Model VB

Model VP

Model VF

Versatile/Portable Cartridge Dust Collector Owner's Manual

V Series Models VB, VF, VP

Parker

ENGINEERING YOUR SUCCESS.

KNOW YOUR EQUIPMENT

READ THIS MANUAL FIRST.

Your V Series system should provide many years of trouble-free service. This manual will help you understand the operation of your V Series unit. It will also help you understand how to maintain it in order to achieve top performance. For quick future reference, fill in the system and filter information in the spaces below. Should you need assistance, call the Parker customer service number shown below. To expedite your service, have the following information available when contacting Parker.

Parker Order #: _____

Unit Model #: _____

Unit Serial #:_____

Filter Part #: _____

System Accessories:

_____

_____

_____

Installation Date: _____

Parker Customer Service

1-800-343-4048

TABLE OF CONTENTS

Page

Safety Precautions 1

1. Important Notice 1

2. Introduction 1
2.1 Unit Nomenclature 1
2.2 Description and Operation 1
2.3 Air Filtering Operation 1
2.4 Filter Cleaning Cycle 1

3. Specifications 1

4. Installation 3
4.1 Off Loading and Inspection 3
4.2 Installation 3
4.2.1 Portable Installation (VP Model) 3
4.2.2 Downdraft Table Assembly (VB Model) 3
4.2.3 Fixed Unit Assembly (VF Model) 4
4.3 Pulse Cleaning 4
4.4 Electrical Installation 4
4.4.1 Pulse Control Timer Board 4

5. Operation 5
5.1 Start-Up 5
5.2 Checklist 5

6. Service 6
6.1 Filter Removal and Replacement 6
6.2 Dust Drawer Removal 6
6.3 After Filter Removal/Installation 6
6.4 Servicing Direct Drive Blower 6

7. Electrical 7
7.1 Unit Control (On/Off) 7
7.2 Cleaning Control (On/Off) 7

8. Troubleshooting 8

9. Illustrated Parts List 9

10. Appendix 12

11. Equipment Warranty 15

SAFETY PRECAUTIONS

We have provided many important safety messages in this manual and on the V Series source capture system. Always read and obey all safety messages.

This is the safety alert symbol.

This symbol alerts you to potential hazards that can kill or hurt you and others. All safety messages will follow the safety alert symbol and the word “DANGER”, “WARNING”, or “CAUTION”. These words mean:

⚠ DANGER — **Indicates a hazardous situation which, if not avoided, will result in death or serious injury.**

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

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

CAUTION — **CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.**

IMPORTANT SAFETY INSTRUCTIONS

⚠ WARNING

To reduce the risk of fire, electric shock, or injury, follow these basic precautions:

- Disconnect power before servicing.
- Do not use in explosive atmospheres.
- Do not collect emissions which are explosive.
- The V Series should not be used for support of personnel or material.
- Operate only in a safe and serviceable condition.
- When collecting emissions from metal grinding or other spark producing processes, care must be taken to reduce any potential fire hazards.
- Do not allow operator to put cigarettes or any burning object into the hood or ducting of the swing arm.
- Do not use the Swing Arm to move the portable air cleaner (if applicable).

COMBUSTIBLE DUST HAZARDS –
SMOG-HOG® and DUST-HOG® Pollution Control Systems

Pursuant to National Fire Protection Agency (NFPA) Standards, the owner/user is required to test their dust mixtures to evaluate and understand potential combustion or deflagration hazards that may exist. In addition, NFPA standards require the owner/user to perform and have record of a Dust Hazard Analysis (DHA) if there is potentially a combustible material involved within or exposed to the process.

The DHA serves as a systematic review of the process to:
1) Identify where fires and explosions can occur;
2) Identify the potential causes and consequences, and;
3) Determine if existing and proposed safeguards are sufficient.

It is the responsibility of the owner/user to evaluate, interpret and document any associated risk in their process including adherence and compliance to any and all applicable local, state and federal codes, standards, laws and regulations.

It is the sole responsibility of the equipment owner/user of record to coordinate and perform sample material collection and combustion/explosivity testing of any and all dust and material that will be extracted and filtered by the Air Pollution Control (APC) filtration equipment and to notify Parker of the results prior to any discussion involving equipment specification and solution recommendation. It is recommended to utilize a Certified Industrial Hygienist (CIH) or certified safety expert that is properly trained, licensed and approved and to use a licensed and approved dust testing facility for proper dust and material analysis, testing protocol and reporting procedures. A sample of testing facilities and list of Industrial Hygiene (CIH) and other occupational and environmental health and safety (OEHS) consultants can be located through AIHA (American Industrial Hygiene Association) website.

To minimize the risk of fire or explosion, user must ensure proper installation, operation and maintenance of Parker equipment. Since application, installation, operation and maintenance are beyond the control of Parker, Parker disclaims any liability or responsibility for damage from fires or explosions regardless of origin. Parker recommends that all APC dust collection equipment, installation and application conform to any and all applicable local, state and federal standards, codes, laws and regulations including the addition of appropriate fire or explosion protection systems including but not limited to venting, mitigation, suppression and isolation when and where required. Installation of Parker equipment should be by a licensed contractor that is also experienced in potential fire and explosion hazards and adheres to related local, state and federal codes, standards, laws and regulations. Parker is not an expert nor certified design consultant in relation to spark, fire or explosion mitigation including but not limited to detection, mitigation, suppression and isolation pf combustible dusts and materials. Therefore, Parker recommends that any industrial air filtration system recommendation, design or solution be reviewed, approved, stamped and signed by an industry expert consultant in air filtration systems, combustible dust/materials or certified safety expert such as a Certified Industrial Hygienist (CIH) or a Certified Professional Engineer (PE) who is a licensed and certified expert with industrial filtration system design and application including adherence and compliance to any and all applicable local, state and federal codes, standards, laws and regulations.

Pursuant to Parker's Offer of Sale (terms and conditions) and by accepting the purchased equipment, Buyer and owner/user agree to defend, indemnify, and hold harmless Parker, its successors, assignees, suppliers, shareholders, directors, officers, employees, agents, and affiliated companies from all losses, costs, damages, demands, claims, liabilities, fines, penalties or any other expenses (including attorneys' fees, court costs, and expert fees) (collectively "losses"), caused or contributed to in any way by Buyer or owner/user's failure to follow these instructions and/or failure to properly install, apply, operate, or maintain the equipment purchased from or supplied by Parker, or losses caused or contributed to in any way by Buyer's and owner/user's failure to provide accurate information, specifications or dust explosivity values.

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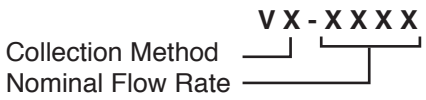
1. Important Notice

This manual contains specific information concerning safety and precautionary measures. It is impossible to list every potential hazard associated with dust collection equipment or systems. Use of the equipment must be discussed with a factory-trained, Parker representative. As always, please adhere to the most stringent safety procedures.

2. Introduction

Thank you for selecting Parker dust collection equipment to assist you in your commitment to a clean and safe environment.

2.1 Unit Nomenclature



Collection Method:
B = Downdraft Bench
F = Fixed Ducted Unit
P = Portable Unit w/ Swing Arm

Nominal Flow Rate:
750 = 750 CFM
1500 = 1500 CFM

Example:
VB-1500
This would be a downdraft bench with a nominal airflow of 1500 CFM.

2.2 Description and Operation

The V Series Dust Collection System is a high efficiency, cartridge dust collector designed to eliminate airborne particles as they are generated. Contaminant is captured at its source by a unit-mounted hood, downdraft table or ducted inlet and then conveyed through the cartridge filter section where it is collected. Clean air is then recirculated back to the work area.

There are two primary cycles of normal operation for the V Series — the air filtering operation and the filter cleaning cycle utilizing a compressed air cleaning system.

Figure 1 shows the basic system operation and equipment of a V Series dust collector.

2.3 Air Filtering Operation

The contaminated air stream is drawn into the collector. Once the dust-laden air enters the cabinet, it meets a baffle plate that disperses the air and significantly reduces the air stream velocity. This provides even distribution of the air stream across the entire surface area of the cartridge filters, allowing a uniform dust cake to form. The reduced air stream velocity causes the heavier particles to fall out and collect in the dust drawer. The air stream then passes through the cartridge filter where it is stripped of the particles by the media. Cleaned air flows through the center of the filter, through the blower (and optional safety after filters and exits through the rear of the cabinet, back into the workplace.

2.4 Filter Cleaning Cycle

As the cartridge filter becomes loaded with contaminants, it becomes necessary to clean the filter to maintain adequate airflow. The compressed air cleaning mechanism provides brief bursts of compressed air into the cylindrical cartridge filter. When actuated, the cleaning system directs 90-100 PSI of customer supplied compressed air through a pulse valve, into a blow pipe, creating a burst of pressure through the inside of the cartridge filter. This pressure dislodges the dust and reduces the pressure drop across the filter so the system can maintain adequate airflow.

