

# MODEL W1867/W1868/W1869 CYCLONE DUST COLLECTORS







# **OWNER'S MANUAL**

(FOR MODELS MANUFACTURED SINCE 06/21)

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

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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.



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# 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: <a href="mailto:techsupport@woodstockint.com">techsupport@woodstockint.com</a>. Our knowledgeable staff will help you troubleshoot problems and process warranty claims.

If you need the latest edition, you can download it from <a href="http://www.woodstockint.com/manuals">http://www.woodstockint.com/manuals</a>. 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

#### **Machine Differences**

#### Model W1867:

- 1.5 HP 110V Single-Phase Motor
- 6" Dust Port Inlet with 2 x 4" Adapter
- 868 CFM @ 1.8" SP
- 1-Micron Canister Filter
- 20-Gallon Collection Drum

#### Model W1868:

- 2 HP 220V Single-Phase Motor
- 7" Dust Port Inlet with 3 x 4" Adapter
- 1023 CFM @ 1.2" SP
- 1-Micron Canister Filter
- 20-Gallon Collection Drum

#### Model W1869:

- 3 HP 220V Single-Phase Motor
- 8" Dust Port with 3 x 4" Adapter
- 1941 CFM @ 2.9" SP
- 1-Micron Canister Filter
- 35-Gallon Collection Drum



# MACHINE SPECIFICATIONS



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#### W1867/W1868/W1869 CYCLONE DUST COLLECTORS

| Model Number   | W1867  | W1868  | W1869           |
|--|--|--|-----------------|
| Product Dimensions                                       |  |  |                 |
| Weight   | 265 lbs.                                     | 285 lbs.                                     | 348 lbs.        |
| Width (side-to-side) x Depth<br>(front-to-back) x Height | 27 <sup>1</sup> / <sub>2</sub> " x 44" x 70" | 28 <sup>1</sup> / <sub>2</sub> " x 52" x 70" | 31" x 54" x 82" |
| Footprint (Length x Width)                               | 32 <sup>1</sup> / <sub>2</sub> " x 24"       | 36" x 26"                                    | 40" x 31"       |
| Shipping Dimensions                                      |  |  |                 |
| Туре   | C  | ardboard Box 1, Main Body                    |                 |
| Weight   | 199 lbs.                                     | 213 lbs.                                     | 282 lbs.        |
| Width x Depth x Height                                   | 43" x 29" x 23"                              | 43" x 29" x 23"                              | 45" x 34" x 29" |
| Туре   | Cardboa                                      | ard Box 2, Stand & Support                   | Arms            |
| Weight   | 39 l   | bs.  | 42 lbs.         |
| Width x Depth x Height                                   | 50" x 1                                      | 8" x 8"                                      | 59" x 19" x 8"  |
| Туре   | Cardboard Bo                                 | x 3, Canister Filter & Colle                 | ction Drum      |
| Weight   | 40 lbs.                                      | 42 lbs.                                      | 52 lbs.         |
| Width x Depth x Height                                   | 22" x 22                                     | 2" x 28"                                     | 27" x 27" x 45" |
| Electrical   |  |  |                 |
| Power Requirement  | 110V, Single-Phase, 60 Hz                    | 220V, Single-P                               | Phase, 60 Hz    |
| Full-Load Current Rating                                 | 15A  | 9A   | 15A             |
| Minimum Circuit Size                                     | 20A  | 15A  | 30A             |
| Connection Type  |  | Cord & Plug                                  |                 |
| Power Cord Included                                      |  | Yes  |                 |
| Power Cord Length  | 72   | )"<br>-                                      | 120"            |
| Power Cord Gauge   | 14 A   | WG   | 12 AWG          |
| Plug Included  |  | Yes  |                 |
| Included Plug Type                                       | 5-15   | 6-15   | L6-30           |
| Switch Type  | Remote Control                               | Magnetic Switch w/Overlo                     | ad Protection   |
| Motor  |  |  |                 |
| Туре   |  | C Capacitor-Start Induction                  |                 |
| Horsepower   | 1.5 HP                                       | 2 HP   | 3 HP            |
| Phase  |  | Single-Phase                                 |                 |
| Amps   | 15A  | 9A   | 15A             |
| Speed  |  | 3450 RPM                                     |                 |
| Power Transfer   | Direct                                       |  |                 |
| Bearings   | Shielded & Permanently Lubricated            |  |                 |
| Centrifugal Switch/Contacts Type                         |  | External                                     |                 |



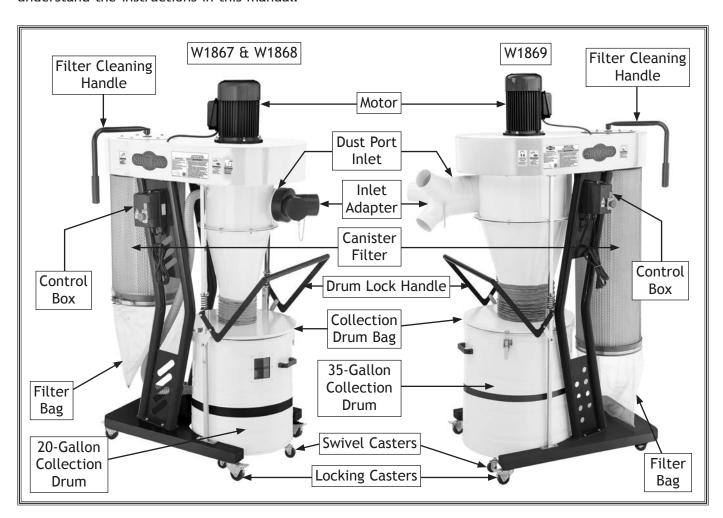
#### Model W1867/W1868/W1869 (For Machines Mfd. Since 06/21)

| Model Number                      | W1867                                  | W1868              | W1869              |
|-----------------------------------|--|--------------------|--------------------|
| Operation                         |  |                    |                    |
| Dust Collector Type               | Two-Stage (Cyclone)                    |                    |                    |
| Approved Dust Types               | Wood                                   |                    |                    |
| Filter Type                       | Pleated Cartridge, Spun-Bond Polyester |                    |                    |
| Air Flow Performance              | 868 CFM @ 1.8" SP                      | 1023 CFM @ 1.2" SP | 1941 CFM @ 2.9" SP |
| Max. Static Pressure (at 0 CFM)   | 9.7"                                   | 10.9"              | 11.0"              |
| Main Inlet Size                   | 6"                                     | 7"                 | 8"                 |
| Inlet Adapter Included            |  | Yes                |                    |
| Number of Adapter Inlets          | 2                                      | 3                  |                    |
| Adapter Inlet Size                | 4"                                     | 4"                 |                    |
| Machine Collection Capacity       | 2 Machines                             | 3 Mach             | nines              |
| Max. Material Collection Capacity | 20 Ga                                  | allons             | 35 Gallons         |
| Bag Information                   |  |                    |                    |
| Number of Filter Bags             |  | 1                  |                    |
| Number of Collection Drum Bags    |  | 1                  |                    |
| Filter Bag Diameter               |  | 20"                |                    |
| Filter Bag Length                 |  | 23"                |                    |
| Collection Drum Bag Diameter      | 3(                                     | O"                 | 39"                |
| Collection Drum Bag Length        | 4                                      | 1"                 | 56"                |
| Canister Filter Information       |  |                    |                    |
| Number of Canister Filters        | 1                                      |                    |                    |
| Filtration Rating                 | 99.9% at 1 Micron                      |                    |                    |
| Canister Filter Diameter          |  | 141/2"             |                    |
| Canister Filter Length            | 24" 39 <sup>3</sup> / <sub>8</sub> "   |                    | 393/8"             |
| Filter Surface Area               | 28.1 s                                 | sq. ft.            | 45.2 sq. ft.       |
| Impeller Information              |  |                    |                    |
| Impeller Type                     |  | Radial Fin         |                    |
| Impeller Size                     | 123/4"                                 | 13"                | 15"                |
| Impeller Blade Thickness          | 1/4"                                   | 1/8                |                    |
| Construction                      |  |                    |                    |
| Dust Collection Bags              |  | Clear Plastic      |                    |
| Base                              |  | Steel              |                    |
| Frame                             |  | Steel              |                    |
| Impeller                          |  | Cast Aluminum      |                    |
| Impeller Housing                  | Steel                                  |                    |                    |
| Body                              | Steel                                  |                    |                    |
| Collection Drum                   | Steel                                  |                    |                    |
| Paint Type/Finish                 | Powder Coated                          |                    |                    |
| Manufacturer Specifications       |  |                    |                    |
| Country of Origin                 |  | Taiwan             |                    |
| Warranty                          | 2 Years                                |                    |                    |
| Approx. Assembly & Setup Time     | 1 Hour                                 |                    |                    |
| Serial Number Location            | Machine ID Label                       |                    |                    |
| Sound Rating                      | 78                                     | dB                 | 79 dB              |



#### Identification

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



#### 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.

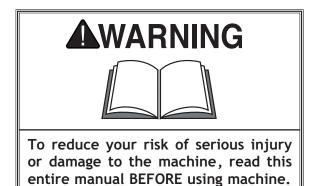
#### **AWARNING**

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.



# **Controls & Components**

Refer to 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.



- A. Filter Cleaning Handle: Turns paddles inside canister filter to knock dust cake off filter pleats, cleaning filter and helping maintain good air flow.
- **B.** Control Box: Controls motor operation with a thermally protected magnetic switch. Houses an RF receiver for operation via remote control.
- C. Removable Filter Bag: Collects fine dust from filter
- D. Inlet Adapter: Allows connection of two 4" ducts (Model W1867) or three 4" ducts (Models W1868 & W1869) to main dust port inlet.
- E. Collection Drum Lock Handle: Secures dust collection drum to lid when pressed down. Releases collection drum from lid when pulled up.
- **F.** Collection Drum Inspection Window: Allows operator to see when collection drum needs to be emptied.

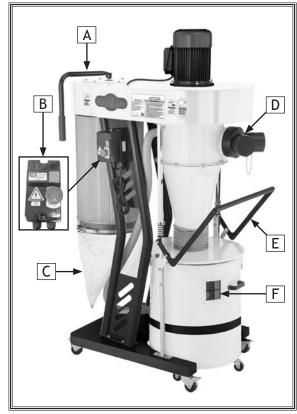


Figure 1. W1867-69 controls & components.

**G.** Remote Control: Green button turns motor *ON*. Red button turns motor *OFF*. Requires a 12V, type A27 battery.

**Note**: The remote operates on radio frequency and has a 75-foot range. It does not need to be aimed at the control box to operate.

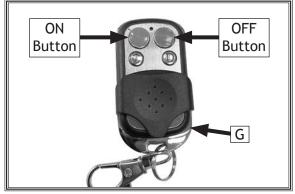


Figure 2. Remote control.



# **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!



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

Indicates a potentially hazardous situation which, if not avoided, AWARNING Indicates a potentially nazardous situation COULD result in death or serious injury.

**ACAUTION** 

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.
- experience 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 Dust Collectors**

Long-term respiratory damage can occur from using dust collectors without proper use of a respirator. Fire or explosions can result in smoke inhalation, serious burns, or death—if machine is used to collect incorrect materials, is operated near potential explosion sources, or ducting is improperly grounded. Entanglement, amputation, or death can occur if hair, clothing, or fingers are pulled into the inlet. To reduce the risk of these hazards, operator and bystanders MUST completely heed the hazards and warnings below.

- INTENDED USE. Collecting the wrong materials can result in serious inhalation hazards, fire, explosions, or machine damage. This machine is ONLY designed to collect wood dust and chips from woodworking machines. DO NOT use it to collect silica, polyurethane, toxic fumes, metal dust or shavings, lead paint, drywall, asbestos, biohazards, explosive dusts, flammable or combustible liquids or fumes, nor burning or smoking material.
- WEAR A RESPIRATOR. Fine dust that is too small to be caught in filter will be blown into ambient air. Always wear a NIOSH-approved respirator during operation and for a short time after to reduce your risk of permanent respiratory damage. Never collect dust from any hazardous material.
- IMPELLER HAZARDS. To reduce risk of entanglement or contact with impeller, DO NOT place hands, hair, clothing, or tools in or near open dust collection inlet during operation, and keep small animals and children away. The powerful suction could easily pull them into impeller.
- HAZARDOUS DUST. Dust exposure 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.
- **EMPTYING DUST.** When emptying bag or drum, wear respirator and safety glasses. Empty dust away from ignition sources and into approved container.
- operating Location. To reduce respiratory exposure to fine dust, locate permanently installed dust collectors away from working area or in another room. DO NOT place dust collector where it can be exposed to rain or moisture, which creates a shock hazard and will reduce life of 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 a fire, regularly check/empty collection bags or drum to avoid buildup of fine dust, which can increase risk of fire. Regularly clean surrounding area where machine is operated—excessive dust buildup on overhead lights, heaters, electrical panels, or other heat sources will increase risk of fire.
- SUSPENDED DUST PARTICLES. To reduce risk of death or injury caused by explosions or fires, DO NOT operate in areas where these risks are high, including spaces near pilot lights, open flames, or other ignition sources.
- AVOIDING SPARKS. To reduce risk of fire, avoid collecting any metal objects or stones. These can possibly produce sparks when they strike impeller, which can smolder in wood dust for a long time before a fire is detected. If you accidentally cut into wood containing metal, immediately turn OFF dust collector, disconnect from power, and wait for impeller to stop. Then empty bag or drum into approved airtight metal container.
- FIRE SUPPRESSION. Only operate dust collector in locations that contain fire suppression system or have fire extinguisher nearby.
- **STATIC ELECTRICITY.** To reduce risk of fire or explosions caused by sparks from static electricity, ground all ducting using grounding wire.
- DUST ALLERGIES. Dust from certain woods will cause an allergic reaction. Make sure you know what type of wood dust you will be exposed to in case of an allergic reaction.



# **ELECTRICAL**

# W1867 110V 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 (W1867) ...... 15 Amps

#### **Circuit Requirements**

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    | 20 Amps                        |
| Plug/Receptacle | NEMA 5-15                      |

#### **AWARNING**

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.

# **AWARNING**



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 110V 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.

#### **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                 | 12 AWG |
|------------------------------------|--------|
| Maximum Length (Shorter is Better) | 50 ft. |

# **AWARNING**

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.

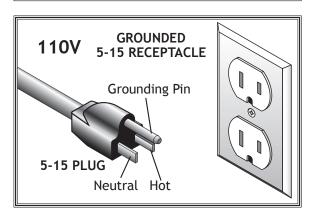


Figure 3. Typical 110V plug & receptacle.



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.



# W1868/W1869 220V 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 | (W1868) | )9 | <b>Amps</b> |
|--------------------------|---------|----|-------------|
| Full-Load Current Rating | (W1869) |    | <b>Amps</b> |

#### **Circuit Requirements**

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

| Circuit Type          | 220V/240V, 60 Hz, Single-Phase |
|-----------------------|--------------------------------|
| Circuit Size (W1868). | 15 Amps                        |
| Circuit Size (W1869). | 30 Amps                        |
| Plug/Receptacle (W18  | 68) NEMA 6-15                  |
| Plug/Receptacle (W18  | 69)NEMA L6-30                  |

## 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.



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 220V Connection

This machine is equipped with a power cord that has an equipment-grounding wire and NEMA 6-15 or L6-30 grounding plug. The plug must only be inserted into a matching receptacle (see **Figure**) that is properly installed and grounded in accordance with local codes and ordinances.

