

OPERATOR'S MANUAL

Safety, Operation & Service Information

AIR-SCRUB-R™ Portable HEPA Air Filter

Model: AF501

Form: GOM31032001US, Version 1.2, Original Instructions

- Do not discard this manual.
- Keep manual readily available for reference during operation or when servicing product.
- Before operation, read and comprehend operator manual content.
- Customer Service: 001 507 451 5510
- Customer Service Telefax: 001 507 451 5511

Note: There is no charge for Customer Service.

- Internet Address: http://www.generalequip.com
- Email: general@generalequip.com
- Mailing Address:

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NOTICE TO OPERATORS

IF YOU CANNOT READ OR DO NOT FULLY UNDERSTAND THE CONTENTS OF THIS MANUAL, PLEASE CONTACT THE FACTORY FOR PROPER ASSISTANCE BEFORE ATTEMPTING TO OPERATE THIS PRODUCT.

SI TU NO PUEDES LE'ER O NO COMPRENDES EL CONTENIDO DE ESTE MANUAL FAVOR DE PONERSE EN CONTACTO CON LA. FABRICA PARA ASSISTENCIA-APROPIA ANTES DE INTENTAR PARA OPERAR ESTE PRODUCTO.

SOLLTEN SIE DIESE GEBRAUCHSANWEISUNG NICHT LESEN KOENNEN ODER ES NICHT VOLLKOMMEN VERSTEHEN, WENDEN SIE SICH BITTE AN DEN HERSTELLER FUER RICHTIGE HILFE EHE SIE VERSUCHEN DIESES PRODUKT ZU OPERIEREN.

SI VOUS NE LISEZ OU NE COMPRENDRE ENTIEREMENT LES MATIERES DE CE MANUEL, S'IL VOUS PLAIT, CONTACTEZ L'USINE POUR L'ASSISTANCE APPROPRIEE AVANT D'UTILISER LE PRODUIT.

IMPORTANT:

- DO NOT allow anyone to operate AIR-SCRUB-R without first reading this
 Operator Manual and becoming familiar with AIR-SCRUB-R operation.
- Manufacturer of this AIR-SCRUB-R has gone to great extremes to
 provide owner(s) and/or operator(s) with the finest equipment available
 for its intended job function of filtering air/creating negative pressure in
 industrial and construction job applications. Yet, the possibility exists the
 AIR-SCRUB-R can be utilized in and/or subjected to job applications not
 perceived and/or anticipated by manufacturer. Such misuse and/or
 misapplication of AIR-SCRUB-R can lead to possibility of serious
 damage, injury or even death.
- It is responsibility of owner(s) and/or operator(s) to determine AIR-SCRUB-R is utilized and/or operated within scope of its intended job function.
- It is responsibility of owner(s) and/or operator(s) to establish, monitor and
 constantly upgrade all safety programs and/or practices utilized in and for
 operation of AIR-SCRUB-R. Purpose of such programs is to provide for
 owner(s') and/or operator(s') safety. Operators must be instructed to
 recognize and avoid unsafe conditions associated with their work (29
 CFR 1926.21 (b)(2)) and/or applicable updated revisions.

- It is responsibility of owner(s) and/or operator(s) to determine no modifications and/or alterations have been made to AIR-SCRUB-R.
 Modifications and/or alterations can lead to possibility of serious damage, injury or even death. It is responsibility of owner(s) and/or operator(s) to make this Operator Manual available for consultation during all phases of operation
- Refer to OSHA 2207 and/or applicable updated revisions which contains all OSHA job safety, health rules and regulations (1926 and 1910) covering construction.

CAUTION

The concept of portable, air filtering equipment has been successfully utilized for many years as a practical solution to many types of air filtering/negative pressure job requirements. The basic concept is proven and well accepted within the associated marketplaces.

Use of an AIR-SCRUB-R requires strenuous work activity when moving the equipment and when used in conjunction with other surface preparation equipment either moving or emptying dust/debris collected. This type of work activity can be considered to be greater in magnitude than that experienced with the use of many other types of both light construction and lawn and garden related equipment. This type of work activity should only be attempted by operators of adequate physical size and stature, mental awareness, and physical strength and condition.

The body parts most noticeably affected when using AIR-SCRUB-R or equipment used in conjunction with AIR-SCRUB-R are the arms, hands, wrists, shoulders, lower back and legs. Lifting and/or moving AIR-SCRUB-R can also produce excessive stress/strain directly to the back muscles, spinal vertebrae and many other body parts. Back related pain can be a side effect of such activity. An operator with a chronic back related problem or a history of back and/or other medically related problems should not attempt to utilize the AIR-SCRUB-R. Use of the AIR-SCRUB-R may only aggravate this and any other medically related problem.

Because of the diverse type of prevailing air filtering/negative pressure conditions, operator experience levels and operator physical characteristics, no warranty, guarantee, representation and/or liability is made by the manufacturer as to the absolute correctness or sufficiency of any operational procedure, operational position and/or technique. There is no absolute guarantee that an operator of any given experience level, physical size and/or physical condition will be immune to the possibility of and/or probable physical side effects of the normal air filtering/negative pressure process.

Each potential operator of the AIR-SCRUB-R must be made aware of and assume the operational and physical liability described and/or associated with the air filtering process when utilizing the AIR-SCRUB-R. <u>Each potential operator not willing to assume the operational and physical liability described and/or associated with the air filtering process should not operate the AIR-SCRUB-R. Proper levels of operator experience, skill and common sense are essential for maximizing the safe and efficient operation of the AIR-SCRUB-R.</u>

Record AIR-SCRUB-R model and serial numbers in spaces provided below.

Model Number:	 	
Serial Number:		 _
Nate of Purchase:		

Specifications and design are subject to change without notice or obligation. All specifications are general in nature and are not intended for specific application purposes. General Equipment Company reserves the right to make changes in design, engineering or specifications and to add improvements or discontinue manufacture at any time without notice or obligation. General Equipment Company and its agents accept no responsibility for variations which may be evident in actual products, specifications, pictures and descriptions contained in this publication.



OPERATOR INSTRUCTIONAL DATA SHEET

The following undersigned operators of AIR-SCRUB-R described and/or pertaining to this Operator Manual have received formal safety and operational information/instruction from undersigned owner(s)/instructor(s) in accordance to OSHA 29 CFR 1926.21 (b)(2) and/or applicable updated revisions pertaining to, but not necessarily limited to the:

- READING, COMPREHENSION AND ACKNOWLEDGEMENT OF MATERIAL COMPRISING ENTIRE CONTENTS OF APPLICABLE OPERATOR MANUAL FOR AIR-SCRUB-R.
- 2. FORMALIZED OPERATOR SAFETY PROGRAM TO BE DEVISED BY OWNER OF AIR-SCRUB-R IN CONJUNCTION WITH CONTENTS OF APPLICABLE OPERATOR MANUAL FOR AIR-SCRUB-R.
- 3. OSHA RULES AND REGULATIONS RESEARCHED FOR AND/OR BY OWNER OF AIR-SCRUB-R AND DEEMED APPLICABLE TO SAFE AND PROPER USE AND/OR OPERATION OF AIR-SCRUB-R FOR ANY SPECIFIC JOB APPLICATION.
- 4. LOCAL LAWS, REGULATIONS AND CUSTOMS RESEARCHED FOR AND/OR BY OWNER OF AIR-SCRUB-R AND DEEMED APPLICABLE TO SAFE AND PROPER USE AND/OR OPERATION OF AIR-SCRUB-R FOR ANY SPECIFIC JOB APPLICATION.
- 5. FORMALIZED MAINTENANCE PROGRAM FOR AIR-SCRUB-R TO BE DEVISED BY OWNER OF AIR-SCRUB-R IN ACCORDANCE WITH, BUT NOT NECESSARILY LIMITED TO, SPECIFICATIONS, GUIDELINES AND OPERATIONAL INFORMATION CONTAINED IN APPLICABLE OPERATOR MANUAL.
- 6. COMPREHENSIVE OPERATIONAL INSTRUCTIONS FOR CORRECT AND PROPER USE OF AIR-SCRUB-R AS PER CONTENTS OF APPLICABLE OPERATOR MANUAL.

