MODEL W1690
3-SPEED CEILING-MOUNTED AIR FILTER

Intertek
4000909

OWNER'S MANUAL

(FOR MODELS MANUFACTURED SINCE 01/21)

Phone: (360) 734-3482 • Online Technical Support: techsupport@woodstockint.com

V2.01.21 **#4946CR Printed in China**

⚠ WARNING!

This manual provides critical safety instructions on the proper setup, operation, maintenance, and service of this machine/tool. Save this document, refer to it often, and use it to instruct other operators.

Failure to read, understand and follow the instructions in this manual may result in fire or serious personal injury—including amputation, electrocution, or death.

The owner of this machine/tool is solely responsible for its safe use. This responsibility includes but is not limited to proper installation in a safe environment, personnel training and usage authorization, proper inspection and maintenance, manual availability and comprehension, application of safety devices, cutting/sanding/grinding tool integrity, and the usage of personal protective equipment.

The manufacturer will not be held liable for injury or property damage from negligence, improper training, machine modifications or misuse.

⚠ WARNING!

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- **Lead from lead-based paints.**
- **Crystalline silica from bricks, cement and other masonry products.**
- **Arsenic and chromium from chemically-treated lumber.**

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: Work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

Contents

USE THE QUICK GUIDE PAGE LABELS TO SEARCH OUT INFORMATION FAST!

INTRODUCTION

Woodstock Technical Support

This machine has been specially designed to provide many years of trouble-free service. Close attention to detail, ruggedly built parts and a rigid quality control program assure safe and reliable operation.

Woodstock International, Inc. is committed to customer satisfaction. Our intent with this manual is to include the basic information for safety, setup, operation, maintenance, and service of this product.

We stand behind our machines! In the event that questions arise about your machine, please contact Woodstock International Technical Support at (360) 734-3482 Ext. 2 or send e-mail to: **techsupport@woodstockint.com**. Our knowledgeable staff will help you troubleshoot problems and process warranty claims.

If you need the latest edition, you can download it from **http://www.woodstockint.com/manuals**.
If you have comments about this manual, please contact us at:

Woodstock International, Inc.
Attn: Technical Documentation Manager
P.O. Box 2309
Bellingham, WA 98227
Email: manuals@woodstockint.com

WARNING

Like all machinery there is potential danger when operating this machine. Accidents are frequently caused by lack of familiarity or failure to pay attention. Use this machine with respect and caution to decrease the risk of operator injury. If normal safety precautions are overlooked or ignored, serious personal injury may occur.

CAUTION

No list of safety guidelines can be complete. Every shop environment is different. Always consider safety first, as it applies to your individual working conditions. Use this and other machinery with caution and respect. Failure to do so could result in serious personal injury, damage to equipment, or poor work results.

MACHINE SPECIFICATIONS

MODEL W1690
3-SPEED CEILING-MOUNTED AIR FILTER

Product Dimensions

Weight..... 55 lbs.
Width (side-to-side) x Depth (front-to-back) x Height..... 24-1/2 x 30-1/2 x 12-1/2 in.
Footprint (Length x Width)..... 30-1/2 x 24-1/2 in.

Shipping Dimensions

Type..... Cardboard Box
Content..... Machine
Weight..... 64 lbs.
Length x Width x Height..... 83 x 68 x 38 in.

Electrical

Power Requirement..... 120V, Single-Phase, 60 Hz
Full-Load Current Rating..... 4.2A
Minimum Circuit Size..... 15A
Connection Type..... Cord & Plug
Power Cord Included..... Yes
Power Cord Length..... 6 ft.
Power Cord Gauge..... 18 AWG
Plug Included..... Yes
Included Plug Type..... 5-15
Switch Type..... Control Panel & Remote Control

Motors

Main

Horsepower..... 1/3 HP
Phase..... Single-Phase
Amps..... 4.2A
Speed..... 770, 980, 1100 RPM
Type..... ODP Permanent-Split Capacitor
Power Transfer ..... Direct
Bearings..... Sealed & Permanently Lubricated

Main Specifications

Operation

Dust Collector Type..... Air Filter
Approved Dust Types..... Particulate
Filter Type..... Pleated/Bag Panels
Airflow Performance..... 720, 1115, 1290 CFM
Filtration Rating..... 1-Micron

Impeller Information

Impeller Type..... Squirrel Cage
Impeller Size..... 11 x 6 in.

Construction

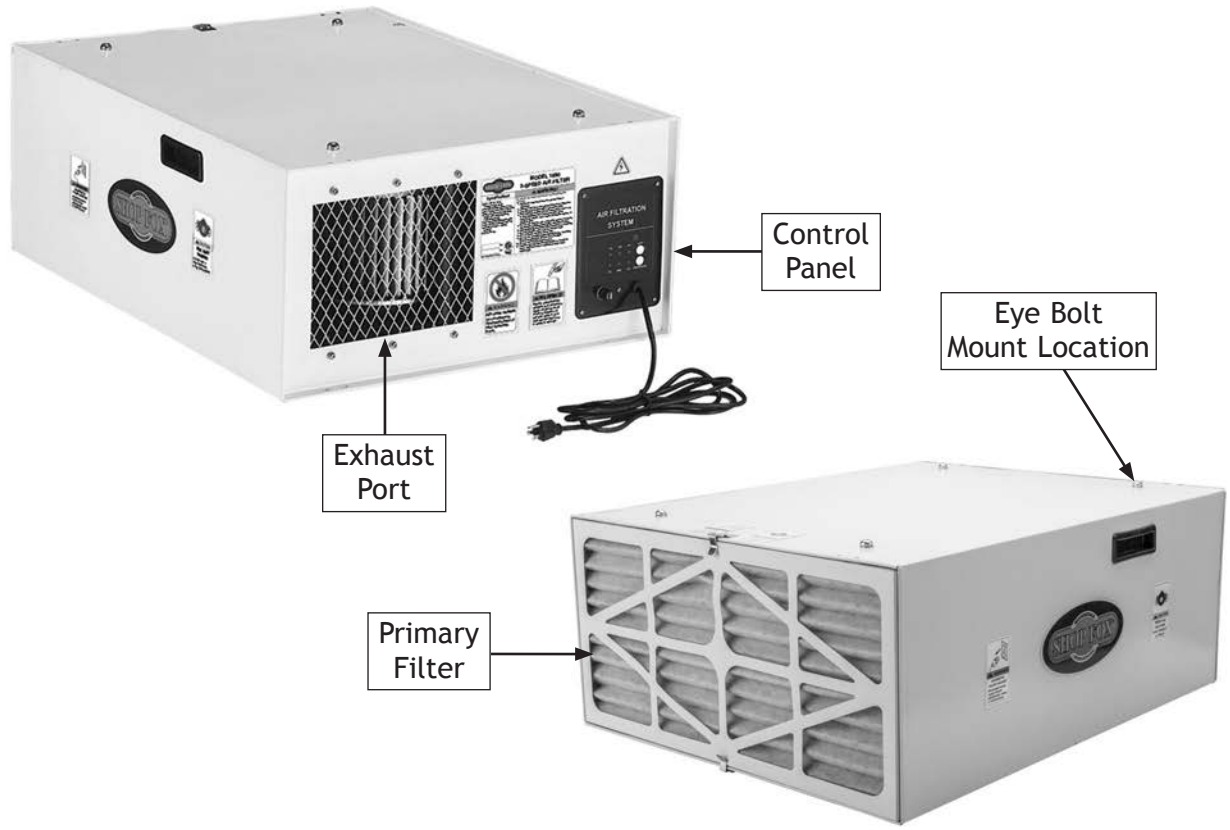
Frame..... Steel Sheet Metal
Impeller..... Steel
Paint Type/Finish..... Powder Coated
Blower Housing..... Steel

Other

Country of Origin ..... China
Warranty ..... 2 Years
Approximate Assembly & Setup Time ..... 1 Hour
Serial Number Location ..... ID Label
Sound Rating ..... 62 - 69 dB
ISO 9001 Factory ..... Yes
Certified by a Nationally Recognized Testing Laboratory (NRTL) ..... Yes

Identification

Become familiar with the names and locations of the controls and features shown below to better understand the instructions in this manual.



WARNING

To reduce your risk of serious injury or damage to the machine, read this entire manual BEFORE using machine.

Controls & Components

Refer to the **Figures 1-2** and the following descriptions to become familiar with the basic controls and components of this machine. Understanding these items and how they work will help you understand the rest of the manual and stay safe when operating this machine.

WARNING

To reduce your risk of serious injury or damage to the machine, read this entire manual BEFORE using machine.

A. Auto Shut-Off Indicator: Indicates if auto shut-off is enabled and how long timer is set.

B. Fan Speed Indicator: Indicates if fan is operating at LO, MID, or HI speed.

C. OFF Button: Turns machine ***OFF***.

D. ON/SPEED Button: Turns machine ***ON***. If machine is ***ON***, cycles between fan speeds.

E. Fuse Holder: Unscrews for quick removal and replacement of fuse.

Figure 1. Control panel components.

F. OFF Button: Turns machine ***OFF***.

G. TIMER Button: Toggles auto shut-off between one hour (1H), two hours (2H), four hours (4H), and indefinite operation (no indicator).

H. ON/SPEED Button: Turns machine ***ON***. If machine is ***ON***, cycles between fan speeds.

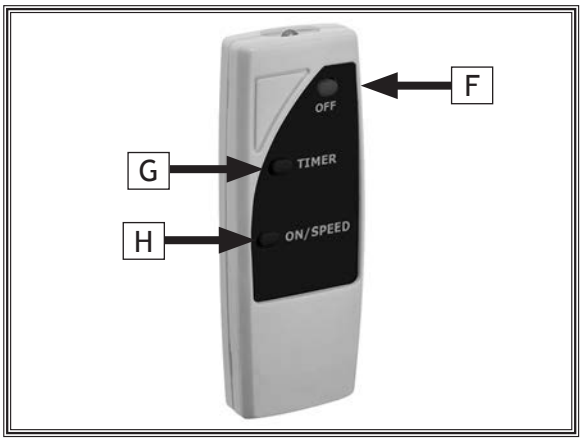


Figure 2. Remote control components.

SAFETY

For Your Own Safety, Read Manual Before Operating Machine

The purpose of safety symbols is to attract your attention to possible hazardous conditions. This manual uses a series of symbols and signal words intended to convey the level of importance of the safety messages. The progression of symbols is described below. Remember that safety messages by themselves do not eliminate danger and are not a substitute for proper accident prevention measures—this responsibility is ultimately up to the operator!