#### **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 (W1868) 1       | 4 AWG  |
|------------------------------------|--------|
| Minimum Gauge Size (W1869) 1       | 2 AWG  |
| Maximum Length (Shorter is Better) | 50 ft. |

# **AWARNING**

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.

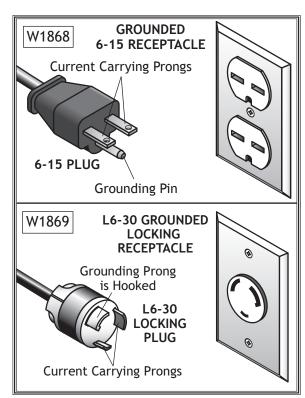


Figure 4. Typical 220V plugs & receptacles.



No adapter should be used with the required plug. If the plug does not fit the available receptacle or the machine must be reconnected to a different type of circuit, the reconnection must be made by an electrician or qualified service personnel and it must comply with all local codes and ordinances.



# **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   |
|--|-------|
| Additional People                                |       |
| Safety Glasses                                   | 1 ea. |
| • Wrench or Socket 10mm                          |       |
| • Wrench or Socket 12mm                          |       |
| • Wrench or Socket 5/16"                         |       |
| • Wrench or Socket <sup>3</sup> / <sub>8</sub> " |       |
| • Wrench or Socket 1/2"                          |       |
| Hex Wrench 5mm                                   |       |
| • Phillips Screwdriver #2                        |       |
| •  |       |



#### **AWARNING**

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!



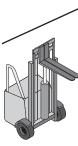
#### **AWARNING**

Wear safety glasses during entire setup process!



#### **AWARNING**

**HEAVY LIFT!** 



Straining or crushing injury may occur from improperly lifting the machine or some of its parts. To reduce this risk, get help from other people and use a forklift (or other lifting equipment) rated for weight of machine.



# 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.

| Box |  | ty |
|-----|--|----|
| A.  | Intake Barrel  |    |
| В.  | Impeller Housing                                       | .1 |
| C.  | Cyclone Funnel   |    |
| D.  | Drum Lock Handle                                       |    |
| E.  | Collection Drum Lid w/Ground Wire                      | .1 |
| F.  | Control Box w/RF Receiver Unit & Remote Control        | .1 |
| G.  | Base   |    |
| Н.  | Hose Clamps 1 <sup>3</sup> / <sub>4</sub> "            | .2 |
| I.  | Collection Drum Latches                                | .2 |
| J.  | Vacuum Hose 1 <sup>1</sup> / <sub>2</sub> " x 60"      | .1 |
| K.  | Filter Paddle Cover                                    | .1 |
| L.  | Collection Drum Hose                                   | .1 |
| Μ.  | Collection Drum Dust Bag                               | .1 |
| N.  | Filter Dust Bag  |    |
| 0.  | Swivel Casters 2"                                      |    |
| Р.  | Locking Swivel Casters 2 <sup>1</sup> / <sub>2</sub> " | .4 |
| Q.  | Flex Hose Clamps                                       | .2 |
| R.  | Filter Dust Bag Clamp                                  | .1 |
| S.  | Filter Handle Spindle                                  | .1 |
| Т.  | Collection Drum Handle                                 | .1 |
| U.  | Inlet Adapter (W1867 Adapter Shown)                    | .1 |
| ٧.  | Support Legs   | .2 |
| W.  | Lock Handle Guides                                     | .2 |
| Χ.  | Dust Collection Drum                                   | .1 |
| Υ.  | Canister Filter  | .1 |
| Ζ.  | Vacuum Ring  |    |
| AA. | Filter Cleaning Handle                                 | .1 |

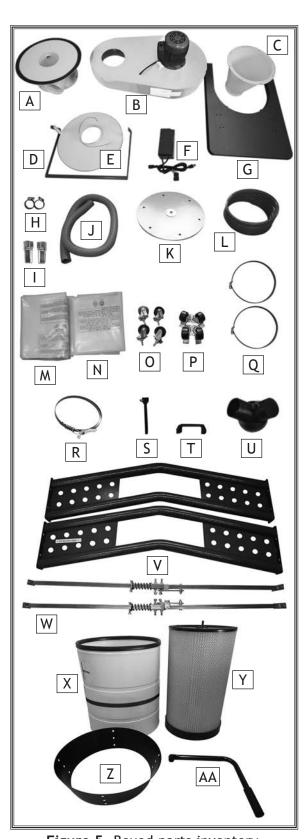


Figure 5. Boxed parts inventory.



| Hardware/Fasteners (Figure 6)   | Qty |
|---|-----|
| <b>AB.</b> Flange Bolts 5/16"-18 x 3/4"   | 28  |
| <b>AC.</b> Flange Bolts <sup>5</sup> / <sub>16</sub> "-18 x <sup>1</sup> / <sub>2</sub> " | 24  |
| AD. Button Head Cap Screws 5/16"-18 x 3/4"  | 16  |
| <b>AE.</b> Hex Nuts <sup>5</sup> / <sub>16</sub> "-18                                     | 4   |
| <b>AF.</b> Flange Nuts <sup>5</sup> /16"-18   | 12  |
| <b>AG.</b> Flange Screw 10-24 x <sup>3</sup> / <sub>8</sub> "                             | 1   |
| AH. Phillips Head Screws 10-24 x 3/4"   | 2   |
| AI. Phillips Head Screws 1/4"-20 x 5/8"   | 2   |
| AJ. Phillips Head Screws M47 x 8  | 88  |
| AK. Fender Washers 5/16"  | 16  |
| AL. Flat Washers 5/16"  | 4   |
| AM. Lock Nuts M47   | 8   |
| AN. Hex Nuts 10-24  |     |
| <b>AO.</b> Acorn Nuts <sup>1</sup> / <sub>4</sub> "-20                                    | 2   |

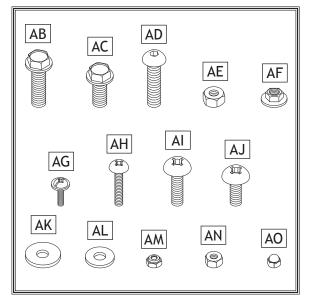


Figure 6. Hardware/fasteners.



#### Machine Placement

#### Weight Load

Refer to the Machine Specifications for the weight of your machine. Make sure that the surface upon which the machine is placed will bear the weight of the machine, additional equipment that may be installed on the machine, and the heaviest workpiece that will be used. Additionally, consider the weight of the operator and any dynamic loading that may occur when operating the machine.

#### Space Allocation

Consider the largest size of workpiece that will be processed through this machine and provide enough space around the machine for adequate operator material handling or the installation of auxiliary equipment. With permanent installations, leave enough space around the machine to open or remove doors/covers as required by the maintenance and service described in this manual. See below for required space allocation.



# **A**CAUTION

Children or untrained people may be seriously injured by this machine. Only install in an access restricted location.

#### Physical Environment

The physical environment where your machine is operated is important for safe operation and the longevity of its components. For best results, operate this machine in a dry environment that is free from excessive moisture, hazardous chemicals, airborne abrasives, or extreme conditions. Extreme conditions for this type of machinery are generally those where the ambient temperature range exceeds 41°-104°F; the relative humidity range exceeds 20-95% (non-condensing); or the environment is subject to vibration, shocks, or bumps.

#### **Electrical Installation**

Place this machine near an existing power source. Make sure all power cords are protected from traffic, material handling, moisture, chemicals, or other hazards. Make sure to leave access to a means of disconnecting the power source or engaging a lockout/tagout device.

#### Lighting

Lighting around the machine must be adequate enough that operations can be performed safely. Shadows, glare, or strobe effects that may distract or impede the operator must be eliminated.

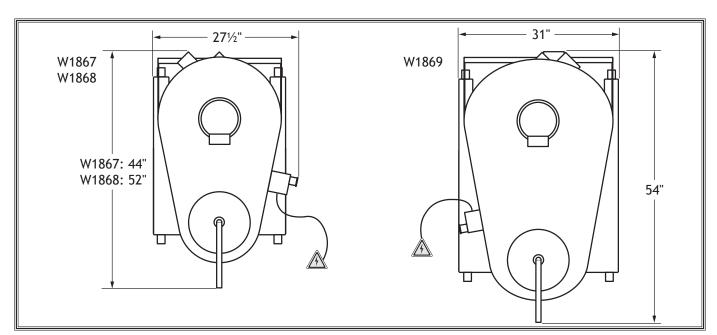


Figure 7. Working clearances.

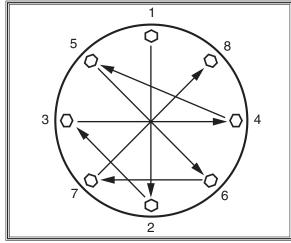


# **Assembly**

Before beginning the assembly process, refer to Items Needed for Setup and gather everything you need. Ensure all parts have been properly cleaned of any heavy-duty rust-preventative applied at the factory (if applicable). Be sure to complete all steps in the assembly procedure prior to performing the Test Run or connecting the machine to power.



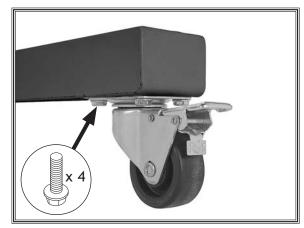
**IMPORTANT:** When assembling any components with a gasket, tighten fasteners in an alternating star pattern to ensure an even seal and reduce the risk of air leaks (see **Figure 8**).



**Figure 8.** Alternating star pattern for tightening fasteners of components assembled with a gasket.

#### To assemble dust collector, do these steps:

1. Attach (4)  $2^{1}/2^{"}$  locking swivel casters to bottom of base, and secure each caster with (4)  $\frac{5}{16}^{"}$ -18 x  $\frac{1}{2}^{"}$  flange bolts (see **Figure 9**).



**Figure 9.** Locking swivel caster (1 of 4) attached to base.



2. Attach each support leg to base, as shown in Figure 10, and finger-tighten with (8) 5/16"-18 x 3/4" button head cap screws and (8) 5/16" fender washers.

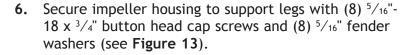
**Note:** For Models W1867 and W1868, install support leg with FIX SWITCH HERE sticker on left side of base. For Model W1869, install support leg with FIX SWITCH HERE sticker on right side of base.

- 3. Attach lock handle guide with stop plate to left side of base stand, and finger-tighten with (2)  $\frac{5}{16}$ "-18 x  $\frac{1}{2}$ " flange bolts (see **Figure 11**).
- **4.** Repeat **Step 3** to attach second lock handle guide to right side of base.

## **A**CAUTION

Once installed, the impeller housing makes the machine top heavy. Assistants must securely hold the impeller housing in place until Steps 5-7 are completed.

5. With help of two assistants, lift impeller housing and onto support legs and lock handle guides (see Figure 12).



- 7. Secure impeller housing to lock handle guides with (4)  $\frac{5}{16}$ "-18 x  $\frac{1}{2}$ " flange bolts (see **Figure 13**).
- 8. Fully tighten all fasteners installed in **Steps 2–4** (see **Figures 10-11**).



Figure 10. Support legs attached to base.

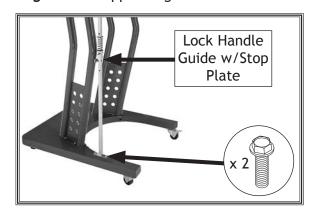
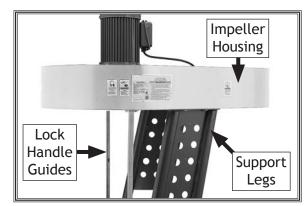
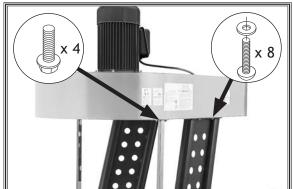


Figure 11. Lock handle guide with stop plate attached to base.



**Figure 12.** Impeller housing positioned on support legs and lock handle guides.

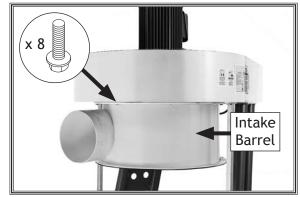


**Figure 13.** Impeller housing attached to support legs and lock handle guides.



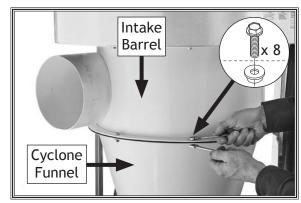
9. Have an assistant align intake barrel so dust port points straight out from impeller housing (see Figure 14), then attach to impeller housing with (8) 5/16"-18 x 1/2" flange bolts.

**Note:** For W1867 and W1868, align dust port on right. For W1869, align dust port on left.



**Figure 14.** Intake barrel attached to impeller housing.

**10.** Attach cyclone funnel to intake barrel, as shown in **Figure 15**, using (8)  $\frac{5}{16}$ "-18 x  $\frac{3}{4}$ " flange bolts and (8)  $\frac{5}{16}$ "-18 hex nuts.



**Figure 15.** Attaching cyclone funnel to intake barrel.

11. Using fasteners attached to spring bracket, place upper end of drum lock handle over outer stud on spring bracket, then attach lock handle link to lower hole on lock handle (see Figure 16).

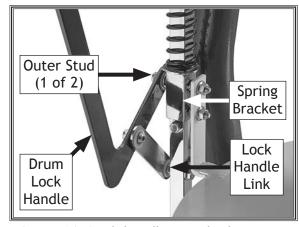
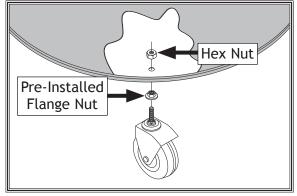


Figure 16. Lock handle attached to spring bracket and lock handle link.



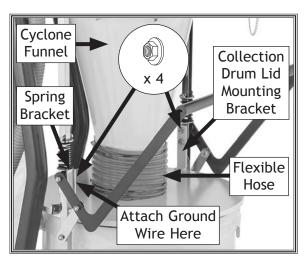
- **12.** Place (2) hose clamps around flexible hose, then slide hose over port on collection drum lid and tighten clamp (see **Figure 17**).
- 13. With collection drum lid mounting brackets facing up, orient lid so dust port, flexible hose, and spring brackets align (see Figure 17).
- 14. Attach flexible hose to cyclone funnel and secure with (1) hose clamp (see Figure 17).
- **15.** Connect ground wire to spring bracket stud, then secure lid and ground wire using (4) <sup>5</sup>/<sub>16</sub>"-18 flange nuts (see **Figure 17**).
- **16.** Attach 2" swivel casters to collection drum, as shown in **Figure 18**, using (1)  $\frac{5}{16}$ "-18 hex nut on each.
- 17. Adjust pre-installed flange nut and hex nut (see Figure 18) until drum rolls evenly without rocking or wobbling, then tighten both nuts to secure caster in place.