3. Specifications

Air Collection Method:
The V Series dust collector comes in three basic dust collection configurations.
1. Downdraft Bench Unit (VB)
2. Fixed Ducted Unit (VF)
3. Portable Unit w/ Swing Arm (VP)
Within these variations, the units have two different models, the 750 and the 1500.

Cleaning Options:
There are two basic filter-cleaning options with the V Series: a cleaning system utilizing compressed air and an option where the filters are cleaned manually, external to the dust collector cabinet by the customer.

Power Supply Options:
All 1-1/2 HP motors are available in 115-230/1/60 and 200, 230, 460, 575/3/60. All 3 HP Motors are available in 200, 230, 460, 575/3/60.

See below for the amperage requirements of your unit, given the horsepower and power supply. The unit nameplate will provide the electrical specifications of your V Series system.

Motor HP	Power Supply	Amp Draw
1.5	115/1/60	16.4
1.5	230/1/60	8.4
1.5	200/3/60	5.2
1.5	230/3/60	4.8
1.5	460/3/60	2.4
1.5	575/3/60	1.9
3	200/3/60	8.4
3	230/3/60	7.8
3	460/3/60	3.9
3	575/3/60	3.1

Table 2 - Unit Amperage Requirements

Standard Unit Options:
HEPA After Filter, Carbon Odor After Filter, Pre-Wired Motor Starter Panels

Filter Media Options:
Protura® Nanofiber, Protura® Nanofiber Fire Retardant, Poly-Fiberglass, Spun-Bond Polyester
See Table 1 on page 2 to see the operating specifications on your V Series system.

4. Installation

4.1 Off Loading and Inspection

The V Series dust collector is shipped in two or three containers depending on the configuration and options selected. The first consists of the unit cabinet and filtration components. Other container(s) may contain the extraction arm, downdraft bench, etc.

Upon receipt of your unit, check for any shipping damage. A damaged carton indicates that the equipment may have received rough handling duringshipping that may have caused internal damage. Notify your delivery carrier and enter a claim if any damage is found.

Remove the filter access cover (located on the front of the unit) by turning the black knob counterclockwise to release the cover. Examine the seal between the tubesheet (the vertical panel between the blower section and the filter section) and filter. Make sure filter or gasket has not become displaced during shipment (refer to Section 6.1, Cartridge Filter Removal and Replacement). Replace covers once inspection is complete.

4.2 Installation

Different models of the V Series collector require different assembly techniques. Please see the techniques in the subsequent sections for your V Series dust collector.

All models of the V Series will require minimum clearances and access in order to perform routine maintenance and service. Be sure to leave access for filter removal, the dust drawer release lever and blower/pulse valve access through the discharge panel as shown in Figure 1.

4.2.1 Portable Installation (VP Model)

The top of the V Series cabinet has either one set of six (VP-750) or eight (VP-1500) threaded studs to mount the swing arm. The necessary hardware is pre-assembled the studs. When mounting the arms on the unit, a ceiling height of about 10' is required for adequate clearance. Two people are suggested for positioning the swing arm and securing into place.

1. Remove the swing arm from its shipping containers and assemble per the swing arm manual provided.
2. Remove nuts, lock washer and flat washer from the studs on the cabinet (refer to Figure 2).
3. Position flange gasket(s) inside the protruding studs on top of the unit (refer to Figure 2).
4. Position the swing arm mounting base into place over the mounting studs. Ensure gasket is positioned properly between unit and base flange. Secure swing arm to cabinet top with the recently removed hardware (refer to Figure 2). Avoid sharp pulls on the arm or hood as well as over-tightening the pivot section since damage to the arm components could result.

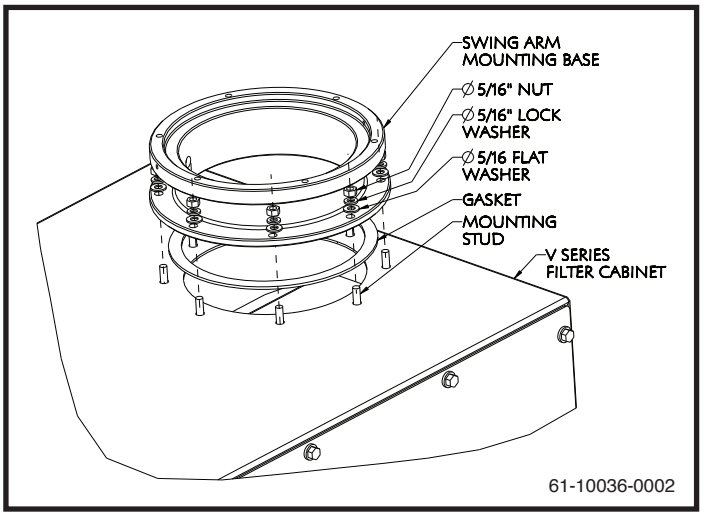


Figure 2. Swing Arm Installation Detail

4.2.2 Downdraft Table Assembly (VB Model)

The V Series downdraft table (VB) comes packaged, requiring some assembly before using. Follow the steps below to complete the assembly.

1. Begin by securing the two side panels as shown in Figure 3. Thread all four fastening knobs into the cabinet leaving enough space for the side panel to fit over top of threaded knob stud.
2. Lower each panel as shown onto the knob studs and then tighten knobs until panel is secure.
3. Lower the back panel into rear aligning tray and side panel guide slots.

4.2.3 Fixed Unit Assembly (VF Model)

The fixed unit assembly typically requires some type of customer-supplied ductwork to convey the dust from the source to the collector. See Figure 4 for a typical installation.

Care should be taken when sizing and laying out the ductwork in order to minimize loses through the system.

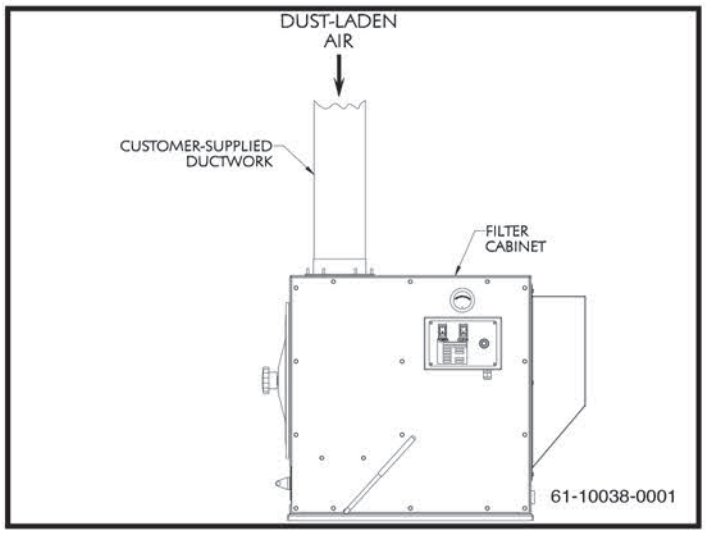


Figure 4. Typical Fixed Unit Installation

4.3 Pulse Cleaning

If your V Series system came with a cleaning system, please review the following section for optimum performance.

Provide a clean, dry, 90-110 PSIG compressed air supply to the compressed air manifold. The supply coupling (1" NPT) is located on the lower center of the unit's rear panel as shown in Figure 7. A reducer bushing may be required for your supply line.

Compressed air supply to the unit can be a flexible quick disconnect air line from a ceiling-mounted hose reel or similar supplied plant air. The hose size can be between 1/4" and 1" diameter.

The compressed air usage per cleaning cycle can be found in Table 1. Note that the cleaning system will only operate when the motor/blower is off. See Section 4.4.1 for adjustments available with the timer board.

4.4 Electrical Installation

The V Series unit has a wide variety of available electrical options to best meet your needs. Take care to ensure proper installation in whatever configuration you have selected.

For units only requiring a 115-volt, single-phase power supply, your unit will be supplied with a 15-foot power cord and plug and is electrically ready for operation. If the unit has a 230-volt, single-phase power supply, the unit will be provided with a power cord but the customer will be responsible for supplying and attaching the appropriate plug.

For units requiring three-phase power, there are two basic options. If Parker is supplying the motor starter, the unit will be equipped with a 15-foot power cord without a plug.

NOTE: All VP Series units come standard with a Parker supplied starter.

If the customer is supplying the motor starter, no cord, motor overload protection or control transformer will be provided.

Refer to Appendix A of this manual for the recommended wiring diagrams of your V Series unit.

4.4.1 Pulse Control Timer Board

Before making any changes to the Pulse Control settings, please read this section of the manual.

The Pulse Control timer board has been designed to pulse a single solenoid valve that supplies a pulse of compressed air to a dust collector filter. Unless otherwise specified, the timer board is factory set to a 0.1 second pulse duration, 10 second pulse delay, and 1 downtime cleaning cycle.

