

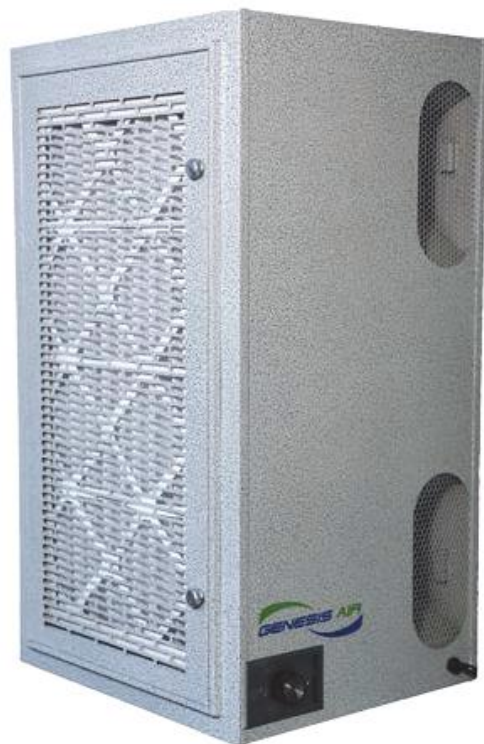


**Indoor Air Purifier**  
**RGS**

Standalone / Portable

Commercial / Residential

CenterPoint™ Photocatalytic Oxidation Technology



## Product Description

The Genesis Air RGS is a stand-alone unit used to reduce the levels of Volatile Organic Compounds (VOC's) and viable airborne biological contaminants. The unit may be utilized as a portable "point-of-use" air purifier or may be permanently wall mounted. The RGS uses (1) Genesis Air 1221 PCP Compound Panel. The Genesis Air RGS is suitable for spaces up to 5,000 square feet\*. For recommend configurations, consult engineering at Genesis Air, Inc. The Genesis Air RGS incorporates 3-step GAP™ Technology: MERV Filtration, UVGI Lamps, and Photocatalyst.

*\* Refer to page 8 for performance in different room sizes.*

## Shipping and Packing List

(1) RGS Housing

(1) 1221 PCP Compound Panel with 12" x 24" UV Shielding

(1) 12" x 24" x 4" MERV 13 Pre-filter

Standard Features:

- Variable Speed Control
- Powder Coated Exterior

## Copyright

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## Revision Summary

Original installation and maintenance manual create in June 2021.

Current manual last revised on August 4<sup>th</sup>, 2021.

# Table of Contents

Product Description	2
Shipping and Packing List	2
Copyright	2
Revisions Summary	2
Safety Certifications	4
Warning Labels	5
Product Overview	6 – 8
Specifications	7
Air Changes Per Hour	8
UV Lamp Safety Information	9
Maintenance	10 – 20
Filter Replacement	10
Lamp Replacement	11 – 13
Lamp Disposal	12 – 13
Ballast Replacement	13 – 14
Fan Motor Replacement	14 – 18
Catalyst Cleaning	18 – 19
Replacement Parts	20
Troubleshooting	21
Installation	22 – 23
Wiring Diagram	24 – 25
Fan Diagram	26
Air Purification Testing	27
Warranty	28 – 29

# Safety Certifications

UL Classified UL File No. E326567

FIFRA....EPA EST No. 87747--TX--001



## UL Requirements

- 105°C minimum supply connection rating.
- For catalyst marked “XXXX”, 50°C/122°F maximum ambient temperature. For those marked “XXXX-E”, 80°C/176°F maximum ambient temperature.
- Suitable for air-handling units.
- Access above ceiling may be required.
- The health aspects associated with the use of this product and its ability to aid in disinfection of environment air have not been investigated by UL.
- Only use type T5 lamps specified by the PCP Compound manufactured by First Light Technologies, Inc or UV Engineering Solutions LLC.
- **Caution:** *Equipment Damage Hazard. Ultraviolet light can cause color shift or surface degradation and sometimes structural degradation of non-metallic components. Select mounting location rubber hoses, wiring insulation, filtration media, etc. If mounting options are limited, items above should be protected with ultraviolet resistant materials such as aluminum foil, aluminum duct tape or metallic shields.*

## Applicable Warning Labels

### WARNING!



Electric / Shock Hazard

Electrical Shock can cause serious injury or death. Disconnect all remote electrical power supplies before servicing.

### WARNING!

To reduce the potential of electric shock or fire, the wiring required by this manual should be performed by a licensed electrician in accordance with applicable National Electric Cod, NFPA 70, and local codes.

### WARNING!



UVC Light hazard. UVC light can cause temporary or permanent loss of vision and sunburn. Take proper precautions to protect eyes and skin from direct exposure. Replace lamps with Model No. 2813, Manufactured by First Light Technologies, Inc., or lamp with Model No. GEN9093, Manufactured by UV Engineering Solutions LLC.

### WARNING!

Mercury Hazard

Do not break lamps. Each UVC lamp contains a small amount of Mercury. In case of breakage use proper lamp disposal techniques on pages 12 – 13.

### WARNING!

Improper installation, adjustment, alteration, service, or maintenance can cause property damage, personal injury, or death. Installation and service must be performed by a qualified installer or service agency.

### WARNING!

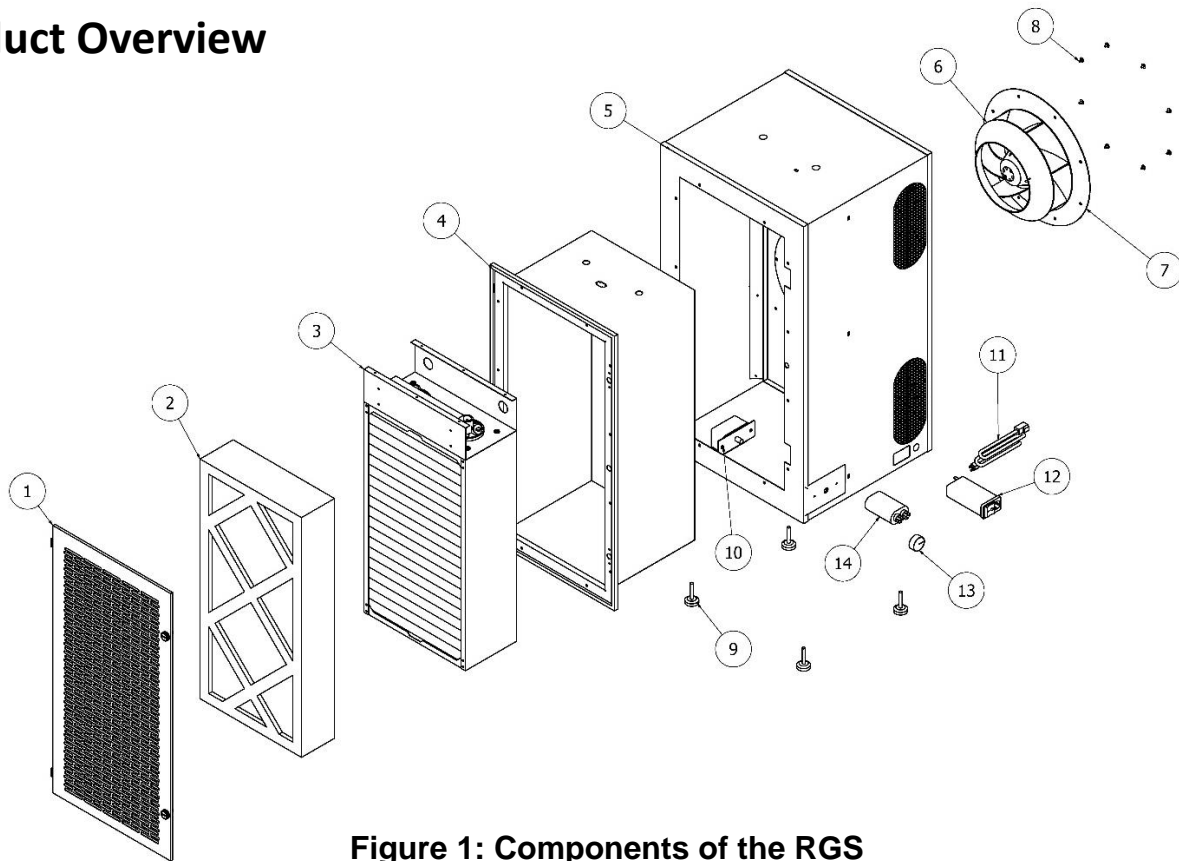
TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:

- a.) Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer.
- b.) Before servicing or cleaning unit, switch power off at service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag to the service panel.

### WARNING!

Children should be supervised to ensure that they do not play with the appliance.

# Product Overview



**Figure 1: Components of the RGS**

*Report missing or damaged parts to Genesis Air. Refer to warranty for more information.*

- 1.) **Filter Grille** – Gives access to pre-filter and PCP panel.
- 2.) **Pre-filter** – 12" x 24" x 4" MERV 13. Removes large particles from air stream.
- 3.) **1221 PCP Panel** – CenterPoint™ Technology. Contains ballast tray, UVC lamps, catalyst mesh, and UVC shielding. This is not a particle filter.
- 4.) **Insert** – Separates particle filter and PCP panel from electrical components.
- 5.) **Shell** – Housing which contains all components.
- 6.) **Fan Motor** – Conveys air through the unit.
- 7.) **Backplate** – Holds the fan motor in place.
- 8.) **Backplate Screws** – (8) screws that hold fan motor into place.
- 9.) **Leveling Feet** – (4) Leveling mounts to prevent damage to surface RGS is placed onto.
- 10.) **Steady State Speed Controller** – Controls the fan speed.
- 11.) **Power Cord** – 120 Volt AC type C13 power cord.
- 12.) **Power Entry Module** – Power cord terminal. Main power ON / OFF switch.
- 13.) **Speed Control Knob** – Controls the fan speed.
- 14.) **Capacitor** – Works in conjunction with the fan motor.