DANGER — **Indicates an imminently hazardous situation which, if not avoided, WILL result in death or serious injury.**

WARNING — **Indicates a potentially hazardous situation which, if not avoided, COULD result in death or serious injury.**

CAUTION — **Indicates a potentially hazardous situation which, if not avoided, MAY result in minor or moderate injury.**

NOTICE — **This symbol is used to alert the user to useful information about proper operation of the equipment or a situation that may cause damage to the machinery.**

Standard Machinery Safety Instructions

OWNER'S MANUAL. Read and understand this owner's manual BEFORE using machine.

TRAINED OPERATORS ONLY. Untrained operators have a higher risk of being hurt or killed. Only allow trained/supervised people to use this machine. When machine is not being used, disconnect power, remove switch keys, or lock-out machine to prevent unauthorized use—especially around children. Make workshop kid proof!

DANGEROUS ENVIRONMENTS. Do not use machinery in areas that are wet, cluttered, or have poor lighting. Operating machinery in these areas greatly increases the risk of accidents and injury.

MENTAL ALERTNESS REQUIRED. Full mental alertness is required for safe operation of machinery. Never operate under the influence of drugs or alcohol, when tired, or when distracted.

ELECTRICAL EQUIPMENT INJURY RISKS. You can be shocked, burned, or killed by touching live electrical components or improperly grounded machinery. To reduce this risk, only allow an electrician or qualified service personnel to do electrical installation or repair work, and always disconnect power before accessing or exposing electrical equipment.

DISCONNECT POWER FIRST. Always disconnect machine from power supply BEFORE making adjustments, changing tooling, or servicing machine. This eliminates the risk of injury from unintended startup or contact with live electrical components.

EYE PROTECTION. Always wear ANSI-approved safety glasses or a face shield when operating or observing machinery to reduce the risk of eye injury or blindness from flying particles. Everyday eyeglasses are not approved safety glasses.

WEARING PROPER APPAREL. Do not wear clothing, apparel, or jewelry that can become entangled in moving parts. Always tie back or cover long hair. Wear non-slip footwear to avoid accidental slips, which could cause loss of workpiece control.

HAZARDOUS DUST. Dust created while using machinery may cause cancer, birth defects, or long-term respiratory damage. Be aware of dust hazards associated with each workpiece material, and always wear a NIOSH-approved respirator to reduce your risk.

HEARING PROTECTION. Always wear hearing protection when operating or observing loud machinery. Extended exposure to this noise without hearing protection can cause permanent hearing loss.

REMOVE ADJUSTING TOOLS. Tools left on machinery can become dangerous projectiles upon startup. Never leave chuck keys, wrenches, or any other tools on machine. Always verify removal before starting!

INTENDED USAGE. Only use machine for its intended purpose—never make modifications without prior approval from Woodstock International. Modifying machine or using it differently than intended will void the warranty and may result in malfunction or mechanical failure that leads to serious personal injury or death!

AWKWARD POSITIONS. Keep proper footing and balance at all times when operating machine. Do not overreach! Avoid awkward hand positions that make workpiece control difficult or increase the risk of accidental injury.

CHILDREN & BYSTANDERS. Keep children and bystanders at a safe distance from the work area. Stop using machine if they become a distraction.

GUARDS & COVERS. Guards and covers reduce accidental contact with moving parts or flying debris—make sure they are properly installed, undamaged, and working correctly.

FORCING MACHINERY. Do not force machine. It will do the job safer and better at the rate for which it was designed.

NEVER STAND ON MACHINE. Serious injury may occur if machine is tipped or if the cutting tool is unintentionally contacted.

STABLE MACHINE. Unexpected movement during operation greatly increases risk of injury or loss of control. Before starting, verify machine is stable and mobile base (if used) is locked.

USE RECOMMENDED ACCESSORIES. Consult this owner's manual or the manufacturer for recommended accessories. Using improper accessories will increase risk of serious injury.

UNATTENDED OPERATION. To reduce the risk of accidental injury, turn machine ***OFF*** and ensure all moving parts completely stop before walking away. Never leave machine running while unattended.

MAINTAIN WITH CARE. Follow all maintenance instructions and lubrication schedules to keep machine in good working condition. A machine that is improperly maintained could malfunction, leading to serious personal injury or death.

CHECK DAMAGED PARTS. Regularly inspect machine for any condition that may affect safe operation. Immediately repair or replace damaged or mis-adjusted parts before operating machine.

MAINTAIN POWER CORDS. When disconnecting cord-connected machines from power, grab and pull the plug—NOT the cord. Pulling the cord may damage the wires inside, resulting in a short. Do not handle cord/plug with wet hands. Avoid cord damage by keeping it away from heated surfaces, high traffic areas, harsh chemicals, and wet/damp locations.

EXPERIENCING DIFFICULTIES. If at any time you experience difficulties performing the intended operation, stop using the machine! Contact Technical Support at (360) 734-3482.

Additional Safety for Air Filters

Long-term respiratory damage can occur from using this filter to capture hazardous dust without proper use of a respirator. Collecting flammable or combustible liquids, vapors, or explosive dusts can cause fire or explosions, resulting in smoke inhalation, serious burns, or death. An improperly secured air filter can fall, causing head injuries. To reduce the risk of these hazards, operator and bystanders MUST completely heed hazards and warnings below.

LUNG PROTECTION. Fine dust that is too small to be caught in filter will be blown into ambient air during operation. Always wear a NIOSH-approved respirator during operation and for a short time after to reduce your risk of permanent respiratory damage.

INTENDED USE. Using this filter regularly to collect prohibited materials can result in serious health problems. It is only designed to capture dust from ambient air in a woodworking shop for a short time after cutting or sanding operations. DO NOT use to collect particles of silica, polyurethane, metal, lead paint, asbestos, or hazardous bacterium. DO NOT allow filter to collect explosive dusts, flammable, or combustible liquids or fumes, burning or smoking material, or toxic fumes. DO NOT connect directly to air filtration system. Only operate with filters installed.

HAZARDOUS DUST. Dust exposure may cause cancer, birth defects, or long-term respiratory damage. Be aware of dust hazards associated with each workpiece material, and always wear a NIOSH-approved respirator to reduce your risk.

DUST ALLERGIES. Dust from certain woods may cause an allergic reaction in people and animals. Make sure you know what type of wood dust you will be exposed to in case of an allergic reaction.

POWER DISCONNECT. Turn machine ***OFF***, disconnect air filter from power supply, and allow impeller to come to a complete stop before doing any cleaning, maintenance, or service.

OPERATING LOCATION. DO NOT operate the air filter in rainy or wet locations—exposure to water may create a shock hazard or decrease the life of the machine.

POWER DISCONNECT. Turn machine ***OFF***, disconnect from power supply, and allow impeller to completely stop before leaving machine unattended, or doing any maintenance or service.

REGULAR CLEANING. To reduce risk of starting fire, regularly clean surrounding area where machine is operated. Excessive fine dust buildup on overhead lights, heaters, electrical panels, or other heat sources can increase risk of fire. Regularly check/clean/change filters to avoid fine dust buildup.

EMPTYING DUST. To reduce exposure to wood dust when removing dust from filters, which may increase risk of allergic reactions or respiratory problems, always turn machine ***OFF***, disconnect power, and wear a respirator and safety glasses. To reduce fire and explosion risk, empty dust away from ignition sources and into an approved container.

SUSPENDED PARTICLES AND IGNITION SOURCES. To reduce risk of death or injury caused by explosions or fires, DO NOT operate filter in areas where these risks are high, including, but not limited to, spaces near pilot lights, open flames, or other ignition sources.

MOUNTING. To reduce risk of injuries due to filter falling, secure it to load-bearing joists or wall studs that can support its weight. Do not mount unit only to sheet rock, pressboard, paneling, or honeycomb ceiling panels with expansion-type fasteners, which can easily tear out.

ELECTRICAL

Circuit Requirements

This machine must be connected to the correct size and type of power supply circuit, or fire or electrical damage may occur. Read through this section to determine if an adequate power supply circuit is available. If a correct circuit is not available, a qualified electrician MUST install one before you can connect the machine to power.

A power supply circuit includes all electrical equipment between the breaker box or fuse panel in the building and the machine. The power supply circuit used for this machine must be sized to safely handle the full-load current drawn from the machine for an extended period of time. (If this machine is connected to a circuit protected by fuses, use a time delay fuse marked D.)

Full-Load Current Rating

The full-load current rating is the amperage a machine draws at 100% of the rated output power. On machines with multiple motors, this is the amperage drawn by the largest motor or sum of all motors and electrical devices that might operate at one time during normal operations.

Full-Load Current Rating at 120V ..... 4.2 Amps

Circuit Requirements for 120V

This machine is prewired to operate on a power supply circuit that has a verified ground and meets the following requirements:

Circuit Type ..... 110V/120V, 60 Hz, Single-Phase
Circuit Size ..... 15 Amps
Plug/Receptacle ..... NEMA 5-15

⚠WARNING

The machine must be properly set up before it is safe to operate. DO NOT connect this machine to the power source until instructed to do so later in this manual.

⚠WARNING

Incorrectly wiring or grounding this machine can cause electrocution, fire, or machine damage. To reduce this risk, only an electrician or qualified service personnel should do any required electrical work on this machine.

NOTICE

The circuit requirements listed in this manual apply to a dedicated circuit—where only one machine will be running at a time. If this machine will be connected to a shared circuit where multiple machines will be running at the same time, consult with an electrician to ensure that the circuit is properly sized for safe operation.

Grounding Requirements

This machine MUST be grounded. In the event of certain types of malfunctions or breakdowns, grounding provides a path of least resistance for electric current to travel—in order to reduce the risk of electric shock.

Improper connection of the equipment-grounding wire will increase the risk of electric shock. The wire with green insulation (with/without yellow stripes) is the equipment-grounding wire. If repair or replacement of the power cord or plug is necessary, do not connect the equipment-grounding wire to a live (current carrying) terminal.

Check with a qualified electrician or service personnel if you do not understand these grounding requirements, or if you are in doubt about whether the tool is properly grounded. If you ever notice that a cord or plug is damaged or worn, disconnect it from power, and immediately replace it with a new one.

For 120V Connection

This machine is equipped with a power cord with an equipment-grounding wire and NEMA 5-15 grounding plug (see figure). The plug must only be inserted into a matching receptacle that is properly installed and grounded in accordance with local codes and ordinances.