IMPORTANT

Information for units with 3-phase power

A separate motor starter auxiliary isolated dry contact must be supplied with the motor/blower starter for all 3-phase models and wired to terminals #13 and #14 of the pulse control board.

Timer Board Specifications

Power Requirement: 100-132VAC, 1 amp, 50/60Hz.
Operating Temperature: -40ºF to 140ºF (-40ºC to 60ºC),
Output: 1 solid-state switch at 1 amp max.
Required Input: Motor starter or switch isolated normally open contact.

Cleaning Cycle Adjustments/Time

(See Figure 5 for Cleaning Control Switch Settings)
Blower coast down delay: 60 seconds, non-adjustable
Number of downtime pulses performed upon blower shutdown: 1, 2, 4 or 6
Length of time between pulses: 10 or 30 seconds
Length of time output to valve is on: 100 or 150 milliseconds.

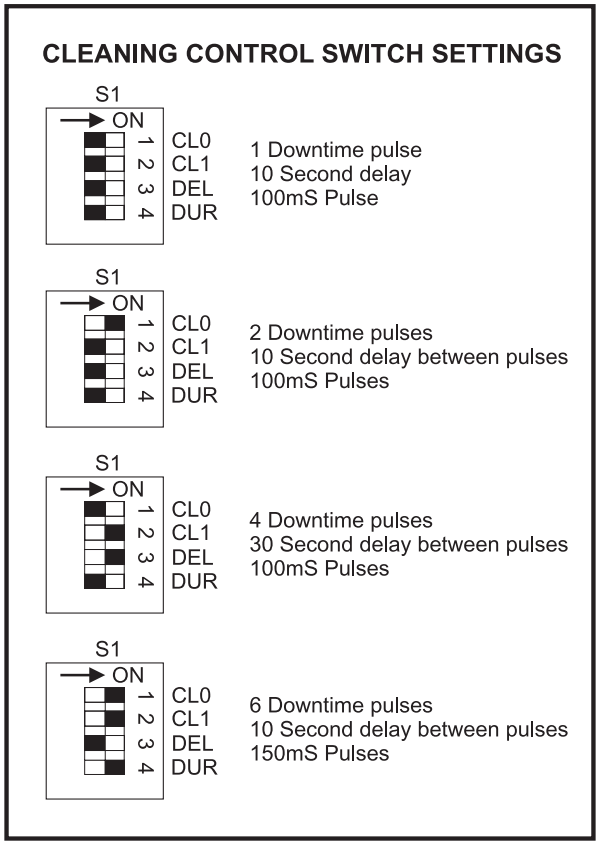


Figure 5. Cleaning Control Switch Settings

Downtime Cleaning Operation

1. Turn the CLEAN switch to the ON position. The PWR light will be ON.

2. When the CLEAN CONTROL contacts (#13 and 14) are shorted, the CLEAN light will be ON.

3. When the CLEAN CONTROL contacts open, the CLEAN light will flash for the duration of the cleaning cycle.

4. After the 60-second blower coast down delay, the valve output (V and N) will turn on for the selected length of time (100 or 150mS).

5. If more than one pulse is selected (2, 4 or 6), there will be a 10 or 30 second delay as selected between the pulses.

6. When the cleaning cycle is complete, the CLEAN light will turn OFF and the control board will wait for the CLEAN CONTROL contacts to close again.

If at any time during the cleaning cycle the CLEAN CONTROL contacts close, the cleaning cycle will be aborted, the CLEAN light will stop flashing, and the unit will wait for the CLEAN CONTROL contacts to open. The unit will NOT remember how many pulses were previously performed; and the cleaning cycle will start again from the beginning. The position of the four "white" switches on S1 determine the number of pulses, the length of the pulse and the delay between pulses. The position of the switches are read when the CLEAN CONTROL contacts open, and will not affect the cleaning cycle if changed during a cleaning cycle. (See Figure 5 for Cleaning Control Switch Settings)

Upon motor/blower shutdown, downtime cleaning will only be performed if the CLEAN SWITCH is in the ON position before the motor/blower is turned OFF. During downtime cleaning, the CLEAN light will flash for the duration of the cycles selected.

5. Operation

5.1 Start-Up

1. Position unit in desired location.

NOTE: Do not attempt to move the portable unit by pulling on the swing arm or hood. Use the fullwidth, bar-type handle on the back of the unit to push the V Series into the desired location. After the unit is situated, use the locks on the rear wheel casters to secure the unit.

2. Plug the unit into a properly grounded electrical receptacle.

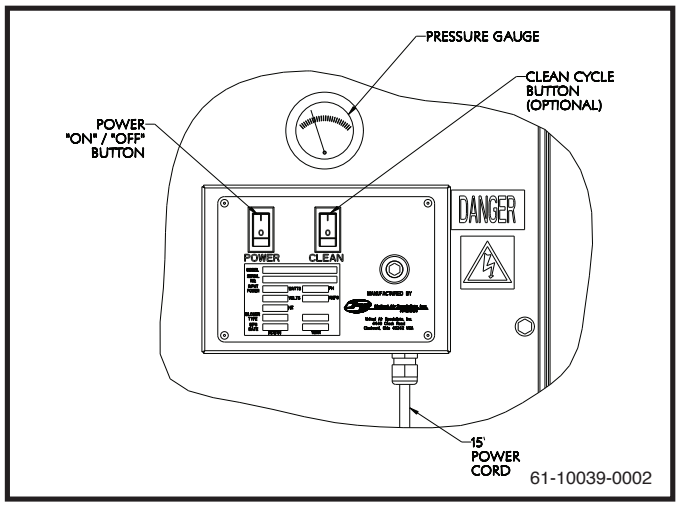


Figure 6. Control Panel Layout Detail

3. Turn the unit on by pushing the "Power" rocker switch to the ON position (refer to Figure 6). On 3-phase units, fan rotation will need to be verified by matching fan rotation with the rotation decal on the blower housing. Rotation should be clockwise as viewed from the motor or drive side. Any two motor starter leads should be reversed if the rotation is not correct.

4. The filter monitor gauge should read between 0.1" and 0.5" w.g. while unit is operating with clean filters.

5. The discharge plenum on the V Series collector can be rotated in 90 increments to direct the discharge air in multiple directions. The discharge housing will be factory installed with the discharge pointing towards the floor as shown in Figure 7.

Collecting Particles

1. Locate the unit, arm and hood in the best position to collect contaminants as generated by the process or operation, and where operator interference is minimal.

2. Position the hood to minimize the influence of cross drafts from outside air sources or other operations.

3. Position the hood slightly higher than the source, with the face of the hood approximately 45° from horizontal. The hood shape is designed for high velocity pick up. It should be located as close to the source as practical and no further than 14-16" from the contaminant source.

4. Check the filter monitor gauge at start-up. The cleaning system should be activated when the gauge has increased 0.5" w.g. above the start-up pressure drop. Allow unit to pulse clean until the original reading is achieved or until the gauge reading will not decrease after six consecutive pulses.

5.2 Checklist

1. Check the clean air outlet. Discharge air should remain visibly clean. If a leak should develop, it will be first noticed after a cleaning pulse as a puff of dust.

2. Check pressure drop on the pressure gauge (see Figure 6). Pressure drop across elements is considered normal between 0.5-5.0" w.g. Pressure drop will generally read between 1-2" for "seasoned" filters.

⚠ WARNING

The following procedure requires access to an area of the unit where high voltage is present. Access should be restricted to qualified personnel.

3. Check diaphragm valves to ensure proper pulse cleaning. With the cleaning cycle activated, the valve should pulse at approximately 10-second intervals. Remove lid of control panel enclosure to view the timer.

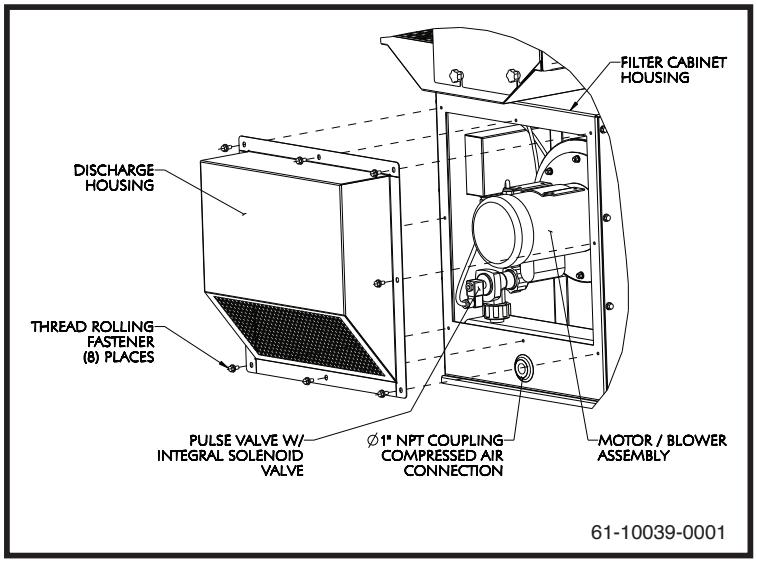


Figure 7. Rear Access

6. Service

⚠ WARNING

Collected dust may be hazardous. Consult proper authorities for handling and disposal.

