High Efficiency Cyclone Dust Collector User Guide

C Series

Parker

ENGINEERING YOUR SUCCESS.

KNOW YOUR EQUIPMENT

READ THIS MANUAL FIRST.

Your Cyclone system should provide many years of trouble-free service. This manual will help you understand the operation of your Cyclone 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 information in the spaces below. Should you need assistance, call the Cyclone customer service number shown below. To expedite your service, have the following information available when contacting Parker.

ORDER #: _____

UNIT MODEL #: _____

UNIT SERIAL #: _____

AFTER FILTER PART #: _____

SYSTEM ACCESSORIES:

_____

_____

_____

INSTALLATION DATE: _____

Parker Hannifin Customer Service

1-800-343-4048

Table of Contents

SAFETY PRECAUTIONS

We have provided many important safety messages in this manual and on the C Series 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 collector components or servicing the unit.
- Use proper lifting and rigging equipment to install the electronic precipitator.
- The electronic precipitator should be properly grounded prior to servicing.
- Disconnect power prior to servicing.
- Do not operate the unit with component doors open.
- 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.
- Do not collect emmisions which are explosive.
- Use non flammable cleaners.
- Keep flammable materials and vapors, such as gasoline, away from the unit.
- The unit should be inspected frequently and contaminants removed to prevent excessive accumulation which may result in flash-over or fire damage.
- Operate only in a safe and serviceable condition.
- Operating temperature to the air stream should not exceed 120º F (49º C).

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 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 must be discussed with Parker Hannifin, Inc. or your local Cyclone representative. Operating personnel must be aware of, and adhere to, the most stringent safety procedures.

1.1 General Cautions On Using the Dust Control Unit

1. Avoid mixing combustible materials such as aluminum, paper, wood or other organic dusts with dusts generated from grinding or welding metals. 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.
2. When collecting emissions from spark-producing processes, care must be taken to reduce any potential fire hazards. Dust collectors do not contain fire extinguishing equipment unless specifically ordered. Consult fire extinguishing experts for recommendations concerning proper fire detection and suppression systems.
3. Some dust collection systems require explosion venting. Consult your insurance underwriter, NFPA (National Fire Prevention Association) Manual and local fire authorities to determine requirements for explosion venting.
4. Be careful and conscientious—consult national and local fire codes, waste disposal, safety and other appropriate authorities. Comply with their recommendations for proper installation and operation of dust collection equipment.

2. Introduction

Thank you for selecting Cyclone 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 dust collection equipment engineered to each dust collection need and manufactured to the highest standards.

The Parker High Efficiency Cyclone Dust Collector is designed to collect process-generated dusts. The C-Series cyclone provides continuous-duty operation in its application to improve the work environment.

As you review this manual, refer to Figure 1 for assistance locating unit parts.

2.1 Unit Nomenclature

Example: C3015-1D

C	High Efficiency Cyclone Dust Collector
30	Refers to cyclone diameter
15	Horsepower of drive motor
1D	Refers to single (1D) or dual (2D drum discharge; or hopper discharge (C60H/C110H-1D)

2.2 Description and Operation

C-Series cyclones are high-efficiency dust collectors designed to eliminate airborne dust as it is generated. Contaminants are captured at the source(s), then conveyed through ductwork to the collector where the dust is separated from the airstream and collected.

The primary mode of operation is the air cleaning operation. The separated dust is discharged into a collection container. The clean air is then exhausted into the atmosphere or further filtered through afterfilters.

2.3 Air Filtering Operation

Normal operation consists of the air filtering operation and the resulting clean air discharge.

During the air filtering operation, contaminated air is drawn into the Cyclone Dust Collector through the air inlet located on the upper barrel above the internal helix (see Figure 1). The contaminated air spirals downward and accelerates as the cone narrows whereby higher centrifugal forces are exerted on dust particles in the airstream. As the contaminated air travels down the cone, it accelerates and the particles are thrown to the periphery of the airstream. Aided by gravity, the heavy particles are discharged into a dust-tight container (i.e. drum or hopper). As the particles drop out, the exhaust airstream spirals upward inside the downward stream of contaminated air into the fan housing and is then exhausted into the atmosphere.

Note: For fine dust and dust with low densities, the cyclone should be considered only as a pre-cleaner. Secondary filtration may be required.

