter 6: Maintaining the Cabinet

- 5 **PCB Display** – P/N 3448002
Remove cables from board (**note cable orientation!**), remove two (2) T20 Torx Screws on side and two (2) Nyloc Nuts on opposite side of PCB Bracket. Separate board from bracket by removing four (4) screws & nuts.
- 6 **Humidifier Filter** – P/N 3181401
Loosen hose clamps on either end, remove top hook of Filter Retainer Bungee Cord, slide Filter out. New Filter install NOT direction specific.
- 7 **Exhaust Blower Speed Control** – P/N 3922100 (115v); 3922101 (230v)
Disconnect wires, remove two (2) screws, pull Speed Control up.
IMPORTANT! – When new Speed Control installed, turn gain screw to 100%
- 8 **Power Board** – P/N 3178400
Disconnect all wires, remove four (4) screws holding board in place.
- 9 **Water Pump** – P/N 4533100
Disconnect wires & hoses. Label hoses before removing to ensure hoses are connected correctly to new Water Pump. Remove two (2) screws & nuts.
- 10 **Humidity Sensor Replacement Kit** – P/N 3179220
Disconnect wire harness, rotate Retaining Plate, slide Sensor out. RH Sensor Filter (P/N 3186400) is included with new Humidity Sensor Kit (see Fig. 6-12b). Kit 3179220 also includes a new O-Ring and Retaining Band; it is recommended to replace these when changing the Sensor. Ensure O-Ring is located above RH Sensor Filter on Sensor body and Retaining Band is flush with end of Sensor, then reassemble Sensor and lock in place by rotating Retaining Plate (see Fig. 6-12b). Sensor should not slide out when secured.
- 11 **Relay, SPST** – P/N 1289200
Disconnect wires, taking careful note of location of wires to ensure correct assembly of new Relay. Remove two (2) nuts.
- 18 **Transformer, 48VAC** – P/N 3179700
Disconnect wires, taking careful note of location of wires to ensure correct assembly of new Transformer. Remove two (2) nuts.

Figure 6-12a

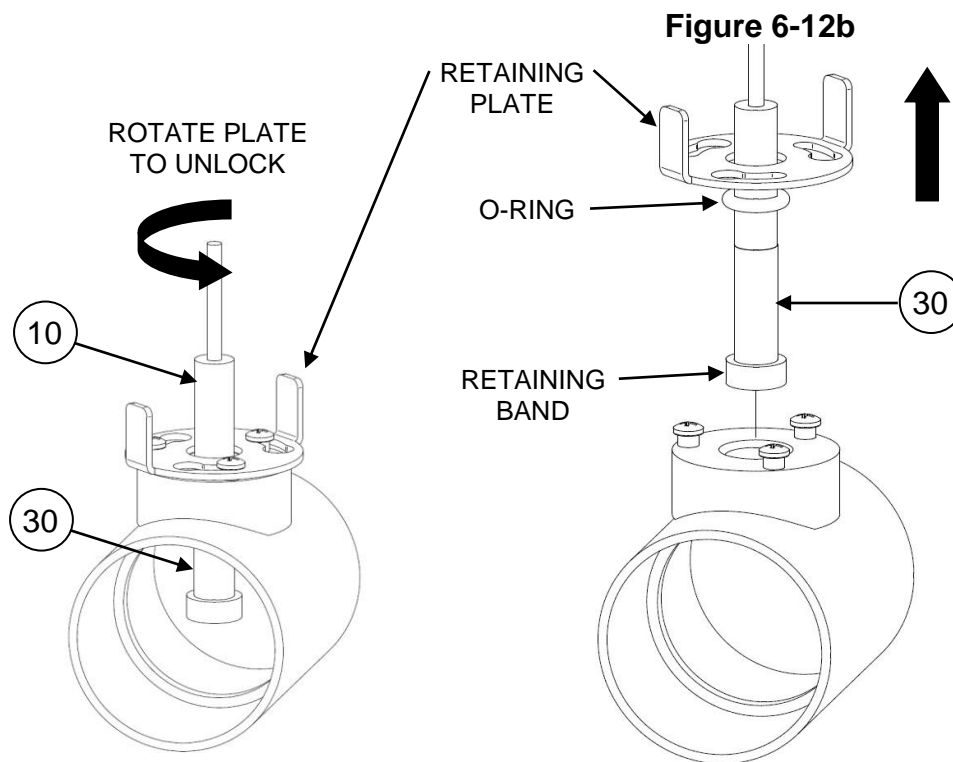


- 12** **Hose, 18.00"** – P/N 3175903
Loosen hose clamps on either end, slide hose off fittings.
- 13** **Hose, 36.00"** – P/N 3175902
Loosen hose clamps on either end, slide hose off fittings.
- 14** **Door Lock** – P/N 3172600
Remove hardware as required. If replacing Main Door Lock, ensure manual override bracket is reattached and operating properly.
- 31** **Water Filter** – P/N 3186800
Pull water hose off each end. Twist Filter Housing open to clean filter.

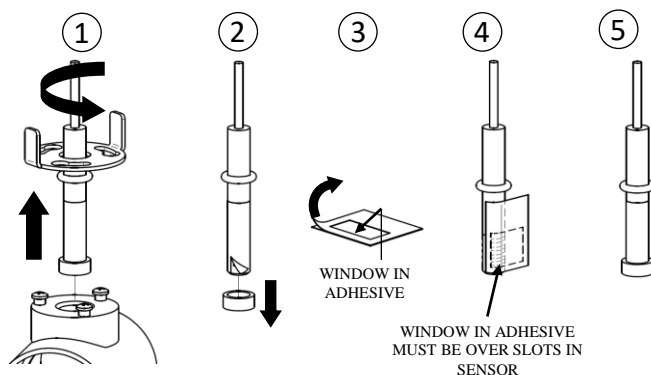
Chapter 6: Maintaining the Cabinet

- 15) **Exhaust Vent Valve** – P/N 3181000
Disconnect wires, remove two (2) screws & nuts. Slide valve off notch in Flapper. *Ensure plunger slot on new valve slides into Flapper notch.*
- 16) **Humidifier Assembly** – P/N 3188000 (115v); 3188001 (230v)
See *Service Parts - Humidifier Assembly* section on following pages. If servicing components inside the Humidifier Assembly, remove all water from the Humidifier Basin by following the procedure in section *Moving the Cabinet* found later in this chapter. After pumping the water out of the Humidifier Basin, to access Humidifier Chamber, loosen hose clamp on P/N 3175903 (Item #12), slide hose off. Open the two (2) Toggle Clamps with red (or yellow) handle grips, then swing Humidifier Cover open.
- 17) **CA Chamber Assembly** – P/N 3171500 (115v); 3171501 (230v)
See *Service Parts - CA Chamber Assembly* section on following pages. The assembly part numbers for this assembly are not available for service, see component part number details of this Assembly in *Service Parts - CA Chamber Assembly* section on following pages.
- 19) **Water Bottle** – P/N 3175500
Remove Water Bottle from cradle, pull water line out of lid hole.
- 20) **Water Level Limit Switch** – P/N 3832300
Remove Water Bottle from cradle. Note wire locations on switch for correct reassembly, then disconnect wiring. Using a permanent marker, draw a line on floor of compartment where Limit Switch Bracket is located (front to back), so that it can be reinstalled in correct location (**this is important**). Remove two (2) nuts on Limit Switch Bracket. Lift Limit Switch and Bracket over threaded studs. Remove two (2) screws & nuts holding Limit Switch to Bracket. **Before assembling new Limit Switch, note that the old Limit Switch did not have the silver, metal tang (tab), remove the silver, metal tang (tab) off of the new Limit Switch by twisting it with pliers.**
- 21) **CA Door Limit Switch** – P/N 3832300
Note wire locations on switch for correct reassembly, then disconnect wiring. Open CA Chamber Door. Remove the two (2) nuts on top of the Limit Switch to remove the Limit Switch.
- 29) **Humidity Sensor Assembly** – P/N 3186000
Rotate Retaining Plate & slide Humidity Sensor (Item #10) out (see Fig. 6-12b). Loosen hose clamps on either end of Sensor Housing, slide Sensor Housing out of each hose.