1. Collected dust may be a potential fire hazard. Refer to Section 1 of this manual.

2. Wear appropriate protective clothing.

3. Be environmentally aware of collected dust and its proper disposal.

4. Press unit function switch to OFF position. Unplug unit from electrical power source.

5. Disconnect compressed air supply to air manifold inlet and bleed air supply from manifold.

6.1 Filter Removal and Replacement

As the V Series unit operates and the filter accumulates dust, the flow rate of the unit will deteriorate. When the pressure drop across the filter continuously reads between 2"-3" or flow drops off to the point where the dust generation process cannot adequately be controlled, then it is time to change filters. To change filters follow these steps:

1. Remove filter access cover by unscrewing the retaining knob (see Figure 8). Tilt cover back away from unit when freed from the retaining nut to trap any fugitive dust on the inside of the access cover. Dump dust into suitable disposal container.

2. Move filter from side to side to break gasket seal between the filter and the tubesheet. Rotate the filter 180° to allow dust on top of the cartridge to fall into the dust drawer.

3. Slide filter out along support rods and transfer to suitable disposal container. Empty dust drawer as described in Section 6.2.

4. Inspect tubesheet and make sure the gasket sealing area is free of dust to ensure a proper seal.

5. Install a new filter element. Clean access cover gaskets and reinstall cover by tightening the knob securely to the retaining nut until the gasket is adequately compressed.

6.2 Dust Drawer Removal

1. To access and remove the dust drawer located at the base of the V Series unit, you must first unseal the drawer by pulling the drawer release handle (see Figure 8) toward the filter access side of the cabinet. The drawer will move down and can be pulled out of the front of the cabinet.

2. Dispose of the collected dust into a suitable container. Any dust in the cabinet that was not contained in the dust drawer should be vacuumed out and disposed of.

3. Replace dust drawer by fully inserting into unit, and reseal the drawer by pushing the drawer release handle toward the control panel.

The collector should now be ready to operate. Reconnect electrical power and air supply. Go through initial start-up checklist to ensure proper unit performance.

6.3 After Filter Removal/Installation

If your unit was ordered with a HEPA or carbon after-filter, there will be an additional filter housing bolted to the discharge side of the V Series unit. The following steps will allow you to remove and replace the after-filter as shown in Figure 9. NOTE: After-filter housings for portable units (VP) have a push handle located on the top of the housing.

1. Release the four draw latches located on the filter housing to release the seal of the after-filter.

2. Remove the exhaust screen.

3. The after-filter will slide out of the housing as shown in Figure 9. Keep in mind that the filter weight may significantly increase from the collected material. Dispose of filter properly.

4. Install a new filter element by sliding it into the filter housing with the gasket of the after-filter leading.

5. Replace the exhaust screen and secure the four draw latches to seal the filter.

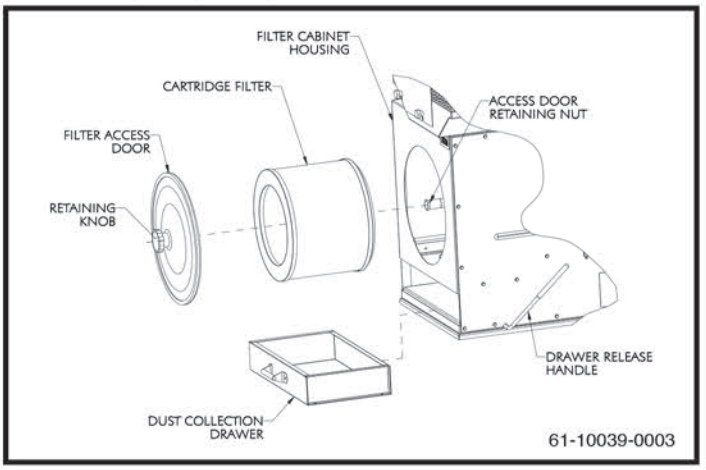


Figure 8. Cartridge Filter Removal

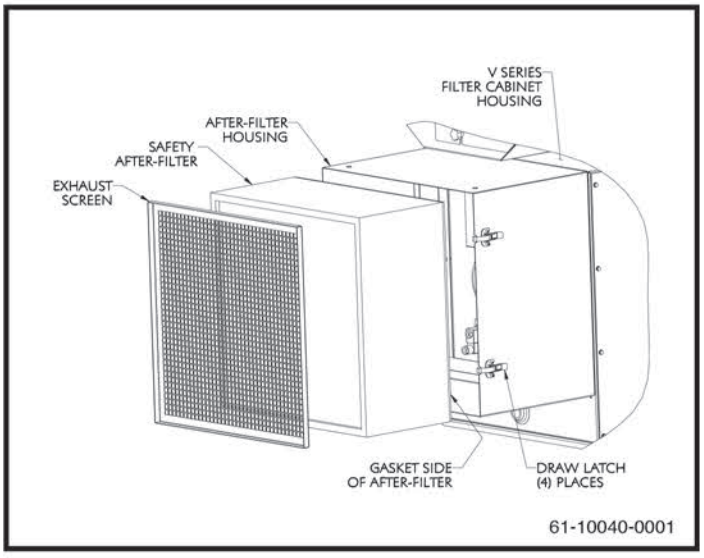


Figure 9. After-Filter Removal

6.4 Servicing Direct Drive Blower

To gain access to the direct drive motor/blower you must first remove the discharge air plenum as shown in Figure 7.

NOTE: The blower rotation should be clockwise when looking at the motor from the discharge side of the cabinet.

See the troubleshooting guide in Section 8 of this manual for clues on motor/blower problems.

7. Electrical

Tables 1 and 2 provide a listing of V Series model numbers and their corresponding voltage, motor horsepower and full load amperage draw.

Please complete the provided blanks on the inside cover of this manual. This will help you to identify your unit when dealing directly with Parker or your local Parker representative.

7.1 Unit Control (ON/OFF)

All units will have the blower controlled from the unit control panel (refer to Figure 6). A black ON/OFF rocker switch is provided to start/stop the blower.

7.2 Cleaning Controls (ON/OFF)

Section 4.4.1 of this manual clearly outlines the available settings and operation of the pulse cleaning system.

Control of the reverse pulse cleaning system is by a rocker switch on the unit control panel (refer to Figure 6). The pulse cleaning system operates independent of the blower. This provides for off-line cleaning.

NOTE: Compressed air must be connected prior to engaging cleaning system to prevent damage to diaphragm valves.