 Operator	Owner/Instructor	Date
 Operator	Owner/Instructor	Date
Operator	Owner/Instructor	Date

NOTE: INSERT COPIES OF THIS PAGE WITHIN OPERATOR'S MANUAL IF SPACE FOR ADDITIONAL OPERATORS IS REQUIRED.



1 INTRODUCTION

Congratulations on your decision to purchase a General Equipment light construction product. From our humble beginnings in 1955, it has been a continuing objective of General Equipment Company to manufacture equipment that delivers uncompromising value, service life and investment return. Because of this continuous commitment for excellence, many products bearing the General name actually set the standard by which competitive products are judged

When you purchased this product, you also gained access to a team of dedicated, knowledgeable, support personnel that stand willing and ready to provide field support assistance. Our team of sales representatives and inhouse factory personnel are available to ensure each General product delivers the intended performance and product safety you expect. Our personnel can readily answer your questions or concerns regarding proper applications, service requirements and warranty related problems.

If you have any questions or concerns about this product, please feel free to contact our Customer Service Department during normal business hours using the contact information located on the front cover of this manual. There is no charge for this service.

Sincerely,

The General Equipment Team

2 INTENDED USE

The AIR-SCRUB-R Portable HEPA Air Filter is intended for use in introducing air filtering/creating negative pressure in non-hazardous, non-flammable, nonexplosive, indoor environments only. Product can be used in restoration from water damage, mold remediation, odor control, plus other applications such as dust control, sewage remediation, and fire damage restoration. The AIR-SCRUB-R is not intended for use in wet applications. The AIR-SCRUB-R is operated by one adult of proper operator experience/skill/common sense, height, weight, strength and physical condition.

IMPORTANT: For water damage restoration, mold remediation and negative pressure containment applications, only professionals properly trained should apply these techniques using the AIR-SCRUB-R.

3 TRAINING

Develop a comprehensive program for safe AIR-SCRUB-R operation by owner(s) and/or operator(s). Program will include, but is not limited to: instructional operation requirements, applicable OSHA requirements, local laws and regulations, job site safety plus AIR-SCRUB-R maintenance. Constantly examine and upgrade program to guarantee owner(s') and/or operator(s') safety. Each operator must be fully instructed regarding specifics of this safety program.

OPERATIONAL DISCLAIMER

The manufacturer of this AIR-SCRUB-R makes no warranty or guarantee it is merchantable and/or suitable for a specific job application and that it will have the power required to filter dust-debris, smoke, VOC's and other noxious odors or contaminants to a specific air quality classification

4 SAFETY SYMBOLS

SAFETY ALERT SYMBOL & SIGNAL WORDS

The safety alert "general warning" symbol indicates a potential personal injury hazard. A signal word (DANGER, WARNING, or CAUTION) is used with the alert symbol to designate the degree or level of hazard seriousness. Other safety symbols may be used to represent the type of hazard in combination with "general warning" symbol, in highlighted boxes, or individually.

Indicates a hazard with a high level of risk which, if not voided, will result in death or serious injury.

WARNING:

Indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.

CAUTION:

Indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.

The following safety alert symbols identify important safety messages in this manual. When you see these symbols, be alert to the possibility of personal injury and carefully read the message that follows.

SAFETY SYMBOLS & MEANINGS

Symbol	Meaning	Symbol	Meaning
0	Action Required	\triangle	General Warning
	Read Manual		Warning, Flammable Material
	Wear Ear Protection		Warning, Explosive Material
	Wear Eye Protection		Warning, Toxic Material
9	Wear Breathing Protection	A	Warning, Electricity
	Wear Protective Gloves		Warning, Body Entrapment
(3)	Wear Safety Shoes	4	Warning, Sharp Element
	No Open Flames		Warning, Rotating Parts
	No Smoking		Warning, Hot Surface
	No Active Mobile Phone	<u>F</u>	Warning, Floor Level Obstacle
	No Food or Drink		Warning, Drop Off
Z	No Trash Containers		Warning, Slippery Surface

5 SAFETY INSTRUCTIONS



- These safety instructions provide guidelines to promote safety and efficiency with the AIR-SCRUB-R.
- No warranty, guarantee or representation is made by manufacturer as to absolute correctness or sufficiency of any information or statement.
- Safety instructions are intended to deal with common practices and conditions encountered in use of AIR-SCRUB-R and are not intended to be all inclusive.
- Not following instructions in this manual can result in property damage, personal injury and/or death.



!\ DANGER



This product can expose you to chemicals including greases, lubrication oils, silica dusts and asbestos which are known to the State of California to cause cancer and carbon monoxide (if gasoline powered) which can cause birth defects or other reproductive harm. For more information: www.P65Warnings.ca.gov

BEFORE OPERATING















- BEFORE operating AIR-SCRUB-R, read this manual to familiarize each operator with correct operating procedures.
- Visually inspect the AIR-SCRUB-R per MAINTENANCE INSTRUCTIONS STEPS 5 through 10 of this manual.
- Determine the AIR-SCRUB-R is in original, factory configuration and has not been modified in any manner. If questions arise about possible modifications, contact the Customer Service Department BEFORE utilization. There is no charge for this service.

AF501 AIR-SCRUB-R™ Portable HEPA Air Filter FORM GOM31032001US, VERSION 1.2



 Always start and stop the AIR-SCRUB-R according to instructions to minimize possibility of unexpected or uncontrolled movement. Know how to stop unit in an emergency.

Noise

Air filtering process creates exposure to high noise emission levels that can result in hearing loss or damage. Hearing protection is required while operating or when near operating equipment. Continuous and regular operators should have their hearing checked regularly.

Clothing

Clothing must be sturdy, snug fitting, but allow complete freedom of movement. Never wear loose fitting jackets, scarves, neckties, jewelry, flared or cuffed pants or anything that could become caught on controls or moving parts. Properly secure eyeglasses, hearing aid devices and other medical related devices. Wear long pants to protect legs. Protect hands and improve grip with heavy duty, nonslip gloves. Wear and properly lace sturdy boots with nonslip soles. Steel-toed safety shoes are mandatory. Wear approved safety hard hat where there is danger of head injuries and/or approved breathing mask where danger of airborne foreign particulate contamination is present.

