KOGI Environmental Solutions | Parker

Downward Flow Cartridge Dust Collector Owner's Manual

Model SFC

KNOW YOUR EQUIPMENT

READ THIS MANUAL FIRST.

Your SFC system should provide many years of trouble-free service. This manual will help you understand the operation of your SFC 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 #:_____

Cartridge Filter Part #: _____

System Accessories:

_____

_____

_____

Installation Date: _____

Parker Hannifin Customer Service

1-800-343-4048

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SAFETY PRECAUTIONS

We have provided many important safety messages in this manual and on your SFC dust collector.
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 when using your air cleaner, follow these basic precautions:

- Wear protective clothing and safety glasses when handling collection filters or servicing the dust collector.
- Use proper lifting and rigging equipment to install your dust collector.
- The dust collector must be properly grounded.
- Disconnect power before servicing.
- Replace all access panels before operating.
- Electrical connections should only be made by qualified personnel, and be in accordance with local and national codes and regulations.
- Do not use in explosive atmospheres unless the dust collector is equipped with the appropriate accessories.
- Keep flammable materials and vapors, such as gasoline, away from dust collector.
- The unit should be inspected frequently and dirt removed to prevent excessive accumulation which may result in flash-over or fire damage.
- The SFC system should not be used to support personnel or material.
- Operate only in a safe and serviceable condition.
- Do not allow any individual to put lit cigarettes or any burning objects into any hood which is ducted into the dust control system.

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.

If requested and ordered by the Buyer or owner/user and approved by Parker IOU engineering, sprinkler connection couplers may be supplied and factory installed with certain DustHog dust collector models such as the MCB, SDC, and SFC. The buyer or owner/user is responsible to supply, install and test the sprinkler head and any related or required fire control system devices, components or accessories. It is the responsibility of the buyer or owner/user to test functionality and operation of the fire control system including but not limited to correct water pressure, water leakage, correct installation, appropriate fire control system component location, correct operation and appropriate application while strictly adhering to any and all prescribed AHJ, OSHA, NFPA, Federal, State/Provincial and Local codes, standards, regulations and instructions applicable to industrial dust collectors, fire control systems and any related or required components and processes.

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 important safety information and precautionary measures. It is impossible to list all potential hazards associated with every dust collection system in each application. Proper use of the equipment should be discussed with Parker Hannifin. Operating personnel should be aware of, and adhere to, the most stringent safety procedures.

⚠ DANGER

EXPLOSION HAZARD

- **Avoid mixing combustible materials such as aluminum, paper, wood or other organic dusts with dusts generated from grinding materials. A fire hazard could develop from sparks entering the dust collector. When collecting flammable or explosive materials, the dust collector should be located outdoors and incorporate the appropriate safety measures and/or accessories.**
- **When collecting emissions from spark-producing processes, care must be taken to reduce any potential fire hazards. System design should include methods to prevent sparks from entering the dust collector. Dust collectors do not contain fire extinguishing equipment unless specifically ordered. Experts in the field of fire extinguishing equipment should be consulted for recommendations concerning proper fire detection and suppression systems.**
- **Some dust collection systems require explosion venting. Consult your insurance underwriter, NFPA (National Fire Protection Association) manual and your local fire authorities to determine the requirements for explosion venting.**
- **Be careful and conscientious – consult national and local fire codes, waste disposal, safety and other appropriate authorities. Comply with their recommendations for the proper installation and operation of dust collection equipment.**
- **Your dust collector was selected for a particular application. Consult Parker prior to making any application or system changes.**
- **All explosion vent installations should be located to allow full-unrestricted discharge when system pressure exceeds the set pressure of the explosion vent. An explosion vent should never be located where the discharge from the vent will impact people or plant equipment.**
- **Do not use the explosion vent as temporary work surface for hand tools; i.e., wrenches, screw drivers, etc. Such actions can cause premature failure to occur via over stressing the explosion vent.**
- **All dust collectors handling hazardous or fire/explosion risk dust, as determined by the user, are recommended to be located outside the building in non-traffic areas even though the dust collector is equipped with an explosion vent.**

2. Introduction

Thank you for selecting Parker dust collection equipment to assist you in your commitment to a clean and safe environment. We trust that in purchasing our product, you have recognized our commitment to continually offer air cleaning equipment engineered to each dust collection need and manufactured to the highest standards. If at any time you have a question about dust collection, please do not hesitate to call your local Parker representative.

The SFC is designed to collect process generated dusts. The optimized pulse cleaning system coupled with the QuickSeal filter access doors provide the most dependable and maintenance friendly cartridge collector in the market.

The SFC dust collector should not be used for any purpose not listed in this manual.

As you review this manual, refer to Figure 1 for assistance in identifying dust collector parts. The SFC Specification Table in Section 3 provides additional unit information.

2.1 Unit Nomenclature

Example: SFC8-2-H55
SFC = Model collector
8 = number of cartridge filters
2 = number of filter tiers
H55 = unit base arrangement
- H55 - hopper with 44” (112 cm) clearance for standard 55 gallon (208 liter) drum
- SD - hopper with 28” (66 cm) clearance for Parker-supplied 20 gallon (76 liter) drum
- OB - open bottom construction
- BV - custom bin vent unit with open bottom
- DD - dust drawer

2.2 Description and Operation

The SFC is a high-efficiency cartridge dust collector designed to eliminate airborne dust as it is generated. Contaminants are captured at the source(s), then conveyed through ducting to the cartridge filter section (dirty air section) where the dust is collected. Clean air is then discharged from the unit through the clean air discharge.

The dust collector is designed for on-line or downtime cartridge filter cleaning by means of a customer-supplied compressed air system.

The SFC is a high-efficiency, horizontally-oriented cartridge dust collector equipped with 9.48” I.D. and 13.87” O.D. cartridge filters. The larger diameter ProTura® Nanofiber cartridge filter design allows for lower pressure losses through the dust collector while increasing the amount of media contained in each filter. SFC Series dust collectors have pre-engineered backward-inclined or radial-type optional blower packages in 2, 3, 5, 7-1/2, 10, 15, 20, 25 and 30 hp (1.5, 2.2, 3.7, 5.5, 7.5, 11, 15, 18.8, 22.6 kW) assemblies.

There are two primary modes of operation — the air filtering operation and filter cleaning cycle. Both modes of operation are shown in Figure 1.

2.3 Air Filtering Operation

The contaminated airstream is drawn into the dust collector where its velocity is reduced by inlet baffle plates to provide even air distribution across the entire surface area of the cartridge filters. This design enhances filtration efficiency by establishing a uniform “dust cake” on the filters. The airstream is then directed around the cartridge filters and down toward the hopper, where the heavier particles discharge to the dust storage drum.

The contaminated air then passes through the cartridge filters. The filter media strips the dust from the airstream, allowing only clean air to pass through the cartridge filter. The air then passes into the clean air plenum, through a blower package and is discharged from the unit.

2.4 Filter Cleaning Cycle

During normal operation, the surface of the cartridge filters become loaded with contaminants. The reverse-pulse cleaning mechanism provides brief bursts of compressed air, directed through the diaphragm valves, toward the cartridge filter. This pulsing action dislodges the collected particles from the media, where they fall into the hopper and are discharged to a dust storage drum or drawer.

During the cleaning cycle, each pair of cartridge filters is cleaned individually. The solid-state sequential timer actuates a solenoid valve, which allows an air diaphragm valve to open for approximately 100 milliseconds. High-pressure air from the air manifold reservoir is directed through the diaphragm valve toward the venturi mounted on the tubesheet in front of the cartridge filters. The venturi, in conjunction with the DIF nozzle, maximizes the compressed air energy to maximize the amount of collected dust released from the filter surface.

The dislodged dust removed from the filter is swept downward into the hopper. The remaining filters are cleaned sequentially. The sequencing is factory preset at 10-second intervals and is adjustable to adapt to your particular cleaning needs.

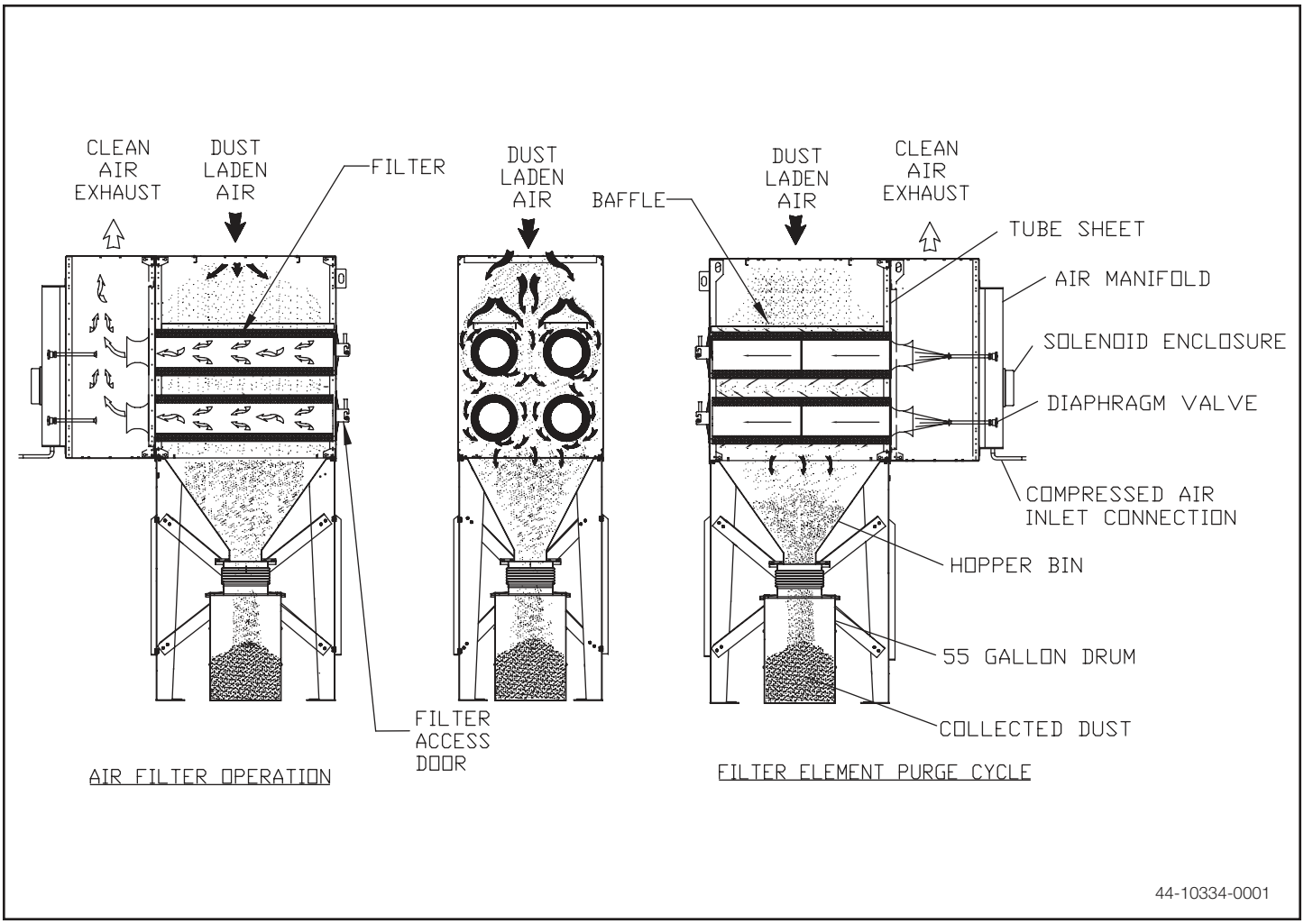


FIGURE 1
SFC Air Filter Operation & Cleaning

3. Installation

3.1 Off Loading and Inspection

SFC dust collector modules are shipped assembled (with cartridges installed) on skid(s). Other skids will contain the hopper/leg assembly and other components. Other accessories (afterfilter assemblies, blower packages, dust storage drums, silencers, etc.) may be on additional, separate skids.

⚠ DANGER

TIP OVER HAZARD

Lift the dust collector components by the packing skids or use the external lifting lugs provided on the filter module. Do not lift the filter module of the dust collector by placing lift truck forks through the cartridge filter access doors. The filter support rails or venturi installed on the tubesheet could be damaged.

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

3.2 Installation Planning

The proper location of your dust collection equipment is very important. Refer to Figures 2 and 3 for typical installation details.

Certain items should be considered when locating the unit, such as emptying of the dust storage drum(s), filter removal requirements, compressed air connections, access to the clean air plenum, electrical connections, blower location and discharge direction. The shortest duct length with a minimum number of elbows will maximize the performance of the unit. Ease of maintenance should also be considered when selecting the location and orientation of the system. Refer to Figure 3 for recommended clearances.

⚠ DANGER

EXPLOSION HAZARD

In the case of spark producing processes, system design should incorporate measures to prevent live sparks from entering the dust collector. Consult local authorities for the location of the unit and any additional precautions to consider when collecting combustible, explosive or hazardous dusts. General warnings and cautions are provided on page iii and in Section 1.

⚠ DANGER

TIP OVER HAZARD

The SFC dust collector should be mounted on a solid, level, reinforced concrete foundation. Other mounting options are also possible. Structural calculations for the foundation or other mounting arrangements must include the weight of the collected material and the weight of all auxiliary equipment installed with the dust collector (ducting, abrasive inlet, blower package, afterfilter assembly, etc.). These weights must be considered together with wind loading, seismic loading and other live load ratings when designing the dust collector foundation support structure. Consult a professional engineer when designing the foundation for the unit.

The system should be designed with the ability to regulate airflow. Two common ways to do this are through the use of flow/volume control dampers or variable frequency drives to control the speed of the fan motor. Parker offers both of these options. If flow control dampers are selected, the interconnecting duct work should be designed to account for the installation of said damper. These dampers can be installed on the inlet or outlet ducting of the SFC unit. Whether you control the flow through the use of a damper or VFD, the ductwork must be properly sized to meet the recommended air velocities for the material being collected.

Follow ducting design methods as listed in the Industrial Ventilation Manual as recommended by the American Conference of Governmental Industrial Hygienists.

3.3 Assembly Of Standard Equation

⚠ DANGER

CRUSH AND ELECTROCUTION HAZARD

Use adequate safety measures when lifting and assembling any heavy components. Consult your plant safety personnel for recommendations.

In preparing to attach the filter module to the hopper, connect lifting slings and spreader bars to all filter module lifting lugs with clevis pins. Use spreader bars to distribute the load evenly. Location must be clear of all obstructions, such as utility lines or roof overhangs.

Remove all crating, strapping and hold-down bolts. Locate all hardware bags, sealant and other assembly materials provided with your unit.