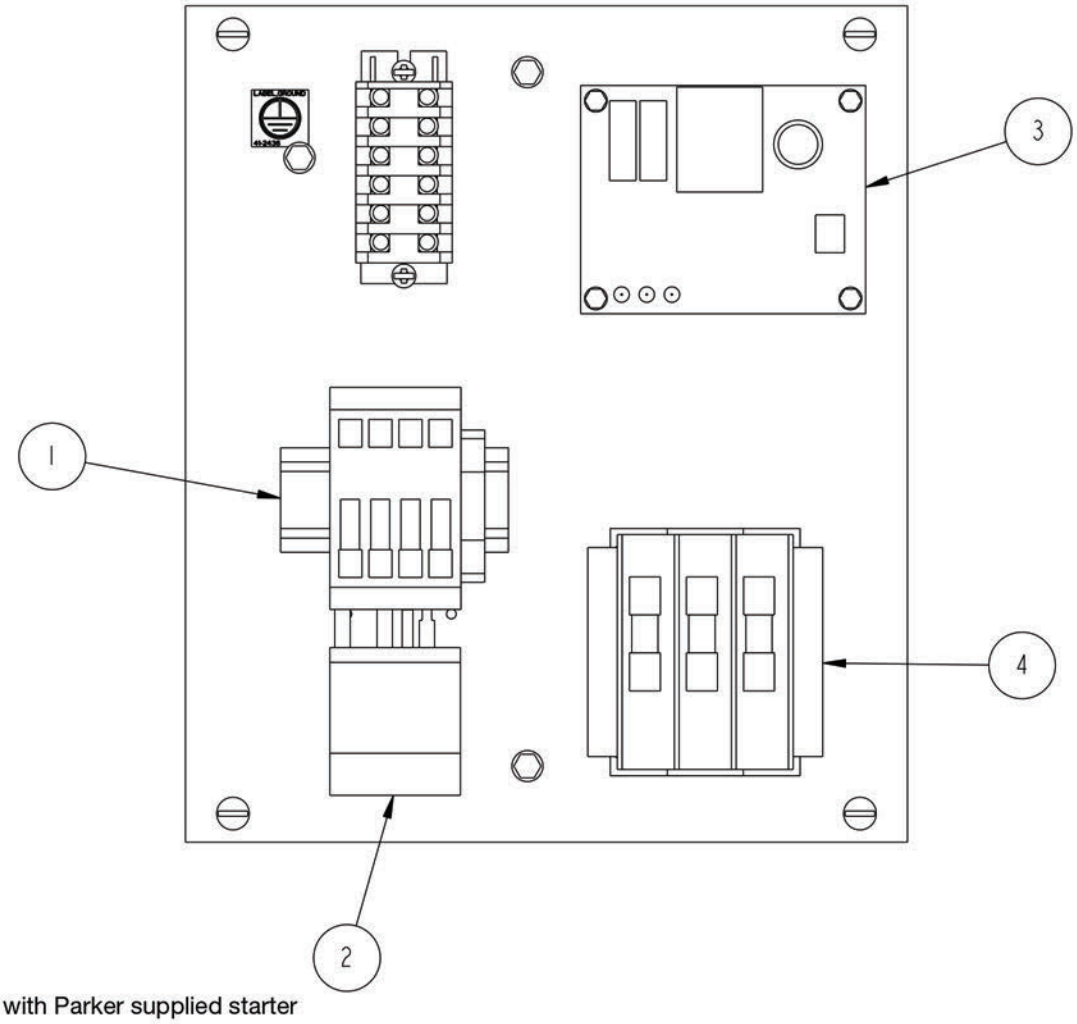
Electrical Schematics

An electrical schematic was included with your unit in this packet. Please secure the drawing to this manual for future reference. A copy of the appropriate wiring diagram is also affixed on the inside of the control panel.

8. Troubleshooting

PROBLEM	POSSIBLE CAUSE	RECOMMENDED SOLUTIONS
The Swing Arm slips from set position.	The joints require adjustment.	Adjust the joints (refer to Section 8.2 of the Swing Arm Manual)
Strong resistance during rotation of the arm.	Lack of grease in the rotating socket.	Grease the rotation socket.
Decrease in air volume.	A) The ventilation duct is plugged. B) Flexible hose not properly connected to arm tubes. C) The flexible hose is damaged. D) The Swing Arm damper is closed. E) Packed filters or other restriction in system.	A) Clean out blockage. B) Reconnect hose. C) Replace damaged hose. D) Open arm damper. E) Check downstream filters, replace or clean as needed.
Motor/blower won't start or won't stay running.	Improper electrical supply.	Refer to Section 7 for electrical specifications.
	Starter overloadtripped.	Reset overloads.
Dust emissions from clean air discharge	Filter element installed incorrectly; gasket not sealing.	Inspect and reinstall filter cartridge (refer to Section 6.1).
	Filter element damaged.	Replace damaged filter element.
Insufficient airflow	Fan rotation backwards.	Check fan rotation to ensure clockwise rotation (refer to Section 5).
	Air inlet restricted.	Check for obstructions and clear.
	Filters at end of service life.	Replace filters.
Continual excessive pressure drop (over 5.0") on filter monitor gauge.	Plugged filter elements.	Cleaning system not being used at required frequency. Increase frequency.
	Inadequate compressed air supply for cleaning mechanism.	Check air supply pressure (should be 90-110 PSIG).
	Filter elements at end of useful life.	Replace filters.
Pulsing failure of diaphragm valve.	Open solenoid valve.	Check continuity of solenoid coil with ohmmeter. Replace if necessary.

PROBLEM	RECOMMENDED SOLUTIONS
Timer does not operate. "PWR" light dose not illuminate.	1. Make certain 120VAC power is at terminals L and N. 2. Check fuses F1 and F2 for open circuit. If F1 is open, check wiring and replace fuse. If F2 is open, replace board.
Downtime cleaning does not function. PWR light not illuminated.	1. Make certain 120VAC power is at terminals L and N even after the motor/blower is turned off. The PWR light should be illuminated.
Downtime cleaning does not function. PWR light illuminated but CLEAN light not illuminated or flashing.	2. In units with motor starters: make certain an isolated normally open motor starter auxiliary contact is wired to terminals 13 and 14 (downtime cleaning begins when the motor/blower starter is turned off.)
Downtime cleaning does not function. CLEAN light flashing but valve does not pulse.	1. Check terminals V and N for 120VAC pulse. If no output when PULSE light flashes, replace board. If 120VAC pulse is detected, check wiring, valve coil and air supply.



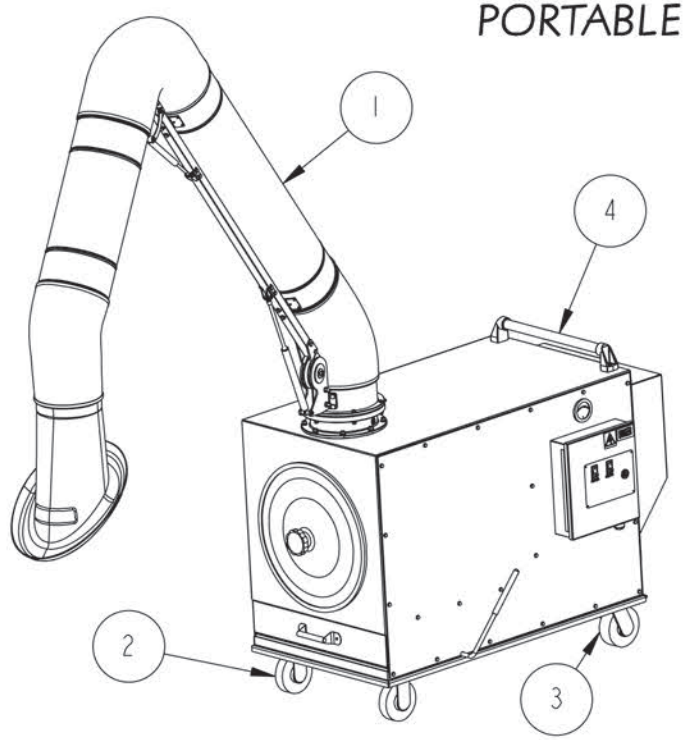
Panel shown is with Parker supplied starter

61-10041-0002

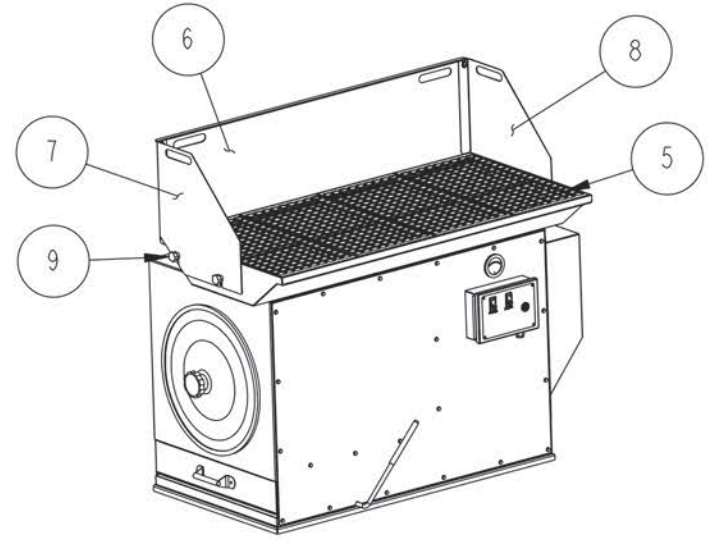
ELECTRICAL ENCLOSURE REPLACEMENT PARTS

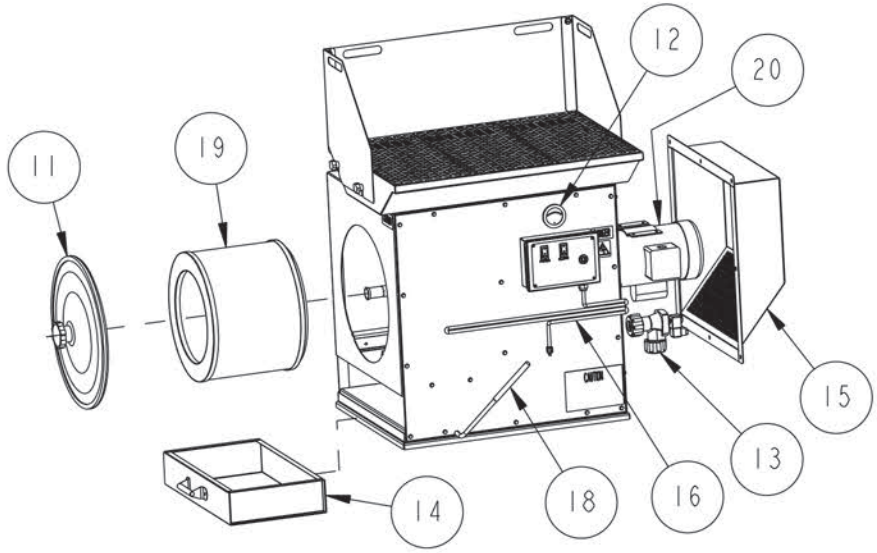
Item No.	Part Number	General Description
1	23-3124-9	CONTACTOR, MOTOR
2	23-3124-5.0	OVERLOAD RELAY (3-PHASE, 1-1/2 HP, 208,230 V)
	23-3124-3.1	OVERLOAD RELAY (3-PHASE, 1-1/2 HP, 460 V)
	23-3124-2.4	OVERLOAD RELAY (3-PHASE, 1-1/2 HP, 575 V)
	23-3124-8.5	OVERLOAD RELAY (3-PHASE, 3 HP, 208,230 V)
	23-3124-4.0	OVERLOAD RELAY (3-PHASE, 3 HP, 460,575 V)
3	20-3232	CONTROL BOARD, CLEANING SYSTEM
4	21-1275-050	TRANSFORMER, STEP-DOWN TO 120V (200-208V)
	21-1274-050	TRANSFORMER, STEP-DOWN TO 120V (230-460V)
	21-1276-050	TRANSFORMER, STEP-DOWN TO 120V (575V)
Not Shown	20-2920	SWITCH, ROCKER, DPST