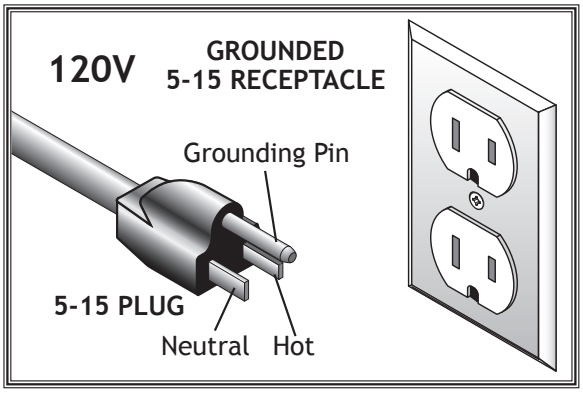
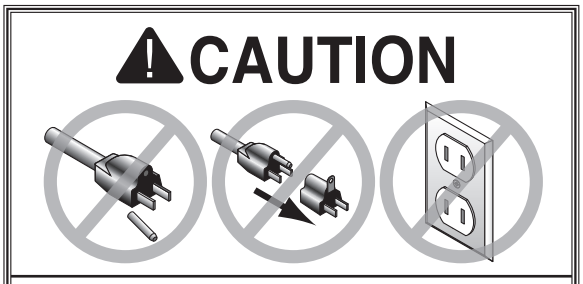


Figure 3. NEMA 5-15 plug & receptacle.



DO NOT modify the provided plug or use an adapter if the plug will not fit the receptacle. Instead, have an electrician install the proper receptacle on a power supply circuit that meets the requirements for this machine.

Extension Cords

We do not recommend using an extension cord with this machine. Extension cords cause voltage drop, which may damage electrical components and shorten motor life. Voltage drop increases with longer extension cords and smaller gauge sizes (higher gauge numbers indicate smaller sizes).

Any extension cord used with this machine must contain a ground wire, match the required plug and receptacle, and meet the following requirements:

Minimum Gauge Size at 110V ..... 16 AWG
Maximum Length (Shorter is Better) ..... 50 ft.

SETUP

Unpacking

This machine has been carefully packaged for safe transportation. If you notice the machine has been damaged during shipping, please contact your authorized Shop Fox dealer immediately.

Items Needed for Setup

The following items are needed, but not included, to set up your machine.

Description	Qty
• An Assistant	1
• Phillips Head Screwdriver #2	1
• Safety Glasses (for each person)	1
• Chain, Cable or Steel Strapping	4 Lengths
• Drill	1
• Drill Bit 1/4"	1
• Open-End Wrench 10mm	1
• Open-End Wrench 12mm	1
• Mounting Hardware	As Needed
• Ladders	2

WARNING

This machine presents serious injury hazards to untrained users. Read through this entire manual to become familiar with the controls and operations before starting the machine!

WARNING

Wear safety glasses during entire setup process!

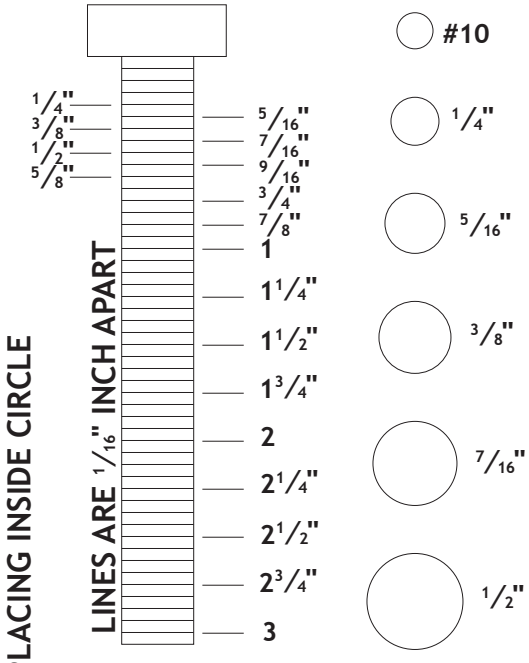
WARNING

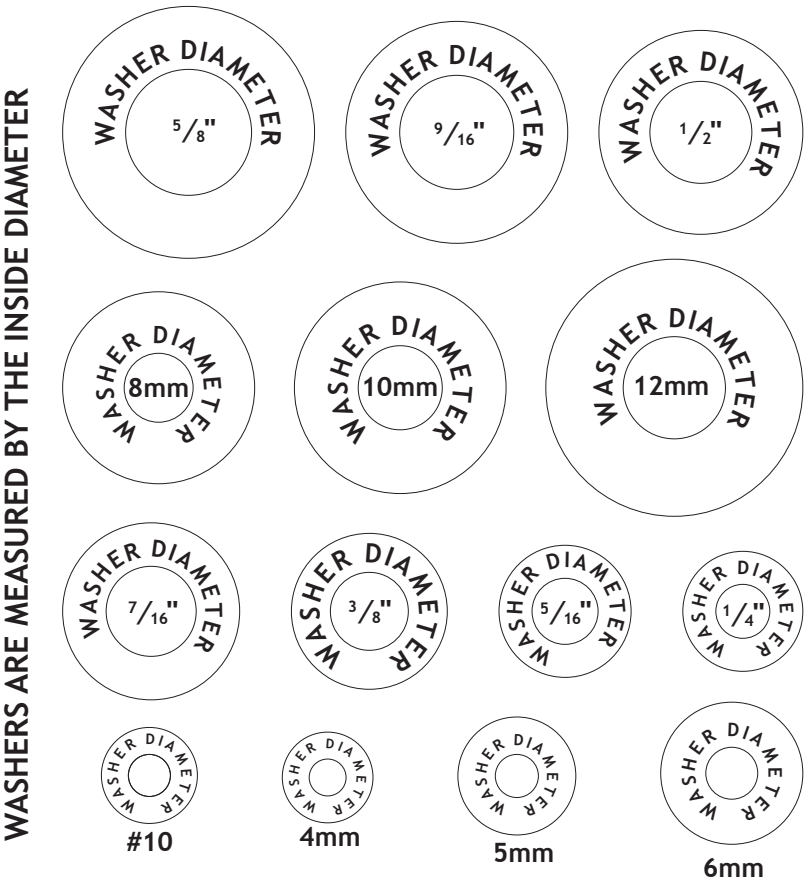
USE helpers or power lifting equipment to lift this machine. Otherwise, serious personal injury may occur.

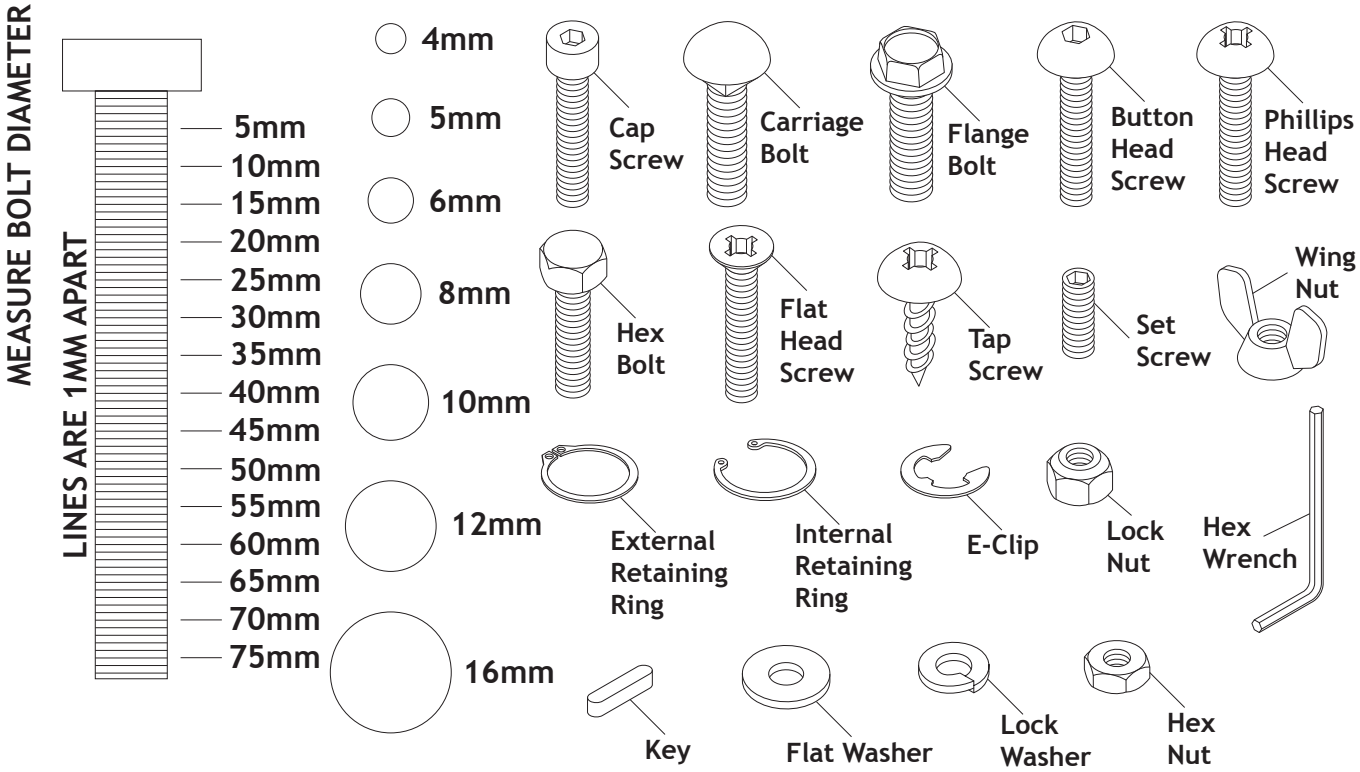
SETUP

Hardware Recognition Chart

USE THIS CHART TO IDENTIFY HARDWARE DURING THE INVENTORY/ASSEMBLY PROCESS.







SETUP

Inventory

The following is a list of items shipped with your machine. Before beginning setup, lay these items out and inventory them.

Note: *If you cannot find an item on this list, carefully check around/inside the machine and packaging materials. Often, these items get lost in packaging materials while unpacking or they are pre-installed at the factory.*

The Model W1690 comes pre-assembled; however, before performing the test run or mounting the machine, remove the filters and remove any packing material that may be inside the unit (refer to **Cleaning/Replacing Filters** on **Page 23** for more information).