Dust Control

Wear disposable/washable clothing on the jobsite. Shower (if possible) and change into clean clothing BEFORE leaving jobsite to prevent vehicle, home, and other works area contamination with crystalline silica dust or other contaminants such as lead. Properly clean all dust control equipment and equipment used in conjunction with before reuse in other applications/jobsites.

Flying Debris

Air filtering process can result in flying debris. Eye protection and appropriate safety apparel is required when near or operating AIR-SCRUB-R. DO NOT operate unit with onlookers or animals close by.

BACK CARE & PROPER LIFTING PROCEDURES

Operators will be required to lift/move AIR-SCRUB-R repetitively as demanded by specific job applications. When lifting, one person is required. Utilize proper lifting techniques to minimize fatigue and back-related injuries.

Back Anatomy

The human body is supported by the spinal column consisting of thirty bones called vertebrae, all linked and supported by a series of muscles. Pads called discs separate each vertebrae, acting as cushions to pressure from external forces. Spinal column is wrapped by nerve system with three sections that require being kept in natural alignment to prevent discomfort:

Cervical: From base of neck to brain.
Thoracic: From middle to lower back.
Lumbar: From lower back to buttocks area.

Back Care Preventative Measures

Most occupational physicians agree on several "universal" preventative measures an operator should follow to help lower risk of back-related injuries:

- 1. Maintain proper body weight.
- Eliminate/reduce use of tobacco. Smoking reduces oxygen supply and nutrients to discs cushioning vertebrae.
- 3. Develop a consistent exercise routine.
- 4. Maintain good posture while walking or sitting.
- Watch how you twist/bend your body. Twisting/bending incorrectly can exert too much pressure on discs and vertebrae.
- Use firm footing, keep intended path clear before moving/lifting and/or carrying AIR-SCRUB-R.
- 7. Always use proper lifting techniques as described below.

PROPER LIFTING PROCEDURES

The following are guidelines for properly moving/lifting AIR-SCRUB-R and are not intended to be all inclusive. Plan your path and make sure there are no obstructions or tripping hazards. Consider how you will set the load. The spinal column is a very sensitive mechanism. At any given time, improper lifting procedures can cause damage that can lead to injury.

 Position feet a comfortable distance (shoulder width) apart to help provide necessary balance.

- Tighten stomach muscles by pulling in your stomach. Keep back as straight as possible to keep spine, back muscles/ligaments in alignment.
- 3. Bend at hips and knees as much as possible.
- Start lifting AIR-SCRUB-R by thrusting feet while lifting as much as possible with leg muscles. Use smooth movements.
- Once AIR-SCRUB-R is lifted, keep it close as possible to the body. Avoid turning at waist. To turn, pivot entire body.
- 6. Keep shoulders, hips and feet pointed in same direction.

IMPORTANT: Use firm footing, keep intended path clear before carrying AIR-SCRUB-R.

TRANSPORTATION



- When transporting AIR-SCRUB-R, coil and secure unit power cord around carry handle. Remove accessory ducting from machine per INSTALLING & REMOVING ACCESSORY DUCTING in MACHINE SET-UP section of this manual when in the following operating conditions:
 - a) To and from jobsite.
 - b) Longer distances while being repositioned on jobsite.
 - c) Traversing up and down stairways.
 - d) Performing maintenance and/or repairs.
 - e) Lifting/lowering from transportation vehicle.
- To minimize damage, transport AIR-SCRUB-R on back side or side having protective rubber feet.
 - a) Provide proper protection between AIR-SCRUB-R components and vehicle to prevent direct contact.
 - DO NOT drop unit or directly impact AIR-SCRUB-R to prevent damage.
- All equipment must be secured in/on vehicles with suitable strapping or tie downs.
- Personnel should not be transported in same compartment as equipment and fuel supplies. Consult applicable OSHA regulations for specific information.



CAUTION

 Improperly secured AIR-SCRUB-R and related accessories can fall from moving vehicle and result in property damage and/or personal injury.

DETERMINATION OF POTENTIAL SUBSURFACE HAZARDS IN PROPOSED JOBSITE LOCATION(S)









AIR-SCRUB-R housing, carry handle plus, outlet grill are constructed of nonmetallic composite material, but do not guarantee operators will be properly insulated from contact with charged electrical cables. AIR-SCRUB-R and related accessories are not classified as insulated. AIR-SCRUB-R is not sealed or insulated. DO NOT operate AIR-SCRUB-R in an explosive atmosphere or near combustible materials. Refer to current OSHA rules and regulations.





WARNING



BEFORE attempting to ventilate an area, identify/mark all potential subsurface hazards in proposed ventilation locations(s). Potential subsurface hazards may include, but may not be limited to the following:

- Buried debris, rotted timbers or wood planking.
- Buried pressurized pipelines (e.g. natural gas, propane, 2.
- Buried electrical cables.
- Water, flammable/combustible/toxic liquids, gases, vapors, dusts, fibers, or filings.

DETERMINATION OF POTENTIAL ABOVE SURFACE HAZARDS IN PROPOSED JOBSITE LOCATION(S)













Normal AIR-SCRUB-R use is on a level surface. Avoid other surface conditions which can be dangerous. Special care must be exercised on slippery, and/or difficult/uneven surfaces. Watch for surface irregularities or drop offs to lower floor levels. Identify any objects that could puncture ducting. Check for large, heavy debris that could be pulled into the AIR-SCRUB-R. Remove any trip/fall hazard BEFORE operating AIR-SCRUB-R. Check for such hazards as water, flammable/combustible/toxic liquids, gases, vapors, dusts fibers or filings.

OPERATIONAL HAZARDS









- The air filtering process can produce sparks, dusts and other foreign particle contamination that can result in fire and/or explosion depending on existing jobsite conditions.
- Dust, dirt and debris can contain asbestos and other chemicals that are known to cause physical harm and/or affect the environment.
- Excessive water, and/or other conductive materials on work surface can result in electrocution of operator and/or other personnel.
- When used in negative air ducting applications, to prevent airborne particulates from escaping space, exhausting too much air from a space with open combustion devices (e.g. furnace, fireplace or water heater) can cause those devices to backdraft and contaminate space with potentially fatal gases

IMPORTANT: Only professionals with appropriate training should set up negative pressure containment areas.

Preventive Measures:

- Operator must maintain physical and mental alertness. Be prepared for unexpected dirt and/or debris coming in contact or entering AIR-SCRUB-R. DO NOT allow inlet to become blocked or place object in inlet and/or outlet opening. Operator must be capable of sensing level of AIR-SCRUB-R control operator has.
- DO NOT operate AIR-SCRUB-R in areas where flammable or combustible liquids, gases, vapors, dust, fibers or filings may be present. DO NOT discharge flammable liquids or chemicals through AIR-SCRUB-R.
- DO NOT place AIR-SCRUB-R in standing water or operate when raining. DO NOT allow water inside AIR-SCRUB-R or motor. If motor/ AIR-SCRUB-R becomes wet for any reason, dry thoroughly BEFORE operating. Remove water and/or conductive materials by industryapproved and/or accepted practice BEFORE operating AIR-SCRUB-R. Determine AIR-SCRUB-R is properly grounded and power cord is free of cuts, abrasions and/or exposed cable strands.
- For negative air ducting applications, AIR-SCRUB-R must be used in one of three ways:
 - a) As filtering unit only. Exhaust no air from space preventing negative pressure or back drafting.
 - Exhaust very limited amount of air preventing backdraft. Open combustion devices must be thoroughly checked to guarantee devices do not backdraft while AIR-SCRUB-R is operating.