## Specifications

**U.S. Patent Number:** 10946116

**Model Name:** RGS

**Volumetric Flow Rate (CFM):** 275 (Low Speed) – 825 (High Speed)

**Power Requirements:** 120 Volts, 60 Hertz

**Current (amps):** 3.4

**Weight (lbs.):** 58.2

**Size:** 15" x 16.25" x 33.25"

**Number of Lamps:** 2

**UVGI Life Cycle:** 12,000 operational hours

**PCP Compound Panel Life Cycle:** 5 years\*

**Particle Filter:** MERV 13 up to HEPA

**Installation Type:** Portable or Wall Mounted

**Temperature Rating:** -20°F to 122°F

**Sound Level (dB from 3 ft away):** 48 (Low Speed) – 65 (Mid-Range) – 74 (High Speed)

*\* Genesis Air equipment must be properly maintained to allow PCP Compound Panels to last the full 5-year warranty period. If MERV particle filters are not used or are not replaced at the appropriate intervals, the life of the Compound Panels will be reduced. If PCPs are cleaned incorrectly or too frequently, the life of the Compound Panels will be reduced. **High pressure spray may not be used directly on PCP Panels.** Performing maintenance improperly will result in a voided product warranty. Catalyst can exceed warranty and last up to 15 years if well maintained.*

## Air Changes Per Hour

Volumetric Flow Rate (CFM)								
Room Square Footage			Air Changes Per Hour					
(8 ft ceiling)	(9 ft ceiling)	(10 ft ceiling)	1	2	3	4	5	6
875	778	700	117	233	350	467	583	700
1000	889	800	133	267	400	533	667	800
1125	1000	900	150	300	450	600	750	900
1250	1111	1000	167	333	500	667	833	1000
1500	1333	1200	200	400	600	800	1000	1200
1750	1556	1400	233	467	700	933	1167	1400
2000	1778	1600	267	533	800	1067	1333	1600
2250	2000	1800	300	600	900	1200	1500	1800
2500	2222	2000	333	667	1000	1333	1667	2000
3000	2667	2400	400	800	1200	1600	2000	2400
3500	3111	2800	467	933	1400	1867	2333	2800
4000	3556	3200	533	1067	1600	2133	2667	3200
4500	4000	3600	600	1200	1800	2400	3000	3600
5000	4444	4000	667	1333	2000	2667	3333	4000
5500	4889	4400	733	1467	2200	2933	3667	4400
6000	5333	4800	800	1600	2400	3200	4000	4800
7000	6222	5600	933	1867	2800	3733	4667	5600

**Table 1: Air changes per hour at varying flow rates**

**Note:** *Highlighted Cells indicate unit range. See ASHRAE standard 62.1 for required ventilation for acceptable indoor air quality. CenterPoint devices do not deactivate or oxidize 100% of all contaminants in the air. Lower air speeds increase the effectiveness of the air purifier.*



## UV Lamp Safety Information

Ultraviolet germicidal irradiation (UVGI) is used for the activation of the PCO Catalyst. The residual light presents a variety of potential health hazards to humans. These hazards include eye damage, skin burns, and the potential to cause skin cancer. Because germicidal UV rays are invisible to the human eye, personnel may be subjected to a hazardous dose of UV without warning. There is no Occupational Safety and Health Administration standard for exposure to ultraviolet light. UV can be associated with adverse health effects depending on duration of exposure and wavelength. These adverse health effects include erythema (sunburn), photokeratitis (a feeling of sand in the eyes), skin cancer, melanoma, cataracts, and retinal burns. Ideally, activated UV sources should be attended by knowledgeable personnel at all times.

The UVC lamps in Genesis Air CenterPoint™ products do not produce ozone! The lamps provide a minimum intensity of 775 microwatts/cm<sup>2</sup> at 10.77 cm to activate the catalyst effectively to maintain tested performance. Lamps may not be substituted with an unapproved manufacturer. These lamps provide UV-C light at a wavelength of 254 nm. Despite their appearance to the naked eye, the lamp intensity will reduce over time. All lamps must be replaced every 16 months (12,000 hrs.) of continuous use to maintain intensity requirements. Lamps provided by Genesis Air Contain trace amounts of mercury. Lamps include a Teflon case to encapsulate the lamp and reduce the risk of exposing the consumer and environment to mercury.

### Personal Protective Equipment

While in normal operation, Genesis Air units will not emit harmful levels of UV radiation to the surrounding area. When checking for proper lamp connection, you may be exposed to harmful levels of UV radiation. If you must have the lamps on to check for proper operation, follow these instructions.

- All personnel exposed to UV radiation must wear UV protective glasses.
- All personnel exposed to UV radiation must protect exposed skin with UV resistant clothing.

# Maintenance

## Filter Replacement

The Genesis Air RGS unit includes a pre-filter to remove large particles from the air stream. This prevents the buildup of debris on the PCP panel. The pre-filter should be replaced when it has become built up with dirt and other contaminants. Genesis Air recommends replacing filter with a 12" x 24" x 4" MERV 13 after 3 months of continuous use.

### Filter Replacement Procedure

1.) Disconnect unit from power supply.

**Note:** *If the unit is powered on while the filter grille is opened, a safety switch will break power.*

**Caution:** *Electrical plug must be disconnected before servicing. A break in power caused by the safety switch is not considered disconnecting power.*

2.) Open filter grille by loosening (2) knobs by hand or with a coin.

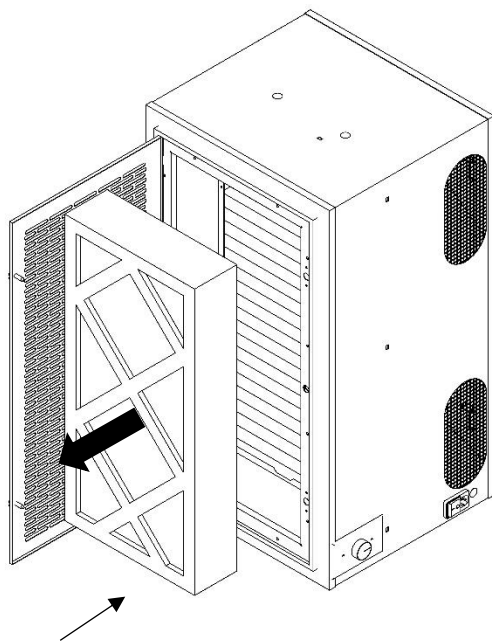
3.) Remove old air filter. See Figure 2.

4.) Insert new air filter. Ensure that arrows on filter match the direction of air flow. See Figure 2.

**Note:** *Air will move in through the filter grille and exhaust out the sides of the unit.*

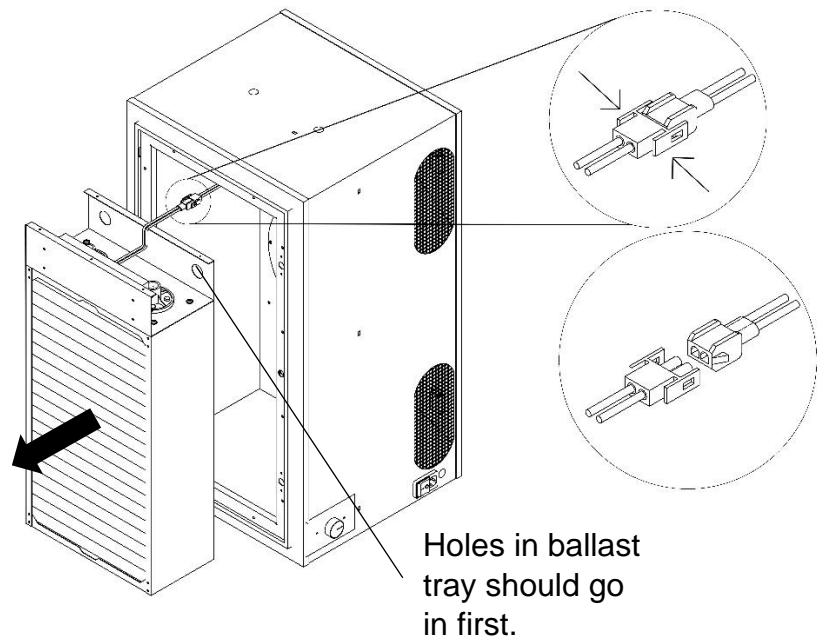
5.) Close filter grille and tighten knobs.

6.) Plug-in unit and power on to ensure that the unit works properly.



Direction of air flow

**Figure 2**



**Figure 3**

## Lamp Replacement

The Genesis Air RGS includes (2) 20" UVC lamps. UV lamps are used to energize the catalyst. These lamps will either be manufactured by First Light Technologies, Inc or UV Engineering Solutions LLC. Lamps must be replaced after 12,000 hours of continuous use. Genesis Air recommends replacing lamps once a year.