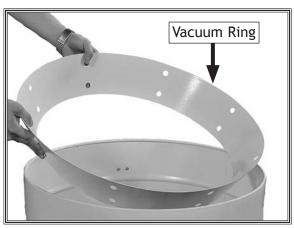
**Figure 18.** Cut-away illustration of 2" swivel caster attachment to collection drum.

**18.** Place vacuum ring inside collection drum with smaller side of ring facing down, as shown in **Figure 19**.

**Note:** During operation, this ring and the vacuum connection to the cyclone funnel will prevent the collection bag from collapsing or being pulled up into the cyclone.



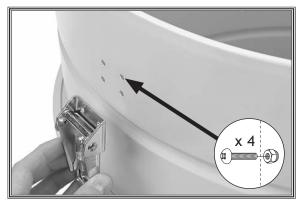
**Figure 17.** Collection drum lid and related components installed.



**Figure 19.** Inserting vacuum ring into collection drum.



**19.** Attach both drum latches using (4) M4-.7 x 8 Phillips head screws and (4) M4-.7 lock nuts per latch (see **Figure 20**).



**Figure 20.** Attaching latch to collector drum.

- **20.** Attach handle to collection drum using (2)  $^{1}/_{4}$ "-20 x  $^{5}/_{8}$ " Phillips head screws and (2)  $^{1}/_{4}$ "-20 acorn nuts (see **Figure 21**).
- **21.** Insert large plastic dust bag inside collection drum, and fold excess length of bag over top of collection drum.
- **22.** Move collection drum under lid, connect latches to lid hooks, then secure latches.
- **23.** Press drum lock handle down to lift collection drum off floor.
- **24.** Place  $1^3/4$ " hose clamps on each end of  $1^1/2$ " x 60" vacuum hose, then connect hose to ports on cyclone funnel and collection drum (see **Figure 22**).



**Figure 21.** Collection drum handle attached.

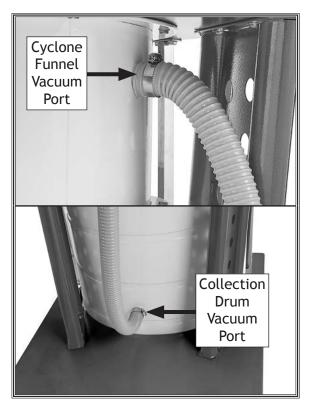
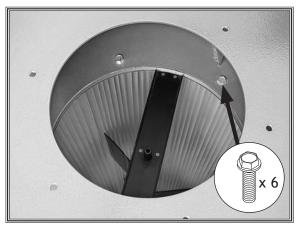


Figure 22. Vacuum hose connections.

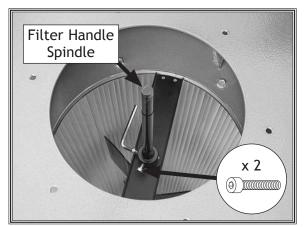


25. While assistant holds canister filter under impeller housing, reach into impeller housing and attach canister filter to impeller housing with (6) <sup>5</sup>/<sub>16</sub>"-18 x <sup>1</sup>/<sub>2</sub>" flange bolts (see **Figure 23**).



**Figure 23.** Canister filter attached to impeller housing.

26. Insert filter handle spindle so one of two M6-1 x 16 cap screw tips aligns with flat on side of filter paddle spindle, then tighten both cap screws to secure spindle (see Figure 24).



**Figure 24.** Filter handle spindle attached to canister filter assembly.

27. Slide filter paddle cover over filter handle spindle, then secure with (6)  $\frac{5}{16}$ "-18 x  $\frac{3}{4}$ " flange bolts (see Figure 25).

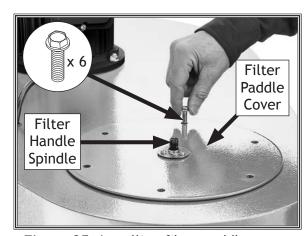
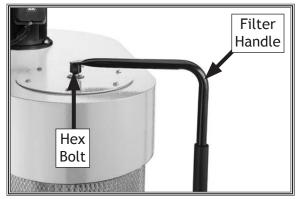


Figure 25. Installing filter paddle cover.

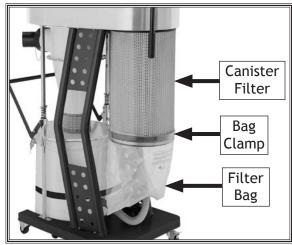


28. Install filter cleaning handle on spindle so that M6-1 x 16 hex bolt tip aligns with spindle flat, then tighten hex bolt (see Figure 26).



**Figure 26.** Filter handle installed on spindle.

**29.** Attach plastic filter bag to canister filter and secure with bag clamp (see **Figure 27**).



**Figure 27.** Filter bag attached to canister filter.

**30.** Loosen (2) Phillips head screws and remove magnetic switch cover (see **Figure 28**).

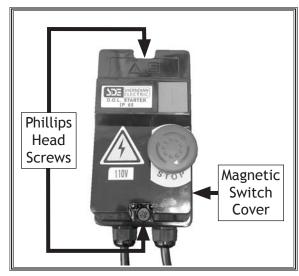
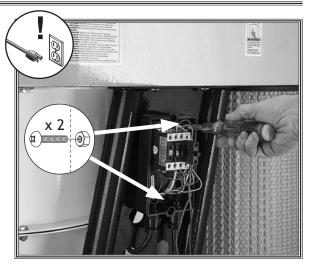


Figure 28. Magnetic switch cover.

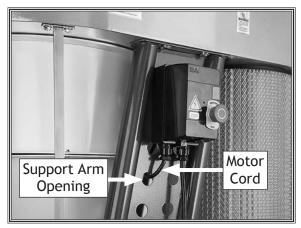


- 31. Install magnetic switch over FIX SWITCH HERE label (left support arm for Models W1867 and W1868, right support arm for Model W1869), then secure with (2) 10-24 x <sup>3</sup>/<sub>4</sub>" Phillips head screws and (2) 10-24 hex nuts (see **Figure 29**).
- 32. Follow Steps 2—3 of Programming Receiver on Page 37 to connect receiver to remote.



**Figure 29.** Example of installing magnetic switch on support arm.

- **33.** Tuck loose wires into magnetic switch cover so none can be crimped when cover is re-attached, and then replace magnetic switch cover and tighten (2) Phillips head screws loosened in **Step 30** to secure.
- **34.** Thread motor cord through support arm opening and connect to matching plug from motor under impeller housing (see **Figure 30**).



**Figure 30.** Example of magnetic switch attached to support arm.

35. Install inlet adapter on dust port and secure with  $10-24 \times \frac{3}{8}$ " flange screw (see Figure 31).

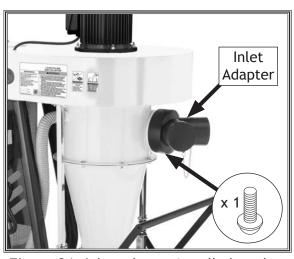


Figure 31. Inlet adapter installed on dust port.



#### 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.

#### To test run machine, do these steps:

- 1. Clear all setup tools away from machine.
- 2. Lock all swivel casters on base stand.
- **3.** Connect machine to dust-collection system or place covers over inlet adapter ports.

**IMPORTANT:** DO NOT operate dust collector without first connecting it to a dust-collection system or covering an inlet adapter port. Otherwise the lack of airflow resistance will cause the motor to operate at full amperage load, which could trip your circuit breaker or blow a fuse.

- **4.** Press Emergency Stop button in, and connect machine to power.
- 5. Twist Emergency Stop button clockwise until it springs out (see **Figure 32**). This resets switch so machine can start.
- **6.** Standing away from intake port, press green "I" button to turn machine *ON*. Verify motor starts up and runs smoothly without any problems or unusual noises.
- 7. Press Emergency Stop button to turn machine *OFF*.
- **8.** WITHOUT resetting Emergency Stop button, try to start machine by pressing the "I" button. The machine should NOT start.
  - If machine does not start, the Emergency Stop button is working correctly.
  - If machine does start, immediately turn it OFF and disconnect power. The Emergency Stop button is NOT working properly and must be corrected before further using the machine.

# **AWARNING**

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.

### **AWARNING**

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 32.** Resetting Emergency Stop button.

- To test remote control operation, press green remote button to turn motor ON. The motor should run smoothly with little or no vibration or rubbing noises.
- Press red remote button to turn motor OFF.
  - If the machine does not shut off with the remote control, press the Emergency Stop button to turn machine OFF. Refer to Troubleshooting on Page 43 to correct any problems with the remote control unit before further using it again with the machine.



# **DESIGNING THE SYSTEM**

#### General

# **A**CAUTION

Always make sure there are no open flames or pilot lights in the same room as the dust collector. There is a risk of explosion if too much fine dust is dispersed into the air with an open flame present.



#### **▲**CAUTION

static electrical build up by grounding all dust collection lines.

The Model W1867/W1868/W1869 works quite well as a point-of-use dust collector, or for collecting dust from up to two machines (Model W1867) or up to three machines (Models W1868 and W1869) simultaneously. The locking swivel casters make it easy to move around the shop near the machine being used.

#### Tips for Optimum Performance

- Avoid using more than 10' of flexible hose on any ducting line. The ridges inside flexible house greatly increase pressure loss, which reduces suction performance.
- Keep ducts between the dust collector and machines as short as possible.
- Keep ducting directional changes to a minimum. The more curved fittings you use, the greater the loss of suction at the dust-producing machine.
- Gradual directional changes are more efficient than sudden directional changes (i.e. use 45° elbows in place of 90° elbows whenever possible).
- The simpler the system, the more efficient and less costly it will be.

#### **Duct Material**

You have many choices regarding main line and branch line duct material. For best results, use smooth metal duct for the main line and branch lines, then use short lengths of flexible hose to connect each machine to the branch lines.

Plastic duct is also a popular material for home shops. However, be aware that there is a fire or explosion hazard if plastic duct material is not properly grounded to prevent static electrical build-up. (Refer to **System Grounding** later in this section.) Another problem with using plastic is that it is less efficient per foot than metal.



## **ACAUTION**

Plastic duct generates static electrical buildup that can cause fire or shock. Properly ground it to reduce this risk.

#### **Plastic Duct**

The popularity of plastic duct is due to the fact that it is an economical and readily available product. It is also simple to assemble and easily sealed against air loss. The primary disadvantage of plastic duct for dust collection is the inherent danger of static electrical build-up.

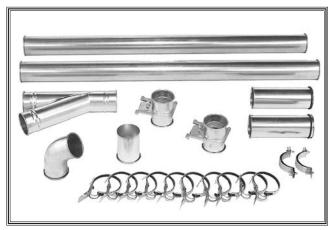


**Figure 33.** Examples of plastic ducting components.



#### **Metal Duct**

Advantages of smooth metal duct is its conductivity, efficiency, and that it does not contribute to static electrical charge build-up. However, static charges are still produced when dust particles strike other dust particles as they move through the duct. Since metal duct is a conductor, it can be grounded quite easily to dissipate any static electrical charges.



**Figure 34.** Examples of smooth metal duct and components.

There are a number of options when it comes to metal duct, but metal duct that is specially manufactured for dust collection is the best choice. When selecting your metal duct, choose high quality metal duct with smooth welded internal seams that will minimize airflow resistance. This type of duct usually connects to other ducts or elbows with a simple, self-sealing clamp, is very quick and easy to assemble, and can be readily dismantled and re-installed in a different configuration. This is especially important if you ever need to change things around in your shop or add more tools.

Avoid inferior metal duct that requires you to cut it to length and snap it together. This type of duct is time consuming to install because it requires you to seal all the seams with silicone and screw the components on the ends with sheet metal screws. Another disadvantage is the rough internal seams and crimped ends that unavoidably increase static pressure loss.

#### Flexible Duct

Flexible hose is generally used for short runs, small shops and at rigid duct-to-tool connections. There are many different types of flex hose on the market today. These are manufactured from materials such as polyethylene, PVC, cloth hose dipped in rubber and even metal, including steel and aluminum.

The superior choice here is metal flex hose that is designed to be flexible, yet be as smooth as possible inside to reduce static pressure loss.

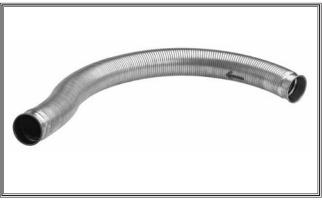


Figure 35. Example of flexible metal duct.

There are also many kinds of pure plastic flexible hose, such as non-perforated drainage type hose and dryer vent hose. Drainage type hose, while being economical, does not quite have the flexibility required for dust collection. The inside of the duct is also deeply corrugated and can increase the static pressure loss by as much as 50% over smooth wall duct. Dryer vent hose, while being completely flexible, is non-resistant to abrasion and has a tendency to collapse in a negative pressure system. We DO NOT recommend using dryer vent hose in your dust collection system.

If using flex-hose, you should choose one of the many types that are designed specifically for the movement of solid particles, i.e. dust, grains, and plastics. However, the cost of specifically designed flexible duct can vary greatly. Polyethylene hose is well suited for the removal of particulate matter, especially sawdust, since it is durable and completely flexible. Polyethylene is also very economical and available in a wide variety of diameters and lengths for most applications.



# System Design

#### Decide Who Will Design

For most small-to-medium sized shops, you can design and build the dust collection system yourself without hiring engineers or consultants. We have included some basic information here to get you started on a basic design.

If you have a large shop or plan to design a complicated system, we recommend doing additional research beyond this manual or seeking the help of an expert.

#### Sketch Your Shop Layout

When designing a successful dust collection system, planning is the most important step. In this step, sketch a basic layout of your shop, including space requirements of different machines.

Your sketch only needs the basic details of the shop layout, similar to the figure below, including all your current/planned machines and your planned placement of the dust collector.

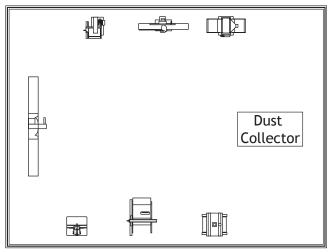


Figure 36. Basic sketch of shop layout.

#### Sketch a Basic Duct Layout

For the next step, sketch how you will connect your machines to the dust collector. Consider these general guidelines for an efficient system:

- 1. Machines that produce the most saw dust should be placed nearest to the dust collector (i.e. planers and sanders).
- 2. Ideally, you should design the duct system to have the shortest possible main line and secondary branch ducts. See the figures below for ideas of efficient versus inefficient duct layouts.

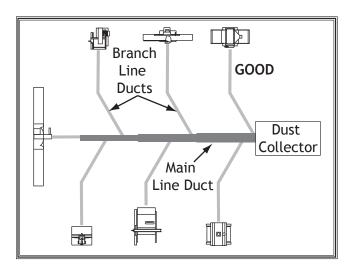


Figure 37. Efficient duct layout.

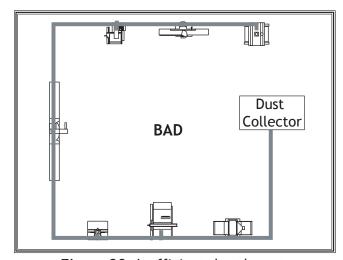


Figure 38. Inefficient duct layout.