Box Contents (Figures 4-5)	Qty
A. Model W1690 Hanging Air Filter	1
B. Secondary Filter (1-Micron, Bag-Type)	1
C. Primary Filter (5-Micron, Pleated-Type)	1
D. AAA Batteries	2
E. Rubber Feet	4
F. Hand-Held Remote Control Unit	1
G. Flange Brackets	4
H. Eye Bolts M6-1 x 20	4
I. Hex Wrench 5mm	1
J. Hex Wrench 4mm	1
K. Hex Bolts M6-1 x 10	8
L. Flat Washers 6mm	8
M. Lock Washers 6mm	8

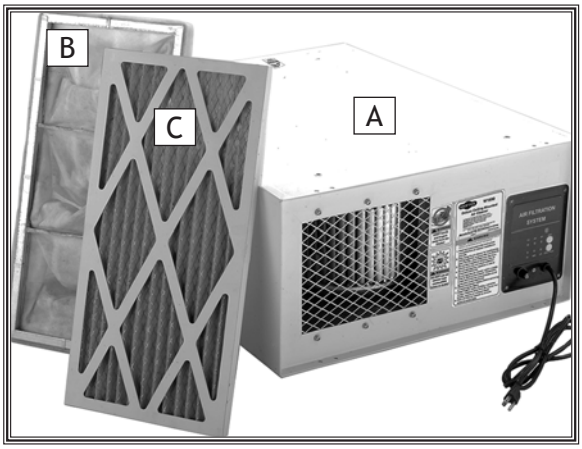


Figure 4. Model W1690 and filters.

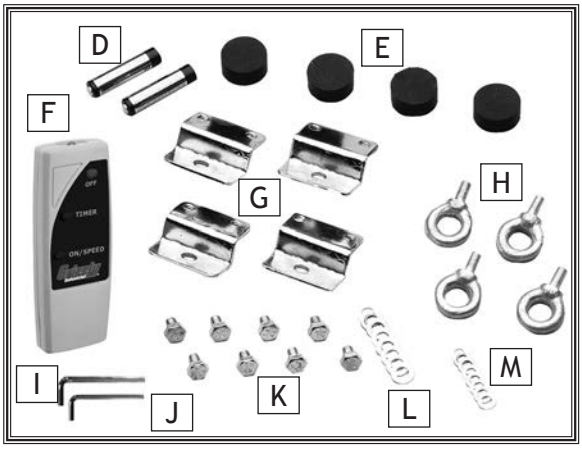


Figure 5. Remote control and mounting hardware.

SETUP

Test Run

Once assembly is complete, test run the machine to ensure it is properly connected to power and safety components are functioning properly.

If you find an unusual problem during the test run, immediately stop the machine, disconnect it from power, and fix the problem BEFORE operating the machine again. The **Troubleshooting** table in the **SERVICE** section of this manual can help.

The Test Run consists of verifying the following: 1) The motor powers up and runs correctly, and 2) the remote control works correctly.

To test run the machine, do these steps:

1. Clear all setup tools away from machine.
2. Place machine on stable surface such as a workbench that can support it.
3. Connect machine to power supply.
4. Press ON/SPEED button to turn machine ***ON*** (see **Figure 6**). Press ON/SPEED to cycle through LO, MID and HI speeds. Verify the motor runs smoothly and without unusual problems or noises at each speed.
5. Press OFF button to turn machine ***OFF***.
6. Using remote control, press ON button to turn machine ***ON***. Press TIMER button and verify auto shut-off cycles through all options (1H, 2H, and 4H). Press OFF button to turn machine ***OFF***.

Congratulations! The test run is complete.

⚠WARNING

Serious injury or death can result from using this machine BEFORE understanding its controls and related safety information. DO NOT operate, or allow others to operate, machine until the information is understood.

⚠WARNING

DO NOT start machine until all preceding setup instructions have been performed. Operating an improperly set up machine may result in malfunction or unexpected results that can lead to serious injury, death, or machine/property damage.

Figure 6. Control panel.

SETUP

Site Planning

Site planning is an important step to maximize the effectiveness of the hanging air filter. Air circulation must be thought out and all obstructions to the air path considered.

Think of air circulation in terms of the circular motion of the air before and after the air filter. The air exiting the filter is exhausted at a higher velocity than that entering it. Consequently, exhaust being vented inside a building can have an effect on the pattern of air circulation.

Air circulation patterns will vary depending upon which air flow speed is used and according to your specific shop setup. **Figure 7** shows an example of good air circulation.

Figure 8 shows an example of poor air circulation, where the air filter is placed too close to obstructions. In this situation, the velocity of the air is lost and circulation is diminished.

Below is a list of things to keep in mind when selecting a spot for the air filter:

- Study your shop layout and try to determine the best location for the hanging air filter. Air flow that is obstructed will cause a short cycle effect, producing unsatisfactory results. There must be a clearance of at least 3 ft. from any obstructions in front and back of the unit.
- Try to place the air filter in front of high dust producers like sanders or near areas where sanding will take place.
- Do not place the hanging air filter where garage doors may pass closely or where it may impede transport or movement of any other object.
- Try to place the unit where it is easy to access for turning it on, cleaning and maintenance.

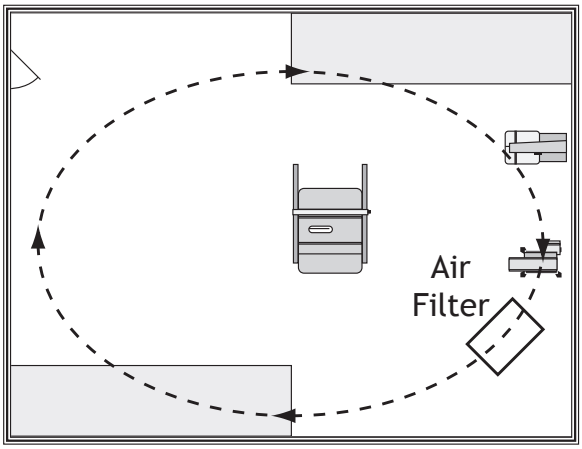


Figure 7. Good air circulation. The air filter placement promotes circular air motion.

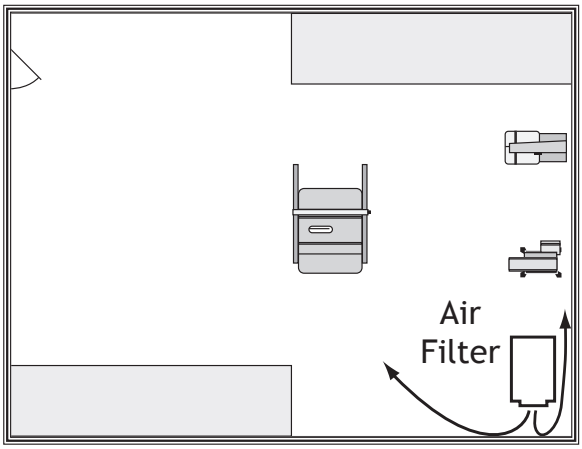


Figure 8. Poor air circulation. Placed too close to the wall, the air circulation short cycles, leaving much of the room unfiltered.

SETUP

Mounting Air Filter

It is very important that the hanging air filter be supported properly. Please follow these guidelines when planning where to mount the unit:

- Where the mounting brackets attach is the top of the unit. The hanging air filter can only be secured by the machine hooks on its top.

- Make sure that an electrical outlet with a properly grounded receptacle is available at the location you choose.

- The hanging air filter must be supported by wood joists. These joists should be capable of supporting at least 100 lbs each. DO NOT attach the hanging air filter to only sheet rock, press board or paneling. These materials cannot support the filter, and it may fall.

- Avoid hitting your head on the hanging air filter. Make sure there is enough clearance between the unit and the ground, especially important in a basement. If possible, position the air filter in an area that has little foot traffic but still offers easy access to the switch and filters.

Note: *For the sake of clarity, the face where the mounting eye bolts and flush mount flange brackets attach will be called the top throughout the manual. The hanging air filter can be placed on its side, top or at an angle but it can only be secured by mounting eye bolts and flush mount flange brackets on its top.*

You can install the air filter unit one of the following ways:

- **Table-Top Mount:** Use the rubber feet and/or the flush mount flange brackets (see **Figures 9-10**) for a table-top application. Refer to **Table-Top Mount** on **Page 18**.

- **Hanging Mount:** Use the eye bolts (see **Figures 9-10**) for a high ceiling application. Refer to **Hanging Mount** on **Page 18**.

- **Flush Mount:** Use the flush mount flange brackets (see **Figures 9-10**) for a wall or low ceiling application. Refer to **Flush Mount** on **Page 20**.

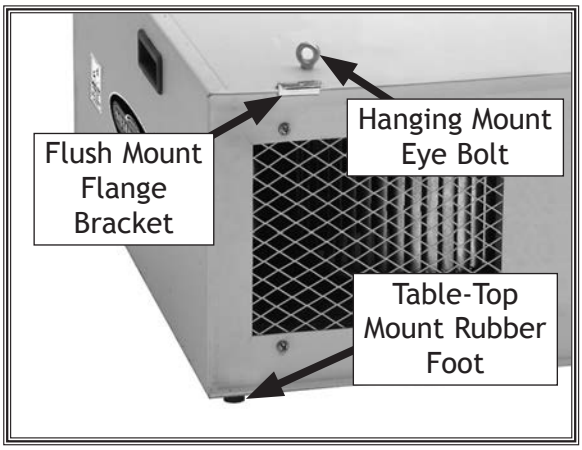


Figure 9. Air filter unit mounting options.

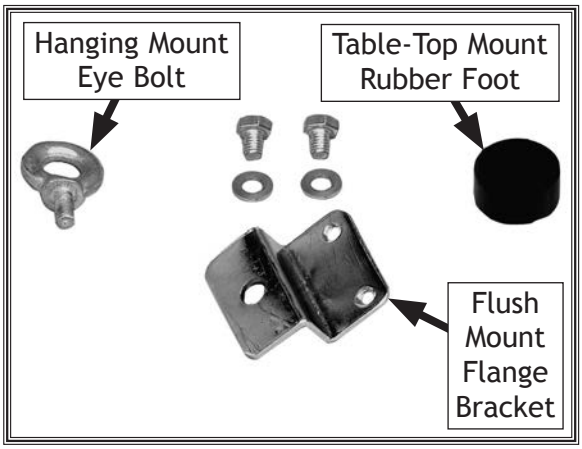


Figure 10. Air filter unit mounting hardware.

SETUP

Table-Top Mount

You can use the air filter unit as a portable air filtration system by installing the rubber feet and placing the unit on a workbench or a table.