### Lamp Replacement Procedure

1.) Disconnect unit from power supply.

**Note:** *If the unit is powered on while the filter grille is opened, a safety switch will break power.*

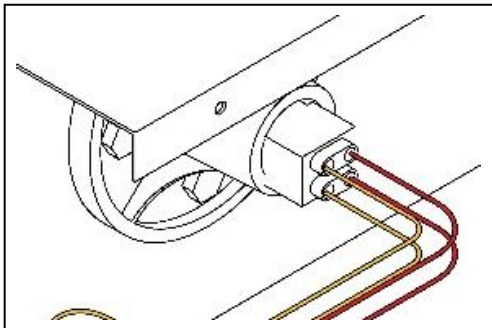
**Caution:** *Electrical plug must be disconnected before servicing. A break in power caused by the safety switch is not considered disconnecting power.*

2.) Open filter grille by loosening (2) knobs by hand or with a coin.

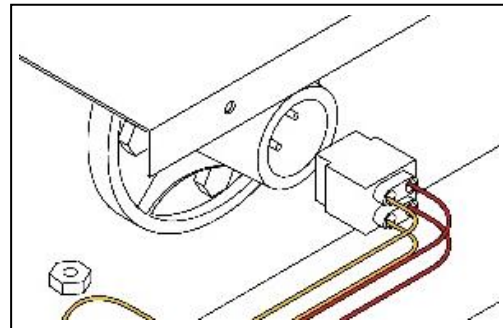
3.) Remove pre-filter. See Figure 2.

4.) Remove PCP panel. See Figure 3.

5.) Disconnect 2 pin MOLEX connector providing power to PCP Panel. See Figure 3.

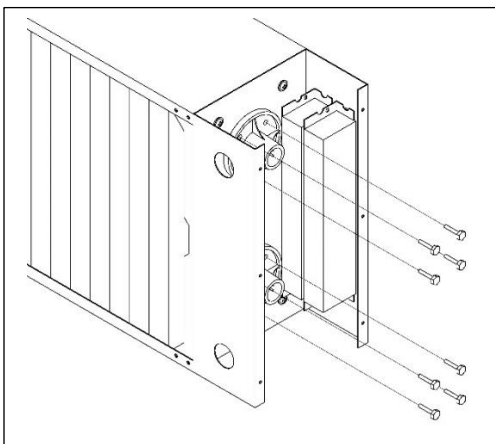


**Figure 4**

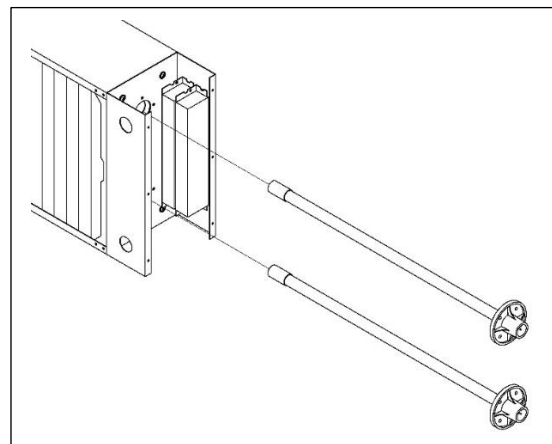


**Figure 5**

6.) Disconnect lamp plugs from lamps that will be replaced. See Figures 4 and 5.



**Figure 6**



**Figure 7**

7.) Lamps are attached to PCP with (4) 10-16 Self-Drilling screws per lamp. Remove the screws using a 5/16" socket wrench. See Figure 6.

8.) Remove lamps by alternating a quarter turn clockwise and a quarter turn counterclockwise as it is pulled out. This will prevent the lamp from becoming bound up in the catalyst media. See Figure 7.

**Caution:** *Lamps may be hot if recently in operation. Allow lamps to cool before removing or wear heat insulating gloves to protect hands.*

9.) Inspect new lamp to ensure that it matches the length of the original lamp.

10.) Replace lamps by alternating a quarter turn clockwise and a quarter turn counterclockwise as it is pushed in. This will prevent the lamp from becoming bound up in the catalyst media. See Figure 7.

11.) Reinsert (4) screws per lamp using a 5/16" socket wrench. See Figure 6.

12.) Reconnect lamp plugs. See Figures 4 and 5.

13.) Reconnect 2 pin MOLEX connector providing power to PCP panel. See Figure 3.

14.) Reinsert PCP panel. Ensure that arrows on PCP panel match the direction of air flow.

See Figure 3.

**Note:** *Air will move in through the filter grille and exhaust out the sides of the unit.*

15.) Reinsert pre-filter. Ensure that arrows on filter match the direction of air flow. See Figure 2.

16.) Reattach the lid and tighten knobs.

17.) Plug-in unit and power on to ensure that the unit works properly.

### Lamp Disposal

Products containing Mercury are considered hazardous waste. Since January 1, 2000, the United States Environmental Protection Agency (EPA) has allowed for spent lamps to be managed as Universal Wastes. The Universal Waste Rules (UWR) are designed in part to simplify the management of mercury containing wastes, including spent fluorescent lamps. The Rules are also intended to encourage recycling, thereby reducing mercury emissions to the environment.

As an alternative to managing lamps as universal wastes, a facility may elect to manage its spent lamps as hazardous wastes. Hazardous waste rules, like the universal waste rules, are promulgated under the federal Resource Conservation Recovery Act (RCRA) and state laws equivalent to RCRA. RCRA regulates hazardous wastes from the cradle to the grave. RCRA Subtitle C requires a waste generator to properly identify, treat, store, transport, and delegate to the States the responsibility for the day-to-day management of the program.

## List of Lamp Recycling Facilities in the US

- AERC Recycling Solutions – Hayward, CA ; West Melbourne, FL ; Allentown, PA
- Universal Recycling Technologies – Dover, NH ; Clackamas, OR ; Fort Worth, TX ; Janesville, WI
- Veolia ES – Phoenix, AZ ; Tallahassee, FL ; Stoughton, MA ; Port Washington, WI

Go online to find you nearest lamp recycling facility.

## **Ballast Replacement.**

There is not a set lifetime for Genesis Air ballasts. Ballasts are intended to last the life of the unit. However, ballasts can fail prematurely and will need to be replaced. Always replace with ballasts sold through Genesis Air. See Ballast Troubleshooting on page 21 for diagnosing ballast faults.

### Ballast Replacement Procedure

1.) Disconnect unit from power supply.

**Note:** *If the unit is powered on while the filter grille is opened, a safety switch will break power.*

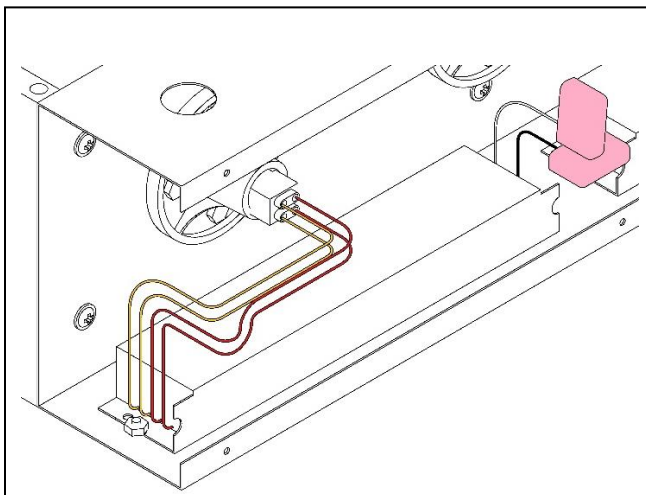
**Caution:** *Electrical plug must be disconnected before servicing. A break in power caused by the safety switch is not considered disconnecting power.*

2.) Open filter grille by loosening (2) knobs by hand or with a coin.

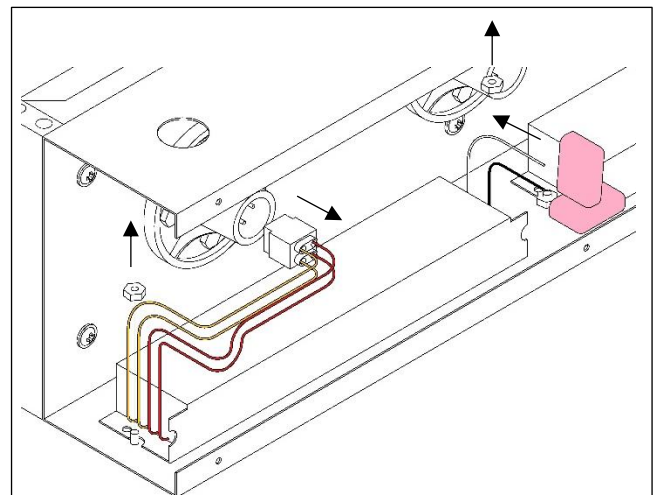
3.) Remove pre-filter. See Figure 2.

4.) Remove PCP panel. See Figure 3.

5.) Disconnect 2 pin MOLEX connector providing power to PCP Panel. See Figure 3.



**Figure 8**



**Figure 9**

6.) Disconnect lamp plug and power attached to defective ballast. Take note of which terminals power the defective ballast so the new one can be wired correctly. See Figures 8 and 9.