Route outlet duct from AIR-SCRUB-R to room with open combustion devices to create positive pressure with filtered air. Open combustion devices must be thoroughly checked to quarantee devices do not backdraft while AIR-SCRUB-R is operating.

6 MACHINE SPECIFICATIONS

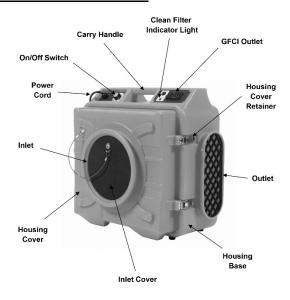


FIGURE 1

AF501 SPECIFICATIONS

AIR FLOW TYPE	Radial
HOUSING	High density, UV resistant polyethylene
FAN	Aluminum blades and hub
ELECTRIC MOTOR	1/4 HP, 115 VAC, 60 Hz, variable speed
POWER CORD	16-3 SJT X 15 ft. (4 M) length
VOLUME FLOW	Variable up to 500 CFM (14.2 CMM)
PRE-FILTER	30% efficient @ 0.5 microns, 15.75 x 15.75 x 0.75 inch (400 x 400 x 19 mm) pleated media, H-13 classification
HEPA SECONDARY	99.7% efficient @ 0.3 microns, 19 x 16 x 2
FILTER	inch (483 x 406 x 51 mm) pleated HEPA
NOMINAL INLET DIAMETER	9.5 inches (241 mm)
NOMINAL OUTLET CONFIGURATION	5 x 13 inches (127 x 330 mm) lay flat
WIDTH	23.8 inches (605 mm)
DEPTH	14.8 inches (376 mm)
HEIGHT	22.2 inches (564 mm)
WEIGHT	31 lbs (14 Kg)
OPERATING	Non-hazardous type locations.
ENVIRONMENTS	
REQUIRED NUMBER	
OF OPERATORS	1

7 STANDARD PRODUCT & ACCESSORIES

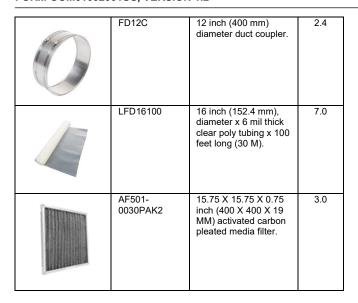
Refer to FIGURE 1 for overview description of standard components included in machine. Included in shipment for AIR-SCRUB-R should be the following:

- 1 each, Model AF501
- 1 each, operator manual
- 1 each, final inspection form

ACCESSORIES

Part #	Description	Weight (in lbs)
FD1225	DUC-PAC 12 inch (305 mm) diameter x 25 ft. (7.6 M) long ducting.	17.0





6 MACHINE SET-UP





Open shipping carton immediately upon receipt. Remove AIR-SCRUB-R from carton. Visually inspect contents for freight damage and/or missing parts. If shipping damage is evident, contact delivering carrier immediately to arrange for an inspection of damage by their claims representative. DO NOT DESTROY OR DISCARD SHIPPING CARTON UNTIL INSTRUCTED BY AUTHORIZED REPRESENTATIVE OF CARRIER OR FACTORY. If missing parts are detected, notify your dealer who will assist you in obtaining them.

NOTE: If ordered with AIR-SCRUB-R, optional ducting, duct couplers and filters can be shipped separately.

NOTE: AIR-SCRUB-R comes pre-assembled and ready to operate. As a precaution BEFORE operating:

- 1. Inspect all fasteners for looseness. Tighten as necessary.
- Determine all components of AIR-SCRUB-R allow for proper function as stated in this operator manual.

INSTALLING & REMOVING PRIMARY ACCESSORY DUCTING Tools required:

1 each, Phillips tip or flat blade screw driver.

 Turn AIR-SCRUB-R ON/OFF power switch to OFF position. Disconnect AIR-SCRUB-R power cord from power source. FIGURE 2



FIGURE 2



CAUTION

- DO NOT attach to or remove ducting from AIR-SCRUB-R while AIR-SCRUB-R is operating.
- Not following proper safety precautions can result in property damage and/or personal injury.
- Remove inlet cover from inlet. Unfold ducting storage bag end containing strap and buckle. Slip duct dust cuff over AIR-SCRUB-R inlet flange. Using fingers, tighten cinch strap to secure.
- Loosen draw string on opposite end of duct storage bag and extend ducting to desired length.
- If an additional section of ducting is required, sections may be joined using a duct coupler. To join duct sections, loosen metal clamping straps surrounding coupler.
- Slide free end of duct not attached to AIR-SCRUB-R over coupler and inside one of the clamping straps. Tighten clamping strap screw to secure.
- Slide starting end of next duct section over coupler and under second clamping strap. Tighten clamping strap screw to secure.
- To remove ducting, reverse STEPS 1 through 6 under INSTALLING & REMOVING PRIMARY ACCESSORY DUCTING section in this manual.

NOTE: Airflow rates decrease as length of duct increases. Air flow rates will vary based on duct types and manufacturer.

INSTALLING & REMOVING OUTLET ACCESSORY DUCTING

 Turn AIR-SCRUB-R ON/OFF power switch to OFF position. Disconnect AIR-SCRUB-R power cord from power source. Refer to FIGURE 2



CAUTION

- DO NOT attach to or remove ducting from AIR-SCRUB-R while AIR-SCRUB-R is operating.
- Not following proper safety precautions can result in property damage and/or personal injury.
- Set unit on level, secure surface on back side opposite inlet opening with outlet facing desired direction of lay flat ducting. As an alternative, unit may be placed on side with rubber support feet.
- 3. Pass ducting inside elastomeric attachment band. FIGURE 3



FIGURE 3

Slide ducting over outlet flange. FIGURE 4





FIGURE 4

 Stretch elastomeric attachment band over ducting and outlet flange to secure ducting. Make sure duct is properly retained around full perimeter to create proper air seal. FIGURE 5



FIGURE 5

 To remove ducting, turn AIR-SCRUB-R ON/OFF power switch to OFF position. Disconnect AIR-SCRUB-R power cord from power source. Reverse STEPS 2 through 5 under INSTALLING & REMOVING OUTLET ACCESSORY DUCTING section in this manual.

NOTE: Airflow rates decrease as length of duct increases. Air flow rates will vary based on duct types and manufacturer.

7 OPERATING INSTRUCTIONS





IMPORTANT: DO NOT operate RIP-R-STRIPPER until each operator completely comprehends contents of this manual.



CAUTION

- If AIR-SCRUB-R and/or an individual component/accessory does not appear to function properly, STOP and DO NOT operate AIR-SCRUB-R until corrective action has been completed.
- Operation with improperly functioning machine, components/accessories can result in property damage and/or personal injury.
- If you have any questions regarding proper operation of AIR-SCRUB-R, contact Customer Service Department for assistance BEFORE using. There is no charge for this service.