To set up air filter for table-top operation, do these steps:

1. With help of an assistant, carefully invert air filter unit.

2. Expose sticky backing on rubber foot and apply foot to bottom of air filter unit (see **Figure 11**). Repeat for each foot.

Note: *For permanent table-top mounting, refer to the Flush Mount procedure on* ***Page 20****, and install the air filter unit to the tabletop with the flush mount flange brackets.*

WARNING

USE helpers or power lifting equipment to lift this machine. Otherwise, serious personal injury may occur.

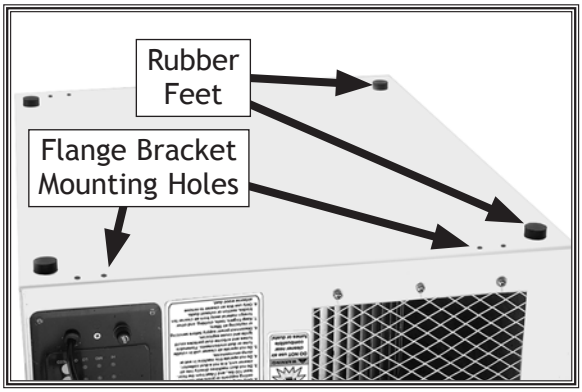


Figure 11. Rubber feet correctly installed.

Hanging Mount

To make the unit operate at the optimum height of 7' from the floor, you can install the air filter unit in your shop by hanging it by chain, cable, or steel strapping.

WARNING

ONLY mount the air filter unit to joists or table that can hold at least 100 lbs. DO NOT mount the unit only to sheet rock, pressboard, paneling, or honeycomb wall panels with expansion-type fasteners like those shown in Figure 12. The fasteners can tear out and the air filter can fall. Ignoring this caution can result in injury or property damage.

Figure 12. Typical unacceptable fasteners.

Tools Needed	**Qty**
Chain, Cable, or Steel Strapping	4 Lengths
Phillips Screwdriver #2	1
Open-End Wrench 12mm	1

To install air filter for hanging mount operations, do these steps:

1. Install (4) chains, cables, or steel strapping lines to ceiling from capable ceiling joists or supports so lines hang 15¼" left-to-right and 24½" front-to-rear and air filter hangs 7' above floor when finished.

SETUP

2. Remove (4) plug screws (see **Figure 13**).

   Note: *Retain screws in case air filter is mounted in a different configuration in the future. Plug screws ensure filter is sealed.*

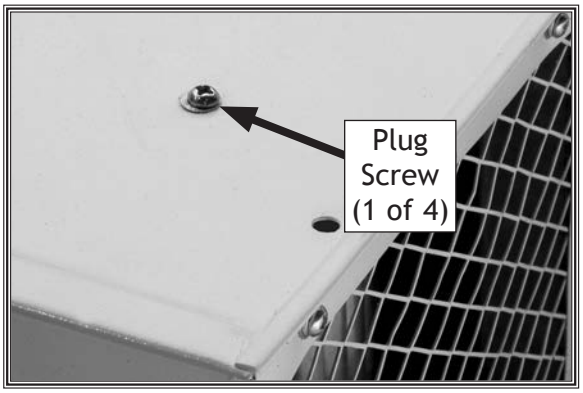


Figure 13. Plug screw.

3. Attach (4) M6-1 x 20 eye bolts to air filter and tighten until snug (see **Figure 14**).

4. With help of an assistant, raise and secure (4) eye bolts to hanging lines.

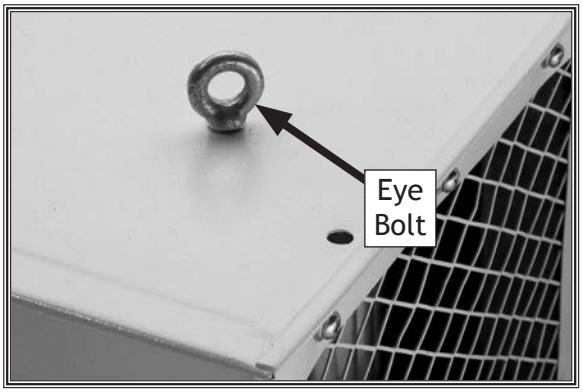


Figure 14. Eye bolt correctly seated.

Flush Mount

You can install the air filter unit in a confined shop by mounting it flush to a ceiling, wall, or table using the flange mounts.

⚠WARNING

ONLY mount the air filter unit to joists or table that can hold at least 100 lbs. DO NOT mount the unit only to sheet rock, pressboard, paneling, or honeycomb wall panels with expansion-type fasteners like those shown in Figure 15. The fasteners can tear out and the air filter can fall. Ignoring this caution can result in injury or property damage.

Figure 15. Typical unacceptable fasteners.

Items Needed **Qty**

Lag Bolts or Hex Bolts with Hardware 1/4".....4
Open-End Wrench 10mm.....1

To install air filter for slush mount operation, do these steps:

1. Locate applicable load bearing studs or supports in wall or ceiling and mark air filter bolt pattern (17 1/4" from left-to-right and 31" from front-to-rear).

2. Drill bolt pattern to accept at least 1/4" lag bolts for studs; or use 1/4" nuts, bolts, and washers for mounting to supports.

3. Position (1) flange bracket under air filter lip at mounting hole location (see **Figure 16**). For permanent table-top mounting, use the lower-lip holes.

4. Attach (4) flange brackets to air filter with (8) M6-1 x 10 hex bolts and 6mm flat washers (see **Figure 17**).

5. With help of an assistant, position air filter on wall or ceiling, then screw or bolt air filter in place.

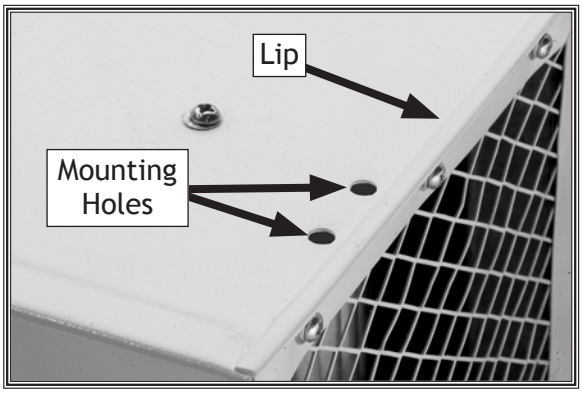


Figure 16. Flange bracket mounting holes and lip.

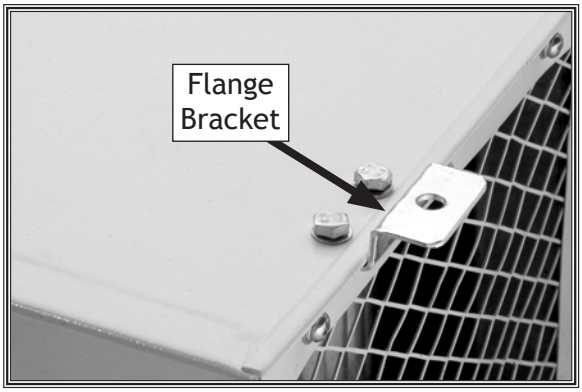


Figure 17. Flange bracket installed.

⚠WARNING

USE helpers or power lifting equipment to lift this machine. Otherwise, serious personal injury may occur.

OPERATIONS

Operation Overview

When the Model W1690 is turned ***ON***, the fan motor starts on HI and then switches to the speed of your selection. Air is drawn through the primary filter, through the secondary filter, then the cleaned air is distributed into your shop.

When the air filter is not in use, unplug the power cord from the power source. Secure the power cord away from potential hazards, such as high traffic areas, sharp objects, heat sources, harsh chemicals or fumes, damp areas, etc.

Filtering Performance

When used in conjunction with an efficient dust collection system, the Model W1690 removes most fine wood particles up to 1 micron from the air. This air filter is capable of recirculating the air in a room measuring 25' x 25' x 8' approximately 15 times in one hour. We recommend that the volume of air in your room be recirculated 6–8 times an hour for the best filtering effect. Therefore, rooms with a larger volume may require two or more air filters to achieve proper filtering.

To calculate the recirculating rate for your shop space, do these steps:

1. Calculate the volume of air in your shop by multiplying the length x width x height of the room (see the example below). Then, divide the volume by the speed (CFM) you have chosen to operate the air filter. This will give you how many minutes it takes to recirculate the air in the room.

   Example: *The room measures 25' x 25' x 8' and you are operating the air filter at 1290 CFM (HI).*

   $$\frac{25' \times 25' \times 8'}{1290\ \text{CFM}} = \frac{5000\ \text{ft}^3}{1290\ \text{CFM}} = 3.88\ \text{Minutes}$$

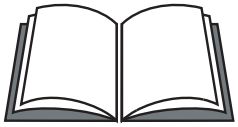
2. Calculate how many times per hour the room volume is recirculated through the air filter by dividing 60 minutes by the circulating time from **Step 1**. This will give you how many times an hour the air in the room is recirculated through the air filter.

   $$\frac{60\ \text{Min.}}{3.88\ \text{Min.}} = 15.46\ \text{Times per Hour}$$

⚠WARNING

THIS AIR FILTER IS TO BE USED FOR WOOD DUST ONLY. **Do not use it to filter toxic fumes, paint spray, or dissipate smoke or fumes, which could damage the filters.**

⚠WARNING



To reduce your risk of serious injury or damage to the machine, read this entire manual BEFORE using machine.

⚠WARNING

To reduce the risk of eye injury and long-term respiratory damage, always wear safety glasses and a respirator while operating this machine.

NOTICE

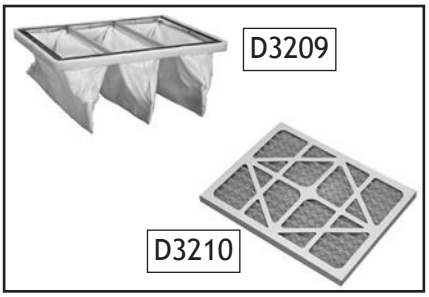
If you are an inexperienced operator, we strongly recommend that you read books or trade articles, or seek training from an experienced operator of this type of machinery before performing unfamiliar operations. Above all, safety must come first!

ACCESSORIES

Air Filter Accessories

The following air filter accessories may be available through your local Woodstock International Inc. Dealer. If you do not have a dealer in your area, these products are also available through online dealers. Please call or e-mail Woodstock International Inc. Customer Service to get a current listing of dealers at: 1-800-840-8420 or at sales@woodstockint.com.