Service Parts – Humidity Sensor Assembly (#29)



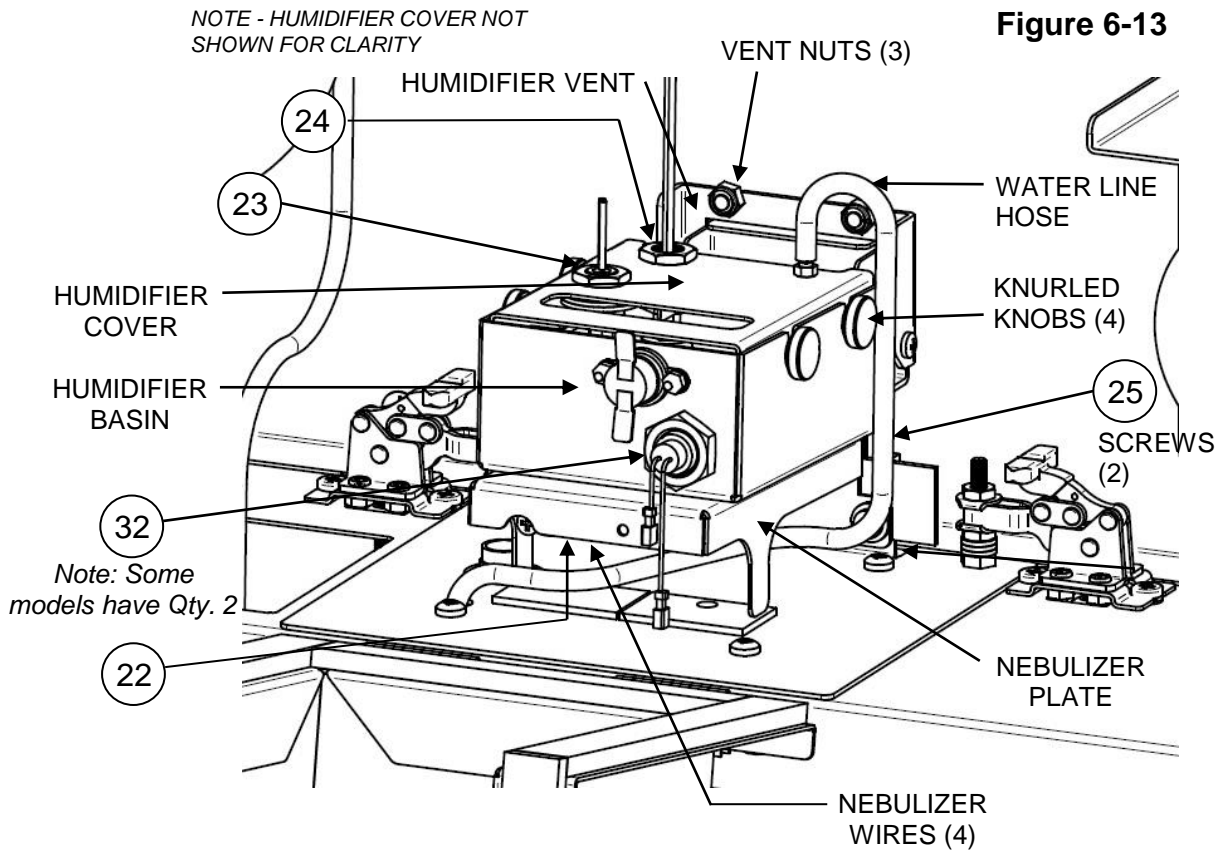
INSTALLATION INSTRUCTIONS



30 **Humidity Sensor Filter** – P/N 3186400

Rotate Retaining Plate & slide Humidity Sensor out (Fig. 6-12b). Peel the old Filter off of the Humidity Sensor. See the Installation Instructions included on the Filter Card (shown above) for applying the new Humidity Sensor Filter. Retain O-Ring and Retaining Band to reuse when re-assembling Sensor. Ensure O-Ring is located above RH Sensor Filter on Sensor body and Retaining Band is flush with end of Sensor (Fig. 6-12b), then reassemble Sensor and lock in place by rotating Retaining Plate. Sensor should not slide out when secured.

Service Parts – Humidifier Assembly (#16)



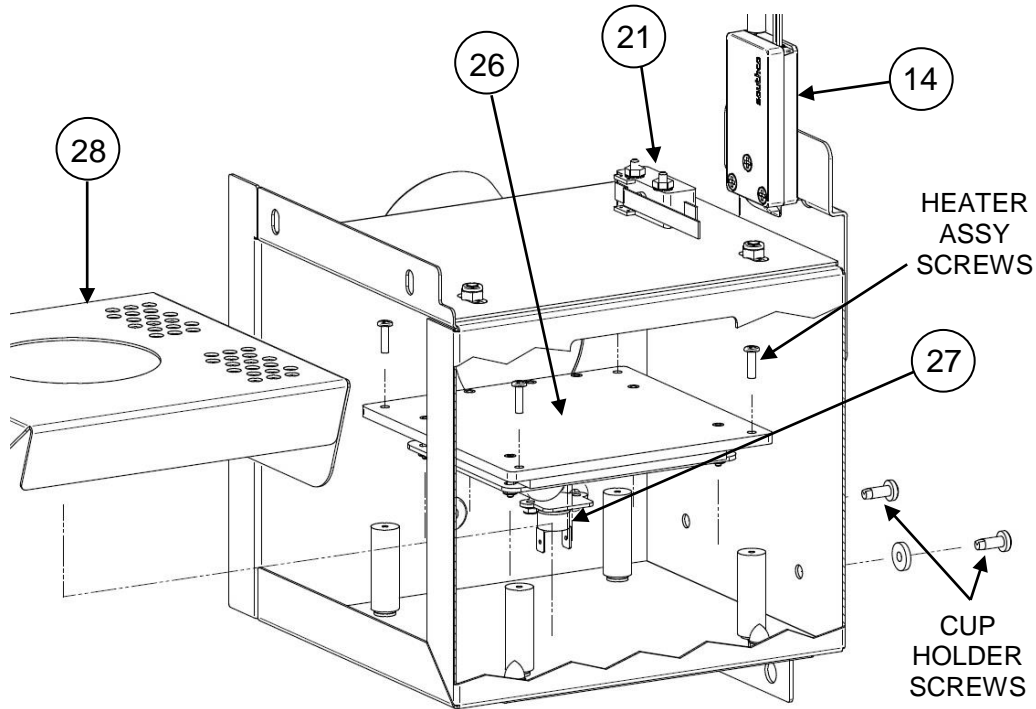
- 22 **Nebulizer** – P/N 3179600
Remove the wire connections from underneath the Nebulizer & also item 24. Remove the two (2) Screws securing the Nebulizer Plate. **Careful! – Humidifier may have small amount of water remaining. Empty any remaining water!** Loosen four (4) Knurled Knobs, and remove Cover. Turn Nebulizer Plate and Basin upside down. Remove four (4) nuts to separate Nebulizer from Plate. When replacing Nebulizer, tighten four (4) nuts until Nebulizer Plate does not move with respect to the Humidifier Basin.
- 23 **Float Switch, Nebulizer** – P/N 3176400
Remove Humidifier Cover by loosening four (4) Knurled Knobs. Disconnect Float Switch wires. Remove Nut securing Float Switch to Cover.