DANGER

- Wear safety eyewear and other safety apparel appropriate for the job application and/or job site environment.
- Improper safety procedures can result in property damage and/or personal injury.

AIR-SCRUB-R SET-UP ON JOBSITE

 Determine AIR-SCRUB-R ON/OFF switch is in OFF position and is not connected to power source. FIGURE 6



FIGURE 6

 Position AIR-SCRUB-R on level, secure surface to prevent shifting while in use with AIR-SCRUB-R outlet facing away from operator.
 AIR-SCRUB-R can be set in place on backside of unit or the side having rubber support feet.



CAUTION

- DO NOT stand directly in front of or place any portion of body in front AIR-SCRUB-R outlet to prevent being hit by flying debris.
- DO NOT use AIR-SCRUB-R as a stepping stool or as a bench.
- DO NOT operate AIR-SCRUB-R with inlet opening resting directly against a wall or floor.
- Not following proper safety precautions can result in property damage and/or personal injury.
- Position AIR-SCRUB-R inlet away from walls and obstructions to provide maximum air flow. Place AIR-SCRUB-R a minimum of 1.5 M (5 ft.) from ledges or drop offs.
- 4. Check integral GFCI outlet operation. Connect power cord to power source. Turn AIR-SCRUB-R ON/OFF switch to ON position. Push "TEST" button on GFCI receptacle. "RESET" button should pop out and small, LED light on face of receptacle will not be lit. While still connected to power, press "RESET" button until noticeable "click" is heard. Small, LED light should now be lit and receptacle operating properly. FIGURE 7, 8 & 9

IMPORTANT: When the AIR-SCRUB-R is plugged into power source, the GFCI outlet also has power present and is electrically "hot" for use.



FIGURE 7





FIGURE 8



FIGURE 9

- Turn AIR-SCRUB-R ON/OFF switch to OFF position and disconnect power cord from power source. Refer to FIGURE 6
- Depending on location/access of area to be filtered, install accessory ducting as necessary per procedures in INSTALLING & REMOVING ACCESSORY DUCTING in MACHINE SET-UP section of this manual.
- Position ducting for optimal air flow. Avoid extremely sharp or 90° bends over length of duct.
- Inspect power cord BEFORE use for damage, cuts, abrasions and/or electrical tape.



WARNING



- BEFORE use, inspect power cord for proper structural integrity.
- DO NOT use cord with worn or cut outer jacket material or repaired with electrical tape.
- Use of cords with improper structural integrity can result in property damage and/or personal injury.
- 9. Connect AIR-SCRUB-R power cord to power source.

IMPORTANT: Due to integral GFCI receptacle in unit, power cord of unit must be plugged directly into wall outlet. DO NOT use any extension cords.

IMPORTANT: If GFCI detects a ground fault, short circuit or overload, GFCI will interrupt power to unit. If this occurs, turn AIR-SCRUB-R ON/OFF switch to OFF position immediately and disconnect power cord from power source. Check for potential causes of power surge such as standing water, frayed power cord or power source circuitry. Once cause has been determined and addressed, refer to STEP 4 this section of manual to "reset" GFCI.



WARNING

- For maximum protection against a fault, always configure power cord to be plugged into power source receptacle.
- Configurations with GFCI placed between AIR-SCRUB-R and power source will not provide maximum protection against potential fault.



WARNING



- Keep power cord free and clear of machine and accessory ducting, heat, oil, sharp edges and moving parts.
- In event power cord becomes entangled about AIR-SCRUB-R and/or operator turn machine OFF immediately.
- Determine power cord/GFCI receptacle are in proper condition to continue operation.
- In event of damage, replace with factory approved component only.



WARNING



- DO NOT abuse the power cord. Never use power cord to move AIR-SCRUB-R or pull plug from wall receptacle or unit GFCI receptacle. Damage to cord and GFCI can result.
- . A damaged cord increases the risk of an electric shock.

NOTE: Up to 4 AIR-SCRUB-Rs can be daisy chained together for simultaneous operation by plugging power cord of one unit into the GFCl outlet of the next unit in line. Last unit in the chain is connected to the power source. Total amperage of all devices plugged into GFCl receptacle must not exceed 10 amps.

 Turn AIR-SCRUB-R ON/OFF switch to ON position. Monitor airflow for any obstructions. Refer to FIGURE 7

IMPORTANT: Motor will restart if power is lost then comes back on. There is no automatic shut off feature on the AIR-SCRUB-R.



DANGER

- DO NOT modify, bypass or disable AIR-SCRUB-R ON/OFF switch.
- DO NOT operate machine if machine ON/OFF switch is not functioning properly.
- Such configuration will not allow operator to quickly stop AIR-SCRUB-R in event of an emergency, prevent unexpected machine start-up, loss of control and can result in property damage and/or personal injury.
- 11. Monitor change filter indicator light throughout operation. When light indicates filter changing is necessary, examine and replace pre-filter and/or HEPA filter as necessary per REPLACING PRE-FILTER & SECONDARY HEPA FILTER of MAINTENANCE INSTRUCTIONS section in this manual. FIGURE 10



8

FIGURE 10

STOPPING AIR-SCRUB-R





- Turn AIR-SCRUB-R ON/OFF switch to OFF position between each use or when moving from one major section of work area to another. Refer to FIGURE 6
- 13. Disconnect power cord from power source.



WARNING

- Stop AIR-SCRUB-R when moving from one major section
- DO NOT choose to save time (time required to restart machine), money (if AIR-SCRUB-R is being rented) or gain added convenience by electing to keep machine running between major sections.
- Never leave AIR-SCRUB-R running and unattended.
- Not doing so can result in property damage and/or personal injury.
- BEFORE removing machine from work area, clean per STEP 6 of MAINTENANCE INSTRUCTIONS in this manual. All other equipment used in conjunction with the AIR-SCRUB-R should be considered contaminated and cleaned per specific machine instructions.

8 MAINTENANCE INSTRUCTIONS





















For routine maintenance, the following information should be followed at minimum once per week or 40 hours of use for maximum performance and return on investment unless otherwise indicated. Information is for reference only and is not intended to be all inclusive.

Use factory approved replacement parts/accessories only for maintenance and repair.



WARNING

- Operating AIR-SCRUB-R utilizing components not meeting minimum operational standards can result in property damage and/or personal injury.
- All maintenance/repairs not described in this operator manual must be done by a dedicated service center following a specific service/repair manual.



DANGER

- Wear safety eyewear and other safety apparel appropriate for the job application and/or job site environment.
- Improper safety procedures can result in property damage and/or personal injury.
- STOP AIR-SCRUB-R BEFORE performing maintenance and service per STOPPING AIR-SCRUB-R in OPERATING INSTRUCTIONS section of this manual
- Remove accessory couplers and ducting per INSTALLING & REMOVING ACCESSORY DUCTING in MACHINE SET-UP section of this manual.
- Inspect for loose, broken, cracked or deformed parts. Inspect all fasteners, individual parts, operator controls and safety devices for proper function. Tighten fasteners as necessary. Replace any worn or damaged part or assembly.

Remove all loose material accumulations, dirt and grease on internal/external surfaces, impeller blade, inlet and outlet to prevent safety hazards, poor performance and reduced service life. Use certified HEPA dust collection system as necessary to remove most accumulation then use damp cloth with mild soap and water or vinyl cleaner/protectant or safety type solvent for final AIR-SCRUB-R cleaning. Dry thoroughly BEFORE operating.