We recommend that you keep a set of **Replacement Filters** on hand to ensure uninterrupted service of your air filter.
D3209 1-Micron Secondary Filter
D3210 5-Micron Primary Filter



Nothing beats the convenience of the Shop Fox **W1844 Wall-Mount Dust Collector with Canister Filter**. This dust collector features high efficiency of the large surface area and a pleated filter with internal paddle brushes. Whenever efficiency is being diminished due to dust cake, just a couple of turns of the handle rotates the paddle brushes against the inside of the filter to drop the fine dust cake into the plastic collection bag. It's as easy as that!

The **D3640 Tool Table Plus** is designed to accomodate larger benchtop machines. The table has a butcher block finish and measures 14" x 40" x 1¼" thick. The wide A-frame stand has a 700 lb. capacity and measures 33" high. Bottom measures 47½" x 25¼". Includes stand frame and top.

MAINTENANCE

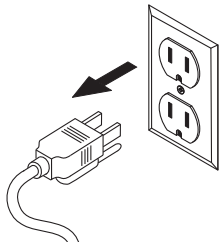
General

For optimum performance from this machine, this maintenance schedule must be strictly followed.

Ongoing
To minimize your risk of injury and maintain proper machine operation, shut down the machine immediately if you ever observe any of the items below, and fix the problem before continuing operations:

- Loose mounting bolts.
- Dirty or clogged filters.
- Worn or damaged wires.
- Any other unsafe condition.

WARNING



MAKE SURE that your machine is unplugged during all maintenance procedures! If this warning is ignored, serious personal injury may occur.

Cleaning/Replacing Filters

The amount of air filter operation has a direct bearing on when you must clean or replace the filters.

To maintain efficient operation, check the filters approximately every 40 hours of use in light or moderately dusty environments. In very dusty environments, check the filters every eight hours of use. Always wear a respirator when checking the filters.

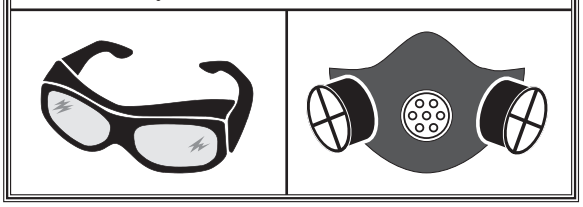
During regular use the filters can be cleaned several times before replacement becomes necessary. To determine whether the filters need to be replaced, hold them up to the sunlight and visually inspect them. If you cannot see through the filters due to caked dust and grim, replace them before putting air filter back into operation.

To clean and replace filters, do these steps:

1. DISCONNECT MACHINE FROM POWER.

WARNING

To reduce risk of eye injury from flying chips or lung damage from breathing dust, always wear safety glasses and a respirator when checking or changing the filters.



2. Open filter retainer latch and remove primary filter (see **Figure 18**).

3. Place primary filter in garbage bag and shake gently to remove dust.

4. Visually inspect filter to see if it needs to be replaced.

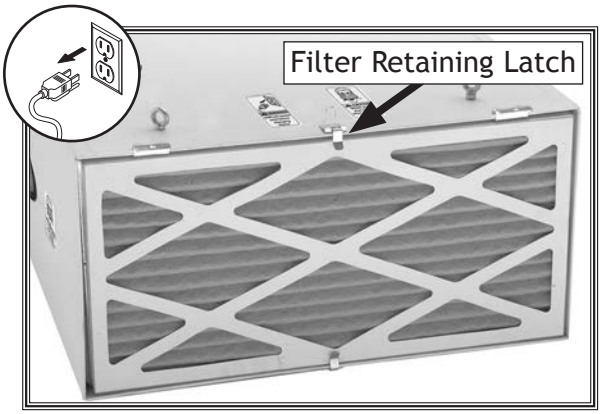


Figure 18. 5-Micron primary filter.

5. Remove secondary filter (see **Figure 19**) and shake out wood dust until clean. Then wash filter with warm water and let dry.

6. Vacuum inside of air filter housing.

7. When secondary filter is dry, place both filters in air filter housing and close filter retainer latch.

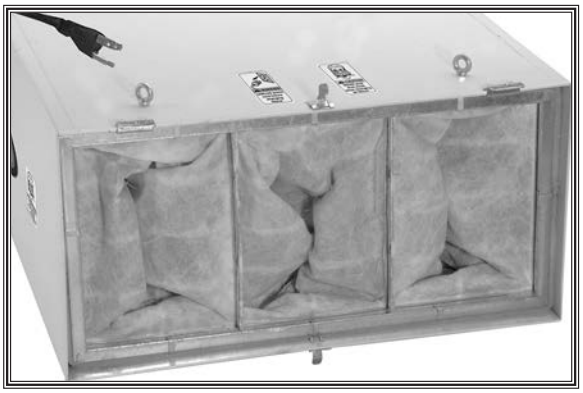


Figure 19. 1-Micron secondary filter.

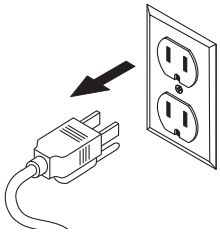
SERVICE

General

This section covers the most common service adjustments or procedures that may need to be made during the life of your machine.

If you require additional machine service not included in this section, please contact Woodstock International Technical Support at (360) 734-3482 or send e-mail to: **techsupport@woodstockint.com**.

⚠WARNING



MAKE SURE that your machine is unplugged during all service procedures! If this warning is ignored, serious personal injury may occur.

Replacing Fuse

The fuse on the control panel will blow in the case of a thermal overload.

Replace the fuse only with a fast-acting, 5 amp, 250V fuse (F5A250V). The correct fuse is available from Woodstock as Part Number X1690006.

Tools Needed	Qty
Phillips Screwdriver #2	1

To replace machine fuse, to these steps:

1. DISCONNECT MACHINE FROM POWER!
2. Remove fuse holder located on control panel (see **Figure 20**).
3. Remove old fuse from holder and install new fuse.
4. Replace fuse holder.

Figure 20. Fuse cap on control panel.

Replacing Battery in Remote Control

The remote control uses two AAA batteries. To replace them, slide the battery compartment cover down and off the remote (see **Figure 21**). Insert the batteries in the proper direction and replace the cover.

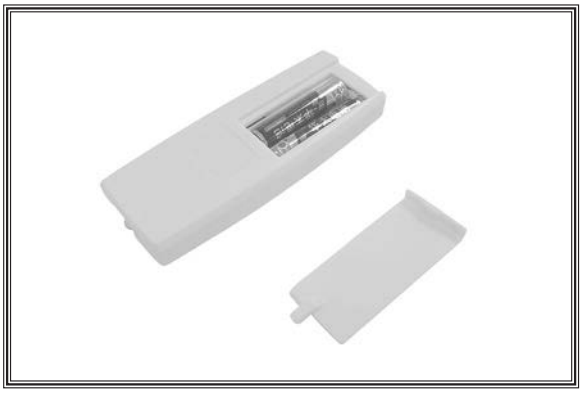
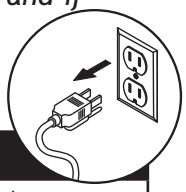


Figure 21. Remote control battery compartment cover removed.

Troubleshooting

The following troubleshooting tables cover common problems that may occur with this machine. If you need replacement parts or additional troubleshooting help, contact our Technical Support.

Note: *Before contacting Tech Support, find the machine serial number and manufacture date, and if available, your original purchase receipt. This information is required to properly assist you.*



Motor & Electrical

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Machine does not start, or power supply breaker trips immediately after startup.	1. Blown fuse. 2. Incorrect power supply voltage or circuit size. 3. Remote not working. 4. Receiver at fault. 5. Power supply circuit breaker tripped or fuse blown. 6. Wiring broken, disconnected, or corroded. 7. Control panel circuit board at fault. 8. Motor or motor bearing at fault.	1. Clean/replace filters; replace fuse/ensure no shorts. 2. Ensure correct power supply voltage and circuit size. 3. Replace batteries; stay in signal range. 4. Inspect/replace if at fault. 5. Ensure circuit is free of shorts. Reset circuit breaker or replace fuse. 6. Fix broken wires or disconnected/corroded connections. 7. Inspect/replace if at fault. 8. Replace motor.
Machine stalls or is underpowered.	1. Filters at fault. 2. Motor overheated. 3. Run capacitor at fault. 4. Extension cord too long. 5. Motor or motor bearings at fault.	1. Clean/replace filters (**Page 23**). 2. Clean motor/let cool, and reduce workload. 3. Test/repair/replace. 4. Move machine closer to power supply; use shorter extension cord. 5. Replace motor.
Machine has vibration or noisy operation.	1. Motor or component loose. 2. Incorrectly mounted (table-top or flush mounts). 3. Motor fan rubbing on fan cover. 4. Motor or motor bearings at fault.	1. Replace damaged or missing bolts/nuts or tighten if loose. 2. Adjust/shim feet or tighten flange brackets. 3. Fix/replace fan cover; replace loose/damaged fan. 4. Test by rotating shaft; rotational grinding/loose shaft requires bearing replacement.

Air Filter Operations

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Loud repetitious noise, or excessive vibration coming from air filter.	1. Air filter is not mounted properly and wobbles. 2. Impeller fan is damaged, loose, or unbalanced.	1. Stabilize air filter. 2. Unplug air filter and inspect the impeller for dents, bends, or loose fins. Replace impeller if damage is found.
Air filter does not adequately collect dust; poor performance.	1. Filters at fault.	1. Clean/replace filters (**Page 23**) .

Electrical Safety Instructions

These pages are current at the time of printing. However, in the spirit of improvement, we may make changes to the electrical systems of future machines. Compare the manufacture date of your machine to the one stated in this manual, and study this section carefully.

If there are differences between your machine and what is shown in this section, call Technical Support at (360) 734-3482 for assistance BEFORE making any changes to the wiring on your machine. An updated wiring diagram may be available. **Note:** *Please gather the serial number and manufacture date of your machine before calling. This information can be found on the main machine label.*

⚠WARNING

SHOCK HAZARD. Working on wiring that is connected to a power source is extremely dangerous. Touching electrified parts will result in personal injury including but not limited to severe burns, electrocution, or death. Disconnect the power from the machine before servicing electrical components!

QUALIFIED ELECTRICIAN. Due to the inherent hazards of electricity, only a qualified electrician should perform wiring tasks on this machine. If you are not a qualified electrician, get help from one before attempting any kind of wiring job.

WIRE CONNECTIONS. All connections must be tight to prevent wires from loosening during machine operation. Double-check all wires disconnected or connected during any wiring task to ensure tight connections.