Chapter 6: Maintaining the Cabinet

- 24 **Float Switch, Water Pump** – P/N 3182601
Remove Humidifier Cover by loosening four (4) Knurled Knobs. Disconnect wires from Float Switch. Remove Nut securing Float Switch to Cover.
- 25 **Solenoid, Vent** – P/N 7478700
Remove Humidifier Cover and Humidifier as previously described for Items 16 & 22. Remove three (3) Vent Nuts, remove Vent. Remove solenoid by removing two (2) screws. May reuse Solenoid Plunger, if not damaged.
- 32 **Heating Element** – P/N 3188400 (115v); 3188401 (230v)
Drain water from Humidifier Basin. Disconnect two (2) wire connectors, then unscrew Nut on outside of Basin. Slide Element out from inside Basin (must remove Humidifier Cover to access Element for removal). Remove and save O-Ring on Element.

Service Parts – CA Chamber Assembly (#17)

Figure 6-14



CAUTION – Hot Surface.
AVERTIR – Surface Chaude

- 14 **Door Lock** – P/N 3172600
Remove hardware as required.
- 21 **CA Door Limit Switch** – P/N 3832300
Note wire locations on switch for correct reassembly, then disconnect wiring. Open CA Chamber Door. Remove the two (2) nuts on top of the Limit Switch to remove the Limit Switch.
- 26 **Heater Assembly** – P/N 3170400 (115v); 3170401 (230v)
Remove Item 28 as described, remove four (4) screws shown. Disconnect Thermocouple Wire from Power Board (p/n 3178400), disconnect Neutral (white) Heater Wire from Removable WAGO Wall Nut Connector behind CA Chamber, disconnect Red Angle Terminal from Item 27. Feed wires through grommets in back side wall of CA Chamber (may have to peel away RTV Silicone to push wires through grommets). Reseal wires w/ Silicone.

Chapter 6: Maintaining the Cabinet

- 27 **Temp Controller** – P/N 1291501
Remove Items 28 & then 26 as described. Remove two (2) wires from Temp Controller. Remove two (2) nuts holding Temp Controller to Heater Plate.
- 28 **Tin Holder** – P/N 3172100
Remove (2) Tin Holder Screws, lift up & angle to pull into Main Chamber.

Moving the Cabinet

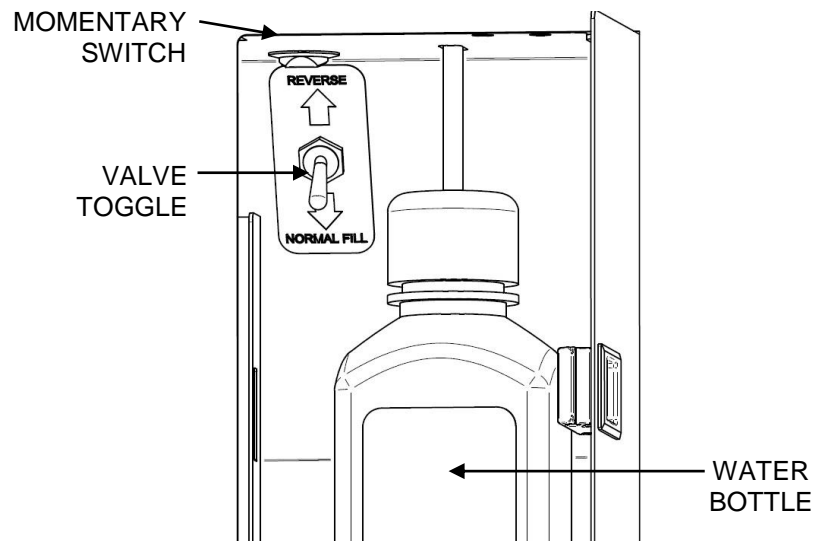
Once installed, the CAPture BT Fuming Chamber should not be moved or tipped without first preparing the Cabinet. If the Cabinet is installed on the accessory stand, it can be rolled without any preparation. Do not roll the Cabinet on the accessory stand over rough surfaces, door thresholds, or on uneven surfaces of more than 5 degrees of inclination. **Always remove all evidence and CA tin before moving the Cabinet.**



To prepare the Cabinet for its move, perform the following tasks:

1. Remove all Hang Bars, and any accessory shelves or other accessories installed inside the Main Chamber. Remove the Perforated Floor from inside the Main Chamber.
2. Open the Water Bottle Door, locate the Valve Toggle (see Fig. 6-15) on the back wall, just to the left of the Water Bottle. Next, flip the Valve Toggle “up” which reverses water flow back into the Water Bottle.
3. Make sure the unit is plugged in, and Main Power Switch is ON. Locate the Momentary Switch (see Fig. 6-15) on the top panel inside Water Bottle Compartment. Press and hold this switch for approximately 15 seconds. When the switch is pressed, you should hear the Water Pump turn on, and see the water level in the Bottle **rising**. Release the Switch, Water Pump should continue to run on its own, if not, hold Switch for another 5 seconds.
4. When air bubbles are seen coming from hose inside Water Bottle, turn the Main Power Switch OFF. Unplug the unit’s power cord. Empty the Water Bottle of all water. Flip the Valve Toggle back “down” to the NORMAL FILL position. Replace Water Bottle.

Figure 6-15



Chapter 7: Troubleshooting

Refer to this table if Cabinet fails to operate properly. If suggested corrective actions do not solve the problem, contact Labconco for additional assistance.

PROBLEM	CAUSE	CORRECTIVE ACTION
Cabinet Display will not turn on	Unit not plugged into outlet	Plug the cabinet into appropriate electrical service.
	Circuit breaker(s) tripped	Check other cord end on top of cabinet. Reset circuit breakers, then turn Power Switch ON (located below Display)
	Internal wiring or components bad	Contact Servicer to troubleshoot.
Cabinet will not achieve Humidity	Door opened during Humidity Cycle	Close door – Do not open door during cycle.
	Starting RH% is less than 15%	Increase Humidify Timeout in SERVICE Menu.
	Humidity Sensor Filter clogged	Change Filter, see 'Humidity Sensor Filter' in Appendix A for Part #.
No Vapor coming from Humidifier Slots	RH Sensor faulty	Verify with independent Hygrometer.
	Low Water in Water Bottle	Refill Water Bottle with water.
	Water Lines pinched	Check Water Lines, look for leaks or pinched lines.
	Water Pump faulty	Replace Water Pump.
	Nebulizer faulty	Contact Servicer to replace Nebulizer.
	Relay faulty	Contact Servicer to replace Relay.