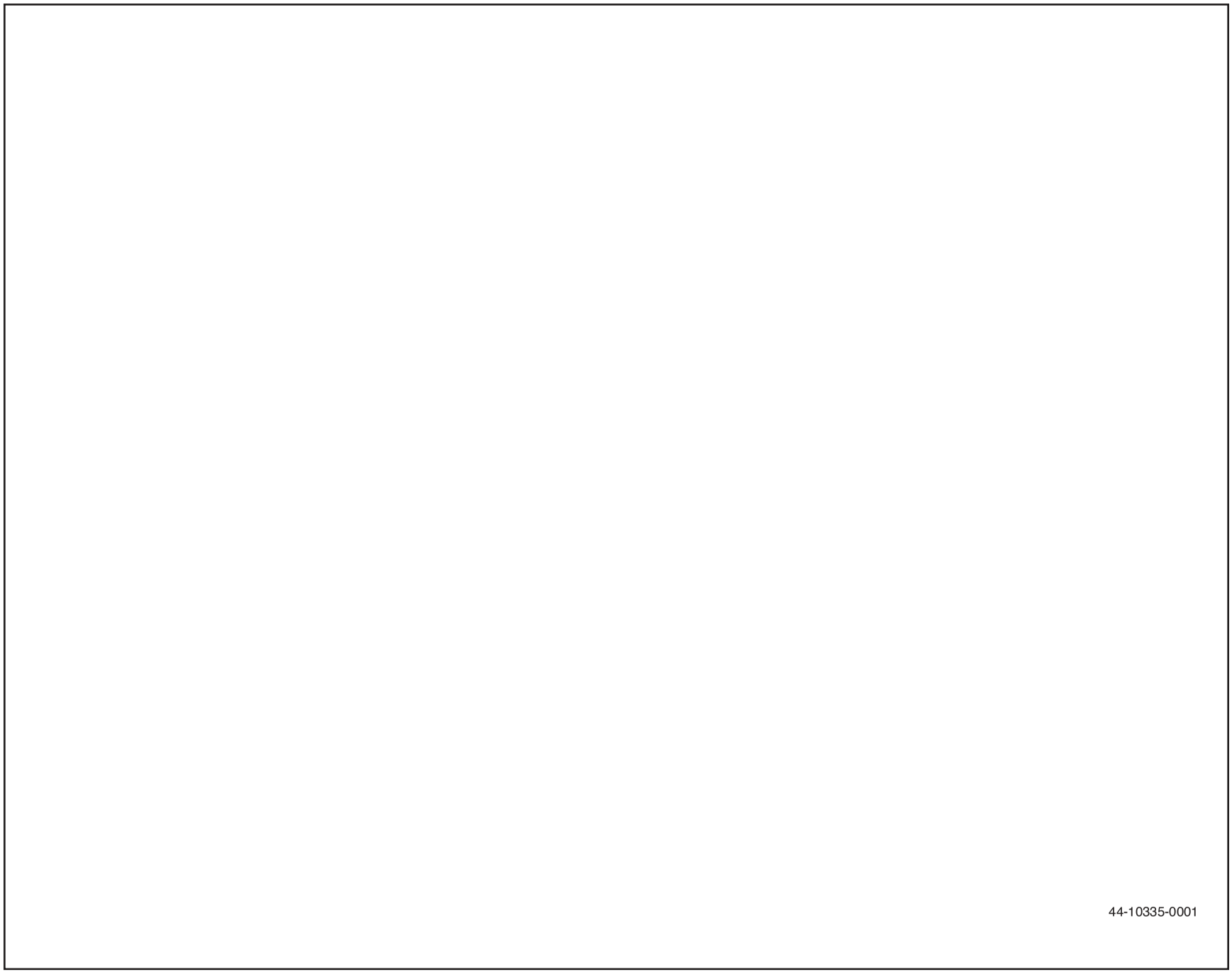


FIGURE 2
SFC Typical SINGLE UNIT Installation Diagram

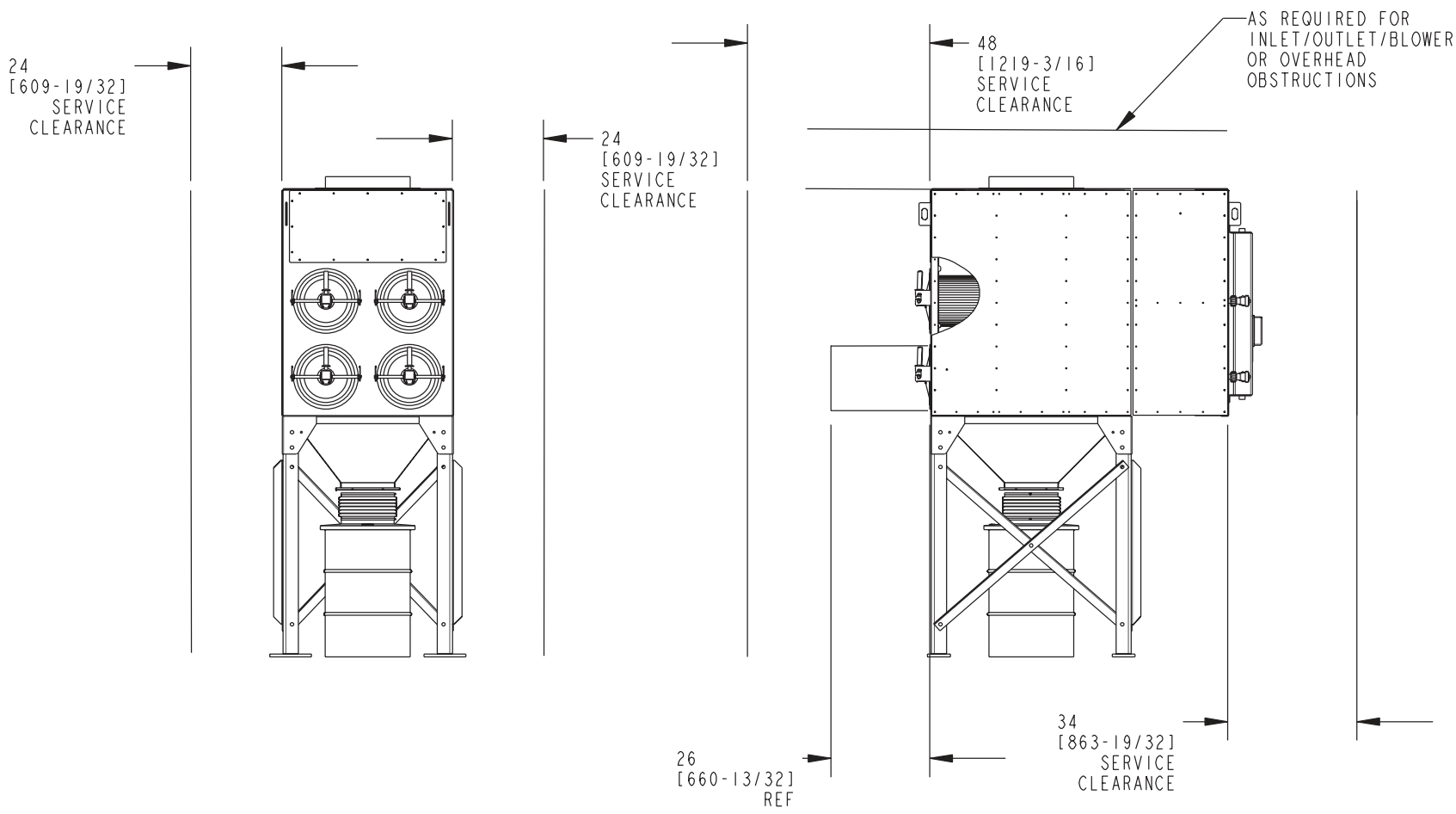


FIGURE 3
Recommended Unit Clearances

3.3.1 Hopper Assemblies

The SFC Series filter module is designed to mount directly on top of the hopper assembly. A hopper assembly consists of a hopper bin, legs, side diagonal sway braces, rear diagonal sway braces and the hardware installation kit. Hopper assemblies will be shipped in pieces and will need to be assembled at the site.

The hopper sections are shipped in pieces for field assembly. Position the legs as shown in Figure 4 for single module hopper assembly, or Figure 5 for multi-modular hopper assemblies.

3.3.1.1 Single Module Hopper Assembly

Assemble four leg weldments to hopper (refer to Figure 4, Detail A), making sure base pads are oriented as illustrated. After four legs have been bolted to the support hopper, locate the four support braces which measure 60-11/16" between hole centers, and attach to left and right side of hopper legs as shown in Figure 4. Locate the two support braces, which measure 55-1/16" between hole centers. These braces are to be attached to back legs as illustrated in Figure 4.

After all support braces have been installed. Bolt brace together as illustrated in Fig. 4, Detail B.

⚠ WARNING

Secure hopper/leg assembly to concrete mounting pad with appropriate mounting hardware. Anchors should be provided by customer or contractor according to local codes.

3.3.1.2 Multiple Modular Hopper Assemblies

Position multiple hoppers side by side and bolt through corner gussets as illustrated in Figure 5, Detail D. After hoppers have been securely fastened, refer to Figure 6 to locate your hopper configuration. Using this configuration and Figure 5, Detail E, locate and attach the leg weldments to the hopper assembly. Locate the diagonal support brace which measures 60-11/16" and attach it to the hopper corner brackets on left and right side of hopper referencing Figure 5 hopper configuration and Figure 6, making sure the base pads are oriented as illustrated in Figure 6. Locate the support braces, which measure 55-1/16" between hole centers. These braces are to be attached to the back legs as illustrated in Figure 5, Details A and C.

After all support braces have been installed, bolt side braces together where they cross as illustrated in Figure 5, Detail B.

⚠ WARNING

Secure hopper/leg assemblies to concrete mounting pad with appropriate mounting hardware. Anchors should be provided by customer or contractor according to local codes.

3.3.2 Fully Assembled Filter Module Sections

Apply two ribbons of sealant to hopper flange to create "figure 8" pattern around mounting holes. Refer to Figure 7, Detail A.

Place filter module onto hopper/leg assemblies (refer to Figure 7). Drift pins will also be useful for locating the filter module section onto the hopper.

NOTE: Each hopper assembly is equipped with four 1/2" (13mm) pry locations – two holes on front flange and two holes on rear flange. Refer to Figure 7, Detail C, to aid in aligning the hopper flange with the module flange.

With filter module still supported, use hardware (refer to Figure 7, Detail A) to bolt the hopper and filter module together. Securely tighten all hardware at the filter module and hopper. Recheck leg assembly sway braces to ensure they are tight. Install fasteners (bolt, flat washer, lock-washer, nut) to all four pry locations.

Disconnect lifting slings and spreader bars used for installation.

3.3.3 Multiple, Bolt-Together Module Sections (Applies to 4 or More Modules)

For units that have multiple bolt-together module sections, remove the row of filters from the modules nearest the bolting flange (refer to Section 5.1). Protect the doors and filters removed by placing in a safe area away from work area. Identify the different module sections. There are left (bolt flange on right side), right (bolt flange on left side) and possibly center (bolt flanges on both sides) module sections.

Install all hopper/leg assemblies as previously described in Section 3.3.1.1 and 3.3.1.2.

Apply two ribbons of sealant to hoppers that are located under the dust collector section that is being installed (refer to Figure 7, Detail A

⚠ DANGER

CRUSH AND ELECTROCUTION HAZARD

In preparing to attach the filter module to the hopper, connect lifting slings and spreader bars to all filter module lifting lugs with clevis pins. Distribute the load evenly. Location must be clear of all obstructions, such as utility lines or roof overhangs.

Place the appropriate filter module onto hopper/leg assembly to which the sealant has been applied, positioning filter module corner holes over alignment holes (refer to Figure 7, Detail C). Drift pins will also be useful for locating the filter module section onto the hopper.

NOTE: Each hopper assembly is equipped with four 1/2" (13mm) pry locations – two holes on front flange and two holes on rear flange. Refer to Figure 7, Detail C, to aid in aligning the hopper flange with the module flange.

With filter module still supported, use hardware (refer to Figure 7, Detail A) to bolt the hopper and filter module together. Securely tighten all hardware at the filter module and hopper. Recheck leg assembly sway braces to ensure they are tight. Install fasteners (bolt, flat washer, lock-washer, nut) to all four pry locations.