DANGER









- Use safety type solvent.
- DO NOT use thinner, benzene, or other volatile solvents that will attack rubber/plastic components when cleaning AIR-SCRUB-R.
- Provide adequate ventilation.
- DO NOT smoke while using cleaning solvents.
- DO NOT use solvents with motor running or if it is hot.
- Allow ample time for motor to cool BEFORE using
- An ignition source in close proximity to hot motor can be the source of an explosion, resulting in property damage and/or personal injury.



!\ warning



- Replace both filters after each mold remediation or other application where hazardous materials/contaminants are present and being filtered such as crystalline silica dust,
- Clean unit thoroughly (per IICRC S520, 10.11) after each job before removing from containment area to prevent cross contamination/spread of hazardous matter.
- DO NOT use pressure wash or high pressure air to clean.
- Dispose of filters, cleaning materials and post service parts per international and local regulations.
- Not following these procedures can result in personal injury to maintenance personnel and future operators of
- 7. Inspect AIR-SCRUB-R ON/OFF switch for proper function. If damaged or
- 8. Inspect carry handle grip is free of moisture, pitch, oil or grease and is not cracked or damaged. If full of dirt or pitch, clean. If cracked or damaged, replace unit.
- Inspect all safety and operation decals for proper condition. If any decal becomes damaged and/or unreadable, replace.
- Inspect primary ducting for dirt/and oil build up on inside and outside surfaces. Clean as necessary with mild soap and water for improved air flow/performance. Repair holes/tears. If unrepairable, replace.

REPLACING PRE-FILTER & HEPA SECONDARY FILTER

Tools Required:

1 each, Phillips-tip screw driver

1 each, airflow meter or anemometer

NOTE: One or both filters may require replacement. Decision to replace a filter should be based on cost versus filtering effectiveness. Based on job site application, operator must determine if airflow below 500 CFM is acceptable (e.g. - 250 CFM will filter particulates from space at half the rate but, will still filter the air).

- STOP AIR-SCRUB-R per STOPPING AIR-SCRUB-R in OPERATING INSTRUCTIONS section of this manual.
- Disconnect ducting per MACHINE SET-UP section in this manual.
- 3. Make sure AIR-SCRUB-R ON/OFF switch is in OFF position. Place AIR-SCRUB-R on level surface and connect power cord to power source.
- Turn AIR-SCRUB-R ON/OFF switch to ON position and increase speed to maximum. Using airflow meter, check airflow at AIR-SCRUB-R outlet. If airflow is unacceptable and/or change filter light remains lit, proceed to next step.



- STOP AIR-SCRUB-R per STOPPING AIR-SCRUB-R in OPERATING INSTRUCTIONS section of this manual.
- Place AIR-SCRUB-R on level surface on back side of unit opposite inlet opening.
- Unlatch housing cover retainers and fully open housing cover. FIGURE 11 & 12



FIGURE 11



FIGURE 12

 Replace pre-filter by removing 4 screws and filter retention clips from inside of housing cover. Set aside for reuse. Place new filter in same location, metal mesh side facing up. Re-install retention clips with screws and tighten until firmly seated. DO NOT overtighten screws to prevent thread strip out. FIGURE 13

IMPORTANT: DO NOT puncture pre-filter. Doing so will shorten secondary HEPA filter life span.



FIGURE 13

 Close housing cover and secure latches. Connect power cord to power source, turn AIR-SCRUB-R ON/OFF switch to ON position and increase speed to maximum. Using airflow meter, check airflow at AIR-SCRUB-R outlet. If airflow is unacceptable and/or change filter light remains lit, proceed to next step. **NOTE:** To substitute a standard, 30% pre-filter with an activated carbon filter, follow STEPS 1 through 9 of REPLACING PRE-FILTER & HEPA SECONDARY FILTER. If an activated carbon filter is already in the unit, when the pleated filter material is brown colored and starting to turn white from its original black/carbon color it is time to replace.

- Turn AIR-SCRUB-R ON/OFF switch to OFF position and disconnect power cord from power source.
- Repeat STEPS 6 & 7 of REPLACING PRE-FILTER & SECONDARY HEPA FILTER section above.
- Replace HEPA secondary filter by lifting and removing from housing base and replacing with new filter with soft foam edge facing down. FIGURE 14

IMPORTANT: To gain proper seal make sure HEPA filter lays flat within housing base cavity.

IMPORTANT: DO NOT puncture secondary HEPA filter to prevent dust dispersion when machine is placed back into operation. DO NOT attempt to vacuum and reuse HEPA filter.



FIGURE 14

13. Close housing cover, latch and return to operation.

9 TROUBLESHOOTING

NOTE: If troubleshooting information does not correct situation, all maintenance/repairs not described in this operator manual must be done by a dedicated service center following a specific service/repair manual.

UNIT WILL NOT START OR LOOSES POWER

UNIT WILL NOT START OR LOOSES POWER		
Possible Cause	Correction	
No power received from power source.	Consult qualified electrician for proper voltage and ampere output.	
On/Off switch in OFF position.	Turn to ON position.	
Motor loses power.	Check power source for correct voltage and amperage.	
Impeller does not start on low speed.	Turn to high speed until impeller starts then reduce speed.	
Circuit overloaded, panel circuit breaker tripped.	Unload circuit, reset circuit breaker.	
High operating temperatures.	Disconnect machine from power source. Allow to cool. Determine motor fan blades are clean of foreign material accumulations. Clean as necessary using appropriate solvent.	

UNIT RUNS, MAKES SCRAPING NOISE

ONIT RONS, MARLS SCRAFING NOISE		
Possible Cause	Correction	
Severe impact damage to unit, fan contact housing.	Inspect for cause. Replace damaged components as necessary. Molded housing not serviceable.	
Severe impact to housing, housing deformed.	Replace unit. Molded housing components not serviceable.	



UNIT RUNS, VIBRATES EXCESSIVELY

Possible Cause	Correction
Severe impact to unit, motor shaft bent.	Inspect for cause. Replace motor/fan assembly. Molded housing not serviceable.
Fan blade(s) damaged.	Inspect for cause. Replace motor/fan assembly. Molded housing not serviceable.
Dirt build up on impeller blade.	Clean impeller blade.
Air inlet blocked.	Clear debris from inlet.

UNIT RUNS BRIEFLY, SHUTS OFF ON OVERLOAD

ONLY RONG BRILLEY, OHOTO OLL ON OVERLOAD		
Possible Cause	Correction	
Motor bearings failing or internal motor electrical fault.	Replace motor/fan assembly.	
Inlet and/or outlet grill obstructed.	Remove obstruction/clean grills.	
Excessive duct length.	Reduce duct length to recommended maximum.	

MOTOR MAKES NOISE, FAN DOES NOT TURN

Possible Cause	Correction
Fan jammed against housing.	Inspect for cause. Replace damaged components as necessary. Molded housing components not serviceable. If unusable, replace unit.
Capacitor wire broken or loose, capacitor failed.	Inspect for cause. Repair or replace capacitor as necessary.
Housing damaged, presses against fan blade.	Inspect for cause. Replace damaged components as necessary. Molded housing components not serviceable. If unusable, replace unit.
Roll pin locking fan to motor shaft is damaged.	Inspect unit for cause. Replace damage components as necessary.