- 7.) Use an 11/32" socket wrench to remove the (2) nuts holding the ballast into place. See Figures 8 and 9.
  - 8.) Inspect the new ballast and ensure that it matches the original one.
  - 9.) Reinstall the (2) nuts that hold the ballast in place using an 11/32" socket wrench. See Figures 8 and 9.
  - 10.) Reconnect lamp plugs and wires powering ballast. See Figures 4 and 5.
  - 11.) Reconnect 2 pin MOLEX connector providing power to PCP panel. See Figure 3.
  - 12.) Reinsert PCP panel. Ensure that arrows on PCP panel match the direction of air flow. See Figure 3.
- Note:** *Air will move in through the filter grille and exhaust out the sides of the unit.*
- 13.) Reinsert pre-filter. Ensure that arrows on filter match the direction of air flow. See Figure 2.
  - 14.) Reattach the lid and tighten knobs.
  - 15.) Plug-in unit and power on to ensure that the unit works properly.

## **Fan Motor Replacement**

Fan motors are intended to last the life of the unit. However, fan motors can fail prematurely and will need to be replaced. Always acquire replacement fan motors from Genesis Air.

### Fan Motor Replacement Procedure

**Note:** *Do not attach 4 pin male MOLEX connector to fan motor wires until wires have been feed through wire tube in step 15. MOLEX connector will not fit through wire tube. Attaching MOLEX connector beforehand will require a special tool to remove wire pins.*

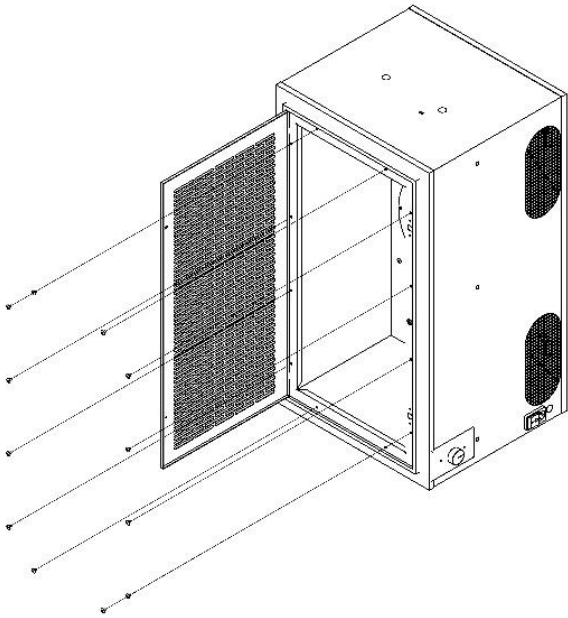
- 1.) Disconnect unit from power supply.

**Note:** *If the unit is powered on while the filter grille is opened, a safety switch will break power.*

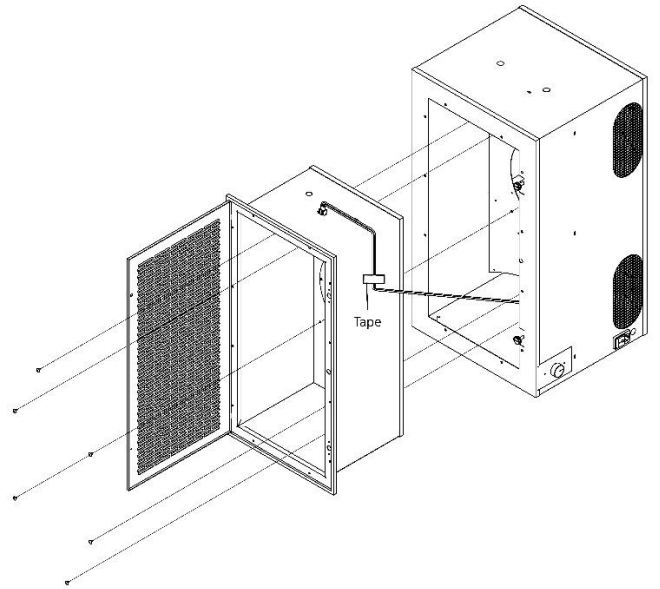
**Caution:** *Electrical plug must be disconnected before servicing. A break in power caused by the safety switch is not considered disconnecting power.*

**Caution:** *Safety switch will not detect that motor has been removed. If unit is plugged into power source, there is a risk of getting fingers caught in moving fan blade.*

- 2.) Open filter grille by loosening (2) knobs by hand or with a coin.
- 3.) Remove pre-filter. See Figure 2.
- 4.) Remove PCP panel. See Figure 3.
- 5.) Disconnect 2 pin MOLEX connector providing power to PCP panel. See Figure 3.



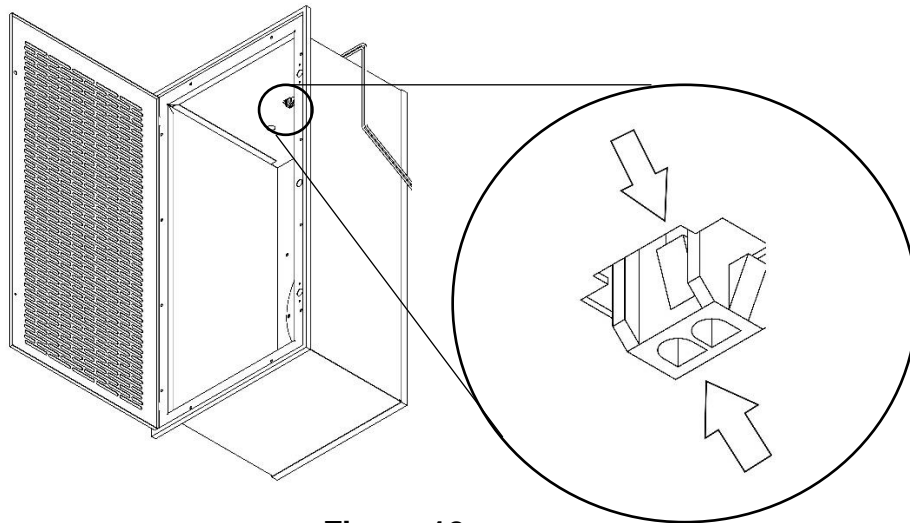
**Figure 10**



**Figure 11**

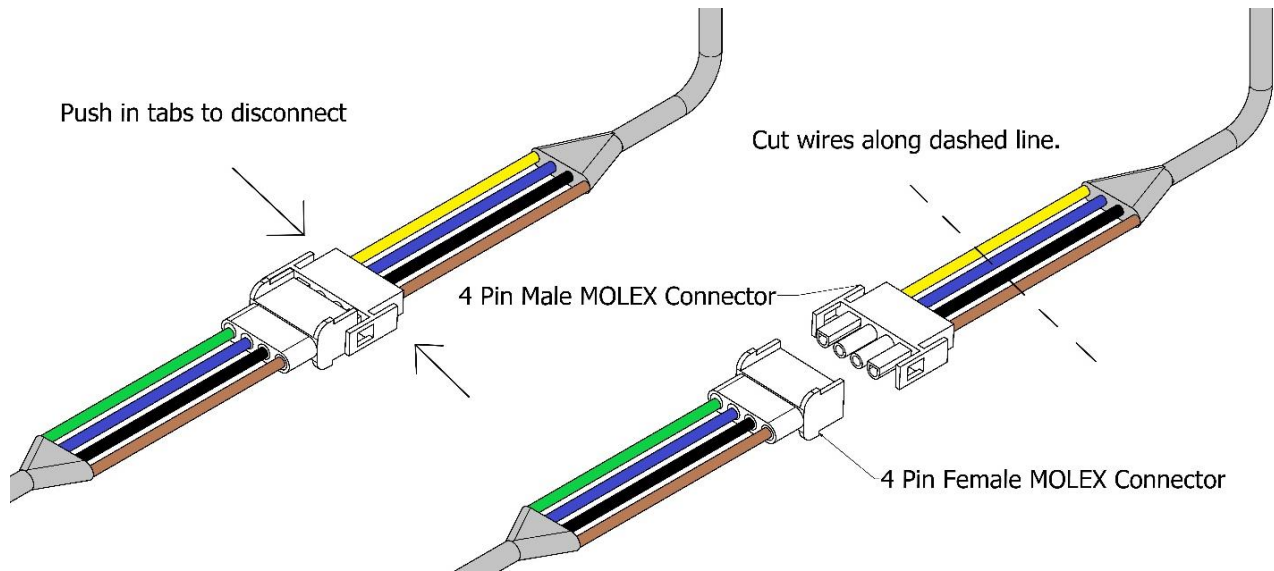
6.) Remove (12) M4 screws holding insert in place. Use a 2.5 mm Allen wrench. See Figure 10.

7.) Remove (6) more M4 screws holding insert in place. See Figure 11.



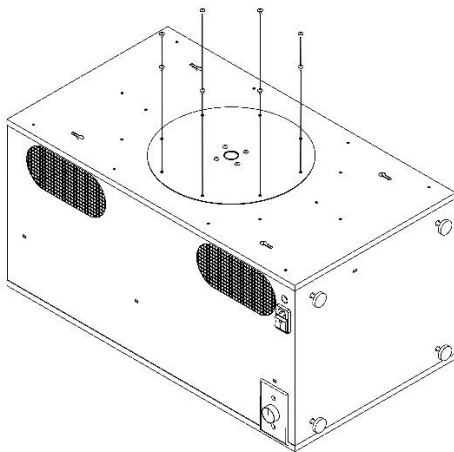
**Figure 12**

8.) Remove 2 pin MOLEX connector attached to insert. Apply a force using a flat head screws driver to pop out the back side first. Then, pop out the front side using the same technique. See Figure 12. This will provide better maneuverability for the next steps.