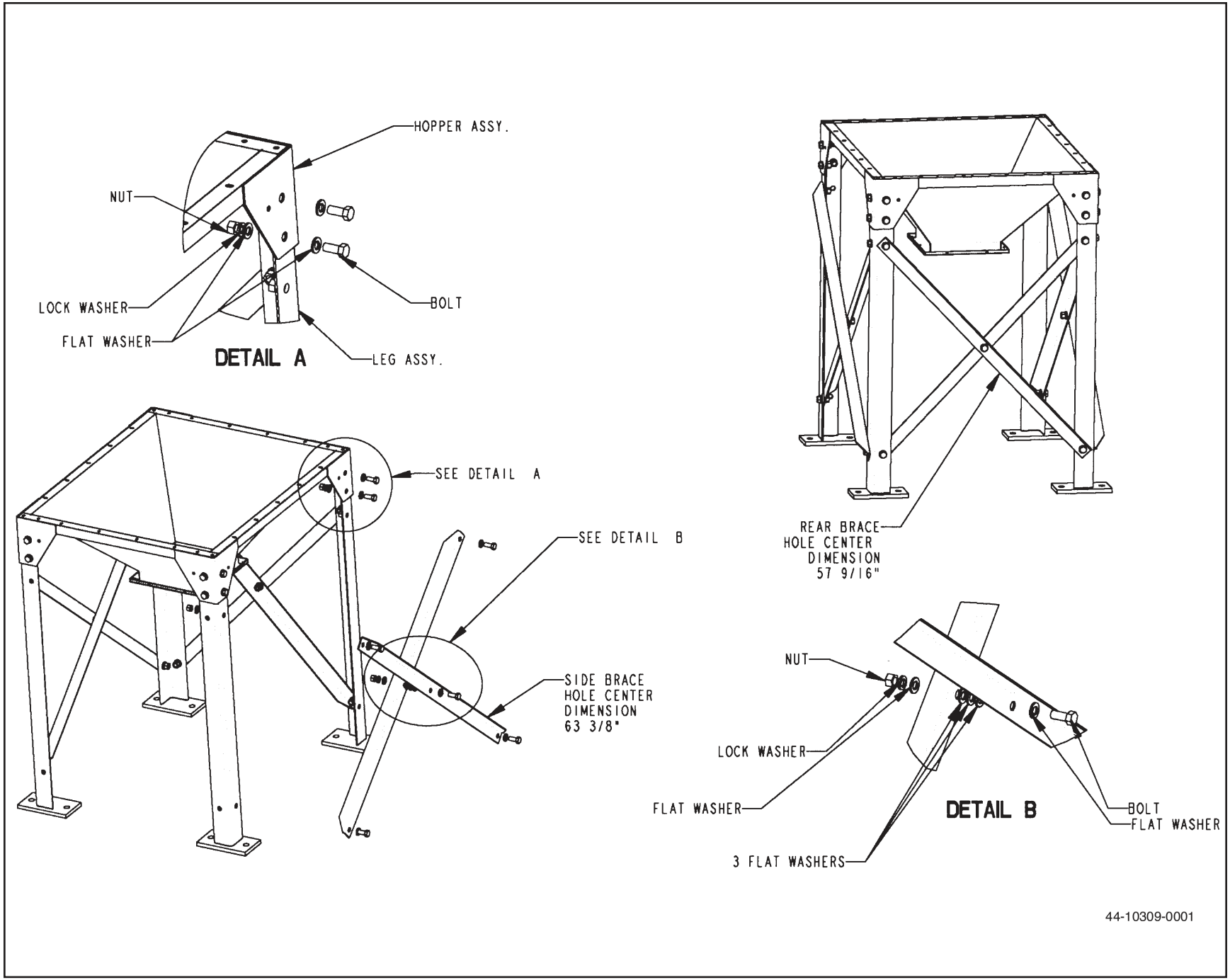


FIGURE 4
Single Hopper, SFC

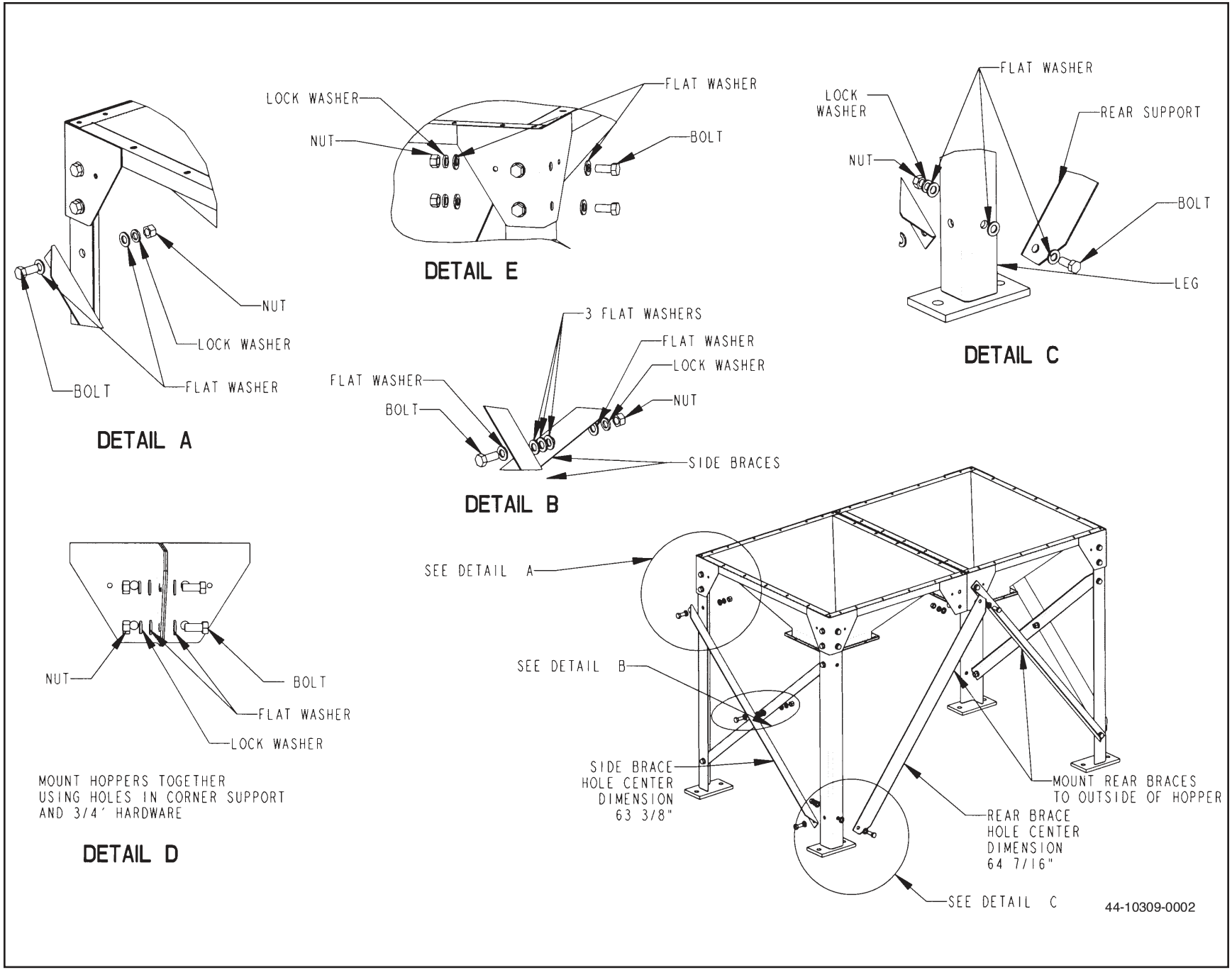


FIGURE 5
Multiple Hopper, SFC

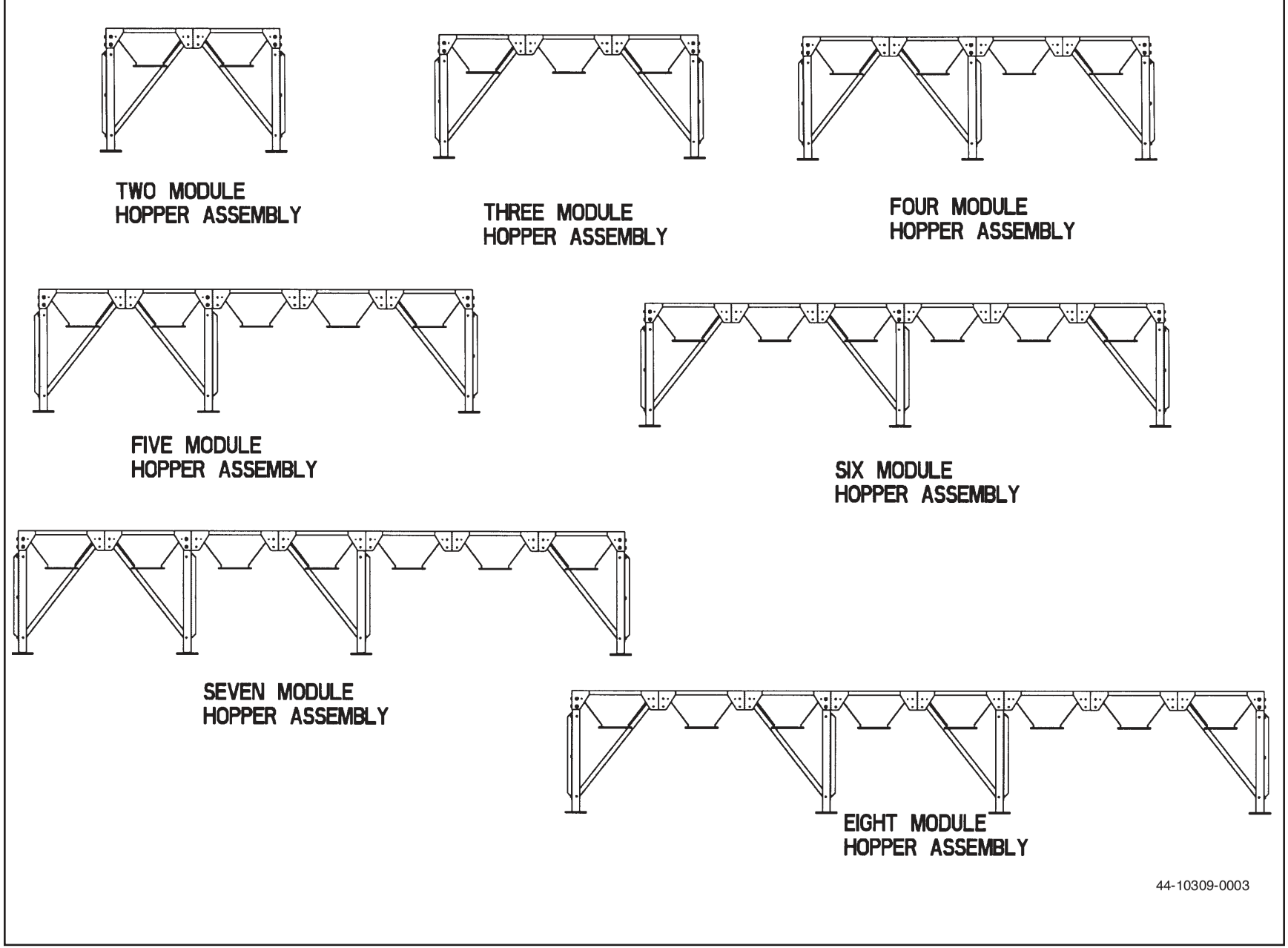


FIGURE 6
Multiple Hopper, SFC

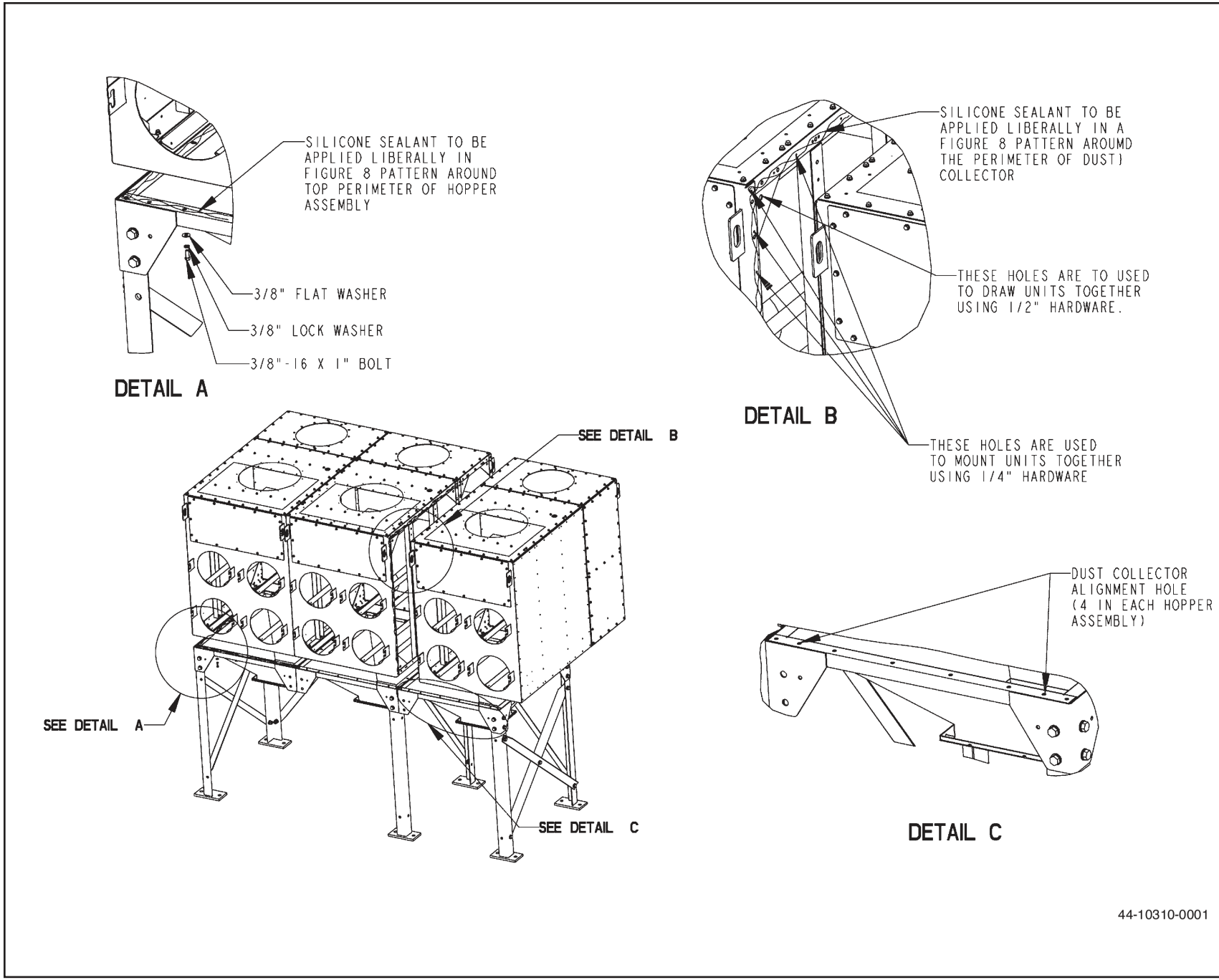


FIGURE 7
Multiple Modules, SFC

Disconnect lifting slings and spreader bars used for installation.

Apply sealant to the next hoppers that will receive a filter module (refer to Figure 7). Apply sealant to the side bolting flange of the next filter module to be installed using the “figure 8” pattern (refer to Figure 7, Detail B). Place this module on its hopper. Use the hardware provided (refer to Figure 7, Detail B).

Place this module on its hopper. Use the hardware provided (refer to Figure 7, Detail B) and bolt the module sections together. Bolt the filter module to the hopper (refer to Figure 7, Detail A). Securely tighten all hardware at the filter module and hopper. Recheck leg assembly sway braces to ensure they are tight. Install fasteners (bolt, flat washer, lock-washer, nut) to all four pry locations.

Disconnect lifting slings and spreader bars used for installation.

Repeat this process until all the module sections are in place, securely fastened and anchored to the foundation. Recheck all hardware connections to make certain they are securely tightened. Remove lift slings and spreader bars and clear all tools from the work area.

NOTE: Make certain all bolts (including the anchor bolts) are properly tightened before proceeding with the remainder of the installation.

Install all cartridge filters removed at the beginning of the installation process and install the filter access doors (refer to Section 5.1).

3.4 Electrical Installation

⚠ DANGER

ELECTRICAL SHOCK HAZARD

All electrical work should be performed by a qualified electrician in accordance with local electrical codes. Disconnect electrical power before installing or servicing any electrical component.

General

Several types of standard electrical components can be installed to control and monitor your dust collector. A VFD or a motor starter circuit (combination starter panel) is required to safely start and stop the system. A properly sized circuit breaker or fused disconnect is also required to safely work on and service the electrical system. In addition, a 115/1/60 (2 amp) control circuit is required for the pulse control panel. Some or all of the above items may be included in the controls package you purchased from Parker. Any one of the following control combinations can be used:

- Motor starter with Digital Pulse Monitor (DPM) for continuous pulse cleaning.
- Motor starter with Digital Pulse Control (DPC) for on-demand pulse cleaning.
- VFD with DPM for continuous pulse cleaning.
- VFD with DPC for on-demand pulse cleaning.

Refer to Parker sales order to verify the control configuration purchased with your unit and whether additional items are required to control and operate your system.

3.4.1 Mounting The Controls

Mount the VFD or combination starter panel for the fan motor in a convenient location. It is recommended that these controls be mounted on a wall or pedestal in an area subject to minimal vibration and electrical noise. Mounting hardware is provided by the customer or the contractor. If the panel includes the DPM or the DPC gauge and Parker timer control board, then the location of the panel must within close proximity of the dust collection unit as shown in Figure 8. For additional setup and installation information refer to the VFD and/or DPM/DPC Owner’s Manuals provided.

CAUTION

Avoid mounting the panel on the collector due to vibration generated from blower assembly and the pulsing system.

For all pulse control panels, connect the black plastic pressure tubing (25’ [7.5 meters] provided by Parker) to the panel fittings and the SFC unit. Connect the dirty air plenum of the SFC to the high pressure port (dirty air) on the panel as shown in Figure 8. Connect the clean air plenum of the SFC to the low pressure port (clean air) on the panel.

3.4.2 Solenoid Valve Enclosure Wiring

The solenoid valves at the dust collector must be wired correctly to the pulse control panel. Refer to Figure 9 when making connections from the pulse control panel to the solenoid valve enclosure(s).

Example: Figure 9 shows the SFC having ten valve locations per module. This means when the system pulses, “1” is the first pulse in the sequence, “2” is the second, “3” is the third, etc.

When multiple dust collector modules are installed, daisy chain the wiring so that each solenoid valve with the same module location will pulse at the same time. This means all #1 solenoid valves are connected together and wired to pulse control panel “OUT 1,” #2 solenoid valves are connected together and wired to pulse control panel “OUT 2,” etc. Refer to Figure 9 for the SFC dust collector solenoid valve wiring information. When cleaning, the pulse valves sequence left to right, top to bottom.

Unless specified on the Parkerr sales order, the customer will supply interconnecting material (conduit, wiring, etc.) from the pulse control panel to the SFC.