3. Specification Table

Model	Flow Rate (CFM)	External Static Pressure (WG)	Inlet Velocity (FPM)	STD Inlet Size	STD Inlet Size	Motor TEFC (HP)	Dust Storage Capacity (STD)FT^3	Dimensions			Shipping Weight+
								H	W	D	
C-192-ID	850-1,200	8. - 4.6	4,328 - 6,110	6”	8”	2	7.5	112”	36”	36”	410 lbs.
C-203-ID	1,250-2,000	7.5 - 3.7	3,580 - 5,729	8”	10”	3	7.5	§124”	36”	36”	635 lbs.
C-205-ID	1,500-2,500	11.4 - 4.9	3,395 - 5,659	8”	10”	5	7.5	§126”	36”	36”	645 lbs.
C-247-ID	2,000-3,500	13.5 - 4.4	3,667 - 6,417	10”	12”	7.5	7.5	§142”	36”	36”	740 lbs.
C-3010-ID	3,000-4,600	9.9 - 4.9	3,820 - 5,857	12”	14”	10	7.5	§163”	36”	36”	1,005 lbs.
C-3015-ID	4,000-5,700	9.5 - 4.8	5,093 - 7,257	12”	14”	15	7.5	§165”	36”	36”	1,180 lbs.
C-3620C60H	4,300-7,000	11.4 - 4.9	4,022 - 6,548	14”	16”	20	60	*271”	90”	52”	3,180 lbs.
C-3625C60H	4,500-7,500	15. - 6.3	4,209 - 7,015	14”	16”	25	60	*271”	90”	52”	3,295 lbs.
C-3630C60H	5,000-8,000	16.2 - 7.0	3,581 - 5,730	14”	16”	30	60	*274”	90”	52”	3,340 lbs.
C-4440C110H	8,000-11,000	15.2 - 5.5	4,527 - 6,225	18”	20”	40	110	*321”	85”	61”	4,955 lbs.
C-4450C110H	8,000-13,000	18.9 - 7.1	4,527 - 7,356	18”	20”	50	110	*323”	85”	61”	5,165 lbs.

* Standard 5’6” under hoppers. C60 or C110 hopper available with all models.
+ Approximate; motor weight will vary.
§ Add 12” for 2D arrangement.