WIRE/COMPONENT DAMAGE. Damaged wires or components increase the risk of serious personal injury, fire, or machine damage. If you notice that any wires or components are damaged while performing a wiring task, replace those wires or components before completing the task.

MODIFICATIONS. Using aftermarket parts or modifying the wiring beyond what is shown in the diagram may lead to unpredictable results, including serious injury or fire.

MOTOR WIRING. The motor wiring shown in these diagrams is current at the time of printing, but it may not match your machine. Always use the wiring diagram inside the motor junction box.

CAPACITORS/INVERTERS. Some capacitors and power inverters store an electrical charge for up to 10 minutes after being disconnected from the power source. To reduce the risk of being shocked, wait at least this long before working on capacitors.

CIRCUIT REQUIREMENTS. You MUST follow the requirements at the beginning of this manual when connecting your machine to a power source.

EXPERIENCING DIFFICULTIES. If you are experiencing difficulties understanding the information included in this section, contact our Technical Support at (360) 734-3482.

NOTICE

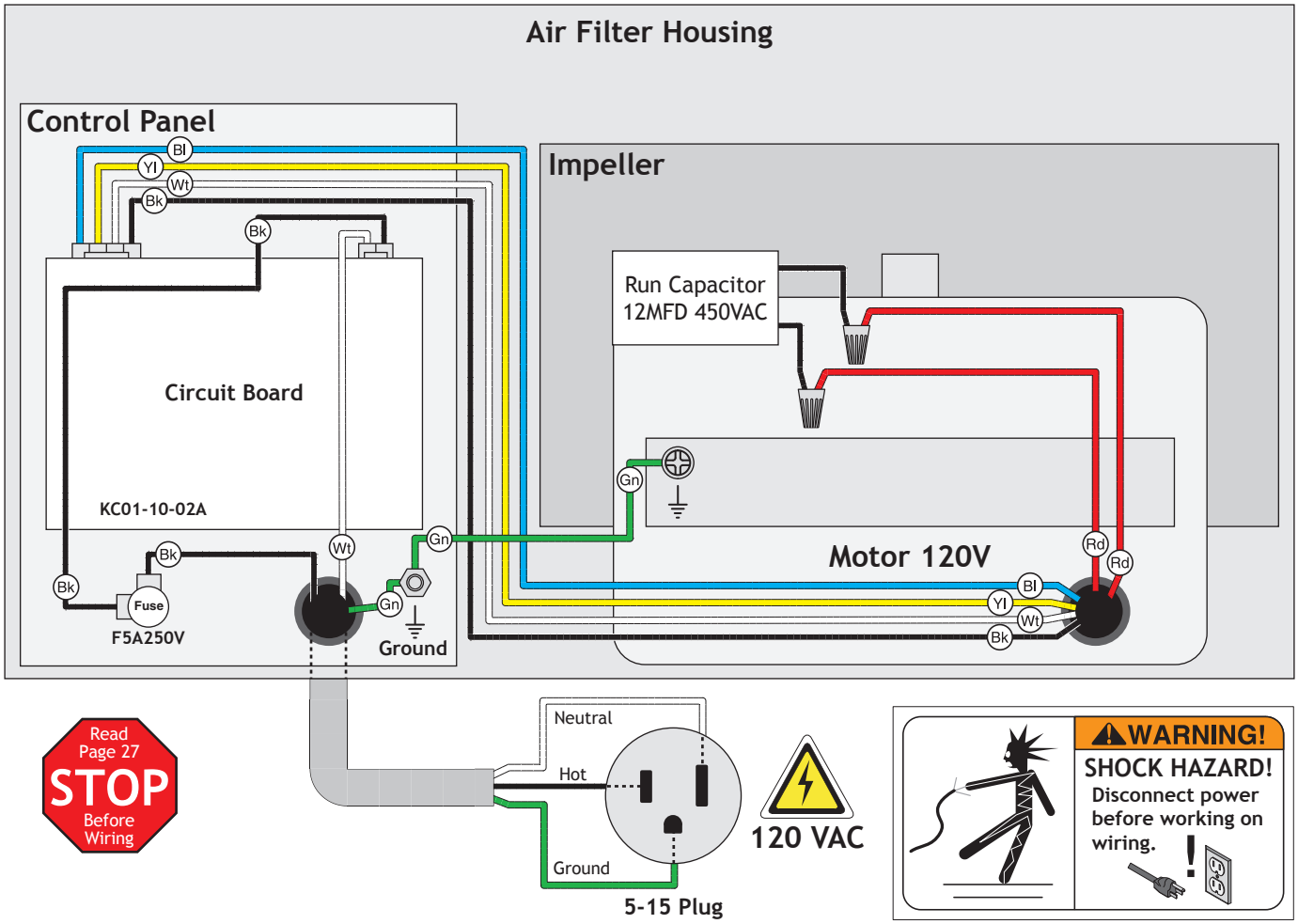
The photos and diagrams included in this section are best viewed in color. You can view these pages in color at www.shopfox.biz.

WIRING DIAGRAM COLOR KEY

BLACK	Bk	BLUE	Bl	YELLOW	Yl	LIGHT BLUE	Lb
WHITE	Wt	BROWN	Br	YELLOW GREEN	Yg	BLUE WHITE	Bw
GREEN	Gn	GRAY	Gy	PURPLE	Pu	TUR-QUOISE	Tu
RED	Rd	ORANGE	Or	PINK	Pk		

SERVICE

Wiring Diagram



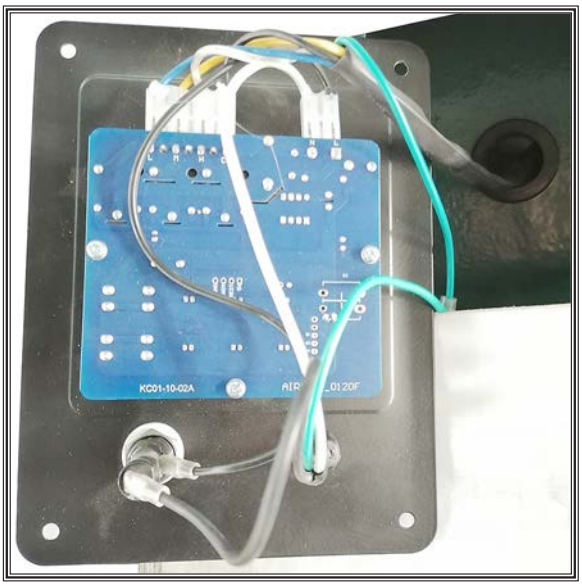
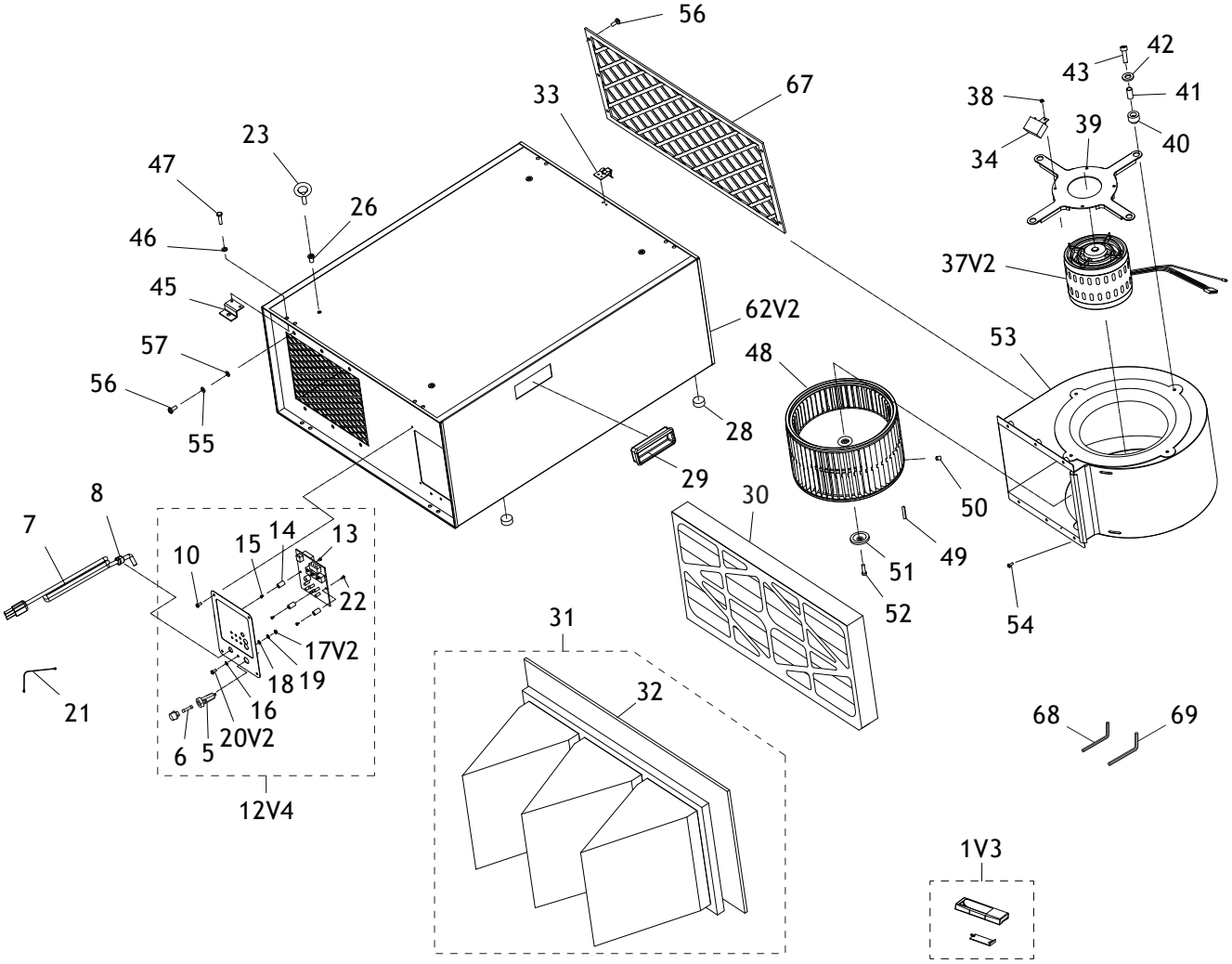


Figure 22. Circuit board wiring.