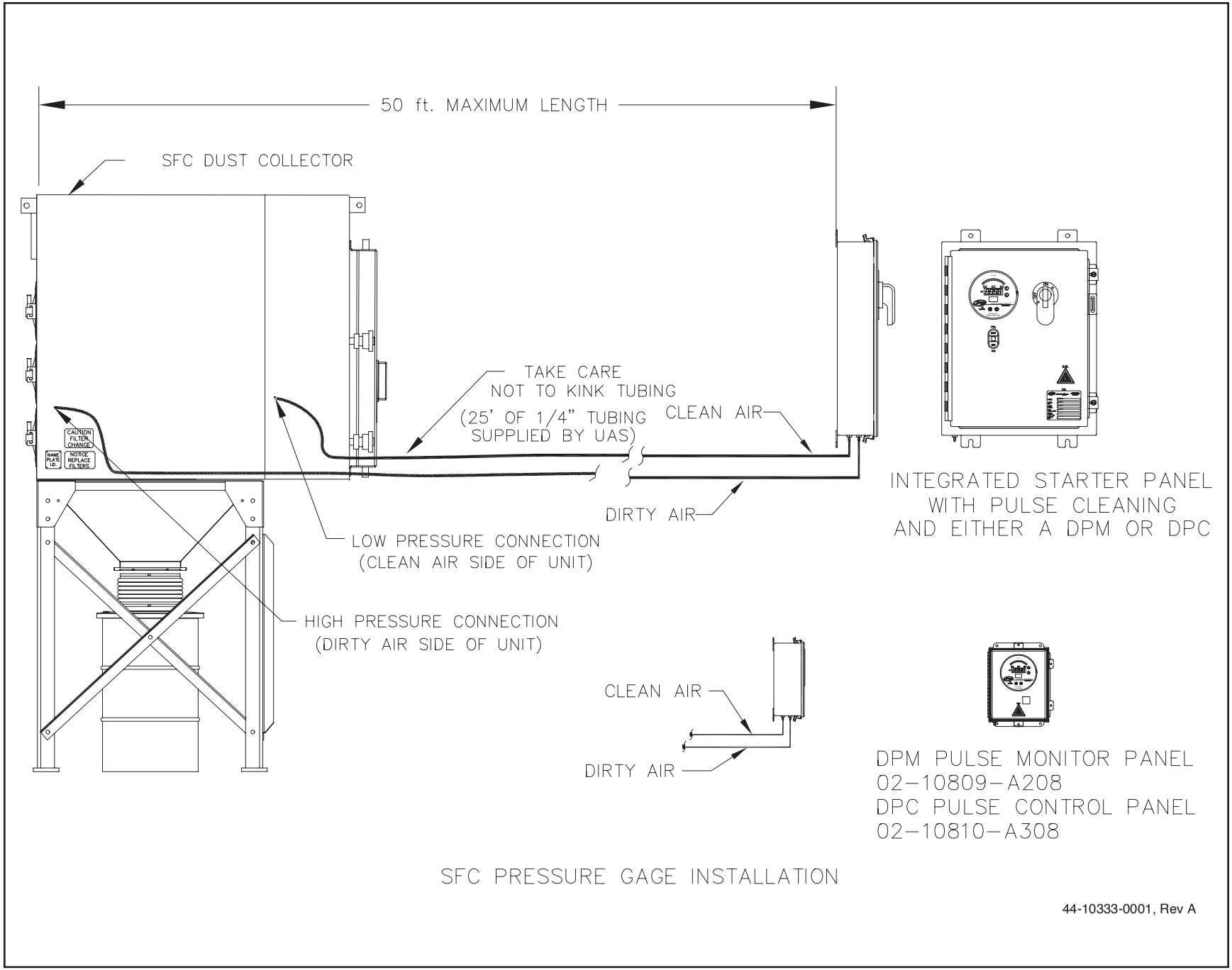
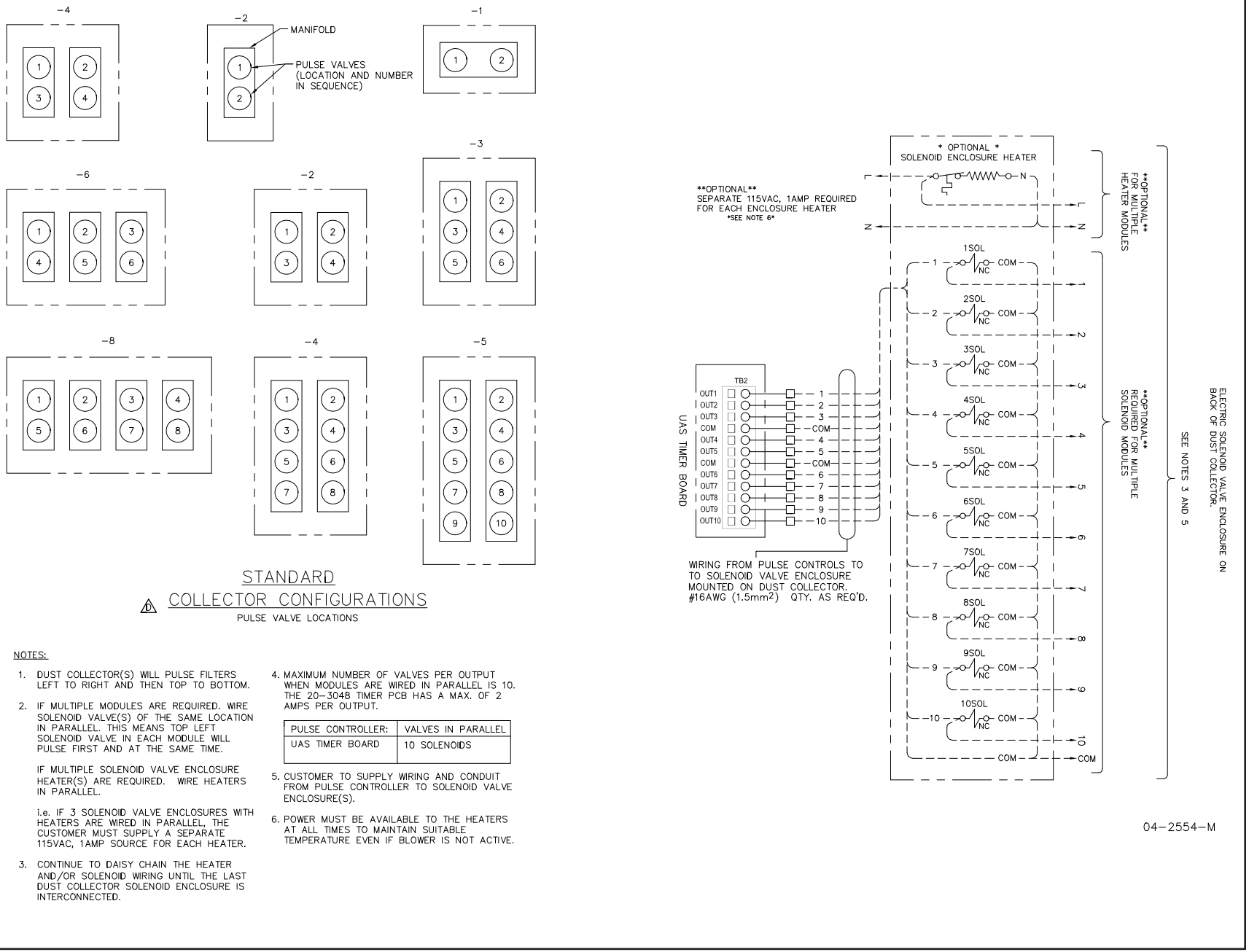


FIGURE 8
SFC Pressure Gauge Installation



NOTES:

1. DUST COLLECTOR(S) WILL PULSE FILTERS LEFT TO RIGHT AND THEN TOP TO BOTTOM.
2. IF MULTIPLE MODULES ARE REQUIRED. WIRE SOLENOID VALVE(S) OF THE SAME LOCATION IN PARALLEL. THIS MEANS TOP LEFT SOLENOID VALVE IN EACH MODULE WILL PULSE FIRST AND AT THE SAME TIME.

   IF MULTIPLE SOLENOID VALVE ENCLOSURE HEATER(S) ARE REQUIRED. WIRE HEATERS IN PARALLEL.

   i.e. IF 3 SOLENOID VALVE ENCLOSURES WITH HEATERS ARE WIRED IN PARALLEL, THE CUSTOMER MUST SUPPLY A SEPARATE 115VAC, 1AMP SOURCE FOR EACH HEATER.
3. CONTINUE TO DAISY CHAIN THE HEATER AND/OR SOLENOID WIRING UNTIL THE LAST DUST COLLECTOR SOLENOID ENCLOSURE IS INTERCONNECTED.
4. MAXIMUM NUMBER OF VALVES PER OUTPUT WHEN MODULES ARE WIRED IN PARALLEL IS 10. THE 20-3048 TIMER PCB HAS A MAX. OF 2 AMPS PER OUTPUT.

PULSE CONTROLLER:	VALVES IN PARALLEL
UAS TIMER BOARD	10 SOLENOIDS

5. CUSTOMER TO SUPPLY WIRING AND CONDUIT FROM PULSE CONTROLLER TO SOLENOID VALVE ENCLOSURE(S).
6. POWER MUST BE AVAILABLE TO THE HEATERS AT ALL TIMES TO MAINTAIN SUITABLE TEMPERATURE EVEN IF BLOWER IS NOT ACTIVE.

FIGURE 9
Solenoid Wiring to Pulse Controls for 2, 3, 4 and 5 Tier Units

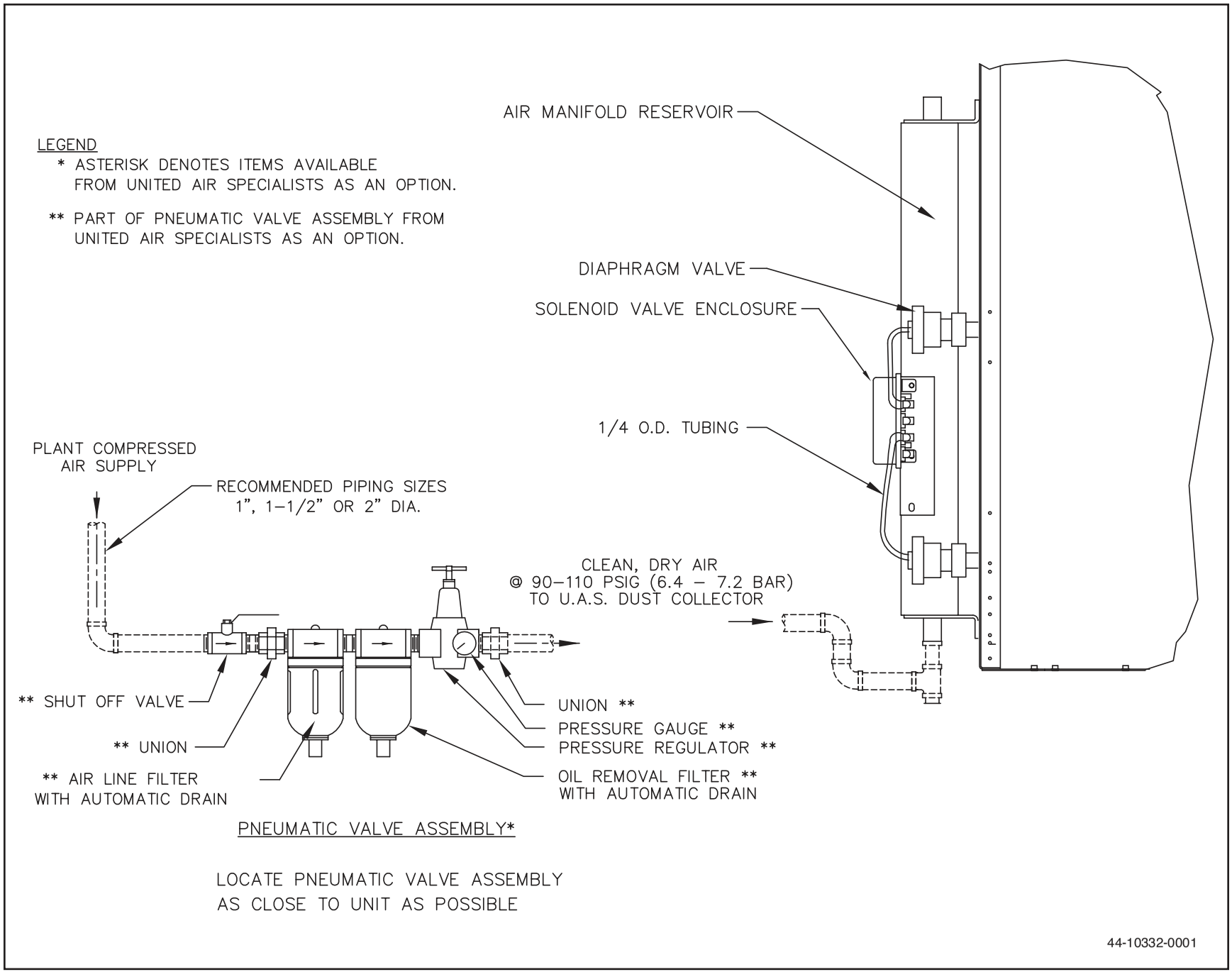


FIGURE 10
Pneumatic Valve Assembly

3.4.3 Heater Wiring

In cold or damp environments, the heater serves to prevent the electric solenoid valves from freezing due to cold temperatures or condensation. If optional solenoid valve heater is purchased, each 4 solenoid valve enclosures will contain a 70-watt cartridge heater, 6, 8 and 10 solenoid valve enclosures will contain a 120-watt cartridge heater internally prewired to a thermostat.

The customer must provide a 100-130VAC, 50/60Hz, 1 amp power to the heater circuit for each module. The power must be available to the module solenoid valve enclosure(s) at all times (even when the blower is shut down) to ensure temperature regulation inside each solenoid valve enclosure is continual. When multiple module solenoid valve enclosures with heaters are installed, daisy chain the wiring so that each heater will have 100/115VAC, 50/60 Hz at all times. Make certain enough current is available to supply all heaters.

Example: If three solenoid valve enclosures are supplied with cartridge heaters, make certain the voltage supply can deliver 3 amps (1amp per heater).

3.5 Compressed Air Connection

CAUTION

Do not allow water and/or oil from the compressed air system into the compressed air manifold reservoir. To ensure a clean, dry air supply, especially when the unit is installed outdoors, a water filter with automatic drain and a coalescing filter should be installed (refer to Figure 10).

Clean, dry, 90-110 PSIG (6.2-7.6 BAR) compressed air is required for the pulse cleaning system to function properly. Compressed air consumption is noted on the Parker sales drawing. A shut-off valve, pressure regulator and pressure gauge should be installed close to the SFC unit. Parker recommends dedicated oil and water removal filters be used to ensure clean, dry air is delivered to the pulse system. Contact your local SFC representative for information about Parker's Pneumatic Valve Assembly. Refer to Figure 10 for recommended compressed air piping and Table 1 below for proper compressed air line sizing.

NOTE: Using Table 1, select the proper diameter compressed air line pipe to supply your dust collector. The final connection size is a female 1" NPT fitting on each module.

Table 1

Pipe Diameter	Number of Filter Section Modules	or	Distance of Supply Air Piping Run From Main Compressor Line
1 inch (25mm)	1-3		50 feet (15 meters)
1-1/2 inch (38mm)	3-5		100 feet (31 meters)
2 inch (51mm)	+5		+100 feet (+31 meters)

NOTE: Purge the compressed air line to remove any debris prior to making the final connection to the SFC compressed air manifold(s). Apply pipe fitting sealant on all compressed air supply pipe fittings and connections.

3.6 Assembly of Optional Equipment

3.6.1 Blower Purge Package Installation

⚠ DANGER

TIP OVER HAZARD

Anchor dust collector to concrete pad prior to installing blower assembly. Make certain all hardware is properly tightened.

If a top-mount blower package was ordered, read the manufacturer's Installation and Operation Manual completely before installing the blower. The blower Installation and Operation Manual is attached to the fan package. Perform all pre-installation checks prior to installing the blower.

⚠ DANGER

TIP OVER HAZARD

If blower package has a 20 HP (15 kW) motor or larger, ensure the blower support legs are installed beneath the clean air plenum of the module to which the blower will be mounted.

For top-mount blower packages of 20 HP (15 kW) or larger, an additional set of support legs is provided. The additional support legs must be mounted under the filter module supporting the blower package (refer to Figure 11). Bolt the mounting plate to the bottom of the appropriate clean air plenum with the hardware provided. Bolt the leg assemblies to the mounting plate with the hardware provided. Secure leg assemblies to the concrete mounting pad with appropriate anchoring hardware.

Remove the clean air plenum cover plate on top of the filter module and save the mounting hardware. Ensure ribbon gasket remains on the unit. Lift blower package using safe, suitable means and position blower base holes over filter module holes with blower discharge pointing in the desired direction. Secure with bolt/washer assemblies previously removed. Top-mount blower packages include a blower outlet damper. Install blower damper to outlet of blower assembly with hardware provided.

If the blower package is a ground-mount blower, read the manufacturer's Installation and Operation Manual completely before installing the blower. The blower Installation and Operation Manual is attached to the fan package. Perform all pre-installation checks prior to installing the blower.