Chapter 7: Troubleshooting

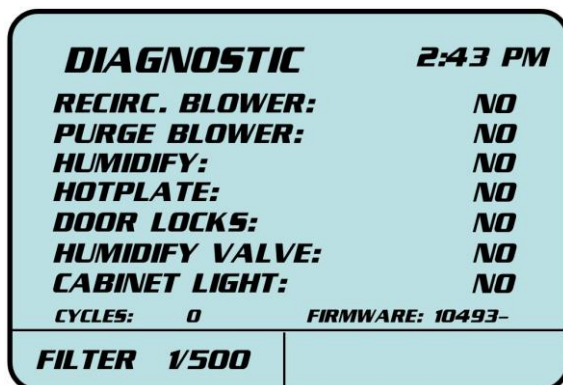
PROBLEM	CAUSE	CORRECTIVE ACTION
Intermittent Vapor from Humidifier Slots	Water in Humidifier dirty or contaminated with CA	Replace with fresh water, if problem persists, change Humidifier Filter and see <i>Humidifier Cleaning</i> section under <i>Additional Maintenance</i> in Chapter 6.
Heat Plate will not achieve Set Temp.	Temperature Controller tripped	Turn Power off, let unit sit for 30 minutes, try again.
	Relay faulty	Contact Servicer to replace Relay.
	Heating Element faulty	Contact Servicer to replace Element.
Recirc. Blower not coming on	Recirculation Blower faulty	Contact Servicer to replace Blower.
Exhaust Blower not coming on	Speed Control not set properly	Turn Speed Control to 100% on (all the way CCW but NOT past click point).
	Relay faulty	Contact Servicer to replace Relay.
	Exhaust Blower faulty	Contact Servicer to replace Blower.
Cabinet Lights off	Unit in sleep mode	Press any key on keypad.
Display is on, but Cabinet Lights off	Wiring disconnected	Reconnect wires in Upper Compartment.
	Relay faulty	Contact Servicer to replace Relay.
	LED Light Strip faulty	Contact Servicer to replace LEDs.
	LED Driver faulty	Contact Servicer to replace Driver.
Cabinet not exhausting CA fumes*	Main Carbon Pre-Filter blocked	Check for blockage and replace Pre-Filter.
	Main Carbon Filter blocked	Check for blockage and replace Main Carbon Filter if necessary.
	Exhaust Valve not opening during Purge	Replace Exhaust Valve, see 'Exhaust Vent Valve' in Appendix A for Part #.
Door Alarm is on when door is closed	Switch is blocked or bound	Check switch and remove blockage/unbind switch tab
	Switch faulty	Replace Switch.
Low Water Alarm is on with full Bottle	Water Hose out top of Bottle is bound	Check Water Hose, push any excess hose back up through hole above Bottle
	Switch is blocked or needs adjustment	Unblock/Readjust Switch
Filter Alarm is on after replacing Carbon Filters	Filter Life Gauge needs to be Reset	Contact Labconco or see <i>Changing the Carbon Filters</i> section for instructions to reset Gauge in SERVICE Menu

**CAUTION! Cabinet may be full of CA fumes – wear full PPE for protection*

Diagnostic Mode

When troubleshooting the CAPture BT Fuming Chamber, it can be helpful to test functionality of critical components individually. The Diagnostic mode allows for the testing of individual components. To access the Diagnostic menu, on the Main Menu, select **SETTINGS** by moving the red arrow to Settings Menu option, and press 'OK'. From the Settings Menu (see Fig. 5-4), select **DIAGNOSTIC** by moving the red arrow to this sub-menu, and press 'OK'. The Diagnostic Screen is displayed (see Fig. 7-1).

Figure 7-1



Use the UP/DOWN Buttons to select a component to test, then press the RIGHT Button to start the test. The 'NO' next to that component will change to 'YES' while active. Each component will activate for 30 seconds (doors must be closed). The expected result for each component test is listed below:

Recirc. Blower Time On = 30 seconds

Should hear Recirculation Blower turn on. For 30 seconds, Recirc. Blower will alternate between slower and faster speeds for 15 seconds on each speed.

Purge Blower Time On = 30 seconds

Should hear Exhaust Blower turn on. Exhaust Blower will run at one speed. Run this test two (2) times in succession (no more than 5 seconds between tests) to test Exhaust Vent Valve, which should open by end of second test.

Humidify Time On = 30 seconds

Should hear Recirc. Blower come on and see water vapor coming from the Humidifier slots in the lower portion of the right, internal wall.

Hotplate Time On = 30 seconds

Hot Plate heats up. CAUTION! Do NOT place hand on hot plate!

Chapter 7: Troubleshooting

Door Locks **Time On = 30 seconds**

Should see both Main & CA Chamber Door lock & stay locked while active.

Humidify Valve **Time On = 30 seconds**

Should hear Valve come open, and then close after 30 seconds.

Cabinet Light **Time On = 30 seconds**

Cabinet Light dims, and then returns to full brightness after 30 seconds.

Time On for each diagnostic test is with Main Door closed. To run each test indefinitely, open the Main Door before starting the test. Take care not to leave the unit running any diagnostic tests indefinitely, and do NOT run any diagnostic test longer than 30 minutes.

Manual Override of Main Door Lock

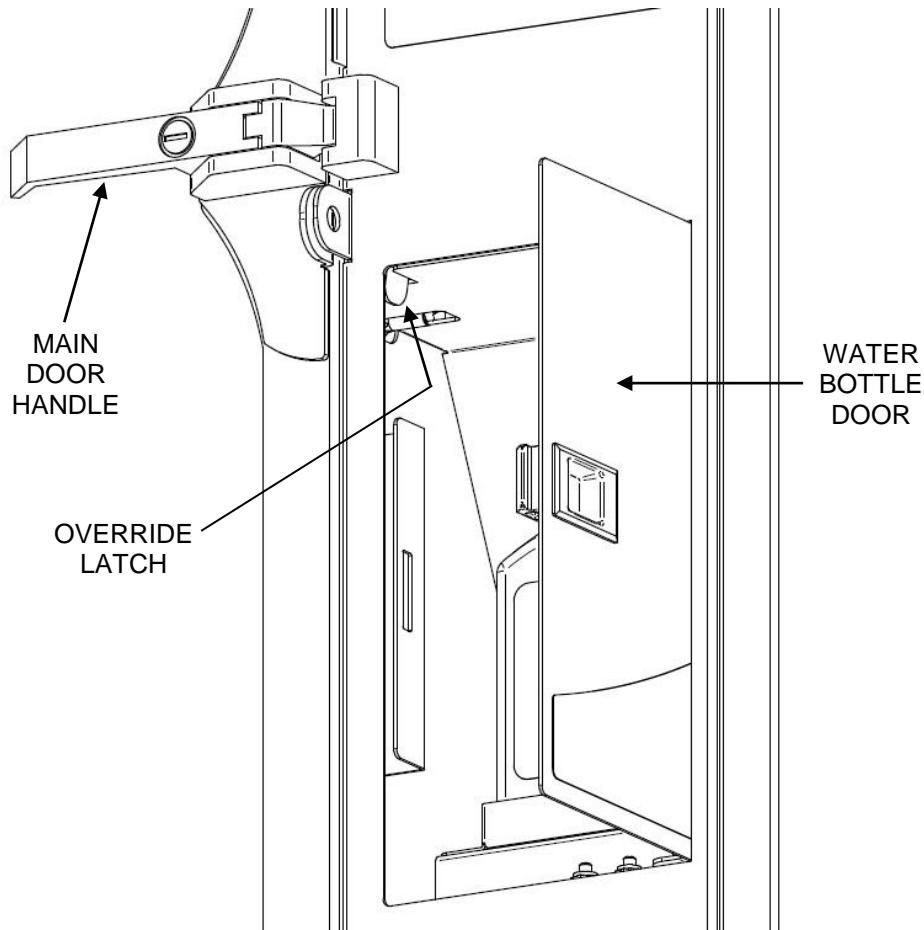
If power is lost during a Fuming Cycle, the Main Door will remain locked. To manually override the Lock, and remove evidence to prevent over-fuming, perform the following procedure:



CAUTION! – CA fumes may be heavily present – Use proper PPE!