PORTABLE - VP

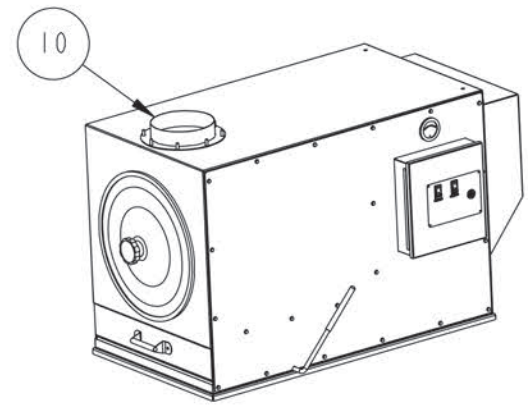


DOWNDRAFT BENCH - VB





FIXED UNIT - VF



61-10041-0001

Portable V Series Replacement Parts

Item Number	Part Number	General Description
1	15-10028-000M	Swing Arm, W/ Paravent Hood, 6” Dia. x 7’ Extension
	15-10029-000M	Swing Arm, W/ Paravent Hood, 6” Dia. x 10’ Extension
	15-10030-000M	Swing Arm, W/ Paravent Hood, 6” Dia. x 14’ Extension
	15-10031-000M	Swing Arm, W/ Paravent Hood, 8” Dia. x 7’ Extension
	15-10032-000M	Swing Arm, W/ Paravent Hood, 8” Dia. x 10’ Extension
	15-10033-000M	Swing Arm, W/ Paravent Hood, 8” Dia. x 14’ Extension
2	17-0026	Caster Rigid, 5” Dia.
3	17-0027	Caster-Swivel, 5” Dia. w/ Lock
4	39-0268	Push Handle Bar

Downdraft Bench V Series Replacement Parts

Item Number	Part Number	General Description
5	10-11872-0001	Grate, Bench, VS1500
	10-11873-0001	Grate, Bench, VS750
6	10-11876-0001	Plate, Rear, Bench, VS1500
	10-11877-0001	Plate, Rear, Bench, VS750
7	10-11880-0001	Side plate, FMD, Left, Bench
8	10-11881-0001	Side plate, FMD, Right, Bench
9	39-10026-0001	Knob, 5-Lobe w/ Stud, 1/4-20

Fixed Unit V Series Replacement Parts

Item Number	Part Number	General Description
10	45-10017-0001	Slip Collar, 6” DIA

V Series Common Replacement Parts

Item Number	Part Number	General Description
11	02-10709-0001	VS, Filter Cover, ASM
12	07-0081	Gauge-Minihelic,0-5” S.P.
13	07-10002-0002	Valve, Diaphragm, 1” Comp., DM25, W/ Int Sol
14	18-10716-0001	Dust Drawer, VS 1500
	18-10720-0001	Dust Drawer, VS750
15	18-10728-0001	Discharge Housing, VS
		Contact Parker for After Filter Housing Information
16	20-2813	Cord, Power, 14-3, W/ plug, SJT, 15ft (Single Phase Power)
		Cord, Power, 14-3, SJT, 15ft (3-Phase Power)
18	39-10025-0001	Grip, Black Vinyl,1/2” Rod
19	Filter	See standard filters below.
20	Motor/Blower	Contact Parker for information.

V Series Standard Filters

	Part Number	General Description
	33-10097	Filter, Cartridge, Nanofiber, VS-750
	33-10097-1	Filter, Cartridge, Nanofiber, Fire Retardant, VS-750
	33-10098	Filter, Cartridge, Nanofiber, VS-1500
	33-10098-1	Filter, Cartridge, Nanofiber, Fire Retardant VS-1500
	33-10081-0001	Filter, HEPA 99.97, 23.375x23.375x11.5, UP GASK>
	33-10082-0001	Filter, HEPA 99.97, 23.375x23.375x5.875, UP GASK>
	33-1219	Filter, Charcoal, 24x24x6