Outlet ducting from the SFC unit to the blower package can be connected to either the top or bottom clean air section access panel(s). It is recommended industry practice to provide vibration isolation between the blower inlet and the dust collector outlet ducting.

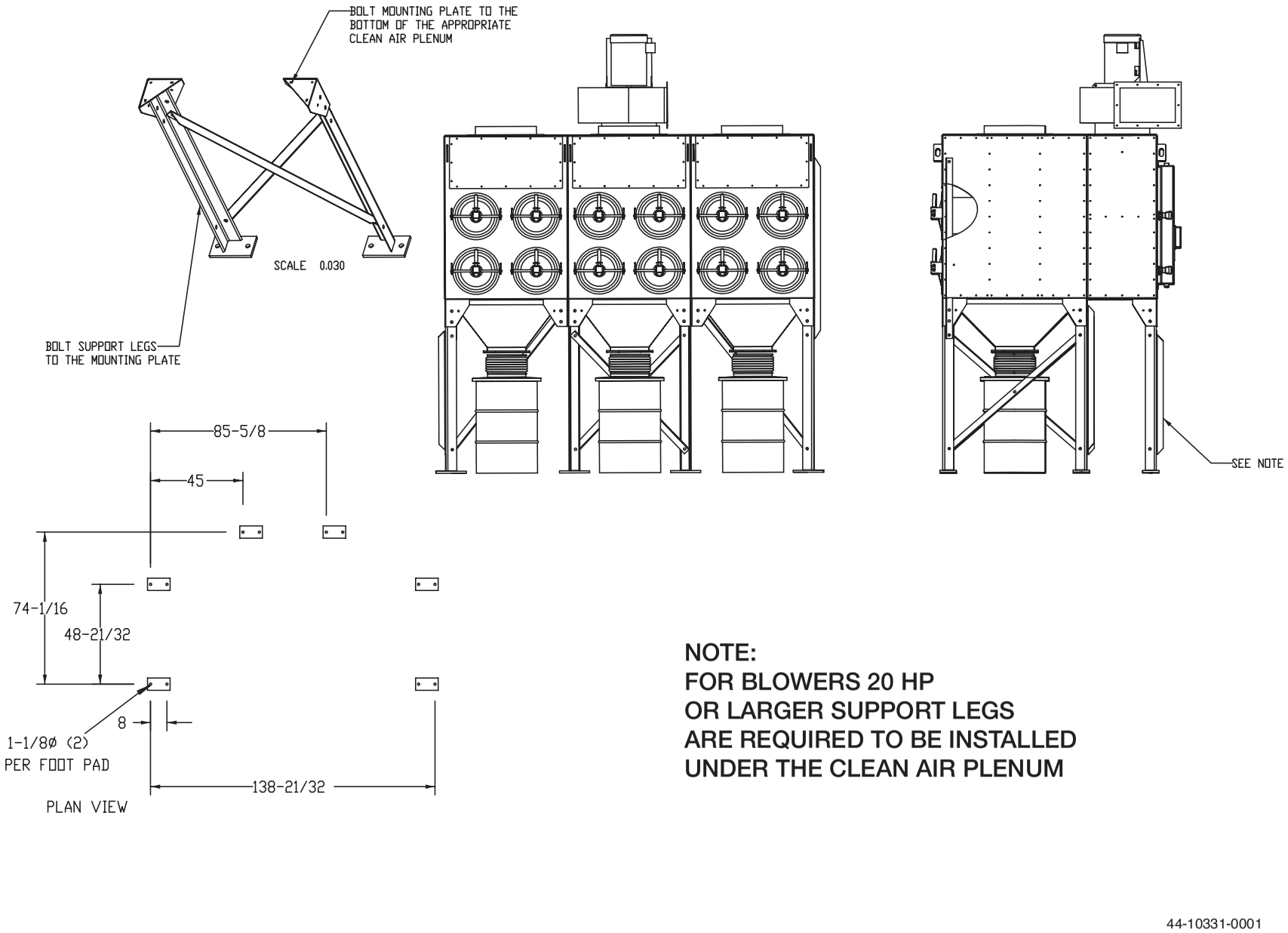


FIGURE 11
Legs Support Top Mount Blower

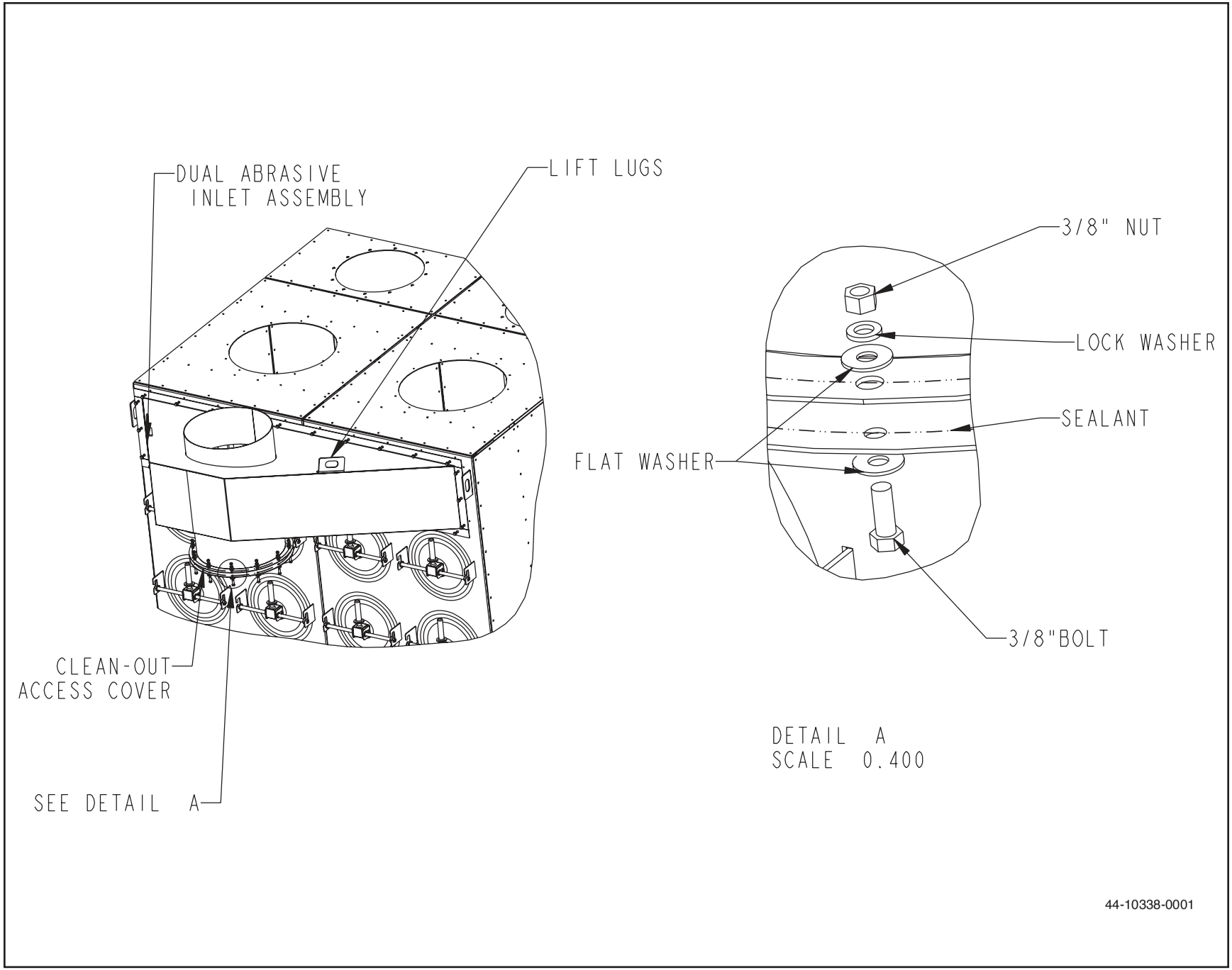


FIGURE 12
Abrasive Inlet Installation

3.6.2 Duct Silencer Installation

A duct-type (in-line) silencer is designed to bolt directly to the blower outlet damper flange. Make certain there is adequate room for the silencer in the discharge direction. Provide at least 24" (61 cm) of unobstructed space at the end of the silencer discharge. The air discharge should be directed into an open area, free of obstructions and with consideration for personnel safety.

⚠ WARNING

CRUSH HAZARD

The silencer will require a separate support. Do not use the blower damper or outlet flange to support the silencer. Apply silicone around the bolt holes of the connecting flanges, lift the silencer into position and secure with the hardware provided. Install permanent supports (customer-supplied) and tighten all hardware before removing the lifting device.

3.6.3 Rotary Air Lock Installation

If a rotary air lock was ordered with the unit, the hopper discharge will have an adapter already bolted to it. Make certain the bolts connecting the adapter to the hopper discharge are securely tightened.

Remove all packing from the rotary air lock and determine its appropriate position. Keep in mind required clearances, electrical connections and maintenance. Apply sealant to the flange of the rotary air lock and to the adapter using 3/8" bolts, washers and lock washers.

⚠ DANGER

ELECTRICAL SHOCK HAZARD

Disconnect and lockout all power to the rotary air lock before servicing. All electrical connections should be made by a qualified electrician according to all applicable codes. Refer to the nameplate and/or documentation for voltage, amperage, cycle and proper wiring. Refer to rotary air lock vendor documentation attached with air lock device.

⚠ WARNING

MOVING PARTS

There are moving parts on the rotary air lock. Do not allow any object to be placed in or near the rotary air lock during operation. Verify rotary air lock rotation matches rotation arrows affixed to assembly.

3.6.4 Abrasive Inlet Installation

The abrasive inlet is designed to use the front access panel(s) of the SFC Series modules as the inlet area to the unit. There are two styles available – a single or dual module abrasive inlet. Each is designed to fit over the appropriate number of front access panels to serve as a single inlet point for one or two modules (refer to Figure 12).

Remove the front access panel(s) located above the QuickSeal filter access doors. Save the hardware. The hardware will be used to attach the abrasive inlet. Remove any remaining gasket material from around the perimeter of the opening.

Apply a 1/4" (6 mm) bead of sealant around the perimeter of the access opening in a "figure 8" pattern around the bolt holes. Align the hole pattern on the abrasive inlet with the hole pattern on the unit and bolt together using the hardware removed earlier. Fasten the inlet ducting securely to the abrasive inlet assembly.

The bottom plate of the abrasive inlet will serve as an inspection plate. If access to the abrasive inlet is required, remove and clean out the bottom plate of the inlet prior to servicing. Do not damage the ribbon of gasket and reuse after cleaning the gasket surfaces.

3.6.5 Drum Lid Installation

The drum lid package is an optional accessory for the SFC Series dust collectors. Refer to Figure 13.

Remove the drum lid package from it shipping carton. Place the drum lid on the 55-gallon (208 liter) drum or the 20-gallon (76 liter) drum. Slide the 14" (360mm) diameter hose over the drum lid and secure with hose clamp. Position the drum assembly under the unit, slide the hose up onto the 14" adapter collar on the hopper and secure it with a clamp.

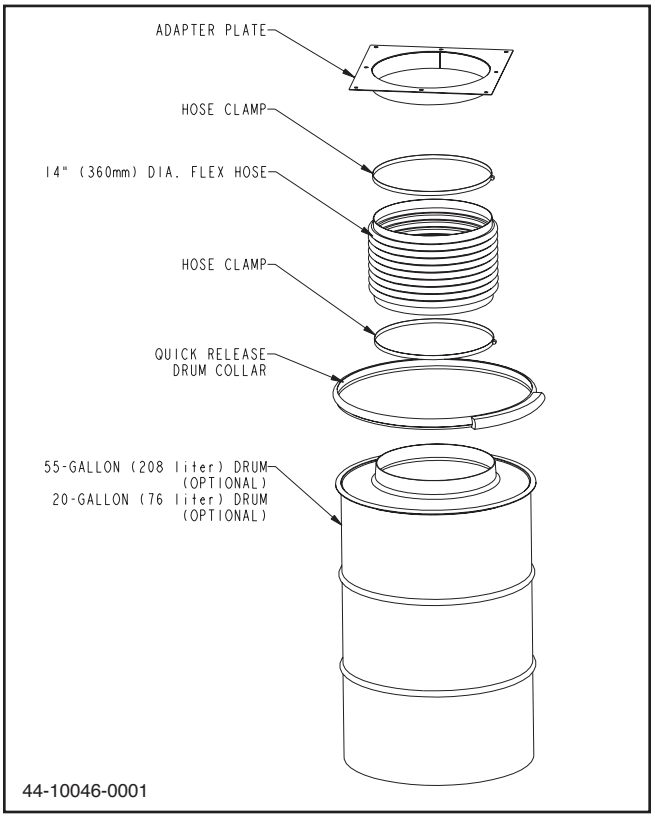


FIGURE 13
Drum Lid Installation

If a drum lid quick release clamp was ordered, use its clamping mechanism to secure the drum lid and drum. To install the clamp: Before placing the drum lid into place, open the clamp and slide it around the drum. Once the clamp is around the drum, install the drum lid on top of the drum. After the drum lid is in place, slide the clamp up and around the lip of the drum lid and drum. Once the clamp is around the lip of the drum, pull the clamp close to secure the drum lid.

If a slide gate was ordered, it was factory installed on the hopper. Open the slide gate. Repeat for multiple drum lid connections.

NOTE: The hopper(s) is not designed for dust storage. The slide gate should remain open during normal operation.

3.6.6 Inlet Cover and Blank Cover Plate Installation

Inlet collar and blank cover plates bolt directly to the SFC unit. Inlet and outlet collar assemblies are specified with initial order; the dust collector is supplied with all blank cover plates.

3.6.7 Remote Blower Start/Stop Assembly

A remote blower start/stop push button station is available for field installation with SFC systems supplied with a Parker combination magnetic motor/blower starter panel. The customer is required to supply interconnecting field wiring and mounting hardware for remote blower start/stop push button station installation. Refer to the DPM/DPC Installation and Operation Manual.