1. Open the Water Bottle Door.
2. Locate the Override Latch (see Fig. 7-2).
3. Push up on the Override Latch, and while holding the Override Latch up, open the Main Door Handle.

Figure 7-2



Note – If the Main Door is closed before power is restored, it will lock again. Repeat procedure above to re-open Main Door.

RH Sensor Calibration

The RH Sensor in the CApture BT Fuming Chamber is pre-calibrated at the factory to display the relative humidity inside the chamber. The relative humidity percentage displayed on the screen during a Humidify Stage is accurate within +/-5%.

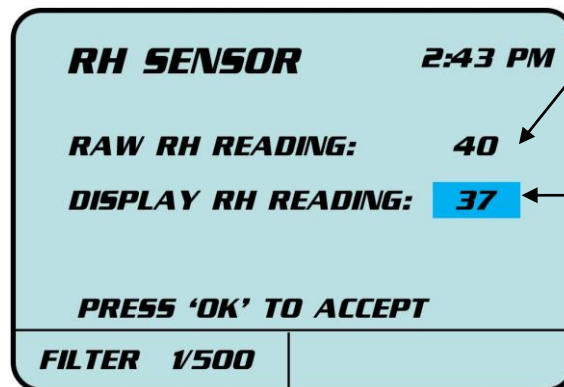
If the accuracy of the relative humidity displayed on screen is in doubt, follow the procedure below to verify or re-calibrate the RH Sensor:

1. Obtain a calibrated hygrometer, and place it inside the CApture BT Fuming Chamber. Make sure the hygrometer is properly calibrated and displaying correct relative humidity when placed in the chamber.
2. Place the calibrated hygrometer as close to the center of the chamber as possible, and turn it on. Close the Main Door.
3. At the **MAIN** menu, select **RUN** and press '**OK**'. On the **RUN** menu, select **HUMIDIFY** and press '**OK**'. Set the *Humidity Set Pt.* to **50%**. Set the *RH Dwell* to **1:00**. Press '**START**'.
4. Once the Humidify Program completes, open main door only slightly then close it. Return to **MAIN** Menu screen, select **SERVICE** and press '**OK**'. Enter the Service Password: '**UP**' '**DOWN**' '**LEFT**' '**RIGHT**' '**OK**'. Select **RH SENSOR** on the **SERVICE** Menu and press '**OK**'. The following screen will be displayed (Fig. 7-3).

NOTE!

MAINTAIN
PASSWORD WITH
RESPONSIBLE
PARTY ONLY

Figure 7-3



NOTE! DISPLAY READING
CAN ONLY BE ADJUSTED
+20%/-10% FROM RAW
READING

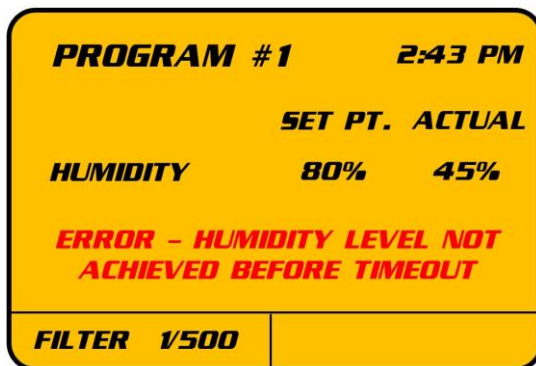
PRESS 'UP'
OR 'DOWN'
TO ADJUST

5. Wait for 1 minute to allow the RH Reading to stabilize. Compare the *Display RH Reading* to the reading from the hygrometer inside the cabinet. Use '**UP**' or '**DOWN**' buttons until the Reading matches the hygrometer reading. Press '**OK**'.

Humidify Timeout

During the Humidify stage within a Program, if the user-selected humidity is not reached within a certain time, an error occurs, and the program ends prematurely. The screen in Fig. 7-4 is displayed. This protects the unit, and alerts the user a problem may exist.

Figure 7-4



However, if the Fuming Chamber is used in an environment with very low humidity, the unit may require more time to reach the desired level of humidity. Before changing the default Humidify Timeout (35 min.), make sure no other problems exist within the unit. *Tip – use a Room Humidifier to raise ambient relative humidity in lab to 30% - 40% to improve humidify times.* Contact Labconco Service Department at (800) 821-5525 or +1 (816) 333-8811 for troubleshooting assistance.

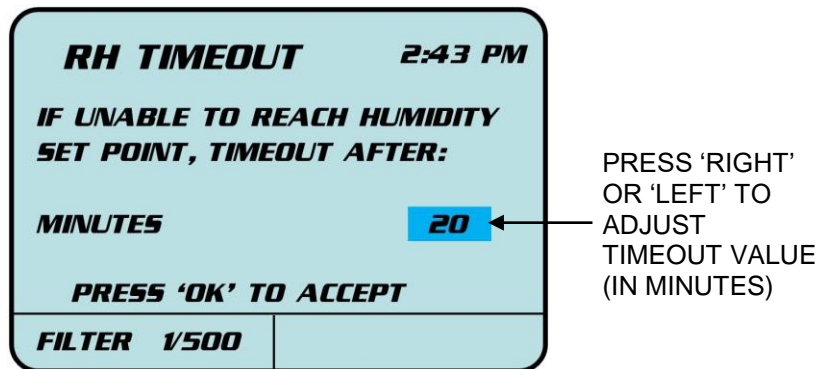
To adjust the Humidify Timeout, following the procedure below:

NOTE!

MAINTAIN
PASSWORD WITH
RESPONSIBLE
PARTY ONLY

1. On the **MAIN** Menu screen, select **SERVICE**, press **'OK'**. Enter the Service Password: **'UP'** **'DOWN'** **'LEFT'** **'RIGHT'** **'OK'**. Select **RH TIMEOUT** on the **SERVICE** Menu and press **'OK'**. The following screen will be displayed (Fig. 7-5).