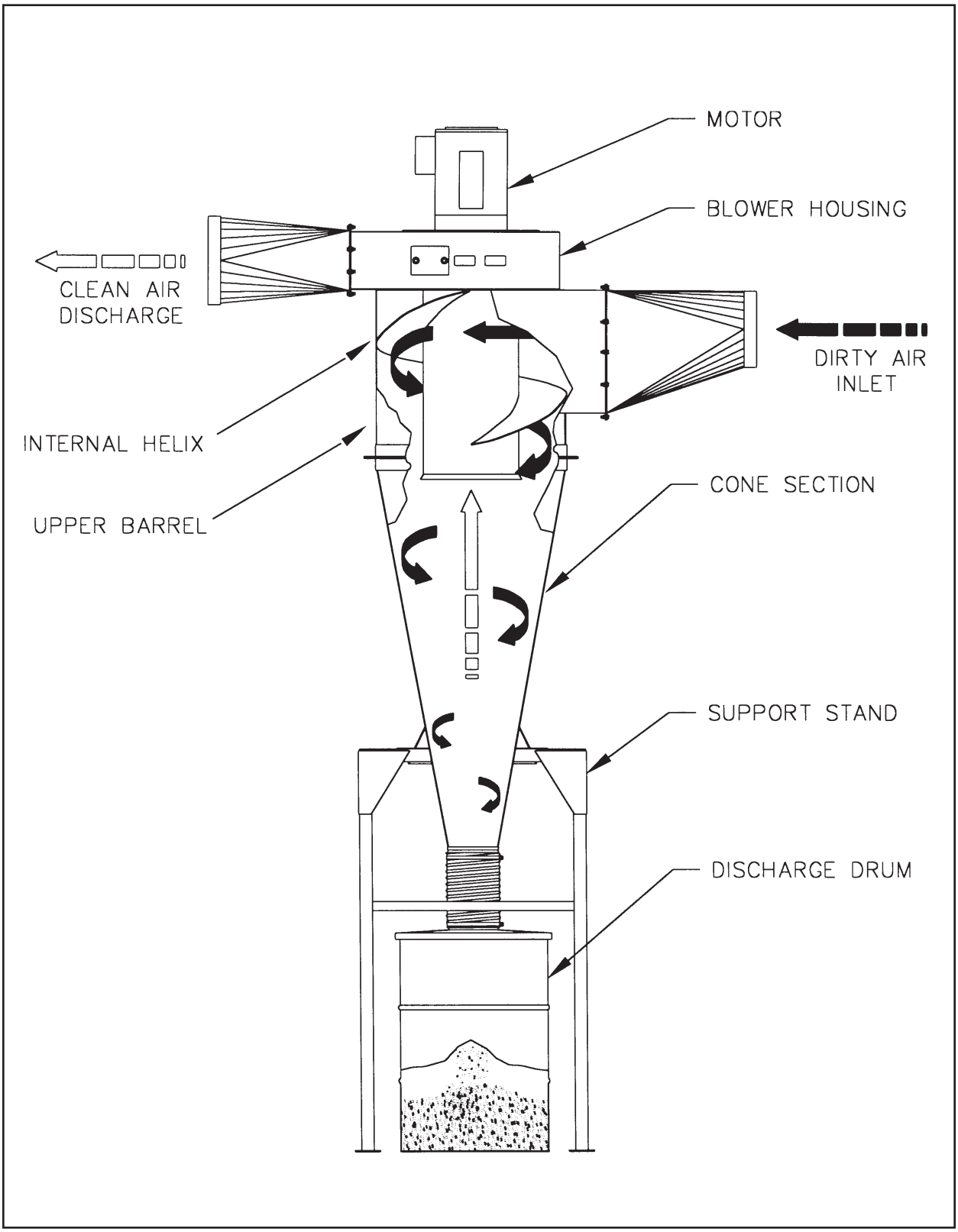

Figure 1. C-Series Cyclone Dust Collector

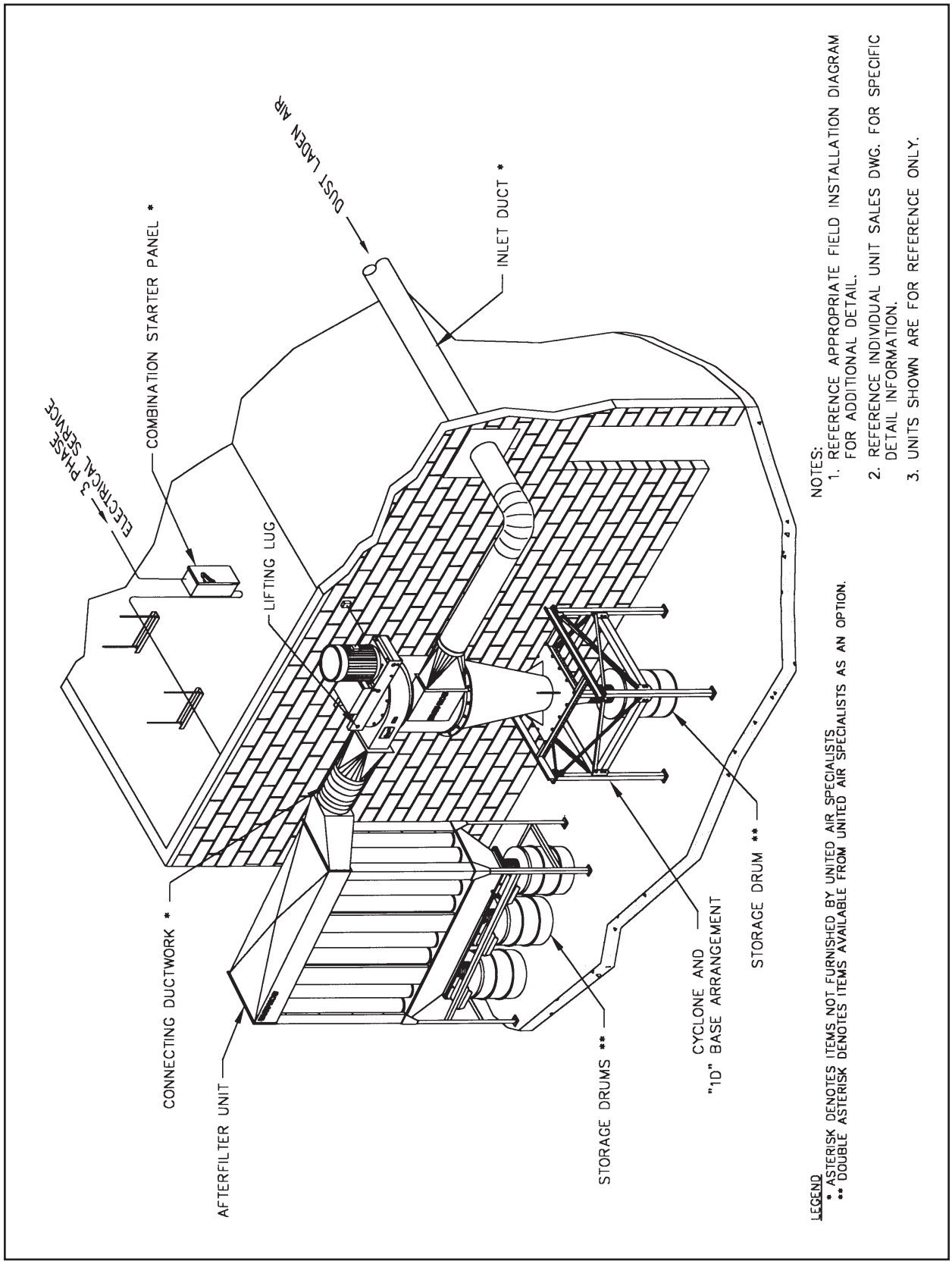

Figure 2. Typical Installation Diagram

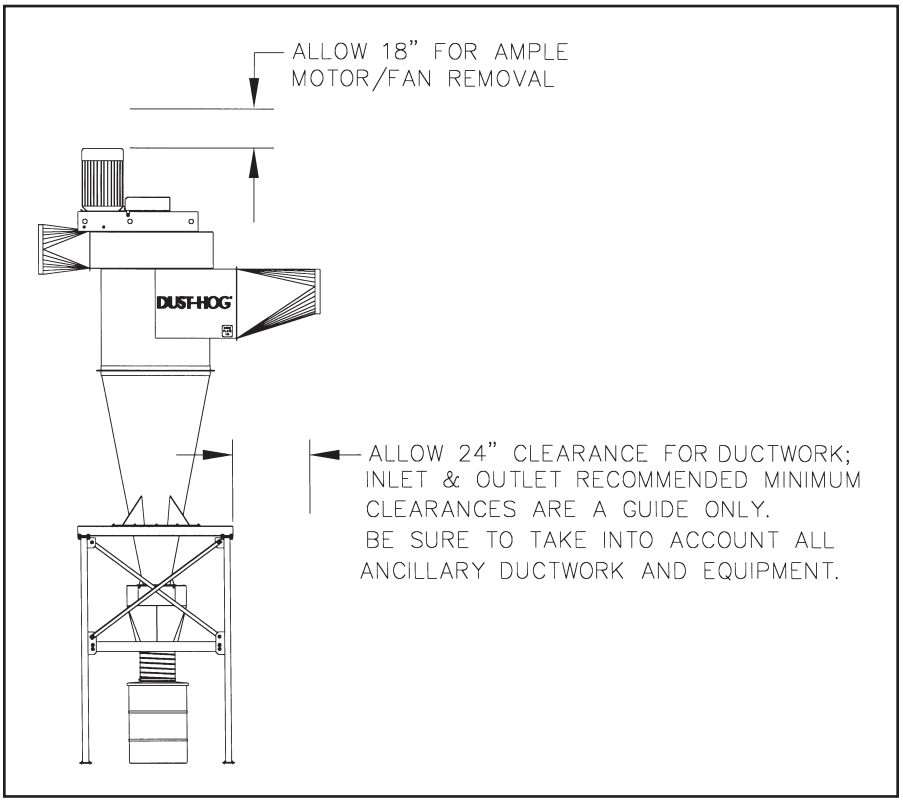

Figure 3.
Recommended
Minimum Clearance

4. Installation

4.1 Off Loading and Inspection

C-Series cyclone units are shipped with major components mounted on skids. The blower assembly will be pre-assembled to the upper barrel assembly. The orientation will have the inlet and outlet opposed 180° unless requested otherwise at the time of order. Other skids may contain afterfilter units or other accessory components.

Inspection Note: 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.