- Directional changes should be kept to a minimum. The more directional change fittings you use directly increases the overall resistance to airflow.
- 4. Gradual directional changes are more efficient than sudden directional changes (i.e. use the largest corner radius possible when changing hose or pipe direction).
- Each individual branch line should have a blast gate immediately after the branch to control suction from one machine to another.
- **6.** The simpler the system, the more efficient and less costly it will be.

#### **Determine Required CFMs**

Since each machine produces a different amount of sawdust, the requirements for the minimum amount of CFM to move that sawdust is unique to the machine (for example, a planer produces more sawdust than a table saw). Knowing this required CFM is important to gauging which size of duct to use.

Refer to the figure below for a close estimation of the airflow each machine requires. Keep in mind that machines that generate the most sawdust should be placed closest to the dust collector. If the machine has multiple dust ports, the total CFM required is the sum of all ports.

| Machine<br>Dust Port Size | Approximate<br>Required CFM |
|---------------------------|-----------------------------|
| 2"                        | 100                         |
| 2.5"                      | 150                         |
| 3"                        | 250                         |
| 4"                        | 400                         |
| 5"                        | 600                         |
| 6"                        | 850                         |
| 7"                        | 1200                        |
| 8"                        | 1600                        |
| 9"                        | 2000                        |
| 10"                       | 2500                        |

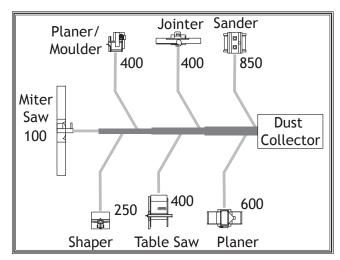
**Figure 39.** Approximate required air flow for machines, based on dust port size.

If the machine does not have a built-in dust port, use the following table to determine which size of dust port to install.

| <u>Machine</u>                          | Average Dust Port Size       |
|---|------------------------------|
|   | 4"                           |
|   | Saw2"                        |
|   | aller)4"                     |
|   | 5" 13" and smaller) 4"       |
|   | 14"-20")6"                   |
| 1                                       | 4"                           |
|   | o table) 2"                  |
| ·                                       | 4"                           |
|   | 4"                           |
|   | nd smaller)2"                |
| · ` `                                   | 4"                           |
|   | d smaller)2"                 |
|   |                              |
| III • ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` | 80" and larger) 5"           |
|   | and smaller)2 x 4"           |
| III                                     | and larger)4 x 4"            |
| Widebelt Sander (                       | 18" and smaller)5"           |
| <u> </u>                                | 24"-37" single head)2 x 6"   |
| Widebelt Sander (2                      | 24"-51" double head) .5 x 4" |

**Figure 40.** Dust port size and quantity per average machine.

Write the required CFM for each machine on your sketch, as shown in the **Figure** below.



**Figure 41.** CFM requirements labeled for each machine.



#### **Determining Main Line Duct Size**

The general rule of thumb for a main line duct is that the velocity of the airflow must not fall below 3500 FPM.

For small/medium sized shops, using the inlet size of the dust collector as the main line duct size will usually keep the air velocity above 3500 FPM and, depending on your system, will allow you to keep multiple branches open at one time.

Mark your drawing, as shown in the figure below, but using the inlet size for your dust collector as the main line.

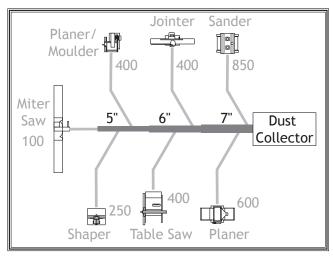


Figure 42. Main line size labeled on sketch.

#### **Determining Branch Line Duct Size**

The general rule of thumb for a branch line duct is that the velocity of the airflow must not fall below 4000 FPM.

For small/medium sized shops, using the dust port size from the machine as the branch line duct size will achieve the correct velocity in most applications. However, if the dust port on the machine is smaller than 4", make the branch line 4" and neck the line down right before the dust port.

**Note:** Systems with powerful dust collectors work better if multiple blast gates are left open. This also allows you to run two machines at once. Experiment with different combinations of blast gates open/closed to find the best results for your system.

Write your determined branch line sizes on your drawing, as shown in the following **figure**.

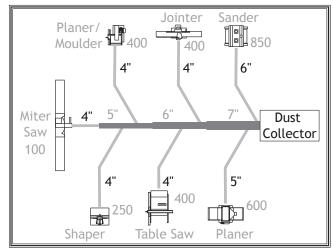


Figure 43. Branch line duct sizes labeled.

If two machines will connect to the same branch line and both will operate at the same time, then add the required CFM for each machine together and find the closest total CFM in the table below to determine the correct branch size.

If both machines will never run at the same time, reference the machine with the biggest dust port in the table below and add blast gates after the Y-branch to open/close the line to each machine.

| Total CFM | Branch Line Size |
|-----------|------------------|
| 400       | 4"               |
| 500       | 4"               |
| 600       | 5"               |
| 700       | 5"               |
| 800       | 6"               |
| 900       | 6"               |
| 1000      | 6"               |

**Figure 44.** Sizing chart for multiple machines on the same branch line.



#### **Planning Drop Downs**

Plan the drop downs for each machine, using blast gates wherever possible to control airflow.

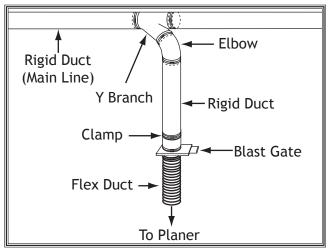


Figure 45. Drop down setup.

#### **Calculating Duct Resistance**

Adding duct work, elbows, branches and any other components to a duct line increases airflow resistance (static pressure loss). This resistance can be minimized by using rigid (smooth) duct and gradual curves, as opposed to flexible duct and 90° elbows.

To help you think about this resistance, imagine riding a bicycle in a tunnel that is an exact replica of your duct work. If the inside of the tunnel is very bumpy (flexible duct) and has a lot of sharp turns (90° elbows), it will take a lot more effort to travel from one end to the other.

The purpose of calculating the resistance is to determine if it is low enough from the machine to the dust collector to meet the given CFM requirement for the machine. Use the following tables to calculate the resistance of duct work.

| Duct<br>Dia. | Approximate Static Pressure     |                                   | Approximate Static Pressure     |                                   |
|--------------|---------------------------------|-----------------------------------|---------------------------------|-----------------------------------|
|              | Loss Per Foot of Rigid Duct     |                                   | Loss Per Foot of Flex Duct      |                                   |
|              | Main<br>Lines<br>at 3500<br>FPM | Branch<br>Lines<br>at 4000<br>FPM | Main<br>Lines<br>at 3500<br>FPM | Branch<br>Lines<br>at 4000<br>FPM |
| 2"           | 0.091                           | 0.122                             | 0.35                            | 0.453                             |
| 2.5"         | 0.08                            | 0.107                             | 0.306                           | 0.397                             |
| 3"           | 0.071                           | 0.094                             | 0.271                           | 0.352                             |
| 4"           | 0.057                           | 0.075                             | 0.215                           | 0.28                              |
| 5"           | 0.046                           | 0.059                             | 0.172                           | 0.225                             |
| 6"           | 0.037                           | 0.047                             | 0.136                           | 0.18                              |
| 7"           | 0.029                           | 0.036                             | 0.106                           | 0.141                             |
| 8"           | 0.023                           | 0.027                             | 0.08                            | 0.108                             |
| 9"           | 0.017                           | 0.019                             | 0.057                           | 0.079                             |

| Fitting<br>Dia. | 90°<br>Elbow | 45°<br>Elbow | 45°<br>Wye(Y) | 90°<br>Wye(Y) |
|-----------------|--------------|--------------|---------------|---------------|
| 3"              | 0.47         | 0.235        | 0.282         | 0.188         |
| 4"              | 0.45         | 0.225        | 0.375         | 0.225         |
| 5"              | 0.531        | 0.266        | 0.354         | 0.236         |
| 6"              | 0.564        | 0.282        | 0.329         | 0.235         |
| 7"              | 0.468        | 0.234        | 0.324         | 0.216         |
| 8"              | 0.405        | 0.203        | 0.297         | 0.189         |

Figure 46. Static pressure loss charts.

In most small/medium shops it is only necessary to calculate the line with the longest duct length or the most fittings (operating under the assumption that if the line with the highest resistance works, the others will be fine).

To calculate the static pressure of any given line in the system, follow these steps:

- 1. Make a list of each size duct in the line, including the length, and multiply those numbers by the static pressure value given in the previous table.
- 2. List each type of elbow or branch and multiply the quantity (if more than one) by the static pressure loss given in the previous table.



**3.** Add the additional factors from the following table to your list.

| Additional Factors                          | Static Pressure |
|---|-----------------|
| Seasoned (well used) Dust Collection Filter | 1"              |
| Entry Loss at Large<br>Machine Hood         | 2"              |

**Figure 47.** Additional factors affecting static pressure.

**4.** Total your list as shown in the example below to come up with your overall static pressure loss number for that line.

**Note:** Always account for a seasoned filter, so you don't end up with a system that only works right when the filter is clean.

| Main Line<br>6" Rigid Duct (0.037) at 20'                                | 0.740          |
|--|----------------|
| Branch Line<br>4" Rigid Duct (0.075) at 10'<br>4" Flex Duct (0.28) at 5' | 0.750<br>1.400 |
| Elbows/Branches<br>6" 45° Y-Branch<br>4" 45° Elbow                       | 0.329<br>0.225 |
| Additional Factors<br>Seasoned Filter                                    | 1.000          |
| Total Static Pressure Loss   | 4.444          |

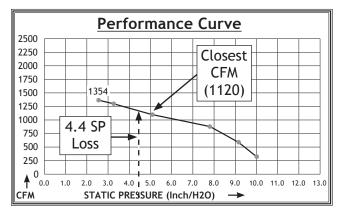
Figure 48. Totaling static pressure numbers.

**Note:** When calculating static pressure loss to determine if multiple lines can be left open at the same time, only include the main line numbers once.

5. Compare the total static pressure loss for that line to the closest CFM given in Figure 49 for your dust collector.

Example: A typical Data Sheet
Performance Curve is illustrated in
Figure 49. Find 4.4 on the Static Pressure
axis (the amount of total static pressure
loss calculated in Figures 48-49), then
refer to the closest value on the CFM axis—
approximately 1120 CFM.

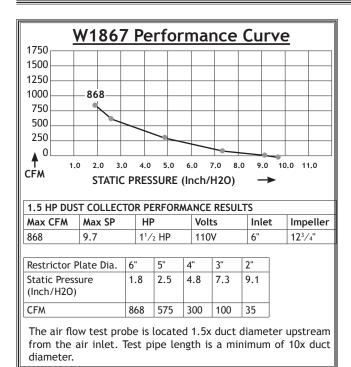
The 1120 CFM for the static pressure loss of the line connected to the router is well above the 220 CFM requirement of that machine.



**Figure 49.** CFM for static pressure loss of line connected to a dust collector & router.

- If the CFM for your static pressure loss is above the requirement of the machine connected to the end of that branch line, then dust collection will most likely be successful. Congratulations! You've just designed your own dust system. Refer to the Accessories section on Page 38 to start buying the components necessary to make your system a reality.
- If the CFM for your static pressure loss is below the requirement of the machine, then that line will not effectively collect the dust. You must then modify some of the factors in that line to reduce the static pressure loss. Some of the ways to do this include 1) installing larger duct,
   2) reducing amount of flexible duct used,
   3) increasing machine dust port size,
   4) moving machine closer to dust collector to eliminate duct length,
   and
   5) reducing
   90° elbows or replacing them with
   45° elbows.





**Figure 50.** W1867 performance curve table and data.

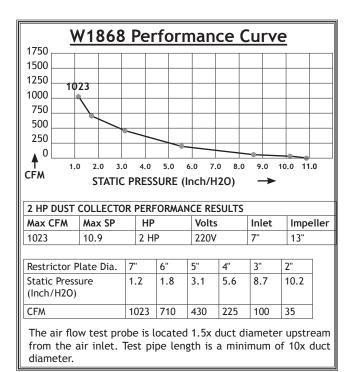
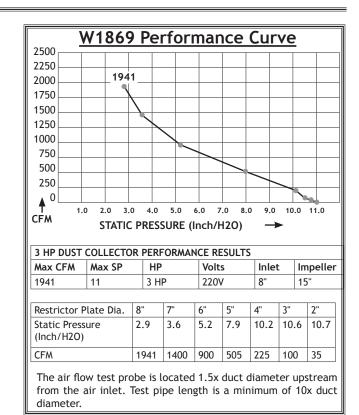


Figure 51. W1868 performance curve table and data.



**Figure 52.** W1869 performance curve table and data.



## **System Grounding**

Since plastic hose is abundant, relatively inexpensive, easily assembled and air tight, it is a very popular material for conveying dust from woodworking machines to the dust collector.

We recommend only using short lengths of flexible hose (flex-hose) to connect the woodworking machine to the dust collector. However, plastic flex-hose and plastic duct are an insulator, and dust particles moving against the walls of the plastic duct create a static electrical build up. This charge will build until it discharges to a ground.

If a grounding medium is not available to prevent static electrical build up, the electrical charge will arc to the nearest grounded source. This electrical discharge may cause an explosion and subsequent fire inside the system.

To protect against static electrical build up inside a non-conducting duct, a bare copper wire should be placed inside the duct along its length and grounded to the dust collector. You must also confirm that the dust collector is continuously grounded through the electrical circuit to the electric service panel.

If you connect the dust collector to more than one machine by way of a non-conducting branching duct system and blast gates, the system must still be grounded as mentioned above. We recommend inserting a continuous bare copper ground wire inside the entire duct system and attaching the wire to each grounded woodworking machine and dust collector.



Be sure that you extend the bare copper wire down all branches of the system. Do not forget to connect the wires to each other with wire nuts when two branches meet at a "Y" or "T" connection.

Ensure that the entire system is grounded. If using plastic blast gates to direct air flow, the grounding wire must be jumped (see the figure below) around the blast gate without interruption to the grounding system.

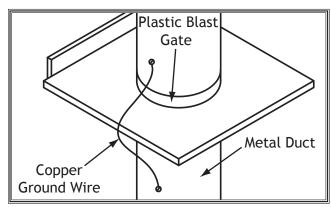


Figure 53. Ground jumper wire when using plastic blast gates and metal duct.

We also recommend wrapping the outside of all plastic ducts with bare copper wire to ground the outside of the system against static electrical build up. Wire connections at Y's and T's should be made with wire nuts.

Attach the bare ground wire to each stationary woodworking machine and attach to the dust collector frame with a ground screw as shown in the figure below. Ensure that each machine is continuously grounded to the grounding terminal in your electric service panel.

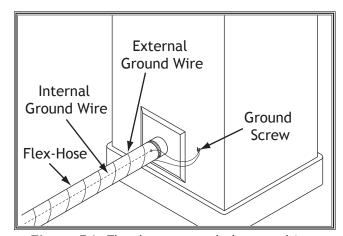


Figure 54. Flex-hose grounded to machine.