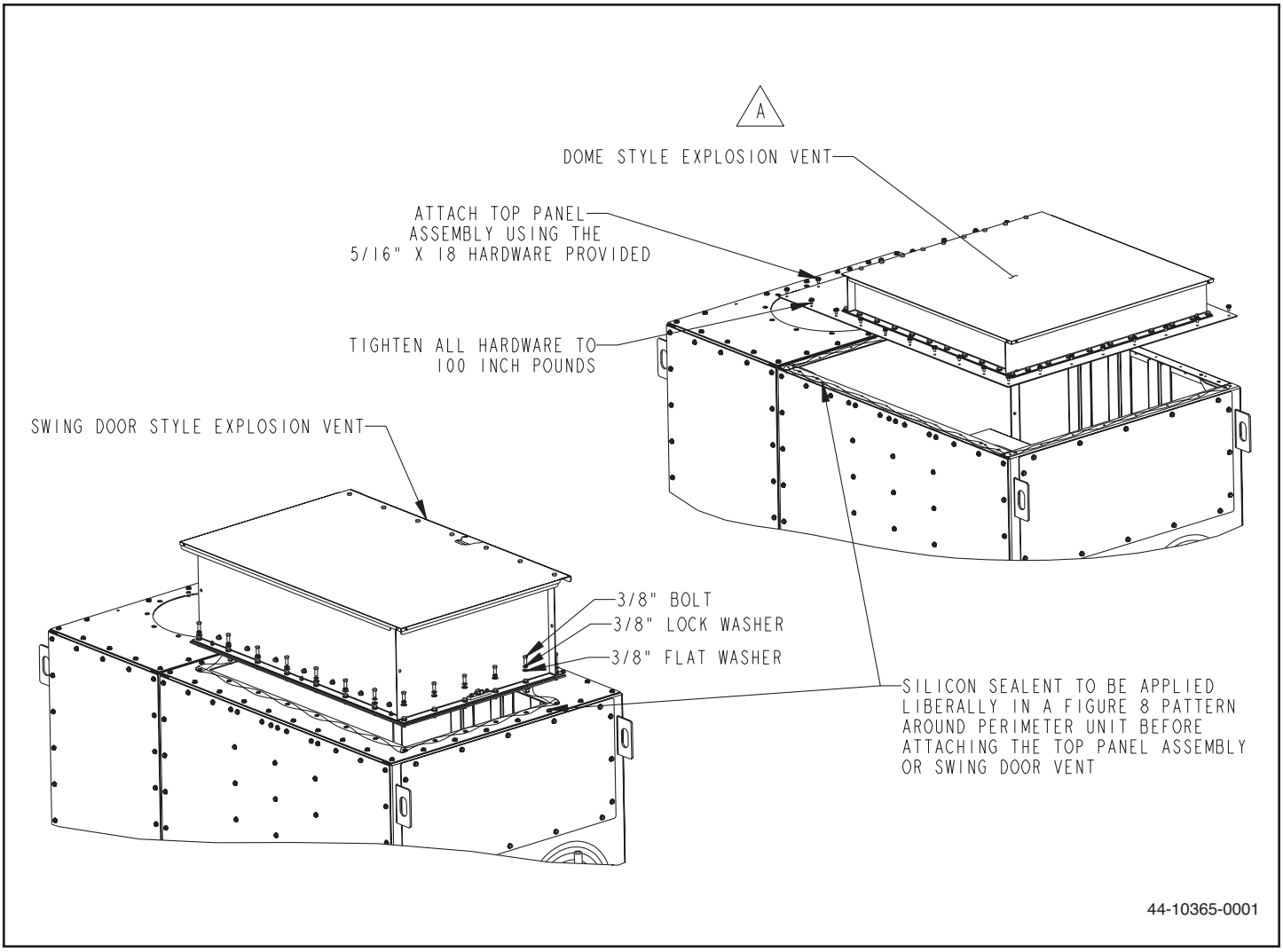


FIGURE 14
SFC Explosion Vent Installation (Top Mount)

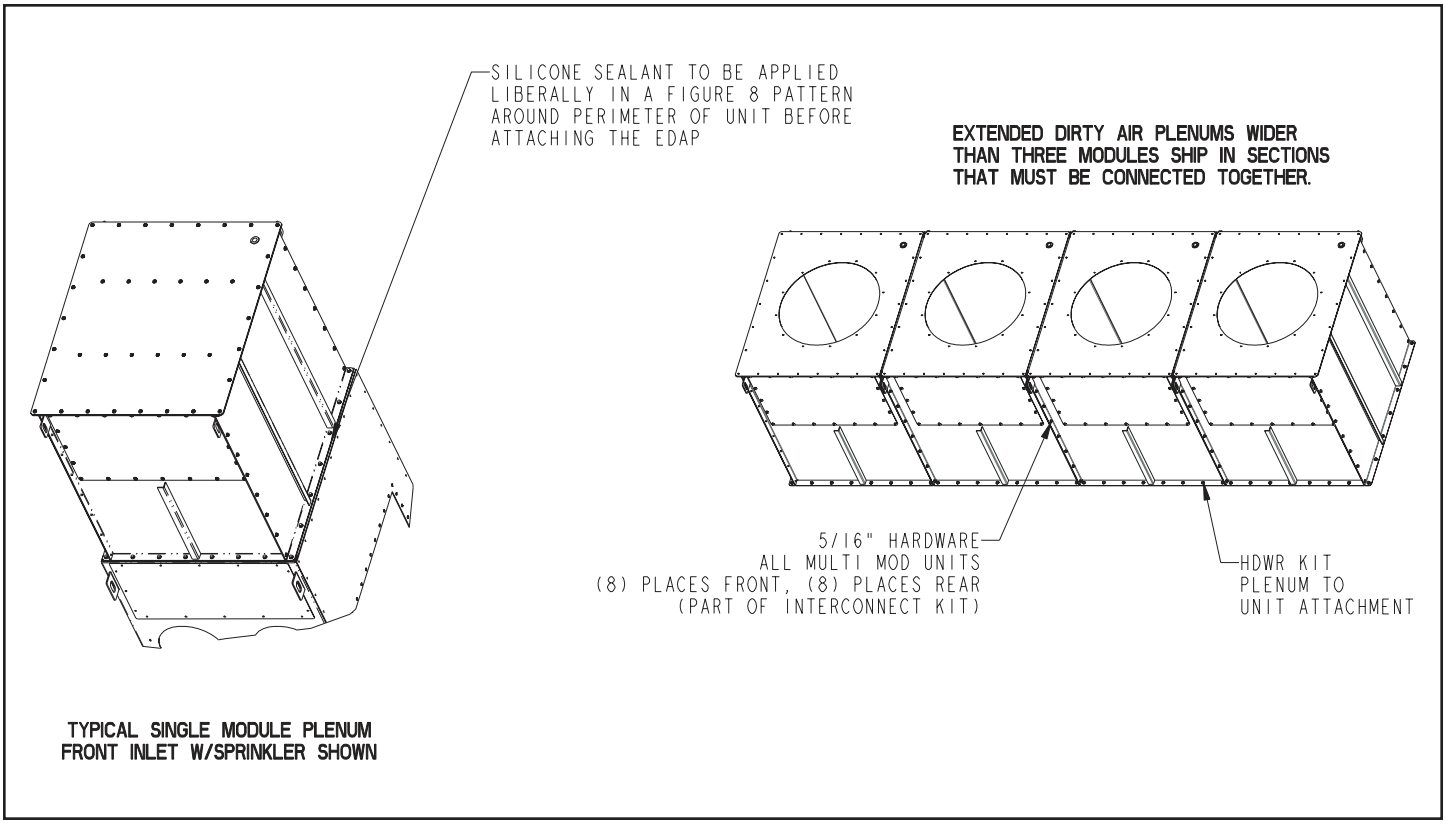


FIGURE 15
EDAP Installation

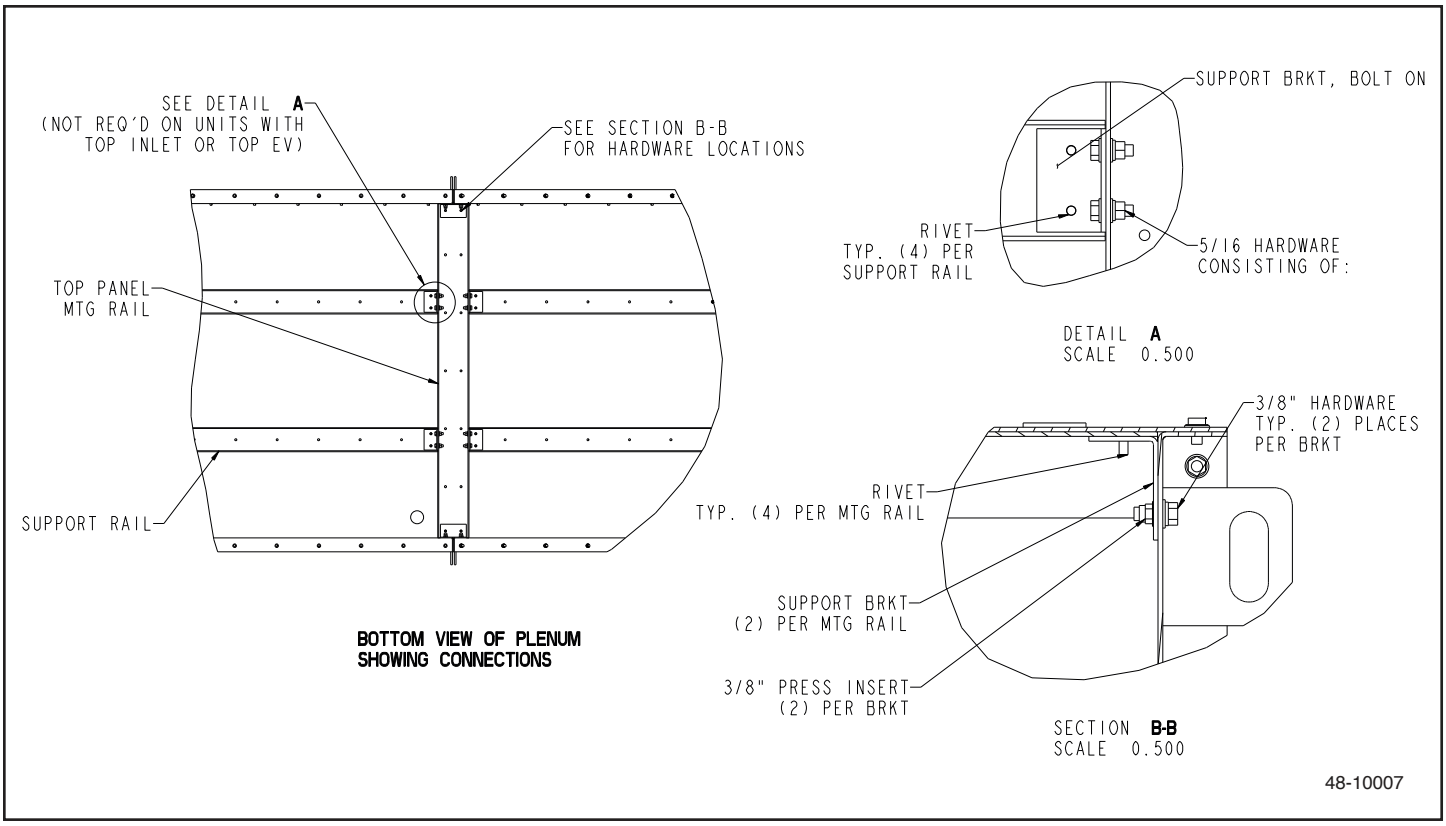


FIGURE 16
EDAP Interconnection

3.6.8 Explosion Vent installation

3.6.8.1 Introduction

Your Parker Dust-Hog® supplied with an explosion vent is designed to minimize structural damage in the event of an explosion. It does not prevent explosions!

The responsible user should:

1. Take every possible precaution to prevent a fire or explosion from occurring
2. Consult with their insurance carrier or local authorities regarding the hazardous nature of dust produced by them.
3. Consult and comply with national and local codes or bulletins when determining location and operation of the dust collector.
4. Do not exceed negative operating pressure of the unit.
5. Do not exceed operating temperature of the dust collector (not to exceed 180°F (82°C)).

3.6.8.2 Operating & Precautions

1. Install unit with the explosion vent directed away from occupied areas.
2. When the explosion vent is properly installed, the rating tag and caution stickers should be in plain sight for all to see. If the explosion vent is installed incorrectly, damage could occur to the explosion vent and to the operator or plant equipment.
3. Ductwork added to the explosion vent flange may create a secondary hazard. User must comply with NFPA standard 68, and/or other codes that apply.
4. Do not place hands or any other objects in vent opening. Serious injury or damage to plant equipment could occur.
5. If any leakage occurs, shut down unit and contact Parker immediately.
6. Never inspect explosion vent(s) with unit running.
7. Only use explosion vent supplied by Parker.
8. Any vent installed, which has been provided by someone other than Parker will void all warranties on the dust-collector.

⚠ DANGER

In case of explosion, contact Parker immediately. Do not operate or rearm the collector with another explosion vent without contacting Parker first. Serious injury could occur.

3.6.8.3 Unit Set-Up

The normal shipping routine for an assembled SFC unit is with an enclosed box truck. This type of truck will not be able to transport an assembled 4-high unit due to height restrictions within the vehicle. When shipping this unit, it will be necessary to ship the top panel and explosion vent separately. This will require the customer to assemble this to the unit on site. Refer to Figure 14 for assembly details.

3.6.9 Extended Dirty Air Plenum (EDAP) For 5 High SFC Unit

The normal shipping routine for an assembled SFC unit is with an enclosed box truck. This type of truck will not be able to transport an assembled 5-high unit due to height restrictions within the vehicle. When shipping this unit, it will be necessary to ship the EDAP separately. This will require the customer to assemble this to the unit on site. Refer to Figures 15 & 16 for assembly details.

3.6.10 Sprinkler Coupler

CAUTION: Water sprinkler systems can deliver high volumes of water when activated and in turn can fill up the dust collector, collect in particulate collection drums and saturate filter cartridges. Large amounts of water inside the dust collector can and will add excess weight to the structure including stress to the support and extension legs resulting in possible failure or collapse. Adequate drainage should be a part of any dust collector with water sprinkler options.

3.6.10.1 Sprinkler Coupler

Optional sprinkler couplers are provided on the SFC unit for the convenience of fire control system professionals. The buyer or owner/user is responsible to supply, install and test the sprinkler head and any related or required fire control system devices, components or accessories. It is the responsibility of the buyer or owner/user to test functionality and operation of the fire control system for water leakage, correct installation, appropriate fire control system component location, correct operation and appropriate application while strictly adhering to any and all prescribed AHJ, OSHA, NFPA, Federal, State/Provincial and Local codes, standards, regulations and instructions applicable to industrial dust collectors, fire control systems and any related and required components and processes.

3.6.10.2 Sprinkler Head

If a sprinkler head is requested to be installed at the factory, it is the sole responsibility of the buyer or owner/user to supply the applicable and desired sprinkler head device or sprinkler head specification including manufacturer and part number and any special installation instructions. It is also the responsibility of the buyer or owner/user to test functionality and operation of the sprinkler head and the fire control system for water leakage, correct installation, appropriate fire control system component location, correct operation and appropriate application while strictly adhering to any and all prescribed AHJ, OSHA, NFPA, Federal, State/Provincial and Local codes, standards, regulations and instructions applicable to industrial dust collectors, fire control systems and any related and required components and processes.

4. Operation

⚠ DANGER

Shut off unit disconnect and lock out all electrical power to the dust collector prior to performing service work.

⚠ CAUTION

Prior to unit start-up, all installation set-up instructions must be completed as specified by this manual. Refer to Section 3.

4.1 Start-Up

Inspect the installation area and make certain no tools, parts, etc., have been left on or inside the SFC unit. Check blower discharge to make certain it is free from all debris.

Start motor/blower and check for proper rotation. A rotation arrow is located on the blower housing. All top-mount blower assemblies rotate in a clockwise rotation as viewed from the driven end (motor end with motor cooling fan). If blower is rotating in the opposite direction, place disconnect switch in the OFF position to the motor starter. For 3-phase blowers, interchange any two power wires to the motor at the load side of the motor starter contactor. For single-phase power, refer to motor nameplate for which two wires to interchange at motor junction box. Engage starter disconnect switch, start blower and recheck rotation.

NOTE: Proper blower rotation is required to move the designed amount of air. A blower rotating in the incorrect direction will only move approximately 40% of design airflow.

CAUTION

The blower assembly provided by Parker includes an outlet damper. If the blower assembly was purchased separately, ensure an outlet damper is included. Close the blower discharge damper to the 50% open position and tighten in place. If a volume control damper is provided in another part of the dust collection system, adjust second damper to the 50% open position and tighten in place.

NOTE: It is important that the air volume of the dust collection system is at design conditions at system start-up. There is a minimal pressure differential across new cartridge filters. If the volume control damper is not correctly adjusted, the air volume will be above design conditions for airflow and will affect cartridge filter life and may kick-out starter overloads.