4.2 Installation Planning

Selecting the proper location for your dust collection equipment is very important. See Figure 2 for typical installation details.

Certain items should be considered when locating the unit, such as: room to empty the dust storage container(s) or hoppers; shortest run for location of ductwork; electrical connections; wall penetrations; fan discharge direction; afterfilters. Ease of maintenance should also be considered when selecting the location and orientation of the system (see Figure 3).

⚠ WARNING

- Do not locate dust collector near dust source in cases where the dust is explosive or a fire hazard.
- In preparing to install the unit, ensure location is clear of all obstructions, such as utility lines or roof overhangs.

The Parker Cyclone Dust Collector is usually mounted on a reinforced concrete foundation. Other mounting options are possible. Structural calculations for the foundation or other mounting arrangement must include the weight of the cyclone, the material collected and the weight of all auxiliary equipment. These weights must be considered together with wind, seismic and other live load ratings when designing the support structure. See the Specification Table on page 2 for dust collector unit weights.

Interconnecting ductwork (not provided with the Cyclone Dust Collector) should be designed and properly sized to handle the air volume at the recommended air velocities for the entrainment of dust into the collection system. When installing ductwork, use the shortest possible runs and large-radius elbows whenever possible. The shortest duct length with a minimum number of elbows will maximize the performance of the unit. Seal all joints. Follow ductwork design methods as listed in the Industrial Ventilation Manual as recommended by the American Conference of Governmental Industrial Hygienists. 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 precautions to consider when collecting combustible, explosive or hazardous dusts. Review General Cautions listed on page iii.

With any air-moving device, a certain amount of noise is created. Normally, the noise level is not as high as that of other machinery in the area. If you require an additional reduction in the noise level, exhaust silencers are available as optional equipment. Noise levels must be taken into consideration as you plan the installation of your equipment.

4.3 Assembly and Standard Equipment

⚠ WARNING

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

Before you begin, remove all crating, strapping and hold-down bolts. Locate all hardware bags, silicone sealant and other assembly materials provided with your unit. Remove fan housing inspection door and examine the unit fan wheel. Make sure it moves freely and is firmly in place. Re-tighten if necessary. Replace door after inspecting. Check that motor mounts are secure.

Parker Cyclone Dust Collectors are typically shipped in three main assemblies:

1. Upper barrel assembly - This section consists of the upper barrel and blower housing with motor.
2. Cone weldment - The cone is usually inverted and mounted inside the base support stand.
3. The base assembly - This consists of support base, legs, drum cover, hose and clamps. The inlet and outlet pieces will also typically be shipped with the base assembly.

⚠ CAUTION

Never lift cyclone by the motor. Do not rest blower assembly on fan wheel.
Use clevises (not hooks) on lifting sling. Use spreader bars on lifting sling.

Drum Support Stand Assembly

Place the base assembly of the unit in its desired location. Use shims under foot pads as needed to level unit. Once base is level, fasten down with properly sized anchor bolts (see Figure 4).

Hopper Support Stand Assembly

Place the hopper base assembly in its desired location. Use shims under foot pads as needed to level unit. Once base is level, fasten down with properly sized anchor bolts.

Shim and anchor the bottom section of the hopper first. Using the hardware provided, set the top section of the hopper on the base section (see Figure 5).

⚠ WARNING

In preparing to assemble the hopper to its mating support base, connect a lifting sling to at least four positions on the unit. Distribute the load evenly. Location must be clear of all obstructions such as utility lines or roof overhangs.