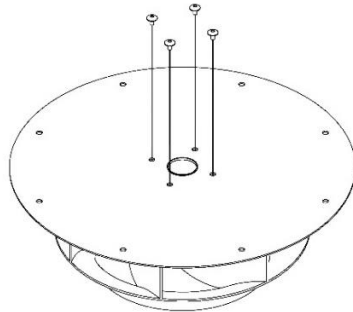


**Figure 13**

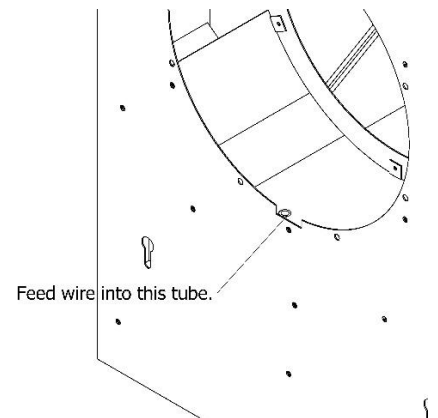
9.) Disconnect the 4 pin MOLEX connectors joining the fan motor to the wiring harness. Identify the wires that attach to the fan motor (side with male MOLEX connector). Cut these wires on the dashed line shown in Figure 13.



**Figure 14**



**Figure 15**



**Figure 16**

10.) Place the unit on its face as shown in Figure 14. Remove (8) M4 screws holding the backplate on with an Allen wrench.

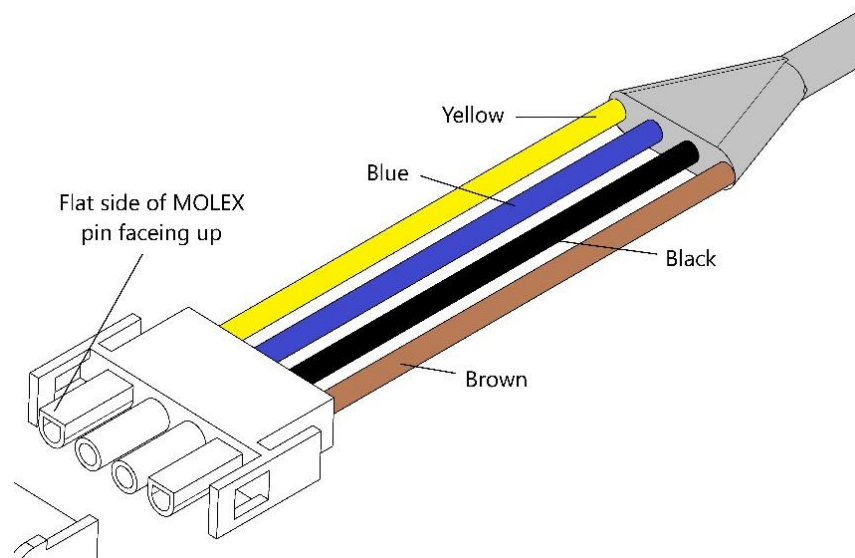
11.) Remove backplate and pull fan motor wires out of unit.

12.) Remove (4) M4 screws holding fan motor onto backplate with an Allen wrench. See Figure 15.

13.) Inspect new fan motor and ensure that it matches the original fan motor.



- 14.) Using an Allen wrench, attach new fan motor to backplate with (4) M4 screws. See Figure 15.
- 15.) Feed wires into metal tube that runs down the inside of the unit housing. See Figure 16.
- 16.) Position backplate over unit as shown in Figure 10. Reattach backplate to unit housing with (8) M4 screws using an Allen wrench.
- 17.) Set unit upright on work surface.



**Figure 17**

- 18.) Attach new 4 pin male MOLEX connector to fan motor wires. See Figure 17 for correct wire order.
  - 19.) Reconnect 4 pin MOLEX connectors, connecting fan motor to wiring harness.
  - 20.) Reinsert 2 pin MOLEX connector into the top of the housing Insert. The connector will snap when it is in place. See Figure 12.
  - 21.) Tape wire to the side of the housing insert. This will keep it from being wedged. See Figure 11.
  - 22.) Place insert back into housing. Attach with (18) M4 screws. See Figures 10 and 11. Unit may need to be placed on its back side to evenly align screws. Tighten screws in a crisscross pattern to prevent metal from binding.
  - 11.) Reconnect 2 pin MOLEX connector providing power to PCP panel. See Figure 3.
  - 12.) Reinsert PCP panel. Ensure that arrows on PCP panel match the direction of air flow. See Figure 3.
  - 13.) Reinsert pre-filter. Ensure that arrows on filter match the direction of air flow. See Figure 2.
- Note:** Air will move in through the filter grille and exhaust out the sides of the unit.
- 14.) Reattach the lid and tighten knobs.
  - 15.) Plug-in unit and power on to ensure that the unit works properly.

**Note:** *If motor is installed incorrectly, fan blade may rub on inlet ring. If this is the case, backplate may need to be removed and clocked 1/8<sup>th</sup> of a rotation before being reattached.*

## **Catalyst Cleaning**

As debris and contaminants accumulate on the catalyst, the effectiveness of the unit decreases. The catalyst must be inspected periodically for buildup. It is recommended that this inspection be performed during pre-filter replacement.

### Catalyst Inspection Procedure

1.) Disconnect unit from power supply.

**Note:** *If the unit is powered on while the filter grille is opened, a safety switch will break power.*

**Caution:** *Electrical plug must be disconnected before servicing. A break in power caused by the safety switch is not considered disconnecting power.*

2.) Open filter grille by loosening (2) knobs by hand or with a coin.

3.) Remove pre-filter. See Figure 2.

4.) Remove PCP panel. See Figure 3.

5.) Disconnect 2 pin MOLEX connector providing power to PCP Panel. See Figure 3.

6.) Using a flashlight, visually inspect catalyst. Look for clumps of dirt and debris.

7.) If catalyst appears clean and free of particulate, the catalyst will not need to be cleaned. Proceed to step 8 to reassemble. If catalyst has accumulated dirt and debris, the catalyst panel should be cleaned. Proceed to step 6 of Catalyst Cleaning Procedure.

8.) Reconnect 2 pin MOLEX connector providing power to PCP Panel. See Figure 3.

9.) Reinsert PCP panel. Ensure that arrows on PCP panel match the direction of air flow.

See Figure 3.

**Note:** *Air will move in through the filter grille and exhaust out the sides of the unit.*

10.) Reinsert pre-filter. Ensure that arrows on filter match the direction of air flow. See Figure 2.

11.) Reattach the lid and tighten knobs.

12.) Plug-in unit and power on to ensure that the unit works properly.

### Catalyst Cleaning Procedure

1.) Disconnect unit from power supply.

**Note:** *If the unit is powered on while the filter grille is opened, a safety switch will break power.*

**Caution:** Electrical plug must be disconnected before servicing. A break in power caused by the safety switch is not considered disconnecting power.

- 2.) Open filter door by loosening (2) knobs by hand or with a coin.
- 3.) Remove pre-filter. See Figure 2.
- 4.) Remove PCP panel. See Figure 3.
- 5.) Disconnect 2 pin MOLEX connector providing power to PCP Panel. See Figure 3.
- 6.) If the catalyst has only light to moderated dust build up, use a hand sprayer with water only to rinse the catalyst. Avoid heavy concentration of spray on ballast tray.

If catalyst is soiled with resin (E.T.S.) or grease, spray catalyst liberally with Nu-Calgon CalClean, Special HD, or another suitable coil cleaner. Do not spray ballast tray. Allow to sit for 15 minutes before rinsing with pump up water spray bottle.

**Caution:** *Do not spray high-pressure water to clean catalyst. Excessive use of high-pressure water will remove catalyst coating. This type of damage will void the product warranty.*

- 7.) Allow catalyst to dry before reinserting into unit.
- 13.) Reconnect 2 pin MOLEX connector providing power to PCP Panel. See Figure 3.
- 13.) Reinsert PCP panel. Ensure that arrows on PCP panel match the direction of air flow. See Figure 3.

**Note:** *Air will move in through the filter grille and exhaust out the sides of the unit.*

- 14.) Reinsert pre-filter. Ensure that arrows on filter match the direction of air flow. See Figure 2.
- 15.) Reattach the lid and tighten knobs.
- 16.) Plug-in unit and power on to ensure that the unit works properly.