SERVICE

PARTS

Main

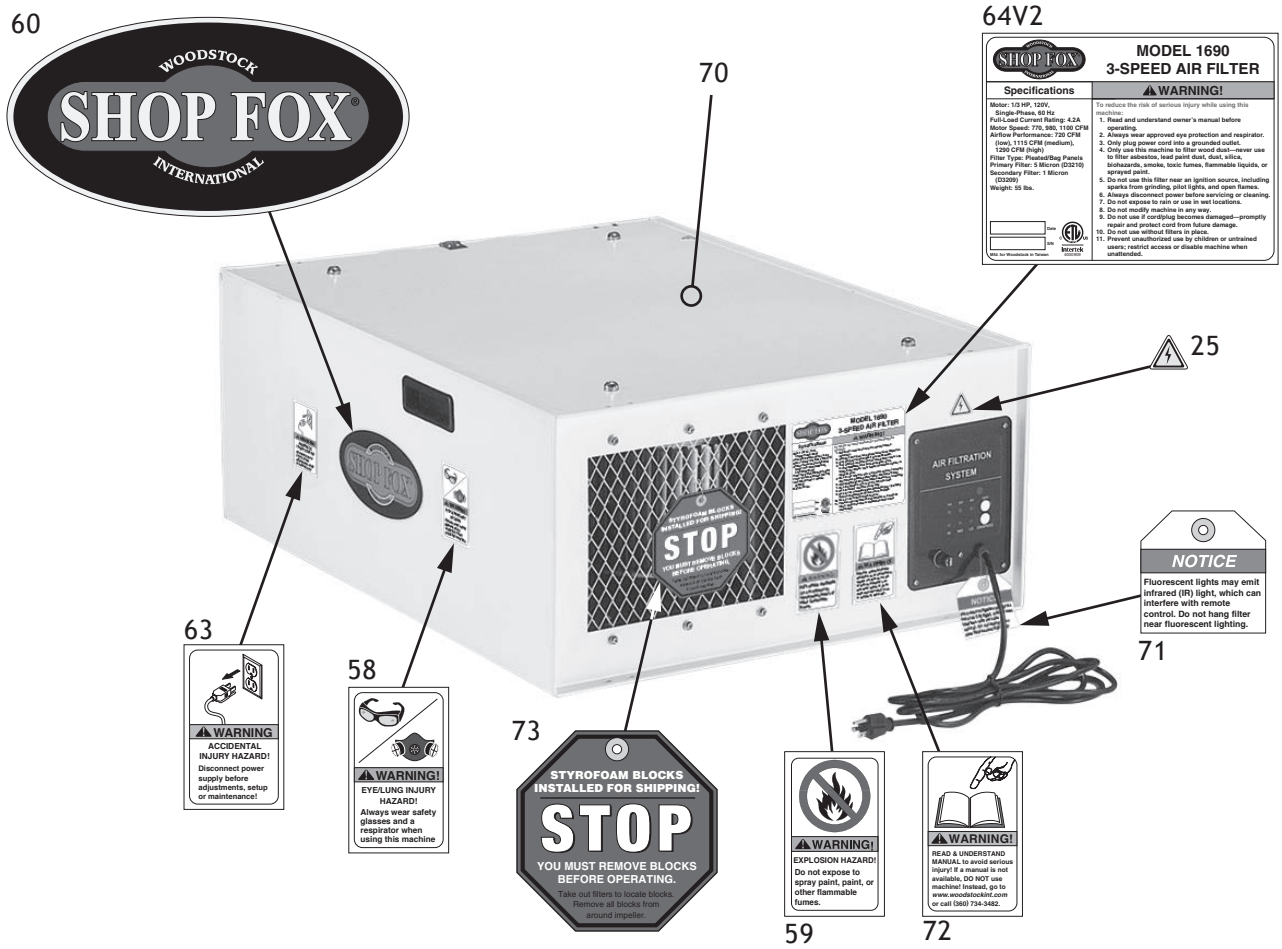

56
67
33
23
47
26
46
45
57
56
55
62V2
28
29
30
31
32
42
43
41
38
39
40
34
37V2
53
48
50
49
51
52
54
8
7
10
15
14
13
22
17V2
18
19
16
20V2
6
5
21
12V4
68
69
1V3

Main Parts List

REF	PART #	DESCRIPTION
1V3	X1690001V3	REMOTE CONTROL V3.01.21
5	X1690005	FUSE HOLDER
6	X1690006	FUSE 1-1/8" 5A 250V
7	X1690007	POWER CORD 18G 3W 5-15P
8	X1690008	STRAIN RELIEF
10	X1690010	PHLP HD SCR M4-.7 X 10
12V4	X1690012V4	CONTROL PANEL ASSEMBLY V4.01.21
13	X1690013	PHLP HD SCR M3-.45 X 6.5
14	X1690014	CONTROL PANEL SPACER
15	X1690015	CONTROL PANEL PHLP HD SCREW
16	X1690016	EXT TOOTH WASHER 4MM
17V2	X1690017V2	HEX NUT M4-.7
18	X1690018	FLAT WASHER 4MM
19	X1690019	LOCK WASHER 4MM
20V2	X1690020V2	PHLP HD SCR M4-.7 X 6
21	X1690021	PC WIRING HARNESS
22	X1690022	CONTROL PANEL BOLT M3-0.45 X 6.5
23	X1690023	EYE BOLT M6-1 X 20
26	X1690026	RIVET NUT M6 X 8
28	X1690028	RUBBER FOOT
29	X1690029	HANDLE
30	X1690030	PRIMARY FILTER 5-MICRON
31	X1690031	SECONDARY FILTER 1-MICRON
32	X1690032	FOAM SEAL 1/4" X 1" X 70"
33	X1690033	FILTER RETAINING LATCH

REF	PART #	DESCRIPTION
34	X1690034	R CAPACITOR 12M 450V
37V2	X1690037V2	MOTOR 1/3HP 120V 1-PH V2.01.21
38	X1690038	LOCK NUT M5-.8
39	X1690039	FLANGE
40	X1690040	SPACER
41	X1690041	SLEEVE
42	X1690042	FLAT WASHER 6MM
43	X1690043	CAP SCREW M6-1 X 30
45	X1690045	FLANGE BRACKET
46	X1690046	FLAT WASHER 6MM
47	X1690047	HEX BOLT M6-1 X 10
48	X1690048	FAN
49	X1690049	KEY 4 X 4 X 20
50	X1690050	HEX BOLT M8-1.25 X 12
51	X1690051	FLANGE DISK 6.5 X 44MM
52	X1690052	CAP SCREW M6-1 X 20 LH
53	X1690053	FAN HOUSING
54	X1690054	TAP SCREW M4 X 10
55	X1690055	LOCK WASHER 6MM
56	X1690056	PHLP HD SCR M6-1 X 16
57	X1690057	FLAT WASHER 6MM
62V2	X1690062V2	HOUSING V2.01.21
67	X1690067	STEEL MESHING
68	X1690068	HEX WRENCH 4MM
69	X1690069	HEX WRENCH 5MM

Labels & Cosmetics



REF	PART #	DESCRIPTION
25	X1690025	ELECTRICITY LABEL
58	X1690058	EYE/LUNG WARNING LABEL
59	X1690059	EXPLOSION HAZARD LABEL
60	X1690060	SHOP FOX LABEL
63	X1690063	DISCONNECT POWER LABEL

REF	PART #	DESCRIPTION
64V2	X1690064V2	ID LABEL V2.01.21
70	X1690070	TOUCH-UP PAINT, OFF-WHITE
71	X1690071	FLUORESCENT BULB NOTICE TAG
72	X1690072	READ MANUAL LABEL
73	X1690073	UNPACKING TAG

⚠WARNING

Safety labels warn about machine hazards and how to prevent serious personal injury. The owner of this machine MUST maintain the original location and readability of all labels on this machine. If any label is removed or becomes unreadable, REPLACE that label before allowing machine to be operated again. Contact us at (360) 734-3482 or www.woodstockint.com to order new labels.

WARRANTY

Woodstock International, Inc. warrants all Shop Fox machinery to be free of defects from workmanship and materials for a period of two years from the date of original purchase by the original owner. This warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence or accidents, lack of maintenance, or reimbursement of third party expenses incurred.

Woodstock International, Inc. will repair, replace, or arrange for a dealer refund, at its expense and option, the Shop Fox machine or machine part proven to be defective for its designed and intended use, provided that the original owner returns the product prepaid to an authorized warranty or repair facility as designated by our Bellingham, Washington office with proof of their purchase of the product within two years, and provides Woodstock International, Inc. reasonable opportunity to verify the alleged defect through inspection. If it is determined there is no defect, or that the defect resulted from causes not within the scope of Woodstock International Inc.'s warranty, then the original owner must bear the cost of storing and returning the product.

This is Woodstock International, Inc.'s sole written warranty and any and all warranties that may be implied by law, including any merchantability or fitness, for any particular purpose, are hereby limited to the duration of this written warranty. We do not warrant that Shop Fox machinery complies with the provisions of any law, acts or electrical codes. We do not reimburse for third party repairs. In no event shall Woodstock International, Inc.'s liability under this limited warranty exceed the purchase price paid for the product, and any legal actions brought against Woodstock International, Inc. shall be tried in the State of Washington, County of Whatcom. We shall in no event be liable for death, injuries to persons or property or for incidental, contingent, special or consequential damages arising from the use of our products.

Every effort has been made to ensure that all Shop Fox machinery meets high quality and durability standards. We are commited to continuously improving the quality of our products, and reserve the right to change specifications at any time.

To register the warranty, go to **https://www.woodstockint.com/warranty**, or scan the QR code below. You will be directed to the Warranty Registration page on www.woodstockint.com. Enter all applicable production information.

WARRANTY

WOODSTOCKINT.COM

High Quality Machines and Tools

Woodstock International, Inc. carries thousands of products designed to meet the needs of today's woodworkers and metalworkers. Ask your dealer about these fine products:

BROSEM® PRECISION STOP BLOCK

THE REBEL®

BOARD BUDDIES®

SLICKPLANE®

ACCU-SHARP®

JOINTER PAL®

STEELEX® FINE TOOLS

WOODSTOCK SHOP FOX® INTERNATIONAL

ROMAN CARBIDE®

Rotacator®

PLANER PAL®

PRO-STIK® ABRASIVE BELT & DISC CLEANER

STEELEX® PLUS

Aluma-Classic®

PARROT VISE®

WHOLESALE ONLY

WOODSTOCK INTERNATIONAL, INC.

Phone: (360) 734-3482 · Fax: (360) 671-3053 · Toll Free Fax: (800) 647-8801

P.O.Box 2309 · Bellingham, WA 98227

SHOPFOX.BIZ