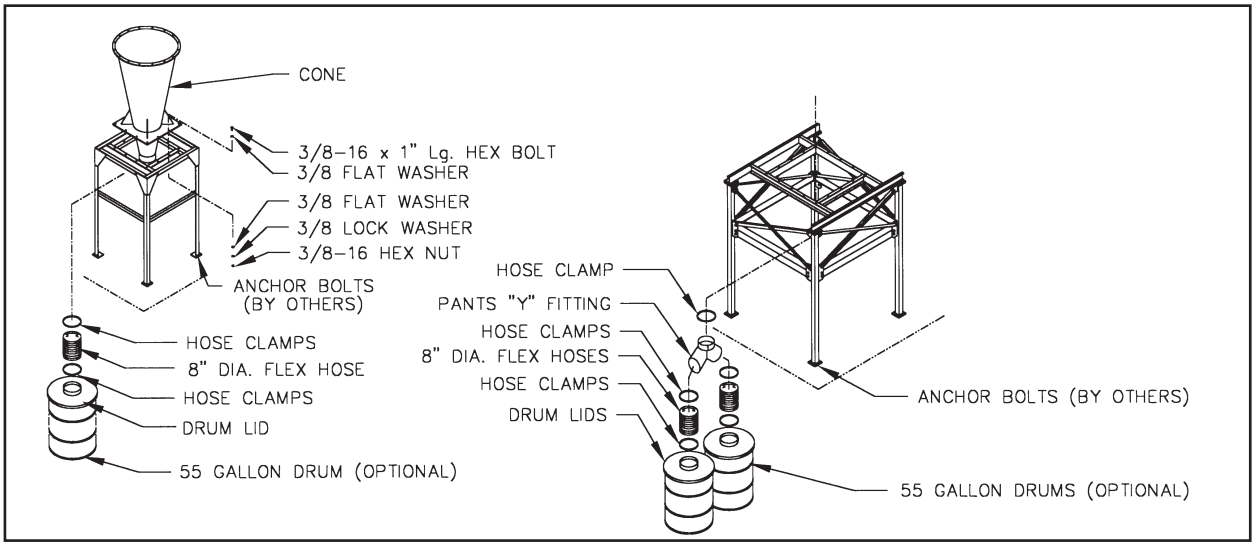

Figure 4. One- and Two- Drum Base Assembly

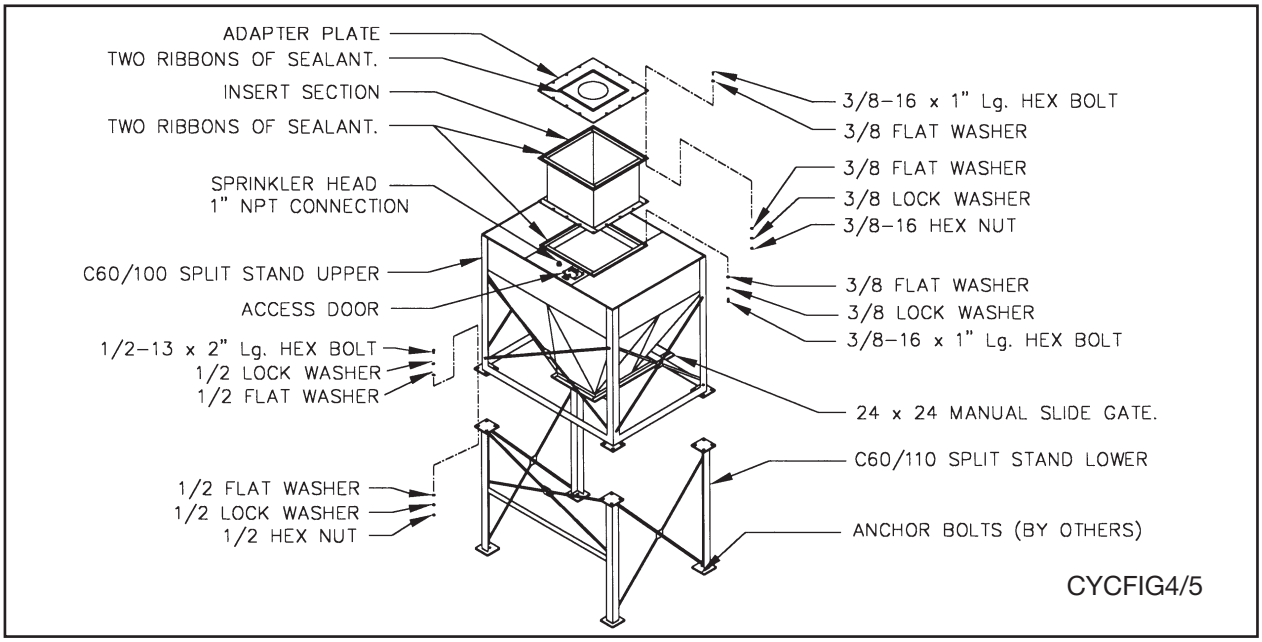

Figure 5. C60H and C110H Hopper Base Assembly

Take care to use proper lifting equipment and procedures. Drift pins may be useful for locating hopper mating sections. With the hopper section still supported, use hardware to bolt the sections together. Once all hardware is in place, go back and fully tighten all hardware on mating pads and all bracing. Disconnect the crane.