UNIT LACKS AIR FLOW

UNIT LACKS AIK FLOW		
Possible Cause	Correction	
Motor bushes worn.	Replace motor/fan assembly.	
Motor overheating.	Inspect unit for cause. Replace damaged components as necessary.	
Housing damaged, presses against fan blade.	Inspect for cause. Replace damaged components as necessary. Molded housing components not serviceable. If unusable, replace unit.	
Roll pin locking fan to motor shaft	Inspect unit for cause. Replace	
is damaged.	damage components as necessary.	

DUST BLOWN FROM UNIT

Damaged filter or unit is	Inspect for cause. Replace damaged
incorrectly assembled.	components as necessary. If needed,
	contact Customer Service for
	assistance.

10 STORAGE

LONG TERM STORAGE





Procedure for long term storage of AIR-SCRUB-R will protect it against effects of corrosion and damage. If AIR-SCRUB-R is not to be operated for a period of 30 days or more, proceed to store as follows:

- STOP AIR-SCRUB-R per STOPPING AIR-SCRUB-R in OPERATING INSTRUCTIONS section of this manual.
- Clean AIR-SCRUB-R, ducting plus change filters as necessary per MAINTENANCE INSTRUCTIONS section of this manual.
- Inspect all visible parts for wear, breakage or damage per MAINTENANCE INSTRUCTIONS section of this manual.
- 4. Coil and secure unit power cord around carry handle.
- 5. AIR-SCRUB-R identified in this manual may be stacked vertically to maximum height of 4 units. To stack, first AIR-SCRUB-R must be set on a level work surface on back side of unit opposite inlet opening. Nest recesses on back side of next unit over embosses of housing cover of previous unit.

IMPORTANT: Store AIR-SCRUB-R inside only.

11 END OF LIFECYCLE



If the AIR-SCRUB-R comes to the end of its lifecycle, destruction of the AIR-SCRUB-R must be conducted according to international and local environmental regulations.

12 ADDITIONAL RESOURCES

Restoration Sciences Academy:

Phone: 800 932 3030

Website: www.restorationsciencesacademy.com

• NIOSH (for breathing/respirator information)

Phone: 800 356 4674

Website: www.cdc.gov/niosh/topics.respirators

Institute of Inspection, Cleaning and Restoration Certification (IICRC)

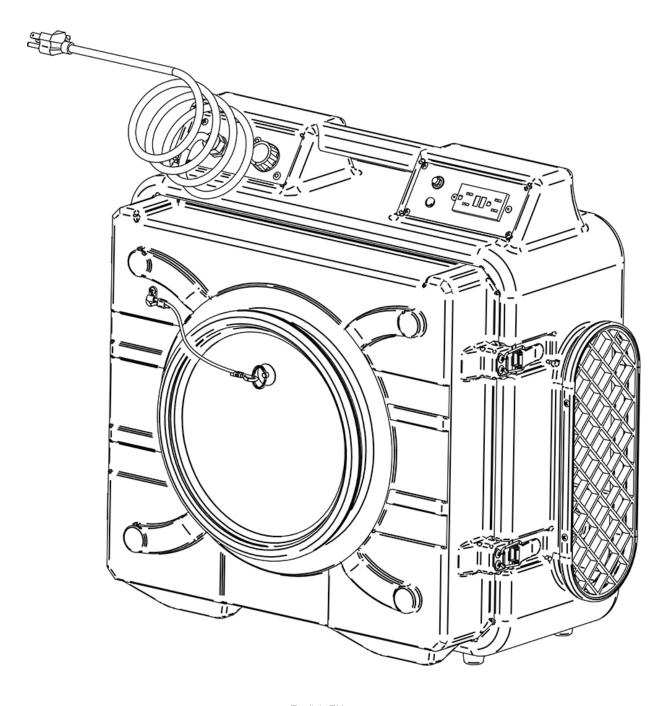
Phone: 360 693 5675 Website: <u>www.iicrc.org</u>

S520: The Standard and Reference Guide For Professional Mold

Remediation

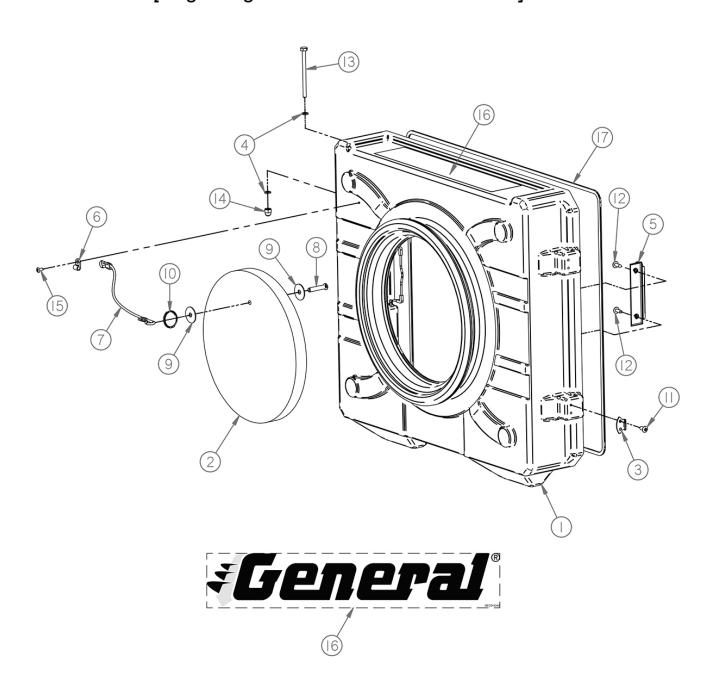


Replacement Parts Diagram AF501 Air Scrubber 115VAC, 60HZ Operation





Replacement Parts Diagram Front Housing Cover AF501 Air Scrubber [Beginning with Serial Number 175316]



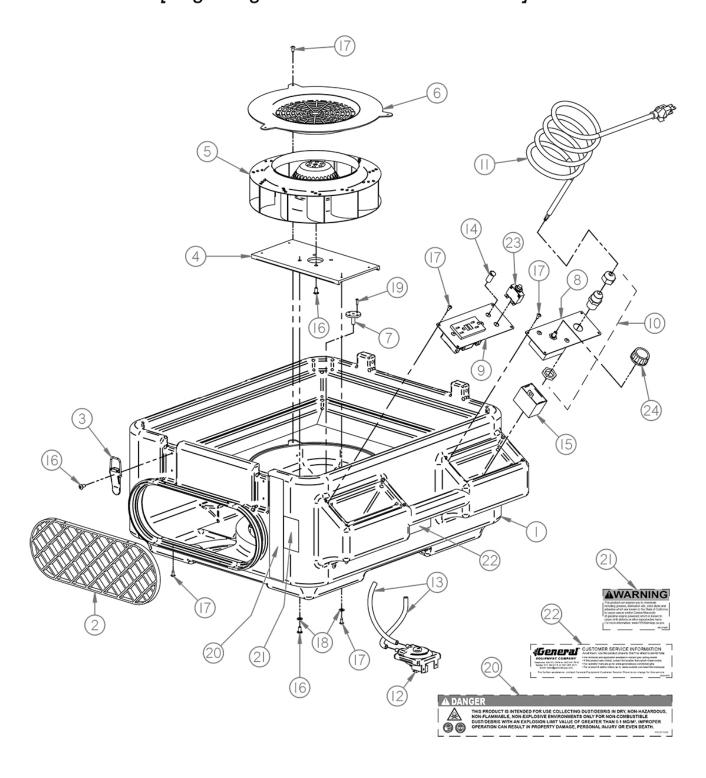


Replacement Parts Diagram Front Housing Cover AF501 Air Scrubber [Beginning with Serial Number 175316]