## **OPERATIONS**

### General

The purpose of this overview is to provide the novice machine operator with a basic understanding of how the machine is used during operation, so the machine controls/components discussed later in this manual are easier to understand.

Due to the generic nature of this overview, it is not intended to be an instructional guide. To learn more about specific operations, read this entire manual, seek additional training from experienced machine operators, and do additional research outside of this manual by reading "how-to" books, trade magazines, or websites.



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



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

## **Operation Overview**

This cyclone dust collector creates a vortex of incoming air that extracts heavy wood chips and large dust particles, and then drops them into the steel drum below, which is lined with a plastic bag.

The remaining fine dust travels past the impeller and is then caught by a canister filter and deposited in the plastic collection bag below. The spun-bond polyester filters catch 99.9 percent of particles to 1 micron in size, and are pleated to provide maximum surface area for efficient air flow.

To maintain CFM during heavy dust-collection operations, turn the filter cleaning handle back and forth to knock caked-on dust into the plastic collection bag.

Always lock all four swivel casters before operation.

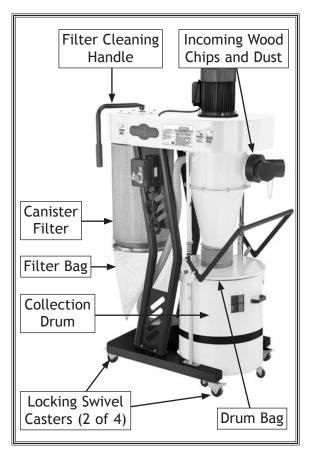


Figure 55. Dust collector operation.



## **Programming Receiver**

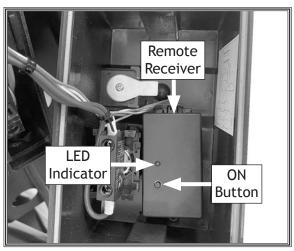
The Models W1867-69 are equipped with a remote control receiver that can be programmed to operate up to 5 separate controllers.

## **AWARNING**

Avoid touching electrified parts inside receiver while performing procedure below! Touching electrified parts will result in personal injury but not limited to severe burns, electrocution, or death. Use a wood dowel or other non-conducting item to push button on receiver.

#### To program receiver, do these steps:

- 1. Remove switch cover to get a clear view of remote receiver (see **Figure 56**).
- 2. To erase any current remote transmitter codes, press black ON button on receiver and hold down until LED indicator on receiver begins to flash (see Figure 56).



**Figure 56.** Location of remote receiver (W1867 shown).

Press either ON or OFF button on remote (see Figure 57). When LED indicator stops flashing, remote control is programmed.

**Note:** To pair more than one remote to receiver, press ON or OFF button of remaining remote(s) before proceeding to **Step 4**.

4. Install switch cover removed in Step 1.

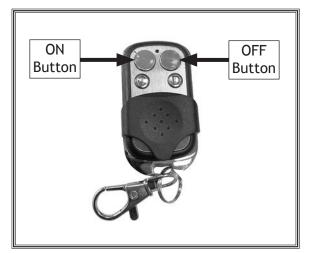


Figure 57. ON and OFF buttons.

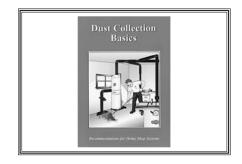


# ACCESSORIES Cyclone Dust Collector Accessories

The following cyclone dust collector 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 <a href="mailto:sales@woodstockint.com">sales@woodstockint.com</a>.

#### W1050-Dust Collection Basics Book

This incisive book skillfully guides the woodworker through all the steps necessary in the design and construction of an efficient central dust-collection system and tells you what you need to know for easy installation. 64 pages.



D4206—Clear Flexible Hose 4" x 10' D4256—45° Elbow 4" W1007—Plastic Blast Gate 4" W1017—90° Elbow 4" D4216—Black Flexible Hose 4" x 10' W1053—Anti-Static Grounding Kit W1317—Wire Hose Clamp 4"

We've handpicked a selection of commonly used dust-collection components for machines with 4" dust ports.



W1014—3" Outer Diameter Y-Fittings W1015—4" Outer Diameter Y-Fittings

Used to attach branch lines to service more than one machine. This design provides increased lateral air flow and efficiency over other types of fittings.





## **MAINTENANCE**

## **General**

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

#### **Ongoing**

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

- Loose mounting bolts.
- Damaged filter canister, cleaning paddle components, or collection bags.
- Worn or damaged wires.
- Suction leaks.
- Any other unsafe condition.

#### **Monthly Check**

Clean/vacuum dust buildup off machine body and motor

# Emptying/Replacing Collection Drum Bag

Dispose of the collection drum bag when dust fills it  $^{3}/_{4}$  full. Replace the bag if it develops a leak or becomes damaged.

**IMPORTANT:** To contain wood dust and minimize risk of exposure, firmly tie bag closed.

If the bag gets overfilled, the dust will be sucked into the intake barrel and passed through to the canister filter and filter bag. Avoid allowing this to happen, as it may reduce filter life.

Check the drum window regularly to prevent excessive dust buildup in the collection drum.



Dust exposure created while using machinery may cause cancer, birth defects, or long-term respiratory damage. Always wear goggles and a NIOSH-approved respirator when working with the dust collection bags or canisters.



| Item(s) Needed                       | Qty |
|--------------------------------------|-----|
| Drum Bag D4894 (Models W1867, W1868) | 1   |
| Drum Bag D4896 (Model W1869)         |     |

To remove and replace collection drum bag, do these steps:

- DISCONNECT MACHINE FROM POWER!
- 2. Lift drum lock handle to lower collection drum onto casters (see Figure 58).
- 3. Release both latches on sides of drum, then roll drum clear of drum lid (see Figure 58).
- 4. Lift bag out of drum and dispose of contents.

**IMPORTANT:** To contain wood dust and minimize risk of exposure, tie bag closed before disposal.

- **5.** Place new dust bag inside collection drum, and fold excess bag length over top of drum.
- **6.** Move collection drum under lid and latch it closed.
- **7.** Press drum lock handle down to lift collection drum off casters for operation.

## Cleaning Canister Filter

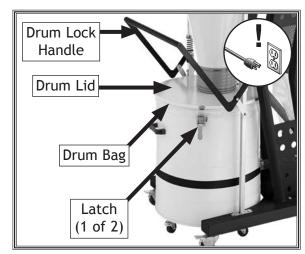
This dust collector uses a handle and internal paddles to remove excess dust and debris from the filter pleats. Move the handle back and forth through its range of motion to knock dust into the filter bag. Dispose of the bag when dust fills it about 1/2 full.

After extended use, the filter should be replaced, or thoroughly cleaned by hand.

To clean canister filter by hand, do these steps:

- DISCONNECT MACHINE FROM POWER!
- 2. Remove bag clamp, filter bag, and canister filter (see Figure 59).
- **3.** Rinse filter with water in an appropriate outdoor location.

**IMPORTANT:** DO NOT use compressed air to clean or dry the filter, as this can spread fine dust into the air and damage filter fibers.



**Figure 58.** Collection drum bag components.

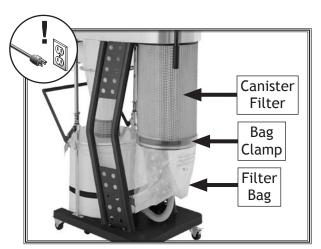


Figure 59. Filter bag components.

4. Allow filter to air dry only. DO NOT use heat.



## **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.

# Removing/Replacing Canister Filter & Bag

If the canister filter is clogged or dirty and cleaning it does not improve dust-collection performance, the canister filter must be replaced.

| Item(s) Needed                              | Qty |
|---|-----|
| An Assistant                                | 1   |
| Wrench or Socket, 12mm                      | 1   |
| Wrench or Socket, 10mm                      | 1   |
| Hex Wrench, 5mm                             | 1   |
| Shop Vac                                    | 1   |
| Canister Filter D4892 (Models W1867, W1868) | 1   |
| Canister Filter D4895 (Model W1869)         |     |
| Filter Bag D4893                            |     |

To remove and replace filter bag and canister filter, do these steps:

- 1. DISCONNECT MACHINE FROM POWER!
- 2. Release bag clamp, then remove filter bag (see Figure 60). Tie bag closed.
- 3. Loosen M6-1 x 16 hex bolt on filter cleaning handle, then remove handle (see Figure 61).



Dust exposure created while using machinery may cause cancer, birth defects, or long-term respiratory damage. Always wear goggles and a NIOSH-approved respirator when working with the dust collection bags or canisters.

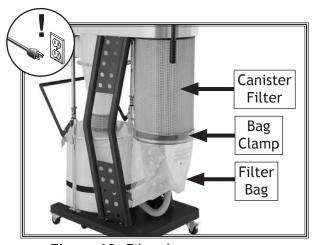


Figure 60. Filter bag components.

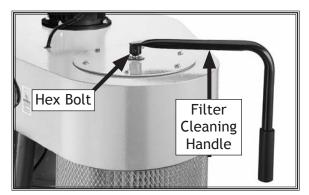


Figure 61. Filter cleaning handle hex bolt.



4. Remove (6) <sup>5</sup>/<sub>16</sub>"-18 x <sup>3</sup>/<sub>4</sub>" flange bolts securing filter paddle cover to impeller housing, then lift cover over spindle (see **Figure 62**).

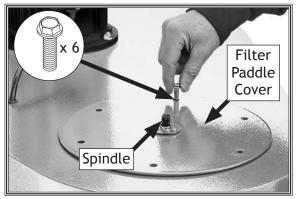
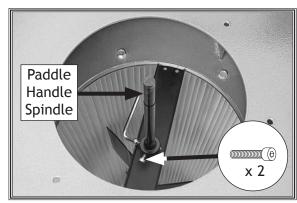


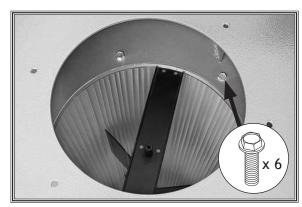
Figure 62. Removing filter paddle cover.

5. Loosen (2) M6-1 x 16 cap screws on paddle handle spindle to remove (see **Figure 63**).



**Figure 63.** Separating paddle handle spindle from filter paddle spindle.

- 6. With assistant holding canister filter from below, loosen and remove (6) <sup>5</sup>/<sub>16</sub>"-18 x <sup>3</sup>/<sub>4</sub>" flange bolts securing canister filter assembly to impeller housing (see Figure 64).
- 7. Vacuum loose dust inside impeller housing and on machine.
- 8. Reverse Steps 2—6 to re-assemble.



**Figure 64.** Remove flange bolts to remove canister filter assembly from impeller housing.



## **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

| DD 001 TH                           | DOSCIDI E CALISE   |  |
|-------------------------------------|--|--|
| PROBLEM                             | POSSIBLE CAUSE   | CORRECTIVE ACTION  |
| Machine does not start or a breaker | 1. Dust collector not properly connected to ducting.                                     | 1. Connect dust collector properly (Page 27).  |
| trips immediately                   | 2. E-Stop Button depressed/at fault.   | 2. Rotate E-Stop Button to reset. Replace if at fault.                                 |
| after startup.                      | 3. Incorrect power supply voltage or circuit   | 3. Ensure correct power supply voltage and circuit                                     |
|                                     | size.  | size.  |
|                                     | 4. Power supply circuit breaker tripped or   | 4. Ensure circuit is sized correctly and free of shorts.                               |
|                                     | fuse blown.  | Reset circuit breaker or replace fuse.   |
|                                     | <ul><li>5. Motor overheated.</li><li>6. Machine circuit breaker has tripped.</li></ul>   | 5. Allow motor to cool, reset overload if necessary.                                   |
|                                     | 7. Remote control not working.   | 6. Reset circuit breaker on switch. 7. Replace battery; stay in signal range (Page 6). |
|                                     | 8. Wiring open/has high resistance.  | 8. Check/fix broken, disconnected, or corroded wires.                                  |
|                                     | 9. Centrifugal switch/contact points at fault.   | 9. Adjust/replace centrifugal switch/contact points.                                   |
|                                     | 7. Centinagae switchii contact points at racte.  | 7. Adjust/Teptace centificagut switch/ contact points.                                 |
|                                     | 10. Power switch/circuit breaker at fault.   | 10. Test/replace.  |
|                                     | 11. Start capacitor at fault.  | 11. Test/replace.  |
|                                     | 12. Remote receiver at fault.  | 12. Replace.   |
|                                     | 13. Motor at fault.  | 13. Test/repair/replace.   |
| Machine stalls or                   | 1. Motor overheated.   | 1. Allow motor to cool, reset overload if necessary.                                   |
| seems underpow-                     | 2. Dust-collection ducting problem.  | 2. Clear blockages, seal leaks, use smooth-wall duct,                                  |
| ered.                               |  | eliminate bends, close other branches (Page 27).                                       |
|                                     | 3. Canister filter clogged/at fault.   | 3. Clean canister filter (Page 40); replace canister                                   |
|                                     | 4. Dust collector to far from machine or   | filter (Page 41). 4. Move closer to machine/redesign ducting layout/                   |
|                                     | undersized for dust-collection system.   | upgrade dust collector.  |
|                                     | 5. Run capacitor at fault.   | 5. Test/repair/replace.  |
|                                     | 6. Centrifugal switch/contact points at fault.   | 6. Adjust/replace centrifugal switch/contact points if                                 |
|                                     |  | available.   |
|                                     | 7. Motor bearings at fault.  | 7. Test by rotating shaft; rotational grinding/loose                                   |
|                                     |  | shaft requires bearing replacement.  |
| Machine has vibra-                  | 1. Motor or component loose.   | 1. Inspect/replace damaged bolts/nuts, and retighten                                   |
| tion or noisy                       |  | with thread-locking fluid.   |
| operation.                          | 2. Motor fan rubbing on fan cover.   | 2. Fix/replace fan cover; replace loose/damaged fan.                                   |
|                                     | 3. Motor mount loose/broken.   | 3. Tighten/replace.  |
|                                     | 4. Centrifugal switch is at fault.   | 4. Adjust/replace centrifugal switch if available.                                     |
|                                     | <ul><li>5. Impeller damaged or unbalanced.</li><li>6. Motor bearings at fault.</li></ul> | 5. Replace. 6. Test by rotating shaft; rotational grinding/loose                       |
|                                     | 6. Motor bearings at rault.  | shaft requires bearing replacement.  |
|                                     | 7. Motor shaft bent.   | 7. Test with dial indicator. Replace motor if damaged.                                 |
| Loud, repetitious                   | Dust collector not on a flat surface and   | Stabilize dust collector; lock casters.  |
| noise, or excessive                 | wobbles.   | i. Stabilize dust collector, lock casters.   |
| vibration coming                    | 2. Impeller damaged, unbalanced, or loose.   | 2. Disconnect dust collector from power. Inspect                                       |
| from dust collec-                   | ,  | impeller for dents, bends, or loose fins. Replace                                      |
| tor (non-motor                      |  | impeller if damaged.   |
| related).                           | 3. Impeller loose on the motor shaft.  | 3. Secure impeller; replace motor and impeller as a                                    |
|                                     |  | set if motor shaft and impeller hub are damaged.                                       |