Appendix A. V Series Wiring Diagram

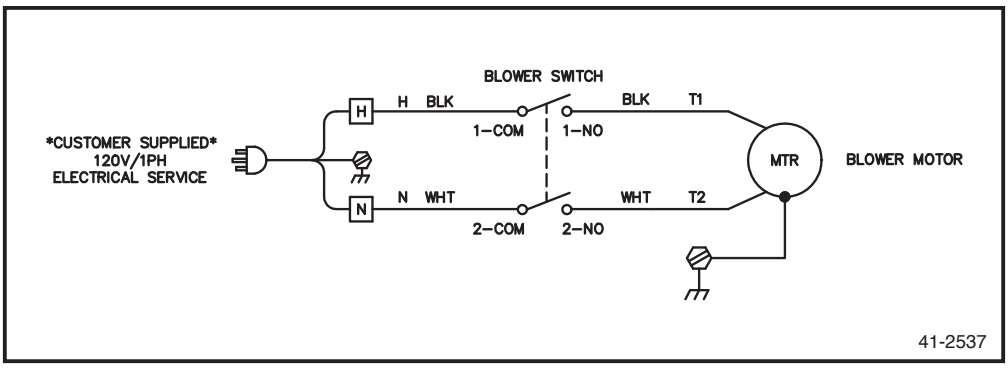


Figure 10. Wiring Diagram 120 Volt, Single Phase, Manual Clean

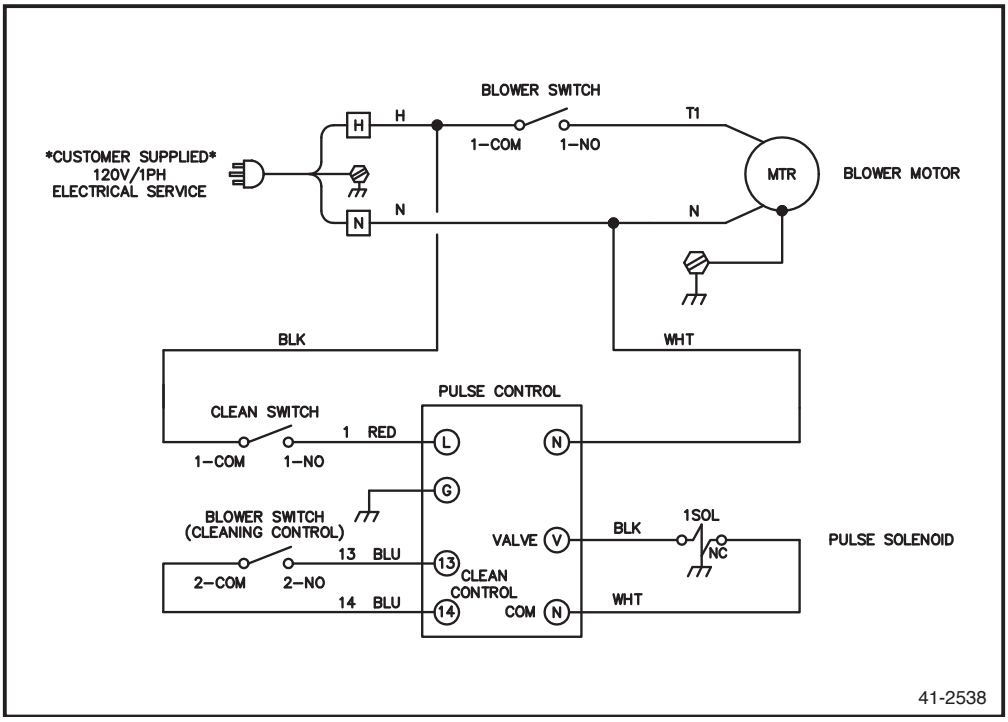


Figure 11. Wiring Diagram 120 Volt, Single Phase, Pulse Cleaning

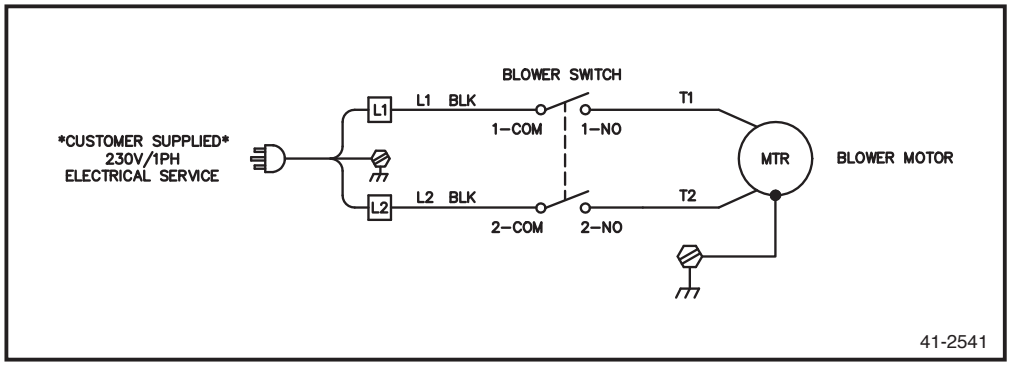


Figure 12. Wiring Diagram 230 Volt, Single Phase, Manual Clean

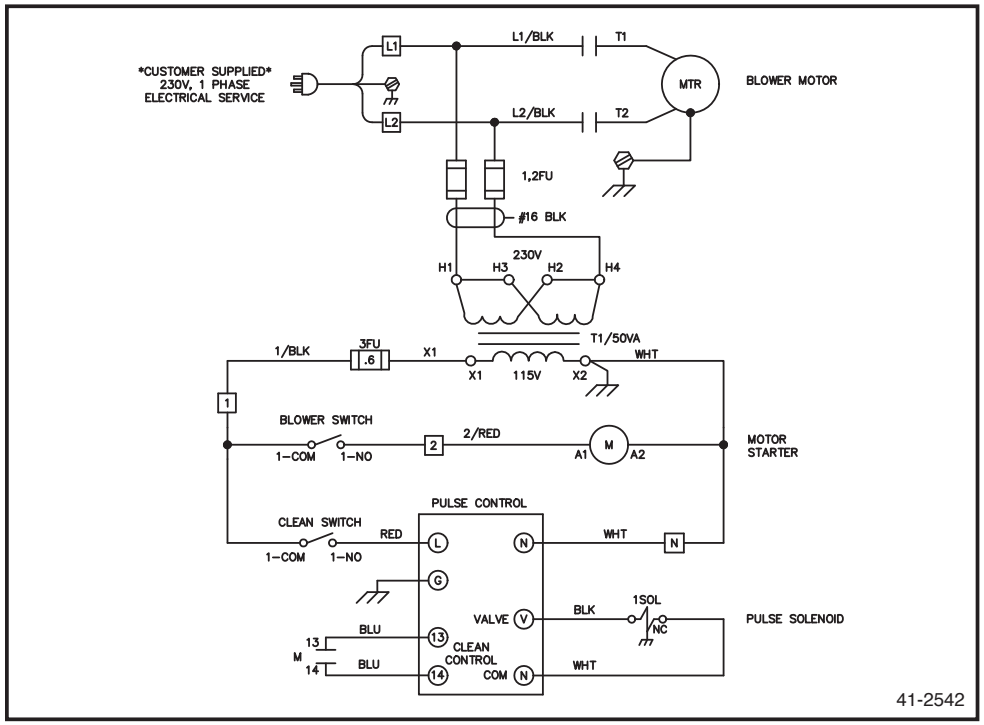


Figure 13. Wiring Diagram 230 Volt, Single Phase, Pulse Cleaning

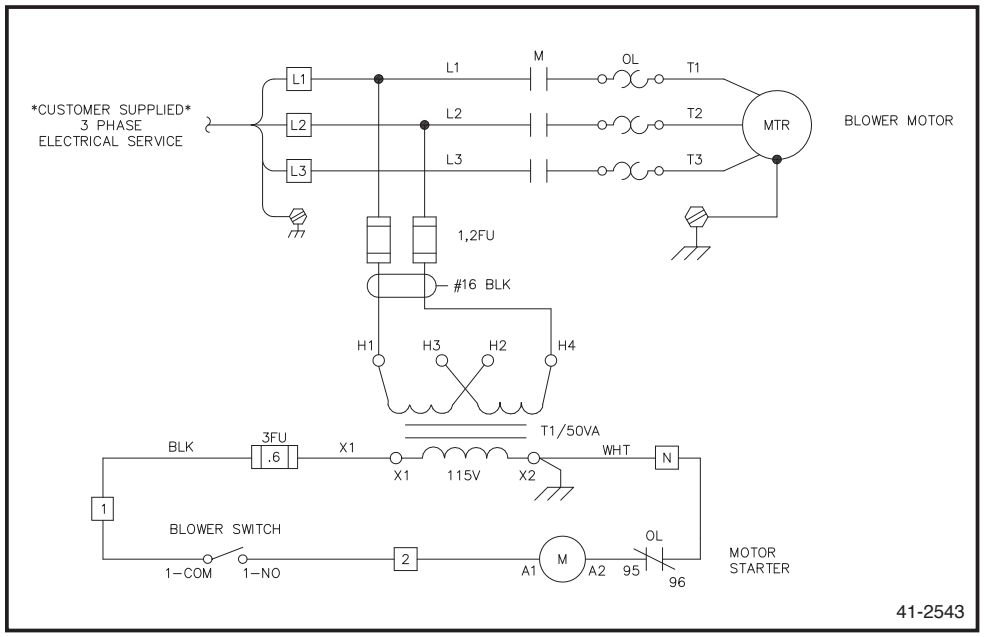


Figure 14. Wiring Diagram, Three Phase, Manual Clean w/ Parker Supplied Starter

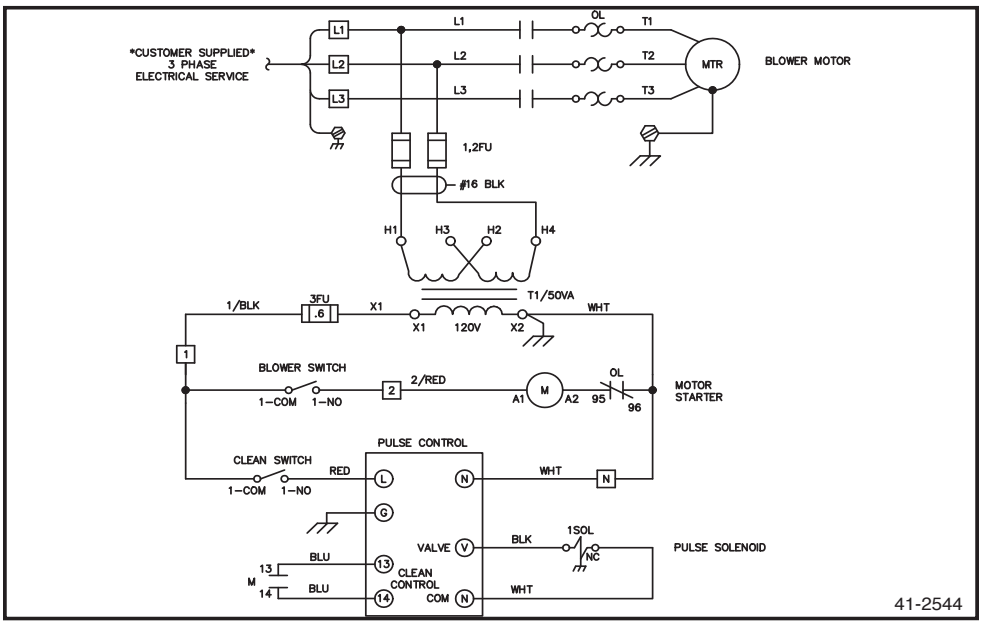


Figure 15. Wiring Diagram, Three Phase, Pulse Cleaning w/ Parker Supplied Starter

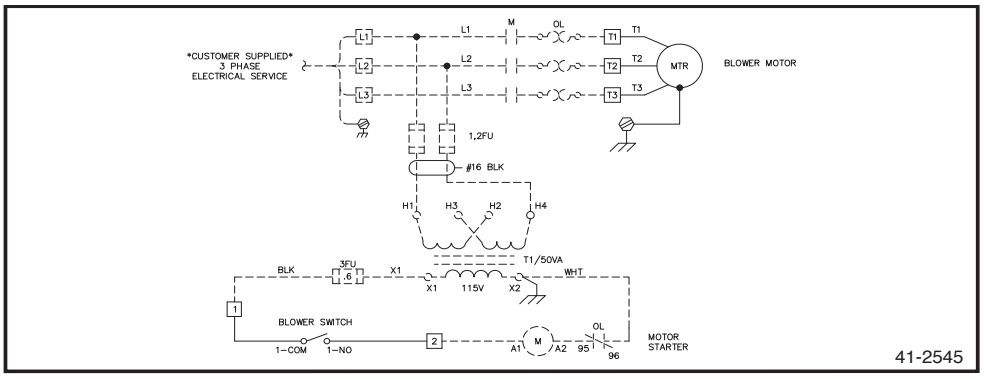


Figure 16. Wiring Diagram, Three Phase, Manual Cleaning w/ Customer Supplied Starter