Figure 7-5



2. The **'RIGHT'** button increases the timeout value, press **'OK'**.

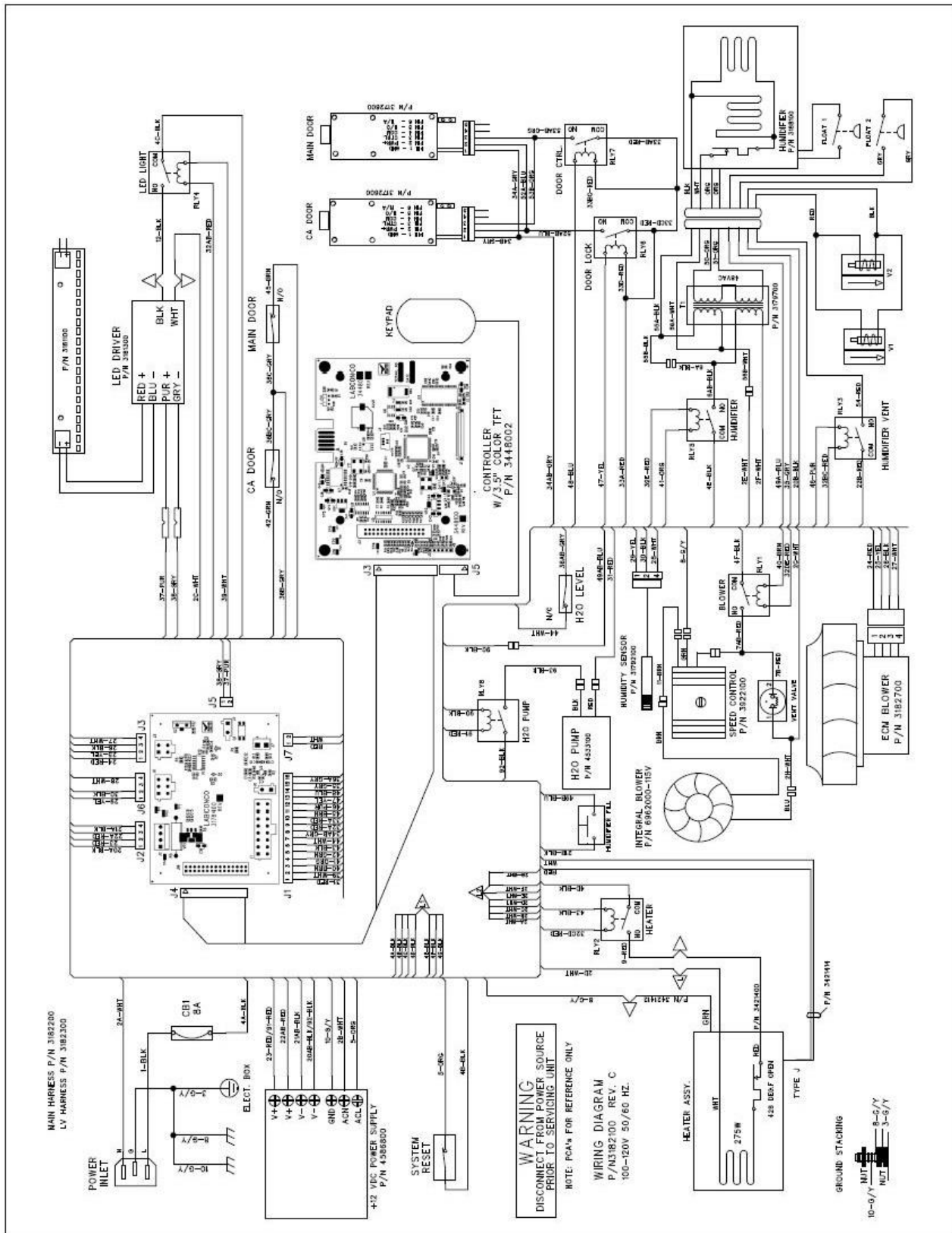
Appendix A: Components & Wiring Diagrams

Capture BT Fuming Chamber Replacement Parts

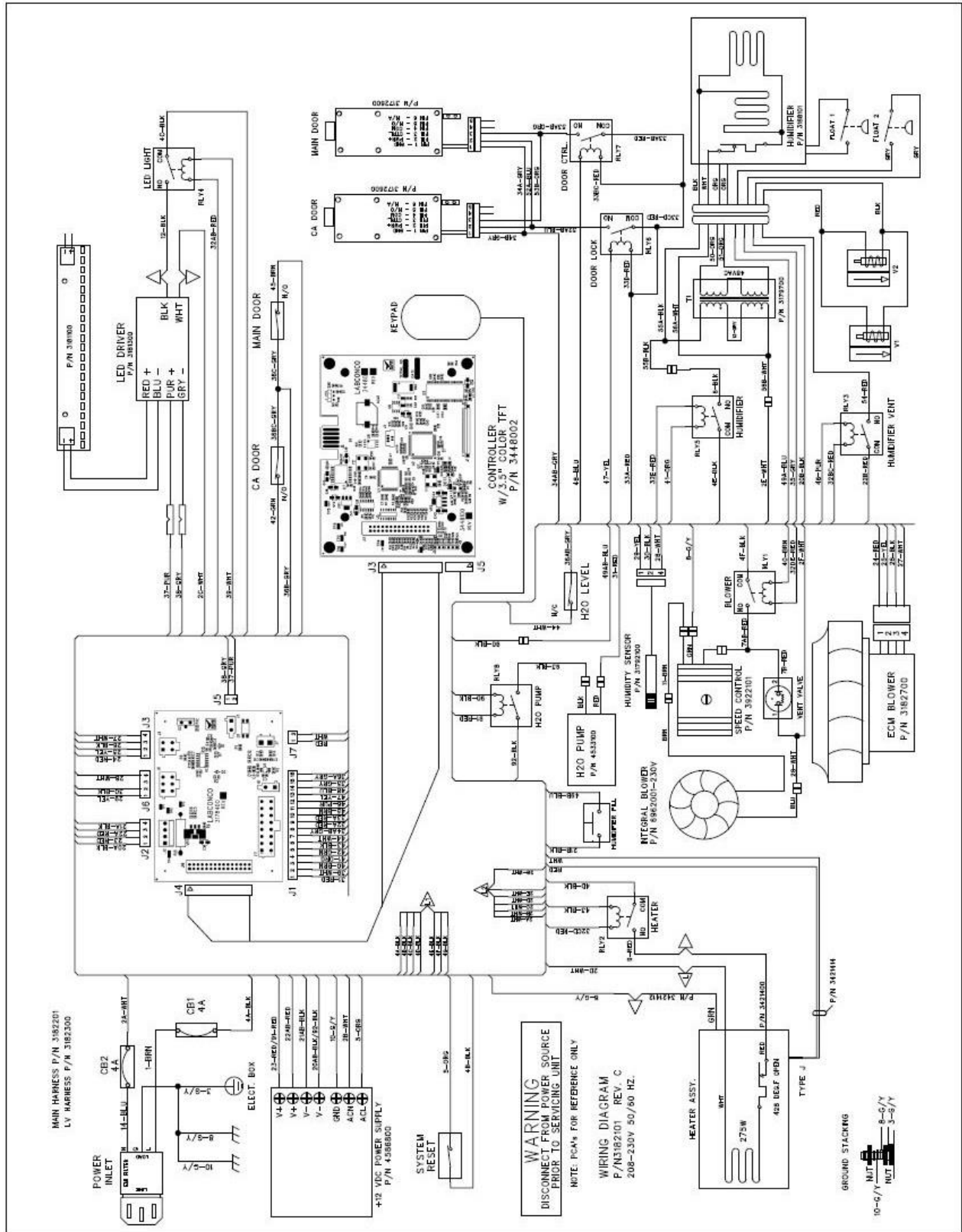
Model	Qty/Unit	Part #	Description
All	1	3186500	Main Carbon Filter (1 filter)
All	1	3181401	Humidifier Filter (1 filter)
All	1	3181400*	Main Pre-Filter (Pack of 10 filters)*
3170000	1	1337100	Power Cord, 115v
3170001	1	1338000	Power Cord, 230v (US)
3170002	1	1336100	Power Cord, 230v (Schuko)
3170003	1	1332600	Power Cord, 230v (UK)
3170004	1	1332700	Power Cord, 230v (China/AUS)
3170005	1	1345700	Power Cord, 230v (India)
All	4	1879800	Leveling Leg
3170000	1	1327208	Circuit Breaker (8 Amp)
All 230v	2	1327209	Circuit Breaker (4 Amp)
All	1	3181300	LED Driver
All	1	3181100	LED Light
All	3	3832300	Limit Switch (Main Door, CA Door, Water Level)
All	1	3172000P	Recirculation Blower
3170000	1	6962000	Exhaust Blower, 115v
All 230v	1	6962001	Exhaust Blower, 230v
All	1	4586800	Power Supply, 12VDC
All	1	3448002	PCB Display
All	2	7478700	Humidifier Valve Solenoid
3170000	1	3922100	Exhaust Blower Speed Control, 115v
All 230v	1	3922101	Exhaust Blower Speed Control, 230v
All	1	3178400	Power Board
All	1	4533100	Water Pump
All	1	3179210	Humidity Sensor
All	7	1289200	Relay, SPST
All	1	3179700	Transformer, 48VAC
All	2	3172600	Door Lock (Main Door & CA Chamber Door)
All	1	3181000	Exhaust Vent Valve
3170000	1	3188000	Humidifier Assembly, 115v
All 230v	1	3188001	Humidifier Assembly, 230v
All	1	3175500	Water Bottle
3170000	1	3170400	Heater Assembly, 115v
All 230v	1	3170401	Heater Assembly, 230v
All	1	1291501	Temperature Controller
All	1	3172100	Tin Holder
All	1	3186400	Humidity Sensor Filter
All	3	3175901	Hose, 5.50"
All	1	3175902	Hose, 36.00"
All	1	3175903	Hose, 18.00"
All	1	3186800	Inline Water Filter