## **Machine Operation**

| PROBLEM   | POSSIBLE CAUSE   | CORRECTIVE ACTION   |
|---|--|---|
| Dust collector does<br>not adequately col-<br>lect dust or chips; | <ol> <li>Collection bag full.</li> <li>Canister filter clogged/at fault.</li> </ol>  | <ol> <li>Empty collection bag.</li> <li>Clean canister filter (Page 40); replace canister filter (Page 41).</li> </ol>  |
| poor performance.   | 3. Ducting blocked/restricted.   | 3. Remove ducting from dust collector inlet and unblock restriction. A plumbing snake may be necessary.   |
|   | 4. Dust collector too far away from point of suction; duct clamps not properly secured; too many sharp bends in ducting.   | 4. Relocate dust collector closer to point of suction; re-secure ducts; remove sharp bends. Refer to <b>Designing the System</b> in manual.   |
|   | 5. Lumber is wet and dust is not flowing smoothly through ducting.   | 5. Only process lumber with less than 20% moisture content.   |
|   | 6. Ducting has one or more leaks, or too many open ports.  | 6. Seal/eliminate all ducting leaks; close dust ports for lines not being used. Refer to <b>Designing the System</b> in manual.   |
|   | 7. Not enough open branch lines at one time, causing velocity drop in main line.   | 7. Open 1 or 2 more blast gates to different branch lines to increase main line velocity.   |
|   | 8. Ducting and ports are incorrectly sized.  | 8. Install correctly sized ducts and fittings (Page 27) Refer to Designing the System in manual.  |
|   | 9. The machine dust-collection design inadequate.  |   |
|   | 10. Dust collector undersized.   | 10. Install larger dust collector.  |
| Dust collector blows sawdust into the air.                        | 1. Duct clamps or filter bag(s) are not properly clamped and secured; ducting loose/damaged.   | Re-secure ducts and filter bag, making sure duct and bag clamp are tight; tighten/replace ducting.  |
|   | 2. Cylinder or funnel seals are loose or damaged.  | Retighten all mounting and sealing points; replace damaged seals/gaskets.   |
| Remote control does not operate dust collector.                   | <ol> <li>Emergency Stop button is pressed in.</li> <li>Machine is disconnected from power.</li> <li>Remote control battery is weak or dead.</li> <li>A wall or barrier disrupts the radio frequency, or controller is too far away.</li> <li>Remote control not paired with receiver.</li> </ol> | <ol> <li>Rotate E-Stop button to reset.</li> <li>Verify machine is connected to power source.</li> <li>Replace battery.</li> <li>Move machine away from barrier; use remote within 75' of machine.</li> <li>Program receiver to accept remote control (Page 37).</li> </ol> |



## **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.

## **AWARNING**

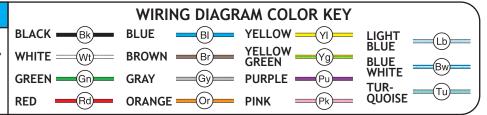
- SHOCK HAZARD. Working on wiring that is connected to a power source is extremely dangerous. Touching electrified parts will result in personal injury including but not limited to severe burns, electrocution, or death. Disconnect the power from the machine before servicing electrical components!
- QUALIFIED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





## **Electrical Components**

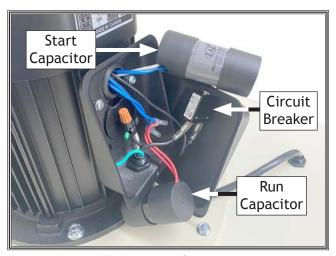


Figure 65. Junction box components (W1868 shown).



Figure 66. Circuit breaker (W1868 shown).

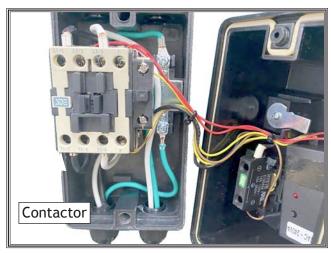


Figure 67. Contactor (W1869 shown).

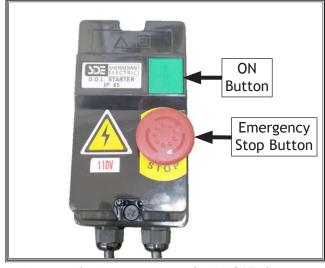
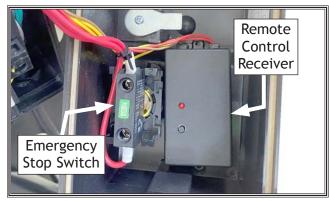


Figure 68. Magnetic switch (W1867 shown).



**Figure 69.** Emergency stop switch and remote control receiver (W1867 shown).

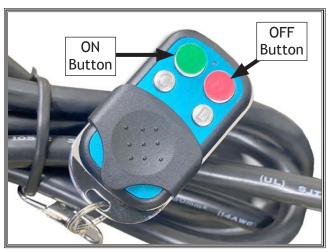
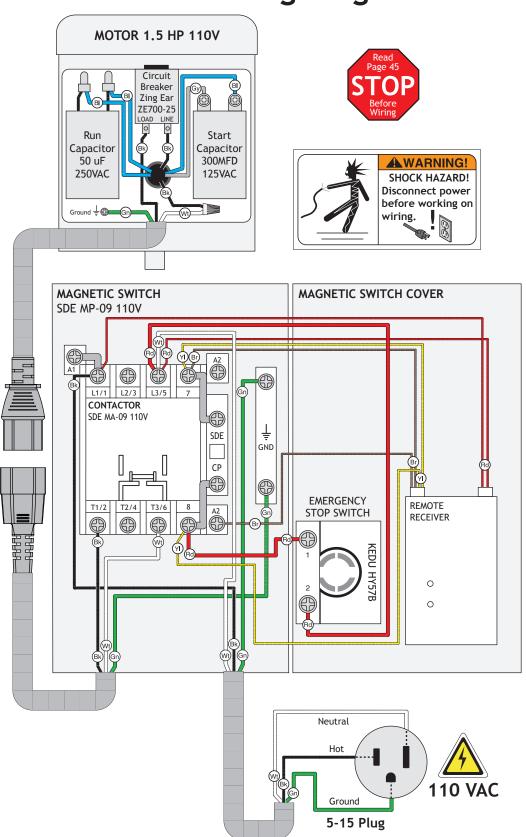


Figure 70. Remote control unit.

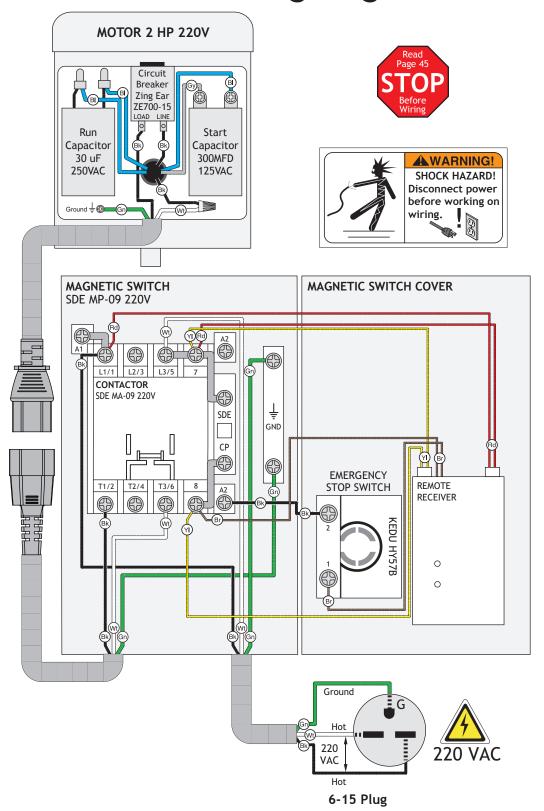


# W1867 Wiring Diagram



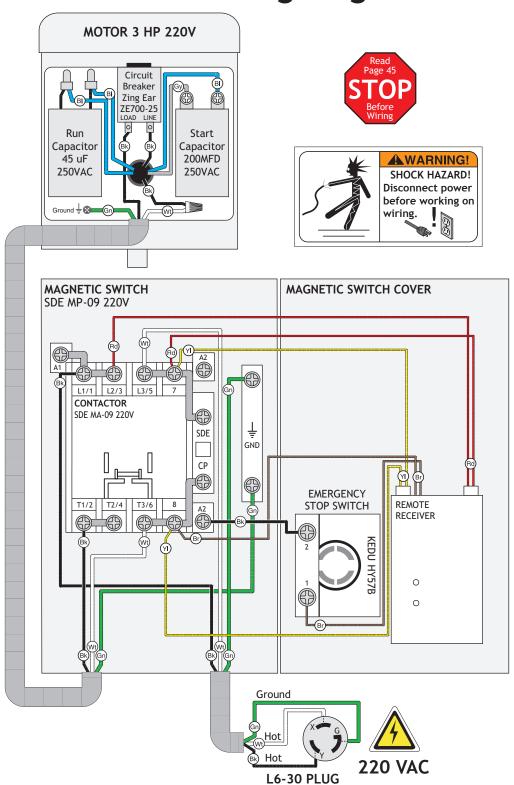


# W1868 Wiring Diagram



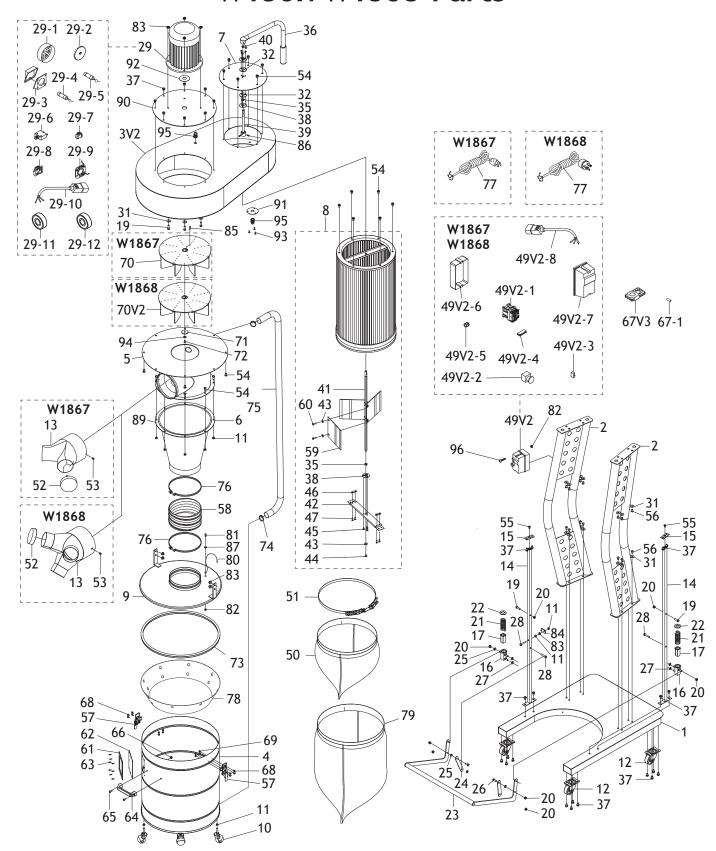


# W1869 Wiring Diagram





# PARTS W1867/W1868 Parts





## W1867 Parts List

| REF      | PART #               | DESCRIPTION   |
|----------|----------------------|---|
| 1        | X1867001             | BASE  |
| 2        | X1867002             | SUPPORT LEG   |
| 3V2      | X1867003V2           | IMPELLER HOUSING V2.06.21                           |
| 4        | X1867004             | COLLECTION DRUM, 20 GALLON                          |
| 5        | X1867005             | INTAKE BARREL                                       |
| 6        | X1867006             | CYCLONE FUNNEL                                      |
| 7        | X1867007             | FILTER COVER PLATE                                  |
| 8        | X1867008             | CANISTER FILTER ASSY 14-1/2" X 24"                  |
| 9        | X1867009             | COLLECTION DRUM LID                                 |
| 10       | X1867010             | CASTER 2", SWIVEL                                   |
| 11       | X1867011             | HEX NUT 5/16-18                                     |
| 12       | X1867012             | CASTER 2-1/2", LOCKING SWIVEL                       |
| 13       | X1867013             | INLET ADAPTER 6" X 4" X 2                           |
| 14       | X1867014             | LOCK HANDLE GUIDE                                   |
| 15       | X1867015             | MOUNTING PLATE                                      |
| 16       | X1867016             | SPRING BRACKET                                      |
| 17       | X1867017             | COPPER PLATE  |
| 19       | X1867019             | HEX BOLT 5/16-18 X 1                                |
| 20       | X1867020             | LOCK NUT 5/16-18                                    |
| 21       | X1867021             | COMPRESSION SPRING 3 X 33 X 70                      |
| 22       | X1867022             | SPRING RETAINER                                     |
| 23       | X1867023             | DRUM LOCK HANDLE                                    |
| 24       | X1867024             | LOCK HANDLE LINK                                    |
| 25       | X1867025             | FLAT WASHER 3/8 PLASTIC                             |
| 26       | X1867026             | BUTTON HD CAP SCR 5/16-18 X 3/4                     |
| 27       | X1867027             | FLAT WASHER 5/16                                    |
| 28       | X1867028             | HEX BOLT 5/16-18 X 1-3/4                            |
| 29       | X1867029             | MOTOR 1.5HP 110V 1-PH                               |
| 29-1     | X1867029-1           | MOTOR FAN COVER                                     |
| 29-2     | X1867029-2           | MOTOR FAN   |
| 29-3     | X1867029-3           | MOTOR JUNCTION BOX                                  |
| 29-4     | X1867029-4           | R CAPACITOR 50M 250V 1-1/2 X 2-3/8                  |
| 29-5     | X1867029-5           | S CAPACITOR 300M 125V 1-3/8 X 2-5/8                 |
| 29-6     | X1867029-6           | CIRCUIT BREAKER ZING EAR ZE-700 25A                 |
| 29-7     | X1867029-7           | STRAIN RELIEF TYPE-2 15MM                           |
| 29-8     | X1867029-8           | CENTRIFUGAL SWITCH                                  |
| 29-9     | X1867029-9           | CONTACT PLATE                                       |
| 29-10    |                      | MOTOR CORD W/PLUG 14G 3W 30"                        |
| 29-11    | X1867029-11          | BALL BEARING 6203-2RS                               |
| 29-12    | X1867029-12          | BALL BEARING 6205-2RS                               |
| 31       | X1867031             | FENDER WASHER 5/16                                  |
| 32       | X1867032             | RUBBER GASKET 43MM                                  |
| 33       | X1867033             | BEARING RETAINER, UPPER                             |
| 34       | X1867034             | PHLP HD SCR M58 X 8                                 |
| 35       | X1867035             | SLEEVE BEARING 12 X 14 X 6MM                        |
| 36       | X1867036             | FILTER PADDLE HANDLE                                |
| 37       | X1867037             | FLANGE BOLT 5/16-18 X 1/2                           |
| 38       | X1867038             | BEARING RETAINER, LOWER                             |
| 39       | X1867039             | PADDLE HANDLE SPINDLE                               |
| 40       | X1867040             | HEX BOLT M6-1 X 16                                  |
| 41       | X1867041             | FILTER PADDLE SPINDLE                               |
| 42       | X1867042             | PADDLE SPINDLE BRACKET                              |
| 43<br>44 | X1867043             | FLAT WASHER 1/4                                     |
| 45       | X1867044<br>X1867045 | PHLP HD SCR M6-1 X 10                               |
| 46       | X1867045<br>X1867046 | PHLP HD SCR M58 X 8 PADDLE SPINDLE BRACKET RETAINER |
| 47       |                      |   |
| 4/       | X1867047             | PHLP HD SCR M58 X 15                                |