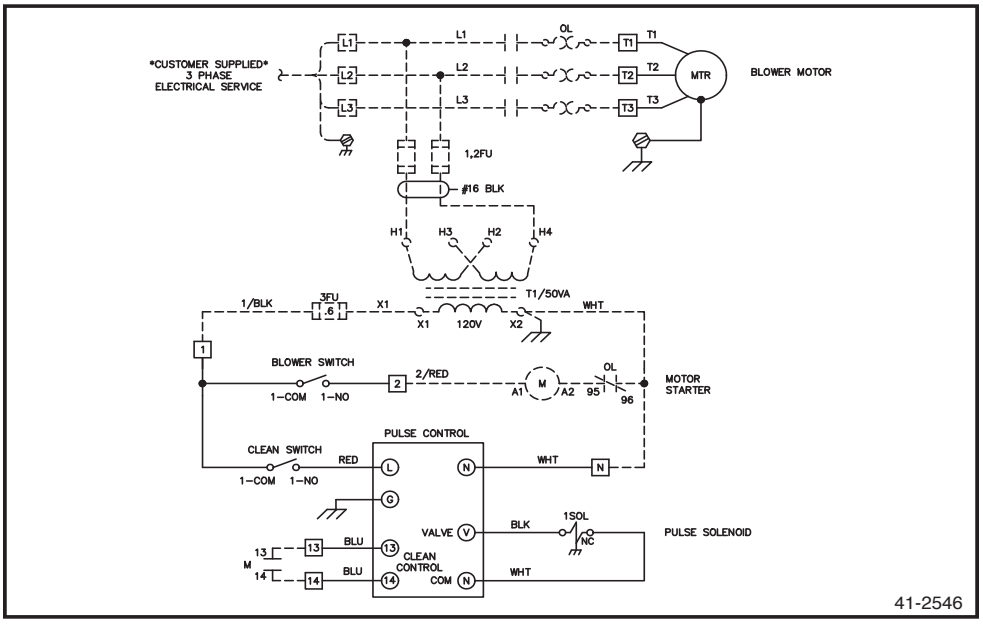


Figure 17. Wiring Diagram, Three Phase, Pulse Cleaning w/ Customer Supplied Starter

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Product Warranty –

SMOG-HOG® and DUST-HOG® Pollution Control Systems

1. Subject to the terms and conditions hereof, Parker-Hannifin Corporation (PARKER) warrants that major structural components on MCB, PNP, SDC, SFC, and SHM series will be free from defects in materials and workmanship for ten (10) years from the date of shipment from Parker. Subject to the terms and conditions hereof, warrants to the original Buyer of any Parker product (PRODUCT) installed and used as recommended by PARKER in normal service, that if the PRODUCT fails or is materially defective within twenty-four (24) months from date of installation or thirty (30) months from the date of shipment (whichever is earlier), of such PRODUCT, then PARKER, at PARKER'S sole option, will replace the PRODUCT with the same or equivalent PRODUCT, repair the PRODUCT or refund the original purchase price for the PRODUCT. Such replacement, repair of payment by PARKER shall be in complete satisfaction of any and all liability of PARKER and its agents with respect to such PRODUCT. Excluded from any Parker warranty are hose, electrical motors or consumable products such as flexible hose, belts, filter cartridges, filter media, ESP cells, electrical components, gasketing, or any component defined by PARKER as a consumable item.

2. Parker IGFG's warranty policy covers defects that are due to manufacturing quality. Equipment must be installed, commissioned and maintained in accordance with Parker IGFG recommendations as documented in the specific user manual related to your dust or wet collector product. This warranty does not cover defects due to poor environmental conditions, improper installation, or wear and tear items. This warranty shall be void in case of:

a) Any buyer's modifications not explicitly approved by Parker IGFG Division,
b) Misuse or failure in maintenance - not in accordance with Parker's product recommendations,
c) Use of unauthorized or non-genuine Parker replacement parts,
d) Damage caused by corrosion, abrasion, abnormal use or misuse, misapplication, or normal wear and tear,
e) Equipment not properly installed, operated and maintained under normal conditions and recommended applications.

As Buyers exclusive remedy for any defects in the equipment, Parker will exchange or repair any defective parts during the warranty period, provided such parts are returned, prepaid, to Parker factory. The obligation of Parker is limited to furnishing replacement parts EXW Parker factory or making repairs at Parker factory of any parts that are determined, upon inspection by Parker, to be defective. In no event will Parker be responsible for labor or transportation charges for the removal, reshipment or reinstallation of the parts. Replacement parts will be provided via INCOTERMS EXW from Parker's Lancaster NY location. Parker makes no warranty as to goods manufactured or supplied by others.

3. THE FOREGOING IS THE ONLY WARRANTY, GUARANTEE OR REPRESENTATION OF ANY KIND MADE WITH RESPECT TO THE SUBJECT PARKER PRODUCTS. NO IMPLIED WARRANTY, INCLUDING ANY IMPLIED WARRANTY OF NONINFRINGEMENT, DESIGN, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, APPLIES TO THE PRODUCT, AND NO OTHER EXPRESS WARRANTY OR GUARANTY, EXCEPT AS MENTIONED ABOVE, GIVEN BY ANY PERSON, FIRM OR CORPORATION WITH RESPECT TO THE PRODUCT SHALL BIND PARKER. PARKER SHALL NOT BE LIABLE FOR LOSS OF REVENUES OR PROFITS, EXPENSE FOR SUBSTITUTE EQUIPMENT OR SERVICE, STORAGE CHARGES, OR ANY OTHER SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES CAUSED BY THE USE, MISUSE OR INABILITY TO USE THE PRODUCT REGARDLESS OF THE LEGAL THEORY ON WHICH THE CLAIM IS BASED, AND EVEN IF PARKER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. NOR SHALL RECOVERY OF ANY KIND AGAINST PARKER BE GREATER IN AMOUNT THAN THE PURCHASE PRICE OF THE PRODUCT SOLD BY PARKER AND CAUSING THE ALLEGED DAMAGE. WITHOUT LIMITING THE FOREGOING, YOU ASSUME ALL RISK AND LIABILITY FOR LOSS, DAMAGE OR INJURY TO YOU AND YOUR PROPERTY AND TO OTHERS AND THEIR PROPERTY ARISING OUT OF USE, MISUSE OR INABILITY TO USE THE PRODUCT NOT CAUSED DIRECTLY BY THE NEGLIGENCE OF PARKER. THIS LIMITED WARRANTY IS GIVEN ONLY WITH RESPECT TO A PRODUCT PURCHASED FROM PARKER OR AN AUTHORIZED PARKER DISTRIBUTOR.

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5. Defective PRODUCTS must be documented via PARKER support "Case Number" within thirty (30) days after the date of the alleged failure or defect and within the warranty period by contacting Parker Technical Support via email or phone:

smoghog@parker.com or dusthog@parker.com
800-343-4048, option 2

The claim must specify in reasonable detail:
1) Product Serial Number or Parker Sales Order # and approximate Date of Purchase;
2) Where or from whom the product was originally purchased;
3) Description of problem symptom;
4) Description of troubleshooting effort details;
5) Description of physical location and/or environment details. The Buyer shall cooperate with PARKER in its investigation and provide full information and documentation concerning the PRODUCT and its usage.

Upon receipt of the claim, Parker IGFG will review and determine if the parts replaced need to be returned for quality evaluation and root cause investigation. If a part is required to be returned, Parker IGFG will issue a Return Material Authorization (RMA) to Return via email. Parts should be returned to Parker IGFG, freight collect, within 45 days accompanied by the RMA packing slip placed on the package. If the repaired part does not need to be returned you will be advised to field scrap it and the claim will be processed. Proof of the defect (written description and pictures of the parts units in question) is required.

NOTE: ANY PART NOT RETURNED WITHIN THE REQUIRED 45 DAYS WILL NOT BE REIMBURSED ON THE CLAIM.

On claims that require repaired parts return, the claim will be processed after the part has been evaluated by the Parker IGFG Quality Department for verification of failure mode. The claims will be paid in the form of a credit to the customer's account. Parker reserves the right to withdraw any quotation or proposal or reject any purchase order without liability.

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Parker Hannifin Corporation
Industrial Gas Filtration and Generation Division
4087 Walden Avenue
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phone 800 343 4048
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