## Replacement Parts

<b>Part</b>	<b>Description</b>	<b>Name / Model Number</b>
Ballast	120 VAC, 60 Hz	Fulham WH-5
Catalyst	11.5" x 24" x 5.8"	1221 PCP Compound Panel
Pre-filter	12" x 24" x 4"	12" x 24" x 4" MERV 13
Motor Assembly	Black EBM-papst Fan or Red EBM-papst Fan	R2E225-RA40-21 or R2E225-RA40-27
Capacitor	15 µF	Packard Titan Pro Capacitor
UVGI Lamps	20" UV-C Lamp	First Light 2813, UV Engineering GEN9093
UVGI Shielding	12" x 24"	RGS UV Shield
Power Cord	16 AWG	Qualtek Electronics Corp. 233058-01
Motor Controller	Steady State Speed Controller	KBWC-16LRK
Lamp Screws	Hex Screw	10-16 Self-Drilling Screw
Catalyst Cover Screws	Philips Head Screw	PPH ½" Self-Drilling Screw
Feet	RGS Feet	5/16" – 18 Leveling Mount
Backplate Screws	RGS Allen Screw	M4 x 0.7 x 6 mm SCS

**Table 2: Replacement Parts**

*\*Only use genuine Genesis Air replacement parts. Parts highlighted in gray may be substituted with other manufactures.*

To place an order for replacement parts, please contact Genesis Air at

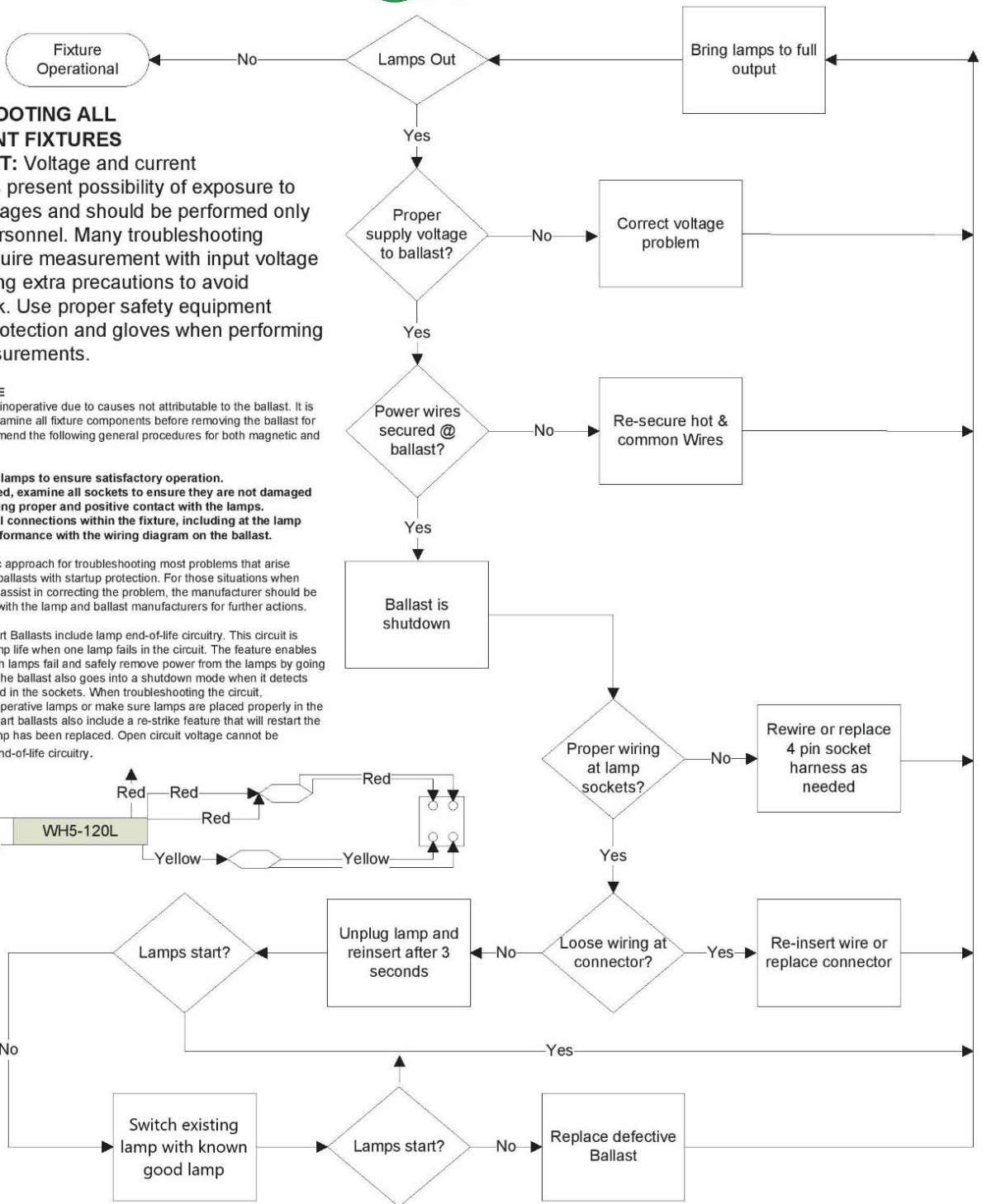
Phone: 806-745-7000

Web: [www.genesisair.com](http://www.genesisair.com)

Physical Address: 5202 CR 7350 Suite D Lubbock, TX 79424

# Ballast Troubleshooting Chart

Figure 1a



## TROUBLESHOOTING ALL FLUORESCENT FIXTURES

**SAFETY FIRST:** Voltage and current measurements present possibility of exposure to hazardous voltages and should be performed only by qualified personnel. Many troubleshooting techniques require measurement with input voltage applied requiring extra precautions to avoid electrical shock. Use proper safety equipment such as eye protection and gloves when performing electrical measurements.

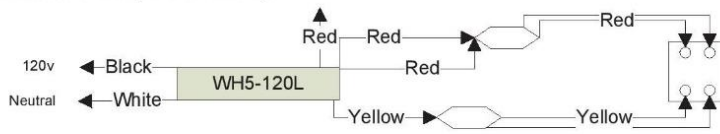
### INOPERATIVE FIXTURE

Often a fixture becomes inoperative due to causes not attributable to the ballast. It is therefore important to examine all fixture components before removing the ballast for replacement. We recommend the following general procedures for both magnetic and electronic ballast:

1. Replace or check all lamps to ensure satisfactory operation.
2. As lamps are removed, examine all sockets to ensure they are not damaged or broken and are making proper and positive contact with the lamps.
3. Examine all electrical connections within the fixture, including at the lamp sockets, to ensure conformance with the wiring diagram on the ballast.

Figure 1a is a systematic approach for troubleshooting most problems that arise regarding fixtures using ballasts with startup protection. For those situations when these documents do not assist in correcting the problem, the manufacturer should be contacted to coordinate with the lamp and ballast manufacturers for further actions.

**NOTE:** Programmed Start Ballasts include lamp end-of-life circuitry. This circuit is included to maximize lamp life when one lamp fails in the circuit. The feature enables the ballast to detect when lamps fail and safely remove power from the lamps by going into a shutdown mode. The ballast also goes into a shutdown mode when it detects lamps not properly placed in the sockets. When troubleshooting the circuit, make sure to replace inoperative lamps or make sure lamps are placed properly in the sockets. Programmed Start ballasts also include a re-strike feature that will restart the lamps after the failed lamp has been replaced. Open circuit voltage cannot be measured due to lamp end-of-life circuitry.



## Installation

The Genesis Air RGS is designed to be utilized either as a portable or permanently installed unit. Installation must be completed by competent personnel. Genesis Air, Inc. assumes no liability for damages or injuries sustained from installations done by persons other than qualified Genesis Air technicians.

### Portable Installation

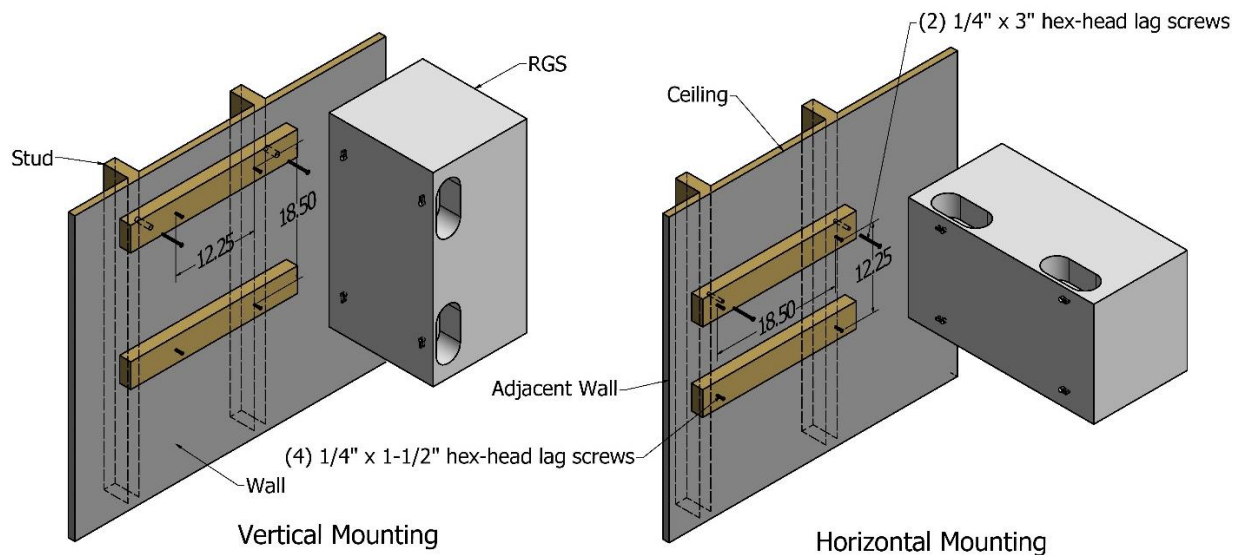
Make the following considerations when choosing an appropriate placement location.