Reference Number	Part Number	Description	Quantity
1	AF501-0040	Cover, Housing	Not Serviced
2	AF501-0170	Cover, Inlet	1
3	AF501-0110	Clip, Latch	2
4	17050010	Washer, Flat, M5, Z	4
5	AF501-0190	Clamp, Filter, Primary	2
6	AF500-0310	Clamp, Lanyard	1
7	AF501-0250	Lanyard, Cover, Inlet	1
8	23041000	Pin, Clevis, 1/4 X 1-1/4, ZY	1
9	49040000	Washer, Fender, 1/4, Z	2
10	KIC-172	Ring, Kickout	1
11	37051010	PHMS, M5-0.8 X 10, Z	4
12	AF501-0260	Screw, Self Tap, #9 X 5/8, Z	4
13	15057610	HHCS, M5-0.8 X 76, Z	2
14	90050010	Nut, Acorn, M5-0.8, Z	2
15	AF501-0180	Screw, Self Tap, #7 X 7/16, Z	1
16	GECD-5040	Decal, General, 2.31 X 12.00	1
17	AF501-0270	Gasket, Cover, Housing	1



Replacement Parts Diagram Main Housing AF501 Air Scrubber [Beginning with Serial Number 175316]



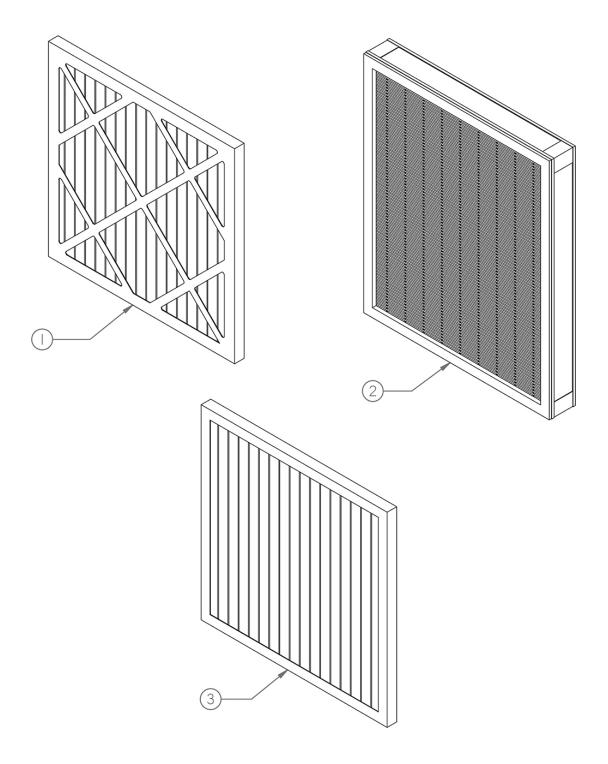


Replacement Parts Diagram Main Housing AF501 Air Scrubber [Beginning with Serial Number 175316]

Reference Number	Part Number	Description	Quantity
1	AF501-0050	Housing, Motor	Not Serviced
2	AF501-0070	Screen, Outlet	1
3	AF501-0120	Latch, Cover	2
4	AF501-0090	Plate, Mounting, Motor	1
5	AF501-0080	Assembly, Fan/Motor	1
6	AF501-0060	Screen, Inlet	1
7	AF501-0200	Port, Vacuum	1
8	AF501-0140	Assembly, Switch, On/Off	1
9	AF501-0130	Assembly, Receptical	1
10	EP8ACP-0120	Relief, Strain	1
11	AF501-0100	Cord, Power, US	1
12	AF501-0160	Switch, Pressure	1
13	AF501-0220	Hose, Vacuum	2
14	AF501-0300	Lamp, Indicator, Filter	1
15	AF501-0150	Capacitor, Motor	1
16	37051010	PHMS, M5-0.8 X 10, Z	8
17	AF501-0180	Screw, Self Tap, #7 X 7/16, Z	19
18	17050010	Washer, Flat, M5, Z	6
19	AF501-0210	Screw, Self Tap, #4 X 7/16, Z	4
20	VS220-5020	Decal, Warning, Silica	1
21	GECD-5060	Decal, Warning, Prop 65	1
22	SG24-5072	Decal, Assistance	1
23	AF501-0290	Breaker, Circuit	1
24	AF501-0310	Knob, Power	1



Replacement Parts Diagram Replacement Air Filters AF501 Air Scrubber [Beginning with Serial Number 175316]



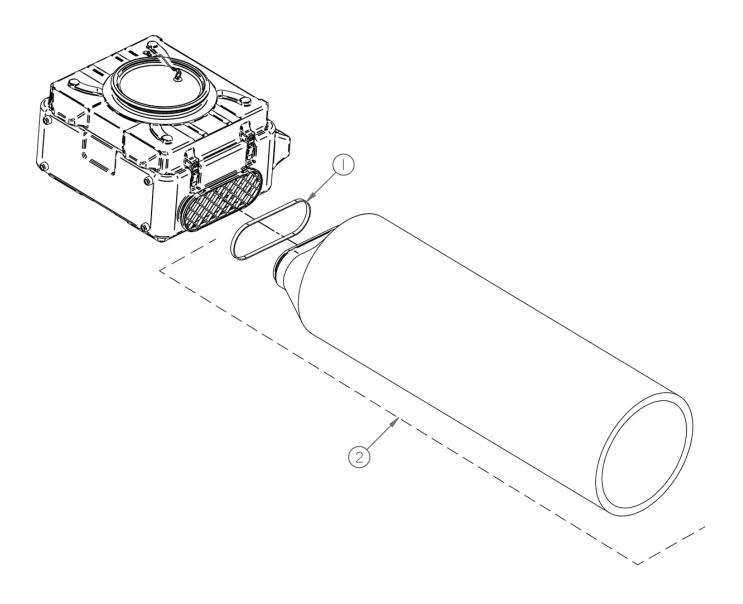


Replacement Parts Diagram Replacement Air Filters AF501 Air Scrubber [Beginning with Serial Number 175316]

Reference Number	Part Number	Description	Quantity
1	AF501-0010PAK3	Pack3, Filter, Main	1
2	AF501-0020	Filter, HEPA	1
3	AF501-0030PAK2	Pack2, Filter, Odor	1 1



Replacement Parts Diagram Air Scrubber Accessories AF501 Air Scrubber



Reference Number	Part Number	Description	Quantity
1	RB16PAK10	Pak10, Band, Rubber, 16D	10
2	LFD16100	Duct, Flat, Lay, 16D, 1200L, (Includes Ref. 1)	1



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