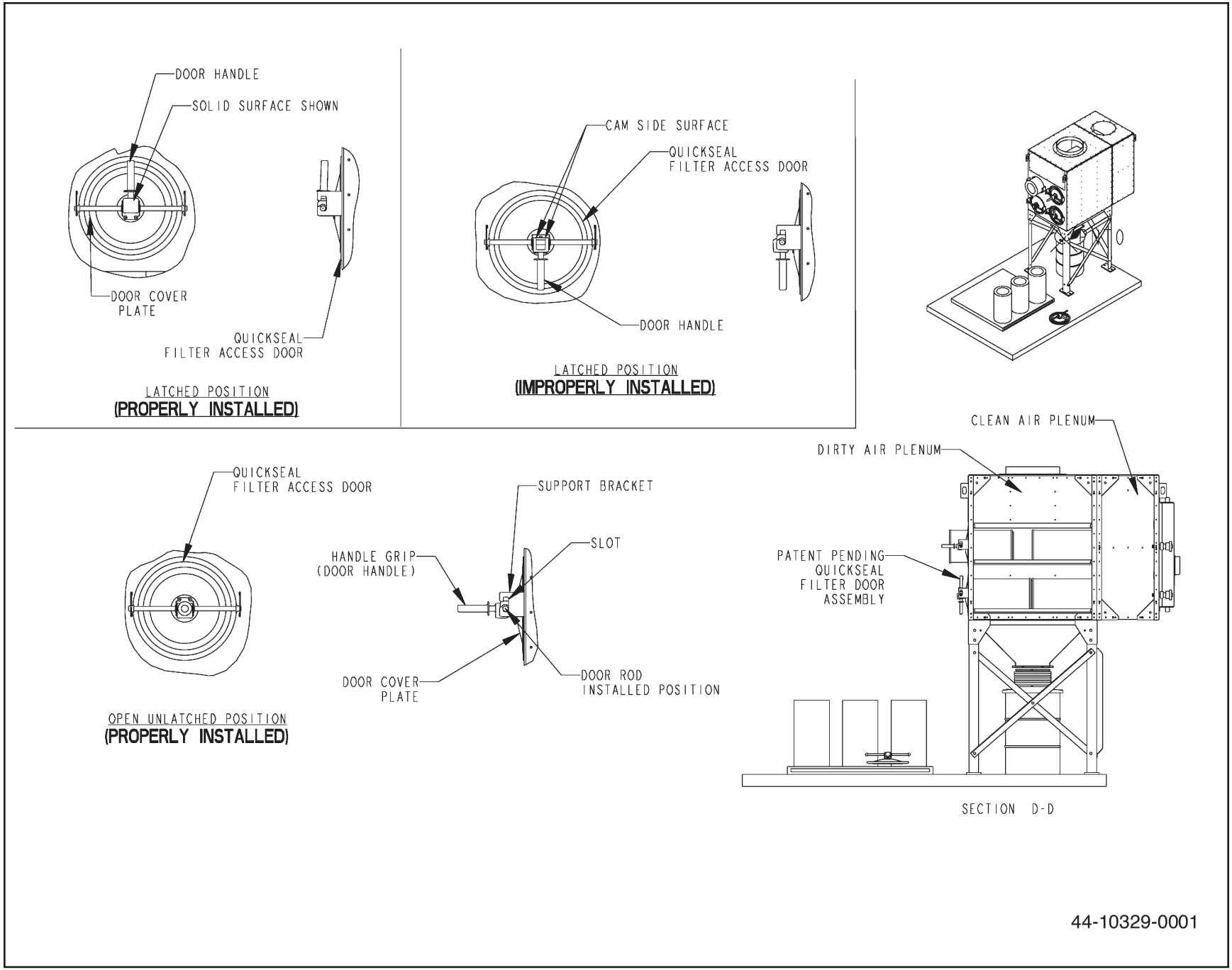


FIGURE 17
SFC Series Door/Filter Installation

CAUTION

Verify dust collector system airflow is adjusted to design conditions with a new, clean filter using the volume control dampers installed in the system. Failure to properly adjust system airflow will affect cartridge filter life.

The air volume should be adjusted based on the performance of the entire system. The air volume control damper must be adjusted to the system design airflow. Closing the volume control damper decreases system airflow. Opening the volume control damper increases system airflow.

Turn on the compressed air supply to the dust collector air manifold reservoir. Adjust the pressure regulator until the gauge reads 90-110 PSIG (6.2-7.6 BAR).

4.2 Checklist

Check the discharge of the blower assembly. Initially, some dust may discharge from the blower assembly as the filters are being seasoned. This may last several minutes after which the discharge air should remain visibly clean.

Measure the total airflow and static pressure at the inlet to the SFC unit. Adjust the blower damper for the desired airflow. Check to ensure that adequate air is being drawn into each of the collection points of the system. Adjust the individual dampers for each operation to balance the system airflow. Recheck the total system airflow and adjust the blower damper to desired system airflow. This procedure may need to be repeated several times until the entire system is within system design airflow specifications.

Check the differential pressure reading across the dust collector clean-to-dirty air sections. A normal differential pressure drop reading is between 1”-5” w.g. (25-127 mmAq). At start-up, this reading is generally in the 1”-3” w.g. (25-76 mmAq) range. Please list the reading here for future reference.

Initial dust collector differential pressure reading across filters is _____” w.g. or _____ (mmAq) on _____ (date).

4.3 Checking the Pulse Cleaning System

Confirm the type of pulse cleaning controller delivered with your system. Your system was delivered with one of the following:

- DPM Pulse Control Panel
- DPC Pulse Monitor Panel

Check the pulse cleaning system for proper operation. The compressed air pressure should be between 90-110 PSIG (6.2-7.6 BAR). Parker’s pulse control panels are factory set to pulse every 10 seconds. Refer to the DPM/DPC Installation and Operation Manual specified with the dust collector to change these initial settings. Check to ensure the pulse (diaphragm) valves are “firing” at approximately 10-second intervals and deliver a crisp sounding pulse to each filter. The valves should not deliver a weak sound. If an extended “hiss” is heard afterwards, the pulse is too long, which does not assist in cleaning, and wastes compressed air.

- If your system is supplied with a DPM Pulse Monitor Panel, place the “Continuous Clean/PS” switch on the timerboard to the “Continuous Clean” position. Or if the system is supplied with DPC Pulse Control, place the “Continuous Clean/PS” switch on the timerboard to PS position. The MOT AUX terminals at the timerboard should be field wired for the pulsing to become active. To activate, energize the motor starter to close the isolated auxiliary contact wired to the timerboard MOT AUX terminals. Verify consistent firing of each solenoid valve exhaust port.

NOTE: It is important that the compressed air pressure is in the 90-110 PSIG range (6.2-7.6 BAR) immediately prior to pulse. If the delivery capability of your compressed air source cannot return the manifold pressure to above 90 PSIG during the “Pulse Delay” (factory set at 10 sec.) interval, adjust the pulse delay at the timerboard and monitor the pressure. A longer interval will raise the operating pressure, which is the pulse delay. (Adjust from position 2 to position 3 on the timer board.) Allow sufficient time for the system to stabilize after each adjustment before making any further adjustment. Adjust until the desired manifold pressure is reached.

4.3.1 Digital Pulse Monitor (DPM) Panel

The DPM is always set to “Continuous Clean” pulse mode, which means pulse cleaning is operating continuously when the system is online. Refer to the DPM/DPC Installation and Operation Manual for additional information.

4.3.2 Digital Pulse Control (DPC) Panel

The DPC Pulse Control Panel is set for “Pressure Switch” or “PS” pulse mode. With the DPC control, the desired pressure can be maintained by adjusting the high and low set-points on the panel. The factory setting is 3.0 (high set-point) and 2.5 (low set-point). This allows a 0.5” “deadband” and the pulse system will maintain the desired pressure. The high and low set-points on the DPC can be adjusted as the filters season and continuous pulsing occurs. Adjust upward in 0.5” increments until pulsing stops. Continue adjustments, when required, until the high set-point reaches 5”. No further adjustments should be made over 5” w.g.

5. Service

⚠ DANGER

Before servicing dust collector:

- **Wear appropriate protective clothing when servicing dust collector.**
- **Disconnect and lockout electrical power to the unit and control panel.**
- **Close off and slowly bleed the compressed air supply from the air manifold reservoir. Air manifold reservoir pressure should be reduced to 0 PSIG (0 BAR).**
- **Collected dust may be hazardous. Consult proper authorities for handling and disposal.**
- **Collected dust may be a potential fire hazard. Welding, grinding or operations involving open flames should not be performed without fire protection measures in place. Refer to Section 1 of this manual for additional precautions.**
- **Disposal of collected dust must be according to federal, state and local regulations and all appropriate authorities.**

5.1 Cartridge Filter Removal and Replacement

ProTura® Nanofiber filters are the only replacement filters which provide the highest level of performance expected from the SFC Dust Collector.

Replacement cartridge filters should be ordered when the differential pressure is consistently above 5" w.g. (127 mmAq or system airflow is inadequate and won't significantly recover with off-line (no fan pulse) cleaning. To order filters, contact Parker at 1-800-343-4048.

TO REPLACE CARTRIDGE FILTERS

1. Read and follow caution instructions in box above before servicing your unit. Start with the top row of QuickSeal doors. (Figure 17)
2. Tap the metal surface of each filter access door to remove collected particles from the inner door gasket. Pull the QuickSeal door handle away from the dust collector until the handle makes a 90° angle with the door cover. The filter access door is now in an unlatched position. Lift the QuickSeal filter access door upward until the door rods clear the side support brackets. Pull the door away from the dust collector. Tilt the door cover away from the dust collector once free from the support brackets to trap any dust on the inside of the filter access door. Dispose of dust into a suitable container. Place filter access door in a safe place.
3. Move filter from side to side to break the gasket seal between filter-to-filter-to-tubesheet locations. Rotate the filter 180° to allow the dust on top of the cartridge filter to fall into the dust collector hopper.
4. Slide the filters out of the dust collector and transfer to a suitable disposal container. Repeat this procedure for the remaining filters.
5. Inspect the tubesheet and make certain the gasket sealing area is free of dust to ensure proper sealing of the new filter. Make certain the area is dry after the cleaning process is complete.
6. Install new ProTura® Nanofiber cartridges into each filter compartment, gasket end first. Clean the filter door gaskets and align with door rod support brackets on the dust collector. Door handle must be placed at a 90° angle to filter access door prior to placing the door cover plate support rod in the support brackets (refer to Figure 17). The flat surface of the door handle should be facing downward. To close the filter access door, push the door handle upward, toward the unit.

⚠ WARNING

The QuickSeal filter access door handle must be in a perpendicular orientation to door surface prior to being closed. A flat solid section of door handle will be visible when door assembly is in the properly closed position. Refer to Figure 17.

If cam surface of the door handle is visible, QuickSeal filter door assembly has been improperly installed.

7. The SFC dust collector is now ready to be placed back in service. Reconnect electrical power and air supply. Please follow the initial start-up checklist to ensure proper unit performance.

5.2 Dust Removal

⚠ WARNING

Do not let the dust storage drum overfill. This can cause poor dust collector performance and require extensive clean-up due to the overflow of dust when removing the collection container(s).

Turn off the dust collector (power to fan system and compressed air to cleaning system) and empty the dust storage drum as necessary to prevent dust from accumulating in the hopper(s). Empty the dust storage drum(s) when two-thirds full. If the hopper has a slide gate, close the slide gate before servicing the dust storage drum(s). The dust collector fan and compressed air cleaning systems do not have to be turned off if the hopper slide gate is closed prior to servicing storage drums. Remember to open the slide gate when the dust storage drum is replaced.

5.3 Servicing the Compressed Air Components

⚠ WARNING

Shut off and slowly release the pressure in the compressed air piping or the SFC compressed air manifold reservoir prior to servicing this equipment.

1. The compressed air system should be periodically checked to ensure clean, dry, oil-free air is delivered to the SFC dust collector. Check the compressed air components and service as recommended by the manufacturer.
2. Periodically check the dust collector air manifold reservoir(s) for contaminants and drain any condensed liquid from manifold reservoirs.
3. With the compressed air supply turned on, check the diaphragm valves, electronic solenoid valves and interconnecting tubing between both devices for any air leakage. Replace any components that are defective or worn.

5.4 Servicing The Direct Drive Blower and Motor System

⚠ DANGER

ELECTRIC SHOCK HAZARD

All electrical work should be performed by a qualified electrician in accordance with local electrical codes. Disconnect electrical power before installing or servicing any electrical component.

Refer to blower assembly Installation and Operation Manual provided with blower assembly for servicing requirements.

5.5 Servicing Cartridge Media

Before replacing cartridges, try down time (fan off) to see if system recovers. If upon restart, collector S.P. is 2-1/2" (63 mmAq) to 3" (76 mmAq) and it takes several days to work back up to over 5" (127 mmAq), there is still "life" left in the cartridges. If upon restart, 4 hours later S.P. is back over 5" (127 mmAq), it is time to change out the cartridges.

5.6 Servicing Optional Return Air Safety Filters (HEPA/ASHRAE)

Periodically check the pressure drop across the return air safety filters. Replace when the differential pressure drop exceeds 2" w.g. (51 mmAq) for ASHRAE filters and 3" w.g. (76 mmAq) for HEPA filters.

CARTRIDGE FILTER	PARKER PART NUMBER	GENERAL DESCRIPTION OF FILTER MEDIA
ProTura® Nanofiber	33-10089	ProTura® Nanofiber layer on cellulose
ProTura® Nanofiber-FR	33-10089-1	ProTura® Nanofiber layer on cellulose with fire retardant material treatment
ProTura® Nanofiber, Wide Pleat	33-10089-5	Half the media quantity of the ProTura® Nanofiber filter
ProTura® Nanofiber-FR, Wide Pleat	33-10089-15	Half the media quantity of the ProTura® Nanofiber-FR
ProTura® SB Nano	NF20782	ProTura® Nanofiber layer on 100% synthetic
ProTura® SB Nano, Wide Pleat	NF20781	ProTura® Nanofiber layer on 100% synthetic
Poly-Fiberglass-W	1212667	Mixture of polyester and fiberglass fibers
Spun-bond-P	1212669	Spun-bond polyester fibers
Spun-bond-T	1212671	Spun-bond polyester fibers with PTFE surface membrane

TABLE 2
Cartridge Filters

5.7 ProTura® Nanofiber Cartridge Filters

The SFC product line is designed to accept ProTura® Nanofiber cartridge filters. Table 2 highlights the most common Parker cartridge filters.

Parker will custom design cartridge filters for application-specific systems. Contact the Parker office for additional information.

5.8 Explosion Vent Replacement

5.8.1 Dome Style Explosion Vent Replacement

⚠ CAUTION

CUT HAZARD - WEAR PROTECTIVE CLOTHING

1. In case of explosion, contact Parker immediately. Do not operate or rearm the collector with another explosion vent membrane without contacting Parker first. Serious injury could occur.
2. Verify that the system is depressurized and safe for human exposure before attempting to remove the old or burst rupture panel. While loosening the capture frame bolting, take care to avoid the sharp edges of the rupture panel as these can cause severe cuts and/or abrasions. Remove the capture frame and set aside.
3. After removal of the capture frame, remove the rupture panel. This may require bending panel sections away from the frame for frame removal. Care should be taken to avoid sharp panel edges during this activity.
4. Dispose of the removed rupture panel in accordance with applicable local and federal regulations.
5. Install the new rupture panel. Make sure all tags and danger warnings are placed on the side of the explosion vent facing out towards installer. Secure with the appropriate gasket material, bolting and previously removed capture frame.
6. Rupture panels are not bolt torque sensitive; i.e., bolt torque does not increase or decrease the rupture panel set pressure. The bolt torque used should be only that which is sufficient to create a leak-free seal.

6. Troubleshooting Guide

Use the troubleshooting guide to correct any problems that occur with your dust collection unit. If the problem or condition continues, contact the Parker customer service office.

⚠ WARNING

All electrical/mechanical troubleshooting should be performed by a qualified electrician/maintenance individual familiar with Parker equipment.

Prior to troubleshooting any equipment, read the Installation and Operation Manuals for each piece of equipment to be serviced.