- Choose a suitable location on the ground or on furniture within a room or corridor.
- Ensure that the intake and outlet grills of the unit are not blocked by adjacent furniture or walls.
- Ensure that the placement of the unit does not interfere with the flow of foot traffic or block entrances or exits to rooms within the building.

**Caution:** *Placing the unit in a location on the floor that impede foot traffic may be considered a fire hazard. Consults local building and fire codes to find a suitable floor location.*

- Choose a location that has access to a 120V power outlet. An extension cord with ground pin may be used if the supplied power cable is too short for your application.

## Permanent Wall Mount



**Figure 13: Wall Mounting**

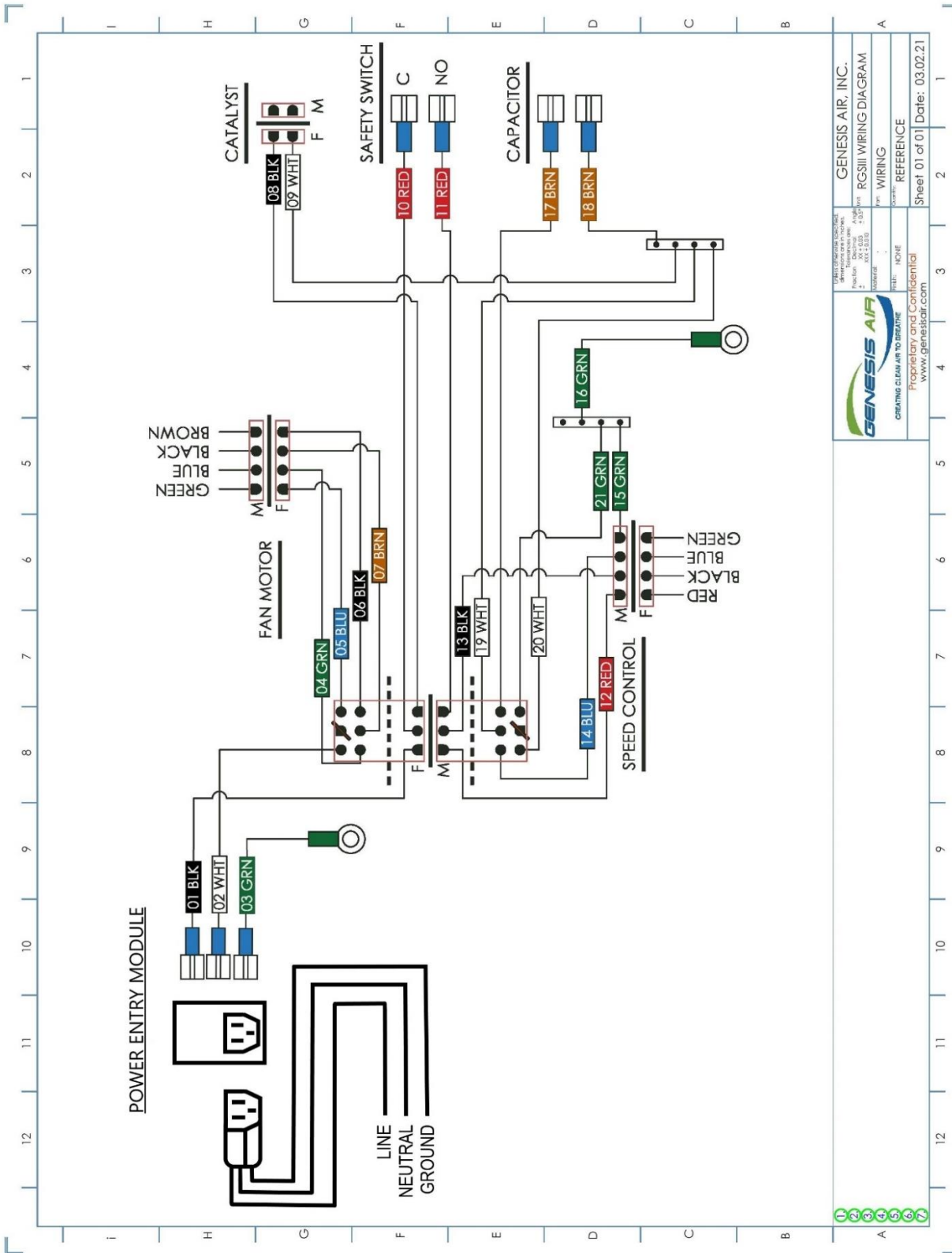
*\* Recommended hardware is not included. All measurements written in inches.*

- 1.) Determine an adequate mounting location. Identify a place on the wall that has space for the RGS.
- 2.) If mounting vertically, the RGS should be hung a minimum of 12" from any adjacent wall or furniture, and a minimum of 1" from the ceiling.

If mounting horizontally, the RGS should be mounted a minimum of 1" from any adjacent wall or furniture, and a minimum of 12" from the ceiling.

- 3.) Locate 2 neighboring wall studs using a stud finder. Use a standard 2" x 4" as a mounting cleat as shown in the drawing.
- 4.) (2) 1/4" x 3" hex-head lag screws are recommended to hand the RGS from the top cleat.
- 5.) (2) 1/4" x 1-1/2" hex-head lag screws are recommended to fasten the bottom cleat to the wall.
- 6.) (2) 1/4" x 1-1/2" hex-head lag screws are recommended to fasten the bottom cleat to the wall. The bottom cleat is indented to prevent the unit from swinging while in operation. Ensure that all wall anchors used are rated for 75 lbs.
- 7.) Hang the RGS on the wall anchors. This will require 2 people to lift the unit into place.
- 8.) Plug in the unit to a 120V AC power source. Run the unit at all speeds, ensuring the fan has not become bound during shipping.

# Wiring Diagram

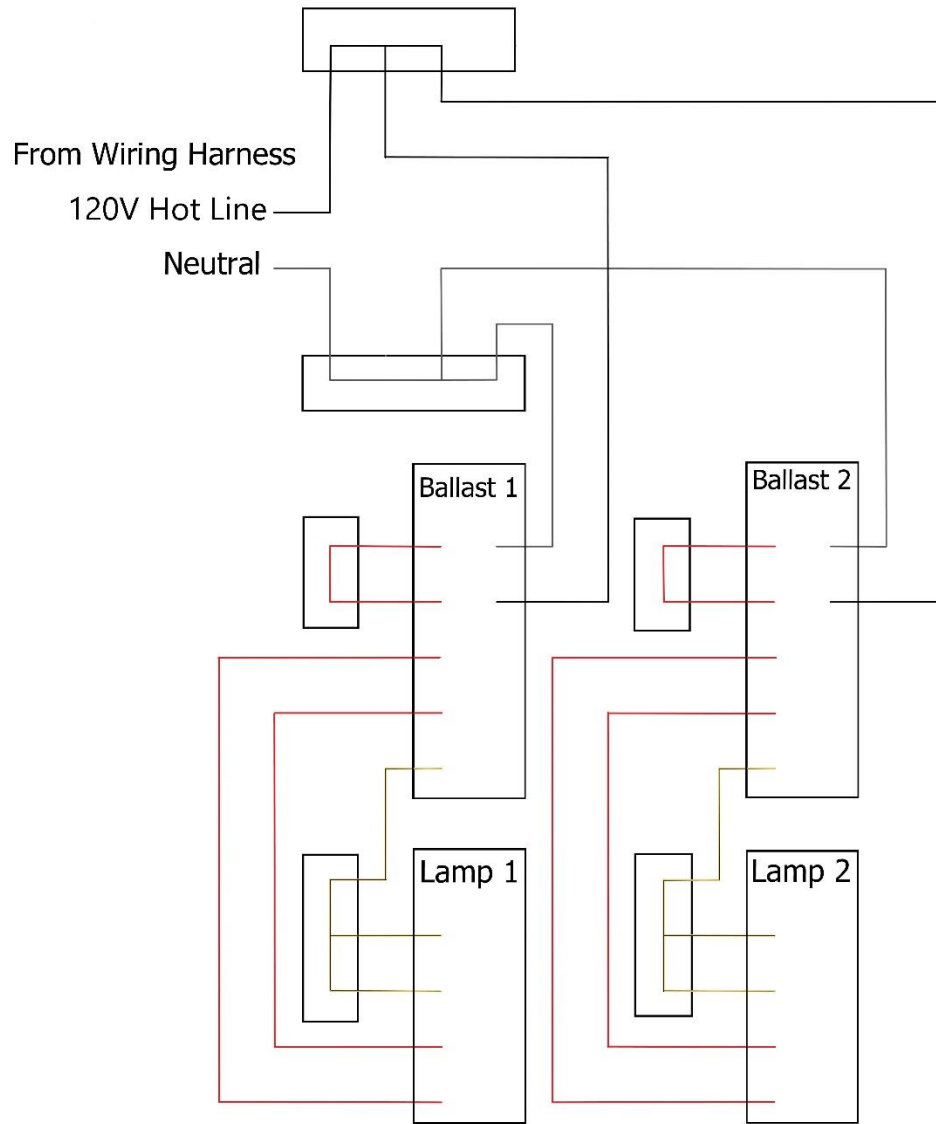


<p>GENESIS AIR CREATING CLEAN AIR TO BREATHE</p>	<p>GENESIS AIR, INC. RGSIII WIRING DIAGRAM WIRING REFERENCE Sheet 01 of 01 Date: 03.02.21</p>
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Figure 14: RGS Wiring Harness

\*\* Older models may not have a Power Entry Module.