Cone Assembly

⚠ WARNING

In preparing to assemble the cyclone to its stand or hopper, connect a lifting sling to at least four positions on the cyclone. Distribute the load evenly. Location must be clear of all obstructions such as utility lines or roof overhangs.

Install the cone assembly by setting the cone on top of the base. No sealant is required at this joint for the 1D and 2D units. Sealant is required for hopper base units. The cones are symmetrical so there is no specific orientation to consider. Using hardware provided, fully secure cone to base (see Figure 4).

Inlet and Outlet Transition Installation

Each Cyclone Dust Collector has its own bolt-on inlet and outlet transitions. The model C192 transitions are welded on the assembly. When mounting the inlet transition, always make sure the top of the transition is up. (see Figure 6). If the transition is mounted improperly, unit efficiency will be adversely affected.

Do not attempt to change the size of the inlet. If the cyclone is operated with more than the maximum permissible inlet area, the motor may become overloaded.

Inlet and Outlet Direction Change

Check to be sure the inlet and the fan discharge are facing the desired direction. If not, they can be rotated. The inlets on the various models can be rotated as follows:

Series C190 - inlet can be rotated at 45° increments from the base.
Series C200 and C240 - inlets can be rotated at 45° increments.
Series C3000 and C3600 - inlets can be rotated at 221/2° increments.
Series C4400 - inlet can be rotated at 15° increments.

The outlet (fan housing) on all models can be rotated at 45° increments. Once correct positioning is obtained, lay two ribbons of sealant around the bolt circle of the fan housing and/or flange rings to ensure airtight seal. Re-bolt the fan housing.

If discharge direction must be changed on the C3600 or C4400 series cyclones after unit has been delivered (or if collector must be moved), the upper cylinder/blower assembly must be re-oriented on the ground because of the considerable force that may be required to rotate the housing.

Place the upper cylinder/blower assembly on the ground and firmly secure. To change the position of the housing discharge in relation to the inlet, proceed as follows:

1. Remove weather/belt guards.
2. Secure the blower package with a sling from a crane or forklift attached to the channel on the blower package.
3. Loosen and remove the bolts on the blower package cover plate.
4. Lift fan/motor assembly out of fan housing and support properly on ground.

⚠ CAUTION

Do not rest fan on the ground, as the fan may become damaged.

5. Loosen and remove the bolts holding the blower housing to the upper cylinder.

6. Rotate blower housing to the desired position. Housing may stick because of sealant. Scrape the old sealant off the barrel top and fan housing, then reseal using silicone sealant. Apply a ribbon of sealant on both sides of bolt pattern.

7. Reassemble parts in reverse order.

The blower package can now be re-installed. Apply a ribbon of sealant to each side of bolt circle on top of the blower housing. Gently lower the blower package in place, making sure the terminal box on the motor is facing desired direction. Use hardware provided and secure package.