PROBLEM	POSSIBLE CAUSES	RECOMMENDED SOLUTIONS
Motor/blower won't start or won't stay running.	Blower rotation is running in reverse.	Reverse blower rotation (refer to Section 5.1).
	No voltage to system.	Check primary voltage to motor circuits for proper voltage on all legs.
	Improper electrical wiring.	Check and correct internal motor wiring for proper connections based on the incoming line voltage at the motor junction box. Check control voltage power (i.e. fuses, transformer, etc.).
	Starter overloads are tripped.	Check for proper motor starter overload rating against full load amps on motor nameplate. Adjust or replace overloads as required.
	Hopper discharge open to atmosphere.	Ensure drum is properly sealed against drum lid package. Ensure drum lid package is properly installed (refer to Figure 13).
	Blower damper not properly adjusted.	Check motor current draw and close volumetric control damper or silencer damper until amperage FLA is below full load rating of motor.
	Low system static pressure.	Close dampers to increase static pressure or install orifice plate in a branch duct.
Dust emissions from clean air discharge.	Filters not installed properly.	Inspect and reinstall cartridge filters (refer to Section 6), gasket end first.
	Filters are damaged.	Replace damaged filter(s) with new ProTura® Nanofilber cartridge filter(s).
	Filter access doors not installed properly.	Remove and reinstall QuickSeal filter access door assembly (refer to Figure 17 and Section 6).
Insufficient airflow.	Blower rotation is running in reverse.	Reverse blower rotation (refer to Section 5.1).
	Loose or open access.	Remove QuickSeal filter access door assembly, verify filters are properly installed (refer to Section 6.1 and Figure 17), gasket end first. Verify drum lid is installed properly (refer to Figure 13).
	Volumetric duct dampers or blower outlet damper is not positioned properly.	Adjust dampers to allow for sufficient air volume (refer to Sections 5.1 and 5.2).
	An inlet(s) obstructed.	Inspect and clean all hoods and other machine connections.
	Filters plugged.	Refer to troubleshooting procedures for continual pressure drop.

PROBLEM	POSSIBLE CAUSES	RECOMMENDED SOLUTIONS
Continual, excessive pressure drop (over 5” [127 mmAq]) on filter monitoring panel.	Compressed air supply problems.	Check incoming compressed air for proper supply at air manifold reservoir (90-110 PSIG [6.4-7.2 BAR]), pulse flow (1.7 SCF standard cubic feet [48.1 liters] per pulse)) and pulse duration (100 milliseconds). Correct any problems.
	Pulse cleaning system not functioning properly.	Check incoming 110-115 VAC power to cleaning control panel. Check control panel boards for blown fuses. Check 110-115 VAC supply power circuit (transformer, primary/secondary fuses, etc.). Replace as necessary. Consult the cleaning control panel Installation and Operation Manual for additional troubleshooting procedures.
		Check for 110-115 VAC supply voltage to the timer board and voltage output from timerboards to solenoid valves. Consult DPM/DPC Pulse Control Panel Installation and Operation Manual for additional assistance.
	DPC not properly adjusted.	Reduce high set-point on DPC to 3” (76 mm). Reduce low set-point on DPC to 2.5” (64 mm) (refer to Section 5.4 or DPM/DPC Pulse Control Panel Installation and Operation Manual).
	Pulse system not properly adjusted.	Check for proper pulse valve operation (refer to Section 5 or DPM/DPC Pulse Control Panel Installation and Operation Manual). Replace damaged parts as necessary.
	Pulse settings incorrect.	Adjust pulse duration to 0.100 seconds (position 3). Adjust pulse delay interval to 10 seconds (position 2). Consult DPC/DPM Pulse Control Panel Installation and Operation Manual for additional assistance.
	Dust storage drum is full.	Empty drum and clean out hopper (refer to Section 6.3).
	Filters are at the end of their service life.	Replace cartridge filters with ProTura® Nanofiber cartridge filters from Parker. Each cartridge filter has a filter part number affixed to end cap (refer to Table 2 for the ProTura® Nanofiber cartridge filters).
	Air inlet and/or outlet ducting are undersized.	Increase air inlet and/or ducting sizes to reduce duct line static pressure losses. Follow ducting design methods as listed in Industrial Ventilation Manual by American Conference of Governmental Industrial Hygienists.

7. Illustrated Parts

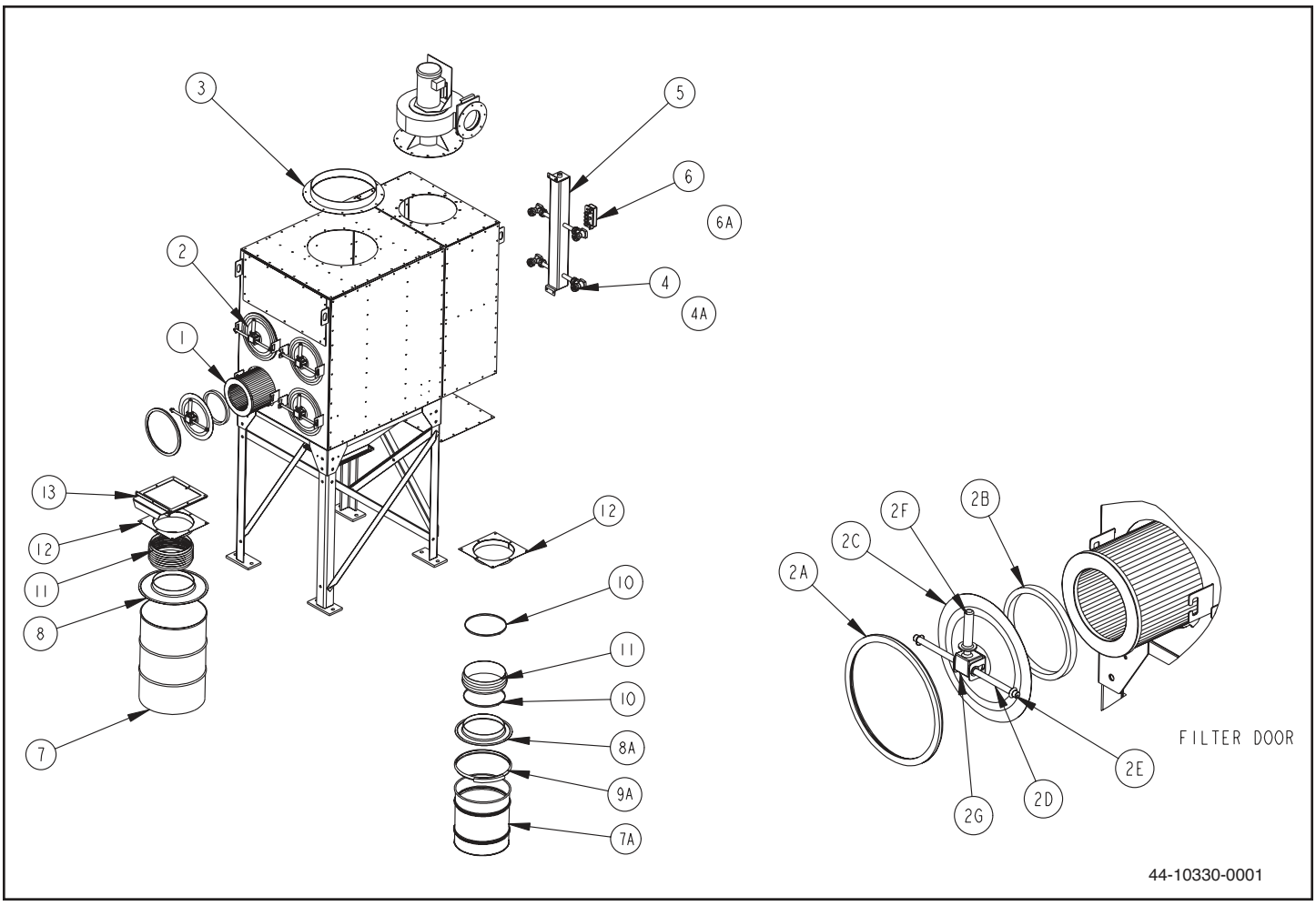


FIGURE 21 SFC Series

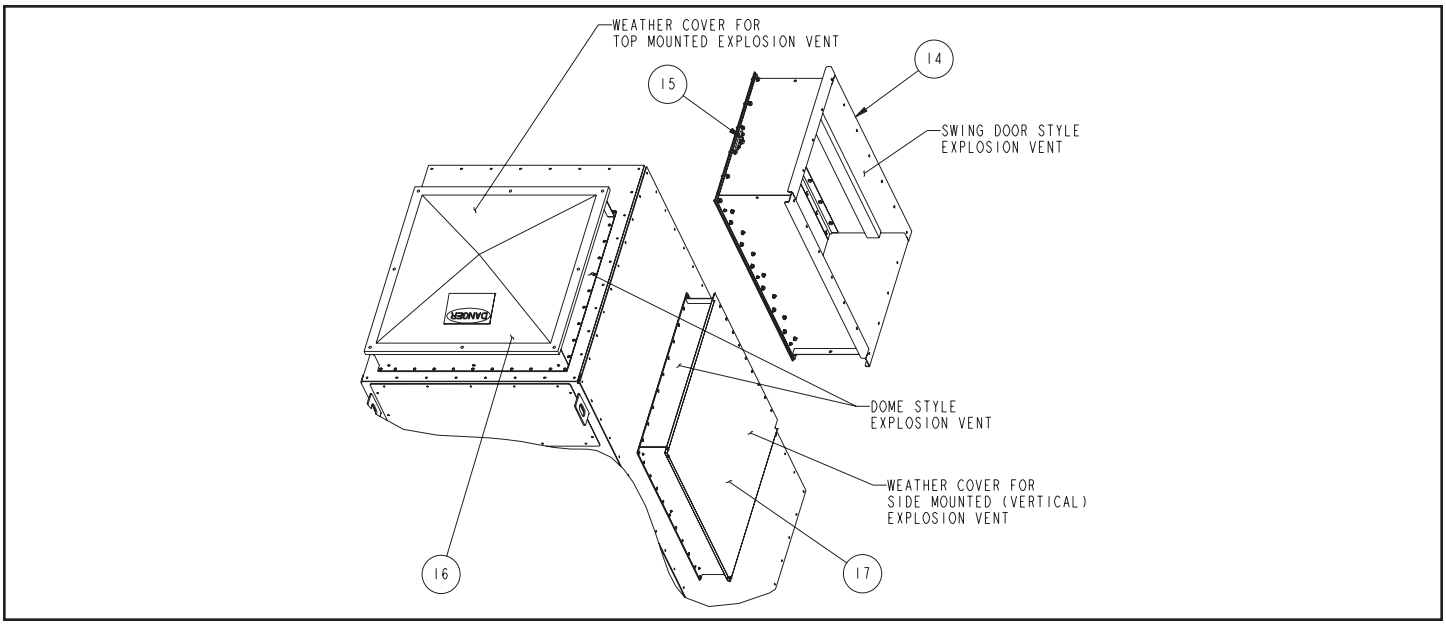


FIGURE 22 SFC Series Explosion Vents

SFC Dust Collector Bill of Materials

Item	Part No.	Description
1		Filter (Consult Parker)
2	02-10019-0001	QuickSeal Filter Access Door Assembly
	02-10019-0002	High Temp QuickSeal Filter Access Door Assembly
	02-10019-0003	QuickSeal Filter Access Door Assembly, Exp Type
2A	42-10002-0001	External Filter Door Seal Gasket
	42-10002-0003	High Temp External Filter Door Seal Gasket
2B	42-10005-0001	Internal Filter Door Seal Gasket
	42-10005-0002	High Temp Internal Filter Door Seal Gasket
2C	10-10079-0001	Door Panel
2D	10-10143-0001	Door Rod
2E	10-10193-0001	Stainless Steel Door Rod End Caps
2F	39-10002-0001	Handle Grip
2G	39-10003-0001	Door Handle
3		Inlet Collar (Consult Parker)
4	07-10002-0001	Diaphragm Valve
4A	07-10003-0001	Diaphragm Valve Repair Kit
5		Compressed Air Manifold (Consult Parker)
6	20-10076-00XX	Solenoid Enclosure (Consult Parker)
6A	20-10076-RPR	Solenoid Repair Kit
6B	20-10076-RPLC	Solenoid Valve Replacement
7	45-0237	55-Gallon (208 Liter) Drum
7A	45-10024-0020	20-Gallon (76 Liter) Drum
8	45-10034-0055	55 Gallon Drum Lid
8A	45-10034-0020	20 Gallon Drum Lid
9	45-10022-0055	55 Gallon Quick Release Collar
9A	45-10022-0020	20 Gallon Drum Quick Release Collar
10	15-0233	14” Hose Clamp
11	15-0202	14” Flexible Duct
12	18-0944	14” Adapter Plate
13	02-6041	14” Slide Gate
14	12-10011	Rupture Panel, Dome 36X36
	12-10012	Rupture Panel, Dome 12X18
	12-10013	Rupture Panel, Dome 18X35
	02-10586-0001	Asm, Explosion Vent, 45x28
	02-10618-0001	Asm, Explosion Vent, 32x19
	02-10618-0002	Asm, Explosion Vent, 16x19
	12-10007-3636	Rupture Panel, Flat, 36x36 (Pre Oct 2012)
	12-10006-1618	Rupture Panel, Flat, 16x18 (Pre Oct 2012)
	12-10001-1836	Rupture Panel, Flat, 18x36 (Pre Oct 2012)
15	10-11358-0001	Clip, Fmd, Exp Vent, 45x28
	10-11358-0002	Clip, Fmd, Exp Vent, 14 GA, 32x19
	10-11358-0003	Clip, Fmd, Exp Vent, 16 GA, 16x19
16	12-10005-3636	Weather Cover, Rupture Panel, 36x36
	12-10005-1836	Weather Cover, Rupture Panel, 18x36
	12-10005-1618	Weather Cover, Rupture Panel, 16x18
	12-10008-1619	Weather Cover, Top Mount, 16x19
	12-10008-1932	Weather Cover, Top Mount, 19x32
	12-10008-2845	Weather Cover, Top Mount, 28x45
	12-10014-1218	Weather Cover, Top Mount, 12x18
	12-10014-1835	Weather Cover, Top Mount, 18x35
17	10-11392-0001	Weather Cover, Side Mount, 45x28
	10-11602-0004	Weather Cover, Side Mount, 32x19
	10-11602-0002	Weather Cover, Side Mount, 16x18

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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.

4. IN NO EVENT IS PARKER LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES ARISING OUT OF, OR AS THE RESULT OF, THE SALE, DELIVERY, NON-DELIVERY, SERVICING, NONCOMPLETION OF SERVICES, USE, LOSS OF USE OF, OR INABILITY TO USE THE PRODUCT OR ANY PART THEREOF, LOSS OF DATA, IDENTITY, PRIVACY, OR CONFIDENTIALITY, OR FOR ANY CHARGES OR EXPENSES OF ANY NATURE INCURRED WITHOUT PARKER'S WRITTEN CONSENT, WETHER BASED IN CONTRACT, TORT OR OTHER LEGAL THEORY. IN NO EVENT SHALL PARKER'S LIABILITY UNDER ANY CLAIM MADE BY BUYER EXCEED THE PURCHASE PRICE PAID FOR THE PRODUCT.

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.

KOGI Environmental Solutions

Kogi Environmental Solutions is a leading environmental services company. We specialize in air pollution control solutions for our clients. We service industrial and commercial kitchens clients. We partner with the best OEMs including Parker Hannifin, Air Quality Engineering, Absolent, Industrial Maid, Halton, Spring Air, ACT, among others.

We bring unparalleled expertise servicing SmogHog, DustHog, MistBuster, Amano, and other brands. Our comprehensive offering includes original and used equipment, after-market parts and filters, rentals, delegated engineering design, and preventative maintenance.

North Carolina, US

PO Box 18461 | Greensboro, NC 27419

1-888-890-0728

sales@kogi-es.com

kogi-es.com

Canada

14035 105 Ave NW
PO Box 53043 Edmonton, AB T5N 0Z1

sales@kogi-es.ca

kogi-es.ca