**Figure 15: 1224 PCP Wiring Harness**

# AC centrifugal fans - RadiCal®

Series R2E225 RA Ø225 mm



### Highlights:

- Backward curved
- 7-blade impeller, single phase motor
- Thermal overload protector (TOP) wired internally
- Mounting position: Any
- Condensate discharge holes: None
- Ingress protection of IP44; dependent on installation and position

**Material:** Fiberglass reinforced composite

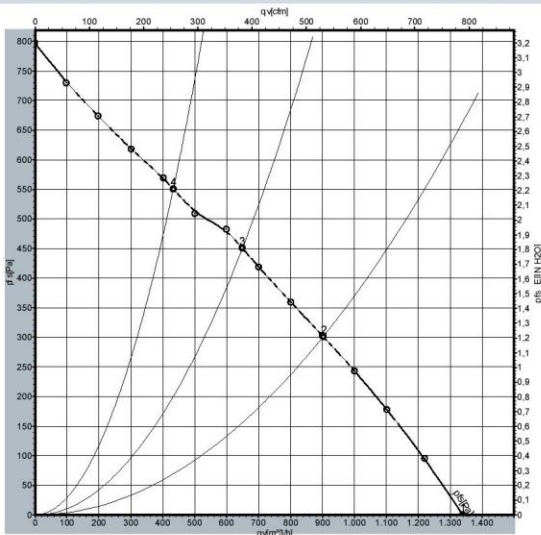
Impeller: PA

**Direction of rotation:** Clockwise, seen on rotor

Nominal Data	Air flow	Nominal voltage	Hertz	Ball bearings	Power input	Speed (1)	Temperature range (1)	Mass	Ingress Protection Rating	Capacitor	UL
	CFM	VAC			Watts	RPM	°C	g		µF	
R2E225-RA40-21	788.7	115	50/60	Yes	225	2,700	-25...40	2,300	IP44	14	Yes
R2E225-RA92-20	765.2	230	50/60	Yes	225	2,600	-25...45	2,300	IP44	3.5	Yes

(1) Nominal data at operating point with maximum load.

### R2E225-RA40-21 Curves



Measurement: LU-128357

Air performance measured as per: ISO 5801, Installation category A, without protection against accidental contact.

Suction-side noise levels: L<sub>wA</sub> as per ISO 13347, L<sub>pA</sub> measured at 1m distance to fan axis.

The values given are valid under the measuring conditions mentioned and may vary according to the actual installation situation.

With any deviation to the standard set-up, the specific values have to be checked and reviewed once installed or fitted.

For detailed information on the measuring set-up, please contact ebm-papst.

	n	Pe	I	L <sub>wA</sub>
	rpm	W	A (115V)	dB(A)
Ⓐ 1	3025	187	1.61	76
Ⓐ 2	2700	225	1.95	70
Ⓐ 3	2765	218	1.89	69
Ⓐ 4	2890	204	1.76	71

# Air Purification Testing

Genesis Air, Inc. has conducted numerous tests to authenticate that CenterPoint™ Technology is an effective means of reducing airborne indoor air contaminants. Genesis Air will make copies of test results available to those who request it.

## Testing Protocol

There are two main types of tests that can be performed with air purifying equipment: single pass tests and chamber tests. A single pass test measures the contaminant level at the inlet of the equipment and compares that value to the level of contaminants at the outlet. A chamber test measures the change in contaminant level within an enclosed space over a given amount of time. Tests can measure volatile organic compound (VOCs) reduction, reduction of viable biological contaminants (bacteria, viruses, fungi), and particulate reduction.

Genesis Air equipment is intended to reduce VOCs and deactivate viable biological contaminants. **Genesis Air equipment is not intended to significantly reduce non-viable biological contaminants. Genesis Air equipment is not intended to significantly reduce particle contaminants.**

Many testing groups do not make a distinction between viable and non-viable biological contaminants. When testing Genesis Air equipment, a distinction must be made between viable and non-viable biological contaminant in the air. **Tests must only measure viable biological contaminants that appear in the air.** The bodies of inactivated biological contaminants will remain in the air. **Inactive bodies are incapable of reproducing or infecting persons occupying the space.**

For more information, please contact Genesis Air at

Phone: 806.745.7000

Email: [information@genesisaair.com](mailto:information@genesisaair.com)

Physical Address: 5202 CR 7350 Suite Lubbock, TX 79424

## **LIMITED WARRANTY**

### **FAILURE TO MAINTAIN YOUR EQUIPMENT WILL VOID THIS WARRANTY**

Your GENESIS AIR™ purification system is expressly warranted from the date of installation to be free from manufacturing defects for the coverage period stated below. Defective parts must be returned by you to the installing contractor together with the GENESIS AIR™ purification system's model number, serial number, and documented installation date no later than thirty (30) days after the failure.

### **ONE (1) YEAR COVERAGE -- RESIDENTIAL AND COMMERCIAL APPLICATIONS**

The covered equipment and covered components are warranted by GENESIS AIR for a period of ONE (1) year from the date of the original unit installation, when installed in a residential or commercial application. If during this period, a covered component fails because of a manufacturing defect, GENESIS AIR will provide a free replacement part. You must pay shipping charges and all other costs of warranty service. GENESIS AIR will not pay labor involved in diagnostic calls or in removing, repairing, servicing, or replacing parts. Such costs may be covered by a separate warranty provided by the installer. NOTE - If the date of original installation cannot be verified, the warranty period will be deemed to begin six (6) months after the date of manufacture.

### **EXCLUDED COMPONENTS**

The following components are not covered by this warranty: the UVCGI lamps or the pleated photocatalytic material. These are replacement items, which must be replaced as stated in the Maintenance section of the installation instructions to ensure effective operation.

### **REPAIRS**

All repairs of covered components must be made with authorized service parts by a qualified service dealer or contractor. Labor charges are not covered by this warranty.

### **WARRANTY LIMITATIONS**

This warranty will be voided if the covered equipment is removed from the original installation site. This warranty does not cover damage or defect resulting from:

- 1 - Flood, wind, fire, or lightning damage. Storage, installation, or operation in a corrosive atmosphere (chlorine, fluorine, salt, recycled wastewater, urine, fertilizers, or other damaging chemicals).**
- 2 - Accident, or neglect or unreasonable use or operation of the equipment, including operation of electrical equipment at voltages other than the range specified on the unit nameplate (Includes damages caused by brownouts).**
- 3 - Modification, change or alteration of the equipment, except as directed by GENESIS AIR.**
- 4 - Operation with system components (indoor unit and control devices), which do not match, or meet the specifications recommended by GENESIS AIR.**
- 5 - Operation with system components (indoor unit and control devices), which exceed operational temperature range of; -20 F to 122F.**
- 6 – Cleaning equipment with high pressure water spray so that the PCP catalyst coating is damaged.**
- 7 – Damage caused by allowing non-functioning equipment to be in an air stream for a prolonged period.**

THIS WARRANTY SHALL NOT OBLIGATE THE MANUFACTURER FOR ANY LABOR COSTS AND SHALL NOT APPLY TO DEFECTS IN WORKMANSHIP OR MATERIALS FURNISHED BY THE INSTALLING CONTRACTOR AS CONTRASTED TO DEFECTS IN THE GENESIS AIR™ PURIFICATION SYSTEM ITSELF. IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE SHALL BE LIMITED IN DURATION TO THE AFORESAID COVERAGE PERIOD. THE MANUFACTURER'S LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, OTHER THAN DAMAGES FOR PERSONAL INJURIES, RESULTING FROM ANY BREACH OF THE AFORESAID IMPLIED WARRANTIES OR THE ABOVE LIMITED WARRANTY IS EXPRESSLY EXCLUDED. THIS LIMITED WARRANTY IS VOID IF DEFECT(S) RESULT FROM FAILURE TO HAVE THIS UNIT INSTALLED BY A QUALIFIED HEATING AND AIR CONDITIONING CONTRACTOR. IF THE LIMITED WARRANTY IS VOID DUE TO FAILURE TO USE A QUALIFIED CONTRACTOR, ALL DISCLAIMERS OF IMPLIED WARRANTIES SHALL BE EFFECTIVE UPON INSTALLATION.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above exclusion or limitations may not apply to you. This warranty gives you specific legal rights and you may also have other rights, which vary from state to state.

**Last Revision: 7/30/2021**

**To register your new GENESIS AIR™ Purification System, PLEASE CUT ON DOTTED LINE AND RETURN THE REGISTRATION FORM TO THE ADDRESS NOTED BELOW.**

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**Customer Registration Form**

Customer Name: \_\_\_\_\_ Address: \_\_\_\_\_

City: \_\_\_\_\_ State/Province: \_\_\_\_\_ Zip/Postal Code: \_\_\_\_\_

Home Phone: \_\_\_\_\_ E-mail: \_\_\_\_\_

Installing Contractor: \_\_\_\_\_ Phone: \_\_\_\_\_

Date of installation: \_\_\_\_\_ Model Number: \_\_\_\_\_ Serial Number: \_\_\_\_\_

Please send this completed form to: GENESIS AIR™

GENESIS AIR, INC.

5202 CR 7350, SUITE D LUBBOCK, TX 79424