*3181400 is a pack of ten (10) Pre-Filters, unit only needs one (1) Pre-Filter to operate.

Wiring Diagram, 115v



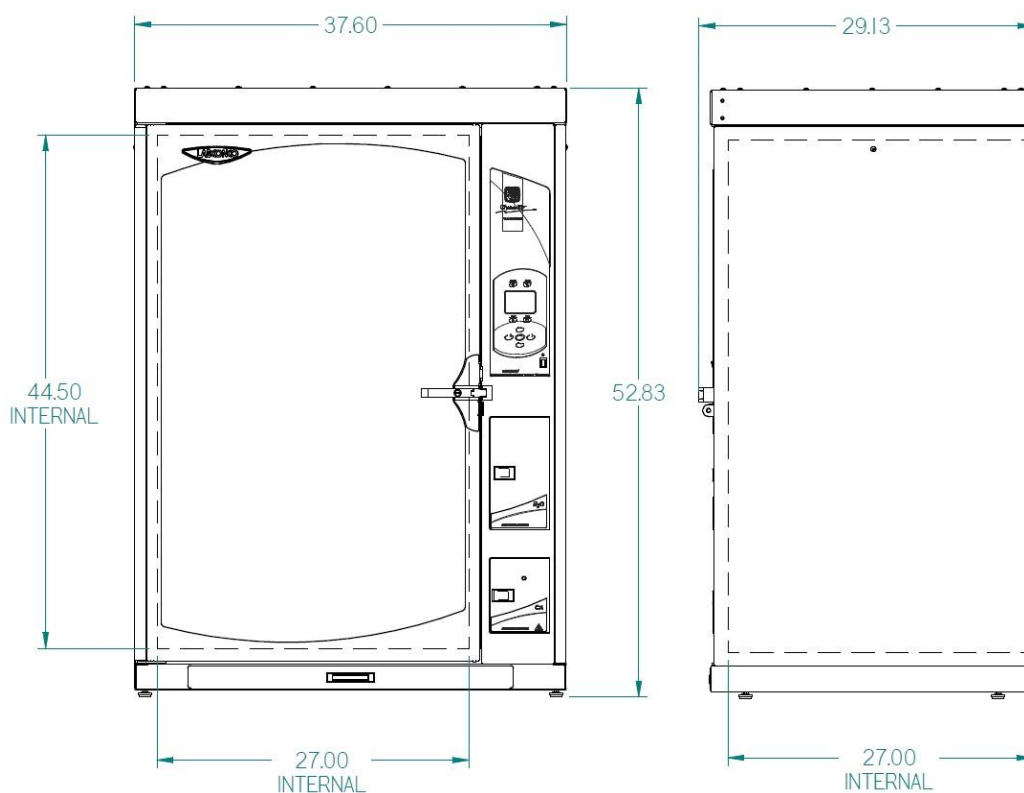
Wiring Diagram, 230v



Appendix B: Dimensions

The External and Internal Dimensions of the CAPture BT Fuming Chamber are shown in Fig. B-1. The Dimensions of the CAPture BT Fuming Chamber mounted on the Accessory Stand are shown in Fig. B-2.

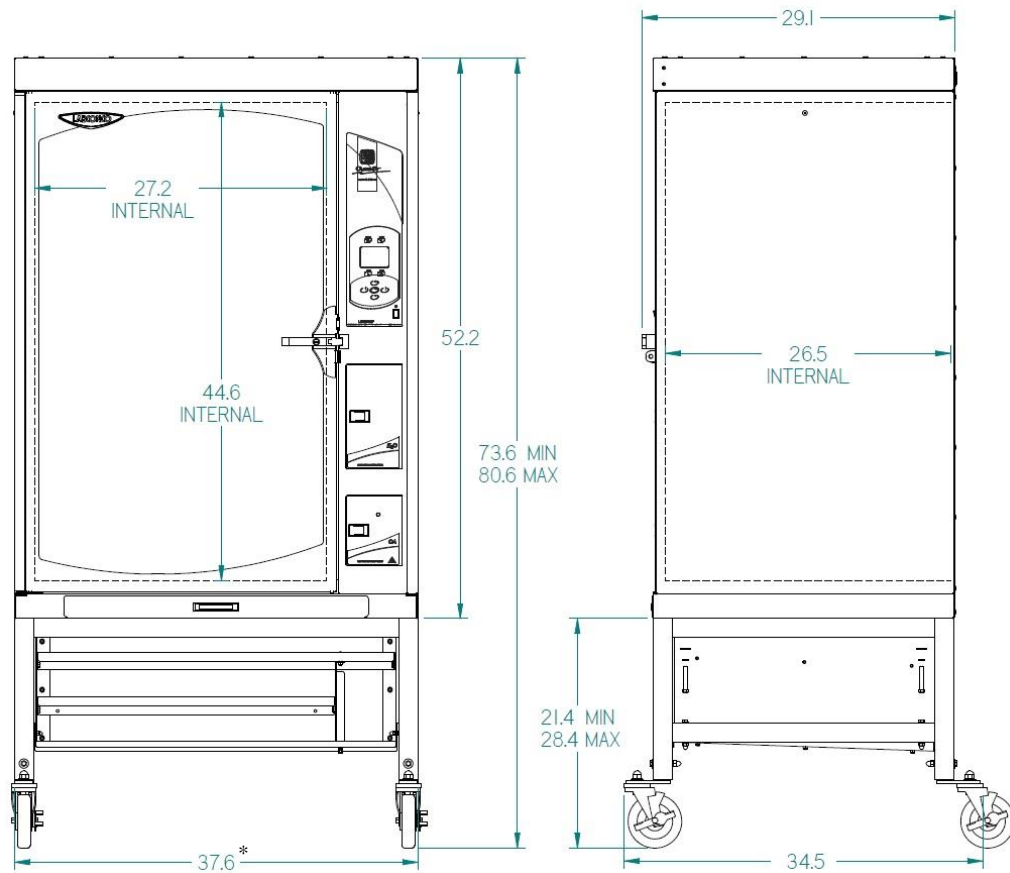
Figure B-1



All dimensions are in inches.