| REF      | PART #               | DESCRIPTION                                   |
|----------|----------------------|---|
| 49V2     | X1867049V2           | MAG SWITCH SDE MP-09 110V V2.06.21            |
| 49V2-1   | X1867049V2-1         | CONTACTOR SDE MA-09 110V                      |
| 49V2-2   | X1867049V2-2         | E-STOP SWITCH KEDU HY57B                      |
|          |                      | CONTACT BLOCK SDE CP                          |
| 49V2-4   | X1867049V2-4         | REMOTE CONTROL RECEIVER                       |
| 49V2-5   | X1867049V2-5         | STRAIN RELIEF TYPE-3 M20-1.5                  |
| 49V2-6   | X1867049V2-6         | MAG SWITCH BASE                               |
| 49V2-7   | X1867049V2-7         | MAG SWITCH COVER                              |
|          | X1867049V2-8         | MAG SWITCH CORD W/PLUG 14G 3W                 |
| 50       | X1867050             | FILTER BAG 20" X 23"                          |
| 51       | X1867051             | BAG CLAMP 15"                                 |
| 52       | X1867052             | INLET ADAPTER CAP 4"                          |
| 53       | X1867053             | PHLP HD SCR 10-24 X 3/8                       |
| 54       | X1867054             | FLANGE BOLT 5/16-18 X 3/4                     |
| 55       | X1867055             | FLAT HD SCR 5/16-18 X 1-1/4                   |
| 56       | X1867056             | BUTTON HD CAP SCR 5/16-18 X 1/2               |
| 57       | X1867057             | COLLECTION DRUM LID LATCH                     |
| 58       | X1867058             | FLEX HOSE 7" X 5"                             |
| 59       | X1867059             | FILTER PADDLE                                 |
| 60       | X1867060             | HEX BOLT M6-1 X 12                            |
| 61       | X1867061             | FOAM GASKET 120 X 140MM                       |
| 62       | X1867062             | DRUM WINDOW 120 X 140MM POLYCARBONATE         |
| 63       | X1867063             | RIVET 2 X 4MM NAMEPLATE, ALUMINUM             |
| 64       | X1867064             | COLLECTION DRUM HANDLE                        |
| 65       | X1867065             | PHLP HD SCR 1/4-20 X 5/8                      |
| 66       | X1867066             | ACORN NUT 1/4-20                              |
| 67V3     | X1867067V3           | REMOTE CONTROL V3.06.21                       |
| 67-1     | X1867067-1           | REMOTE BATTERY TYPE A27 12V                   |
| 68       | X1867068             | PHLP HD SCR M47 X 8                           |
| 69       | X1867069             | LOCK NUT M47                                  |
| 70       | X1867070             | IMPELLER 12-3/4"                              |
| 71       | X1867071             | IMPELLER WASHER 6 X 38 X 4MM                  |
| 72       | X1867072             | CAP SCREW M6-1 X 30                           |
| 73       | X1867073             | COLLECTION DRUM GASKET                        |
| 74<br>75 | X1867074             | HOSE CLAMP 1-3/4"                             |
| 75<br>76 | X1867075<br>X1867076 | VACUUM HOSE 1-1/2" X 60"<br>HOSE CLAMP 7-1/2" |
| 77       | X1867076             | POWER CORD 14G 3W 72" 5-15P                   |
| 77<br>78 | X1867077             | VACUUM RING                                   |
| 79       | X1867079             | COLLECTION DRUM BAG 30" X 41"                 |
| 80       | X1867080             | GROUND WIRE 18G 17-1/2"                       |
| 81       | X1867081             | PHLP HD SCR 10-24 X 3/8                       |
| 82       | X1867082             | HEX NUT 10-24                                 |
| 83       | X1867083             | FLANGE NUT 5/16-18                            |
| 84       | X1867084             | LOCK HANDLE STOP                              |
| 85       | X1867085             | KEY 7 X 7 X 29                                |
| 86       | X1867086             | CAP SCREW M6-1 X 16                           |
| 87       | X1867087             | EXT TOOTH WASHER #10                          |
| 89       | X1867089             | FOAM GASKET SEAL                              |
| 90       | X1867090             | MOTOR PLATE                                   |
| 91       | X1867091             | FIXED PLATE                                   |
| 92       | X1867092             | RUBBER GASKET                                 |
| 93       | X1867093             | PHLP HD SCR 10-24 X 1/2                       |
| 94       | X1867094             | LOCK WASHER 6MM                               |
| 95       | X1867095             | STRAIN RELIEF TYPE-3 M16-2                    |
| 96       | X1867096             | PHLP HD SCR 10-24 X 3/4                       |
|          |                      |   |



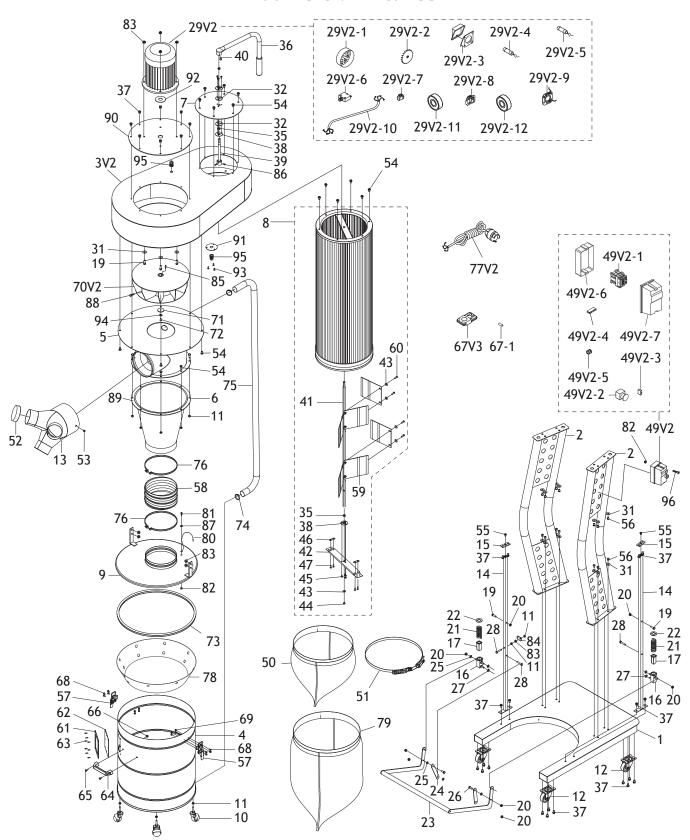
## W1868 Parts List

| 2     | X1868001<br>X1868002 | BASE  |
|-------|----------------------|---|
|       | X1868002             |   |
|       |                      | SUPPORT LEG   |
|       |                      | IMPELLER HOUSING V2.06.21                           |
| 4     | X1868004             | COLLECTION DRUM, 20 GALLON                          |
|       | X1868005             | INTAKE BARREL                                       |
|       | X1868006             | CYCLONE FUNNEL                                      |
|       | X1868007             | FILTER COVER PLATE                                  |
| -     | X1868008             | CANISTER FILTER ASSY 14-1/2" X 24"                  |
| -     | X1868009             | COLLECTION DRUM LID                                 |
|       | X1868010             | CASTER 2", SWIVEL                                   |
|       | X1868011             | HEX NUT 5/16-18                                     |
|       | X1868012             | CASTER 2-1/2", LOCKING SWIVEL                       |
|       | X1868013             | INLET ADAPTER 7" X 4" X 3                           |
|       | X1868014             | LOCK HANDLE GUIDE                                   |
|       | X1868015             | MOUNTING PLATE                                      |
|       |                      |   |
|       | X1868016<br>V1868017 | SPRING BRACKET COPPER PLATE                         |
|       | X1868017             |   |
|       | X1868019             | HEX BOLT 5/16-18 X 1                                |
|       | X1868020             | LOCK NUT 5/16-18                                    |
|       | X1868021             | COMPRESSION SPRING 3 X 33 X 70                      |
|       | X1868022             | SPRING RETAINER                                     |
|       | X1868023             | DRUM LOCK HANDLE                                    |
|       | X1868024             | LOCK HANDLE LINK                                    |
| -     | X1868025             | FLAT WASHER 3/8 PLASTIC                             |
|       | X1868026             | BUTTON HD CAP SCR 5/16-18 X 3/4                     |
|       | X1868027             | FLAT WASHER 5/16                                    |
|       | X1868028             | HEX BOLT 5/16-18 X 1-3/4                            |
|       | X1868029             | MOTOR 2HP 220V 1-PH                                 |
|       | X1868029-1           | MOTOR FAN COVER                                     |
|       | X1868029-2           | MOTOR FAN   |
|       | X1868029-3           | MOTOR JUNCTION BOX                                  |
|       | X1868029-4           | R CAPACITOR 30M 250V 1-1/2 X 2-3/8                  |
|       | X1868029-5           | S CAPACITOR 300M 125V 1-3/8 X 2-5/8                 |
|       | X1868029-6           | CIRCUIT BREAKER ZING EAR ZE-700 15A                 |
| 29-7  |                      | STRAIN RELIEF TYPE-2 15MM                           |
|       |                      | CENTRIFUGAL SWITCH                                  |
| 29-9  | X1868029-9           | CONTACT PLATE                                       |
| -     |                      | MOTOR CORD W/PLUG 14G 3W 30"                        |
| 29-11 | X1868029-11          | BALL BEARING 6203-2RS                               |
|       | X1868029-12          | BALL BEARING 6205-2RS                               |
|       | X1868031             | FENDER WASHER 5/16                                  |
|       | X1868032             | RUBBER GASKET 43MM                                  |
|       | X1868033             | BEARING RETAINER, UPPER                             |
| -     | X1868034             | PHLP HD SCR M58 X 8                                 |
|       | X1868035             | SLEEVE BEARING 12 X 14 X 6MM                        |
|       | X1868036             | FILTER PADDLE HANDLE                                |
| 37    | X1868037             | FLANGE BOLT 5/16-18 X 1/2                           |
| 38    | X1868038             | BEARING RETAINER, LOWER                             |
| 39    | X1868039             | PADDLE HANDLE SPINDLE                               |
| 40    | X1868040             | HEX BOLT M6-1 X 16                                  |
| 41    | X1868041             | FILTER PADDLE SPINDLE                               |
| 42    | X1868042             | PADDLE SPINDLE BRACKET                              |
| 43    | X1868043             | FLAT WASHER 1/4                                     |
| 44    | X1868044             | PHLP HD SCR M6-1 X 10                               |
| 44    |                      |   |
| -     | X1868045             | PHLP HD SCR M58 X 8                                 |
| 45    | X1868045<br>X1868046 | PHLP HD SCR M58 X 8 PADDLE SPINDLE BRACKET RETAINER |

| REF    | PART #       | DESCRIPTION                           |
|--------|--------------|---------------------------------------|
| 49V2   | X1868049V2   | MAG SWITCH SDE MP-09 220V V2.06.21    |
| 49V2-1 | X1868049V2-1 | CONTACTOR SDE MA-09 220V              |
| 49V2-2 | X1868049V2-2 | E-STOP SWITCH KEDU HY57B              |
| 49V2-3 | X1868049V2-3 | CONTACT BLOCK SDE CP                  |
| 49V2-4 | X1868049V2-4 | REMOTE CONTROL RECEIVER               |
| 49V2-5 | X1868049V2-5 | STRAIN RELIEF TYPE-3 M20-1.5          |
| 49V2-6 | X1868049V2-6 | MAG SWITCH BASE                       |
| 49V2-7 | X1868049V2-7 | MAG SWITCH COVER                      |
| 49V2-8 | X1868049V2-8 | MAG SWITCH CORD W/PLUG 14G 3W         |
| 50     | X1868050     | FILTER BAG 20" X 23"                  |
| 51     | X1868051     | BAG CLAMP 15"                         |
| 52     | X1868052     | INLET ADAPTER CAP 4"                  |
| 53     | X1868053     | PHLP HD SCR 10-24 X 3/8               |
| 54     | X1868054     | FLANGE BOLT 5/16-18 X 3/4             |
| 55     | X1868055     | FLAT HD SCR 5/16-18 X 1-1/4           |
| 56     | X1868056     | BUTTON HD CAP SCR 5/16-18 X 1/2       |
| 57     | X1868057     | COLLECTION DRUM LID LATCH             |
| 58     | X1868058     | FLEX HOSE 8" X 7"                     |
| 59     | X1868059     | FILTER PADDLE                         |
| 60     | X1868060     | HEX BOLT M6-1 X 12                    |
| 61     | X1868061     | FOAM GASKET 120 X 140MM               |
| 62     | X1868062     | DRUM WINDOW 120 X 140MM POLYCARBONATE |
| 63     | X1868063     | RIVET 2 X 4MM NAMEPLATE, ALUMINUM     |
| 64     | X1868064     | COLLECTION DRUM HANDLE                |
| 65     | X1868065     | PHLP HD SCR 1/4-20 X 5/8              |
| 66     | X1868066     | ACORN NUT 1/4-20                      |
| 67V3   | X1868067V3   | REMOTE CONTROL V3.06.21               |
| 67-1   | X1868067-1   | REMOTE BATTERY TYPE A27 12V           |
| 68     | X1868068     | PHLP HD SCR M47 X 8                   |
| 69     | X1868069     | LOCK NUT M47                          |
| 70V2   | X1868070V2   | IMPELLER 12-3/4" V2.03.19             |
| 71     | X1868071     | IMPELLER WASHER 6 X 38 X 4MM          |
| 72     | X1868072     | CAP SCREW M6-1 X 30                   |
| 73     | X1868073     | COLLECTION DRUM GASKET                |
| 74     | X1868074     | HOSE CLAMP 1-3/4"                     |
| 75     | X1868075     | VACUUM HOSE 1-1/2" X 60"              |
| 76     | X1868076     | HOSE CLAMP 8-1/2"                     |
| 77     | X1868077     | POWER CORD 14G 3W 72" 6-15P           |
| 78     | X1868078     | VACUUM RING                           |
| 79     | X1868079     | COLLECTION DRUM BAG 30" X 41"         |
| 80     | X1868080     | GROUND WIRE 18G 17-1/2"               |
| 81     | X1868081     | PHLP HD SCR 10-24 X 3/8               |
| 82     | X1868082     | HEX NUT 10-24                         |
| 83     | X1868083     | FLANGE NUT 5/16-18                    |
| 84     | X1868084     | LOCK HANDLE STOP                      |
| 85     | X1868085     | KEY 7 X 7 X 29                        |
| 86     | X1868086     | CAP SCREW M6-1 X 16                   |
| 87     | X1868087     | EXT TOOTH WASHER #10                  |
| 89     | X1868089     | FOAM GASKET SEAL                      |
| 90     | X1868090     | MOTOR PLATE                           |
| 91     | X1868091     | FIXED PLATE                           |
| 92     | X1868092     | RUBBER GASKET                         |
| 93     | X1868093     | PHLP HD SCR 10-24 X 1/2               |
| 94     | X1868094     | LOCK WASHER 6MM                       |
| 95     | X1868095     | STRAIN RELIEF TYPE-3 M16-2            |
| 96     | X1868096     | PHLP HD SCR 10-24 X 3/4               |