The External and Internal Dimensions of the CAPture BT Fuming Chamber mounted on the Accessory Stand (P/N 3182900) are shown in Fig. B-2.

Figure B-2



*Locking Brake on Casters adds 1.0 inch to this dimensions.

All dimensions are in inches.

Appendix C:

Specifications

Electrical Data

Model #	Requirements	Energy Use
3170000	115 VAC, 60 Hz, 8 Amps	400W
3170001 thru -05	230 VAC, 50/60 Hz, 4 Amps	400W

Environmental Conditions

- Indoor use only.
- Maximum altitude: 6562 feet (2000 meters).
- Ambient temperature range: 41° to 104°F (5° to 40°C).
- Maximum relative humidity: 80% for temperatures up to 88°F (31°C), decreasing linearly to 50% relative humidity at 104°F (40°C).
- Main supply voltage fluctuations not to exceed $\pm 10\%$ of the nominal voltage.
- Transient overvoltages according to Installation Categories II (Overvoltage Categories per IEC 1010). Temporary voltage spikes on the AC input line that may be as high as 1500V for 115V models and 2500V for 230V models are allowed.
- Used in an environment of Pollution degrees 2 (i.e., where normally only non-conductive atmospheres are present). Occasionally, however, a temporary conductivity caused by condensation must be expected, in accordance with IEC 664.

Appendix D: Filters

Main Carbon Filter **# 3186500**

Main Carbon Filter – replace approximately every 500 cycles.
Provides one (1) filter.
22 lb. (10.0 kg)

Humidifier Filter **# 3181401**

Humidifier Filter – replace approximately every 500 cycles.
Provides one (1) filter.
9 lb. (4.1 kg)

Main Pre-Filter **# 3181400**

Main Pre-Filter – replace approximately every 50 cycles.
Provides ten (10) filters.
7 lb. (3.2 kg)

Complete Filter Kit **# 3185900**

Complete Filter Kit provides all filters necessary to operate Capture BT Fuming Chamber for approximately 500 cycles. Kit contains:

- (1) Main Carbon Filter
- (1) Humidifier Filter
- (10) Main Pre-Filters

34 lb. (15.5 kg)

Appendix E: Accessories

CApture BT Stand # 3182900

Stand is specially designed for use with the CApture BT Fuming Chamber. Locking casters allow stationary operation, but still provide mobility for moving the Cabinet. Manually adjustable height. Integral shelves hold all accessory shelves, accessory Long Gun Holder, and accessory Casing Holder. 60 lb. (27.3 kg).

Kit, Hanging Rods* # 3184000

Kit provides four (4) additional stainless steel Hanging Rods. Weight limit is 15 lbs. (6.8 kg) per Hanging Rod. 3 lb. (1.3kg).

Kit, Perforated Shelf* # 31816xx

Perforated Shelf fits into Fuming Chamber Side Wall brackets, Chamber can hold up to three (3) Perforated Shelves (Perforated Shelf should not be placed in top Side Wall bracket location). Allows CA fumes to reach bottom of evidence, such as cans or bottles. All stainless steel construction. Available in 1, 2 or 3 piece Kits. Weight limit is 25 lbs. (11.3 kg) per shelf.

#3181611 – 1 Shelf Kit 10 lb. (4.5kg).

#3181612 – 2 Shelf Kit 20 lb. (9.1kg).

#3181613 – 3 Shelf Kit 40 lb. (13.6kg).

Kit, Wire Shelf* # 31815xx

Wire Shelf fits into Fuming Chamber Side Wall brackets, Chamber can hold up to four (4) Wire Shelves. Allows CA fumes to reach bottom of evidence, and allows hanging numerous small items, such as bags. All stainless steel construction. Available in 1, 2 or 4 piece Kits.

Weight limit is 25 lbs. (11.3 kg) per shelf.

#3181511 – 1 Shelf Kit 5 lb. (2.3kg).

#3181512 – 2 Shelf Kit 10 lb. (4.6kg).

#3181514 – 4 Shelf Kit 20 lb. (9.1kg).

Kit, Half Wire Shelf*

3181522

Half-Depth Wire Shelf fits into Fuming Chamber Side Wall brackets, Chamber can hold up to eight (8) Half-Depth Wire Shelves. Same stainless steel wire construction as the full-depth wire shelf, but at half the depth. Allows for a more customized shelf configuration within the Chamber. Kit provides two (2) Half Wire Shelves. Weight limit is 15 lbs. (6.8 kg) per shelf. 3 lbs. (1.4kg).

Kit, Casing Holder*

3181700

Casing Holder provides 45 numbered standoffs to place shell casings upside down for fuming complete outer surface. Holds all casing sizes down to .32 caliber. All Stainless Steel construction. 10 lbs. (4.5kg).

Kit, Long Gun Holder*

3184100

Long Gun Holder provides five (5) U-shaped cradles for long guns to be held securely for fuming. Holder locks into existing Side Wall brackets inside Chamber. Can place up to three (3) Long Gun Holders inside Chamber to hold up to 15 long guns total. Stainless Steel construction. 4 lbs. (1.8kg).

Kit, Large Clips*

3184200

Large Clips are 3.5" x 1.5" and approximately 0.3" thick. Allows easy hanging of larger items, such as hand guns. Stainless Steel Construction. Kit includes ten (10) Large Clips. 2 lbs. (0.9kg).

Kit, Mini Bag Clips*

3184300

Mini Bag Clips are 1.2" x 0.3" alligator-style clips with a hanging loop. Allows easy hanging of small, light-weight items, such as bags from any accessory Wire Shelf. Kit includes ten (10) Small Clips. 1 lb. (0.5kg).

Security Tags

3902400

Package of 100 each tamper-evident, labeled tags. Tags irreversibly indicate if the cabinet door has been opened during a cycle. 1 lb. (0.5kg).

Exhaust Kit

3187000

Exhaust Kit allows chamber's exhaust air to be removed from the room via a user-supplied remove exhaust blower and user-supplied ducting. Connection stub on kit is a 6 inch diameter. 10 lb. (4.5kg).

**It is recommended to pre-treat these accessory parts with a "Stainless Steel Cleaner and Polish" to reduce the buildup of CA on their surfaces. See Chapter 6: Maintaining the Cabinet – section Every 50 Cycles for Stainless Steel Cleaner and Polish information.*