## W1869 Parts





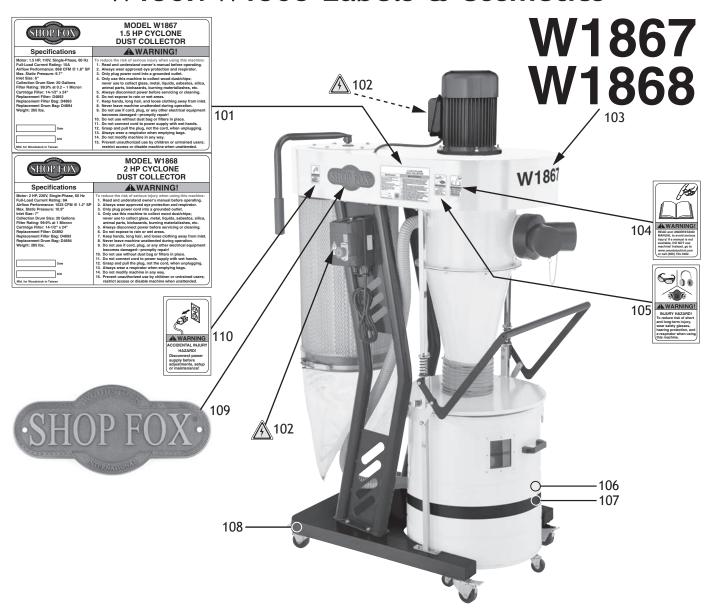
## W1869 Parts List

| 1 X1869001 BASE 2 X1869002 SUPPORT LEG 3V2 X1869003V2 IMPELLER HOUSING V2.06.21 4 X1869004 COLLECTION DRUM, 38 GALLON 5 X1869005 INTAKE BARREL                              |         |
|---|---------|
| 3V2         X1869003V2         IMPELLER HOUSING V2.06.21           4         X1869004         COLLECTION DRUM, 38 GALLON           5         X1869005         INTAKE BARREL |         |
| 4 X1869004 COLLECTION DRUM, 38 GALLON 5 X1869005 INTAKE BARREL  |         |
| 5 X1869005 INTAKE BARREL  |         |
| 1   |         |
| 1   |         |
| 6 X1869006 CYCLONE FUNNEL   |         |
| 7 X1869007 FILTER COVER PLATE   |         |
| 8 X1869008 CANISTER FILTER ASSY 14-1/2" X   | 39-3/8" |
| 9 X1869009 COLLECTION DRUM LID  |         |
| 10 X1869010 CASTER 2", SWIVEL   |         |
| 11 X1869011 HEX NUT 5/16-18   |         |
| 12 X1869012 CASTER 2-1/2", LOCKING SWIVEL   |         |
| 13 X1869013 INLET ADAPTER 8" X 4" X 3   |         |
| 14 X1869014 LOCK HANDLE GUIDE   |         |
| 15 X1869015 MOUNTING PLATE  |         |
| 16 X1869016 SPRING BRACKET  |         |
| 17 X1869017 COPPER PLATE  |         |
| 19 X1869019 HEX BOLT 5/16-18 X 1  |         |
| 20 X1869020 LOCK NUT 5/16-18  |         |
| 21 X1869021 COMPRESSION SPRING 3 X 33 X 70  | 1       |
| 22 X1869022 SPRING RETAINER   |         |
| 23 X1869023 DRUM LOCK HANDLE  |         |
| 24 X1869024 LOCK HANDLE LINK  |         |
| 25 X1869025 FLAT WASHER 3/8 PLASTIC   |         |
|   | //      |
|   | /4      |
| 27 X1869027 FLAT WASHER 5/16<br>28 X1869028 HEX BOLT 5/16-18 X 1-3/4  |         |
|   |         |
|   |         |
| 29V2-1 X1869029V2-1 MOTOR FAN COVER   |         |
| 29V2-2   X1869029V2-2   MOTOR FAN   |         |
| 29V2-3 X1869029V2-3 MOTOR JUNCTION BOX  | 2 (0    |
| 29V2-4 X1869029V2-4 R CAPACITOR 50M 250V 1-1/2 X 2  |         |
| 29V2-5 X1869029V2-5 S CAPACITOR 400M 125V 1-3/8 X   |         |
| 29V2-6 X1869029V2-6 CIRCUIT BREAKER ZING EAR ZE-70  | JU Z5A  |
| 29V2-7 X1869029V2-7 STRAIN RELIEF TYPE-2 15MM   |         |
| 29V2-8 X1869029V2-8 CENTRIFUGAL SWITCH  |         |
| 29V2-9 X1869029V2-9 CONTACT PLATE   |         |
| 29V2-10 X1869029V2-10 MOTOR CORD 12G 3W 60"   |         |
| 29V2-11 X1869029V2-11 BALL BEARING 6205-2RS   |         |
| 29V2-12 X1869029V2-12 BALL BEARING 6206-2RS   |         |
| 31 X1869031 FENDER WASHER 5/16  |         |
| 32 X1869032 RUBBER GASKET 43MM  |         |
| 33 X1869033 BEARING RETAINER, UPPER   |         |
| 34 X1869034 PHLP HD SCR M58 X 8   |         |
| 35 X1869035 SLEEVE BEARING 12 X 14 X 6MM  |         |
| 36 X1869036 FILTER PADDLE HANDLE  |         |
| 37 X1869037 FLANGE BOLT 5/16-18 X 1/2   |         |
| 38 X1869038 BEARING RETAINER, LOWER   |         |
| 39 X1869039 PADDLE HANDLE SPINDLE   |         |
| 40 X1869040 HEX BOLT M6-1 X 16  |         |
| 41 X1869041 FILTER PADDLE SPINDLE   |         |
| 11 A TOUR THE TENT ADDLE ST INDLE   |         |
| 42 X1869042 PADDLE SPINDLE BRACKET  |         |
|   |         |
| 42 X1869042 PADDLE SPINDLE BRACKET  |         |
| 42         X1869042         PADDLE SPINDLE BRACKET           43         X1869043         FLAT WASHER 1/4  |         |

| REF    | PART #       | DESCRIPTION                            |
|--------|--------------|--|
| 47     | X1869047     | PHLP HD SCR M58 X 15                   |
| 49V2   | X1869049V2   | MAG SWITCH SDE MP-09 220V V2.06.21     |
| 49V2-1 | X1869049V2-1 | CONTACTOR SDE MA-09 220V               |
| 49V2-2 | X1869049V2-2 | E-STOP SWITCH KEDU HY57B               |
| 49V2-3 | X1869049V2-3 | CONTACT BLOCK SDE CP                   |
|        |              | REMOTE CONTROL RECEIVER                |
|        |              | STRAIN RELIEF TYPE-3 M20-1.5           |
|        |              | MAG SWITCH BASE                        |
|        |              | MAG SWITCH COVER                       |
| 50     | X1869050     | FILTER BAG 20" X 23"                   |
| 51     | X1869051     | BAG CLAMP 15"                          |
| 52     | X1869052     | INLET ADAPTER CAP 4"                   |
| 53     | X1869053     | PHLP HD SCR 10-24 X 3/8                |
| 54     | X1869054     | FLANGE BOLT 5/16-18 X 3/4              |
| 55     | X1869055     | FLAT HD SCR 5/16-18 X 1-1/4            |
| 56     | X1869056     | BUTTON HD CAP SCR 5/16-18 X 1/2        |
| 57     | X1869057     | COLLECTION DRUM LID LATCH              |
| 58     | X1869058     | FLEX HOSE 12" X 9-1/2"                 |
| 59     | X1869059     | FILTER PADDLE                          |
| 60     | X1869060     | HEX BOLT M6-1 X 16                     |
| 61     | X1869061     | FOAM GASKET 120 X 140MM                |
| 62     | X1869062     | DRUM WINDOW 120 X 140MM POLYCARBONATE  |
| 63     | X1869063     | RIVET 2 X 4MM NAMEPLATE, ALUMINUM      |
| 64     | X1869064     | COLLECTION DRUM HANDLE                 |
| 65     | X1869065     | PHLP HD SCR 1/4-20 X 5/8               |
| 66     | X1869066     | ACORN NUT 1/4-20                       |
| 67V3   | X1869067V3   | REMOTE CONTROL V3.06.21                |
| 67-1   | X1869067-1   | REMOTE BATTERY TYPE A27 12V            |
| 68     | X1869068     | PHLP HD SCR M47 X 8                    |
| 69     | X1869069     | LOCK NUT M47                           |
| 70V2   | X1869070V2   | IMPELLER 15" V2.07.20                  |
| 71     | X1869071     | IMPELLER WASHER 6 X 38 X 4MM           |
| 72     | X1869072     | CAP SCREW M6-1 X 30                    |
| 73     | X1869073     | COLLECTION DRUM GASKET                 |
| 74     | X1869074     | HOSE CLAMP 1-3/4"                      |
| 75     | X1869075     | VACUUM HOSE 1-1/2" X 60"               |
| 76     | X1869076     | HOSE CLAMP 12-1/2"                     |
| 77V2   | X1869077V2   | POWER CORD 12G 3W 120" L6-30P V2.06.21 |
| 78     | X1869078     | VACUUM RING                            |
| 79     | X1869079     | COLLECTION DRUM BAG 39" X 56"          |
| 80     | X1869080     | GROUND WIRE 18G 17-1/2"                |
| 81     | X1869081     | PHLP HD SCR 10-24 X 3/8                |
| 82     | X1869082     | HEX NUT 10-24                          |
| 83     | X1869083     | FLANGE NUT 5/16-18                     |
| 84     | X1869084     | LOCK HANDLE STOP                       |
| 85     | X1869085     | KEY 7 X 7 X 30                         |
| 86     | X1869086     | CAP SCREW M6-1 X 16                    |
| 87     | X1869087     | EXT TOOTH WASHER #10                   |
| 88     | X1869088     | HEX BOLT 3/8-16 X 1/2                  |
| 89     | X1869089     | FOAM GASKET SEAL                       |
| 90     | X1869090     | MOTOR PLATE                            |
| 91     | X1869091     | FIXED PLATE                            |
| 93     | X1869093     | PHLP HD SCR 10-24 X 1/2                |
| 94     | X1869094     | LOCK WASHER 6MM                        |
| 95     | X1869095     | STRAIN RELIEF TYPE-3 M16-2             |
| 96     | X1869096     | PHLP HD SCR 10-24 X 3/4                |
|        |              |  |



## W1867/W1868 Labels & Cosmetics



| REF PART# | DESCRIPTION |
|-----------|-------------|
|-----------|-------------|

|     | X1867101 | MACHINE ID LABEL (W1867)  |
|-----|----------|---------------------------|
|     | X1868101 | MACHINE ID LABEL (W1868)  |
| 102 | X1867102 | ELECTRICITY WARNING LABEL |
| 103 | X1867103 | MODEL NO. LABEL (W1867)   |
|     | X1868103 | MODEL NO. LABEL (W1868)   |
| 104 | X1867104 | READ MANUAL LABEL         |

#### **REF PART # DESCRIPTION**

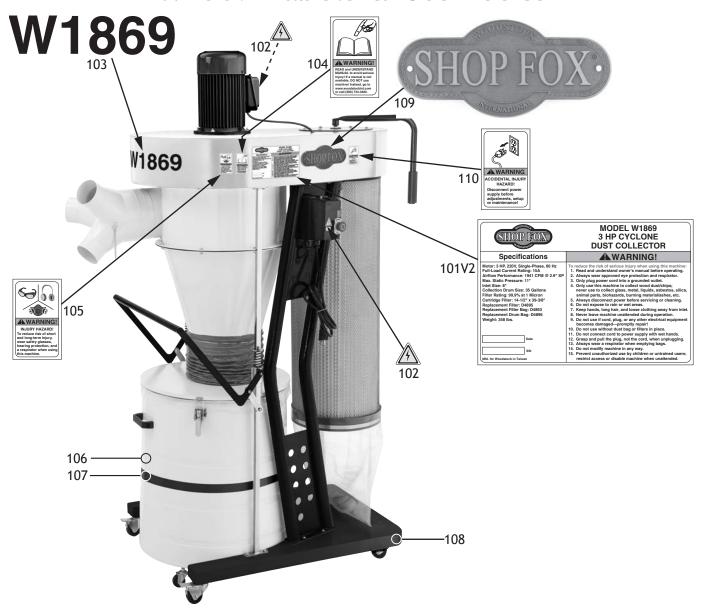
| 105 | X1867105 | EYE/EAR/LUNG WARNING LABEL     |
|-----|----------|--------------------------------|
| 106 | X1867106 | TOUCH-UP PAINT, SHOP FOX WHITE |
| 107 | X1867107 | BLACK TRIM TAPE                |
| 108 | X1867108 | TOUCH-UP PAINT, SHOP FOX BLACK |
| 109 | X1867109 | SHOP FOX NAMEPLATE-MEDIUM      |
| 110 | X1867110 | DISCONNECT POWER LABEL         |

## **AWARNING**

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.



## W1869 Labels & Cosmetics



| 101V2 | X1869101V2 | MACHINE ID LABEL V2.06.21  |
|-------|------------|----------------------------|
| 102   | X1869102   | ELECTRICITY WARNING LABEL  |
| 103   | X1869103   | MODEL NO. LABEL            |
| 104   | X1869104   | READ MANUAL LABEL          |
| 105   | X1869105   | EYE/EAR/LUNG WARNING LABEL |

#### **REF PART # DESCRIPTION**

| 106 | X1869106 | TOUCH-UP PAINT, SHOP FOX WHITE |
|-----|----------|--------------------------------|
| 107 | X1869107 | BLACK TRIM TAPE                |
| 108 | X1869108 | TOUCH-UP PAINT, SHOP FOX BLACK |
| 109 | X1869109 | SHOP FOX NAMEPLATE-MEDIUM      |
| 110 | X1869110 | DISCONNECT POWER LABEL         |

## **AWARNING**

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.

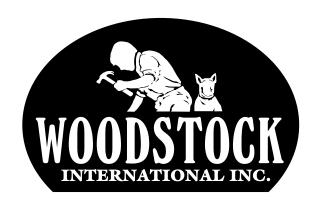
Woodstock International, Inc. will repair, replace, or arrange for a dealer refund, at its expense and option, the Shop Fox machine or machine part proven to be defective for its designed and intended use, provided that the original owner returns the product prepaid to an authorized warranty or repair 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.

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