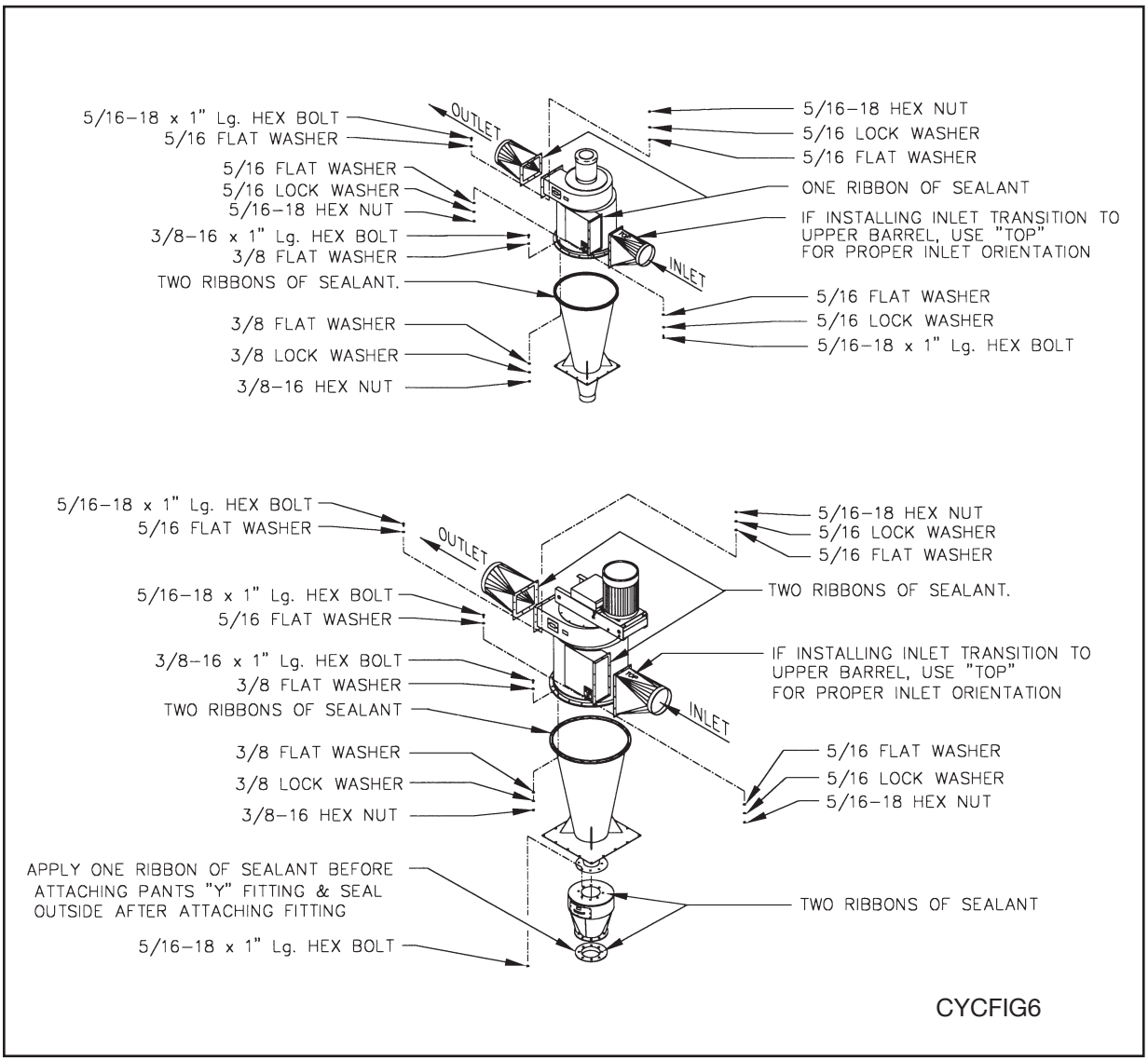

Figure 6. Typical Barrel/Blower Assembly

Barrel/Blower Assembly

Ensure that the inlet and outlet flanges are facing the desired direction. If the inlet and outlet directions need to be changed, see previous section “Inlet and Outlet Direction Change” before continuing.

After ensuring that inlet and outlet direction are correct, use two ribbons of sealant on each bolt-up flange (see Figure 6).

4.4 Assembly of Optional Equipment

AF-Series Afterfilter Assembly

On AF (afterfilter) models, the filter section is shipped in several containers. The filter section of model C192 consists of elbow, flange assembly, filter bag and clamp. On the larger cyclone models, the filter section consists of three main sections:

1. Transition
2. Plenum sections
3. Filter bags and clamps

On all afterfilter models, use a ribbon of sealant between blower housing discharge flange and the mating flange of the afterfilter transition. If required, bolt afterfilter plenum to transition using additional sealant. Install proper ceiling supports or floor supports for the afterfilter housing.

Install filters with the appropriate clamps. Make sure bags and clamps are both on the flange collar of the plenum (see Figure 7B).

Model	Cyclone Base	(A) Dim.	(B) Dim.	# Filters	Filter Length	Filters Area (Sq. Ft.)
AF4	C203	41”	19”	4	70”	72
AF4	C205	41”	19”	4	70”	72
AF4	C247	41”	19”	4	100”	104
AF8	C247	78”	19”	8	100”	208
AF8	C3010	78”	19”	8	100”	208
AF8	C3015	78”	19”	8	100”	208
AF12	C3600	78”	19”	12	100”	312
AF18	C4440	105”	19”	18	100”	468
AF24	C4450	132”	19”	24	100”	624

Figure 7A.
Direct Connection
Afterfilter Specifications

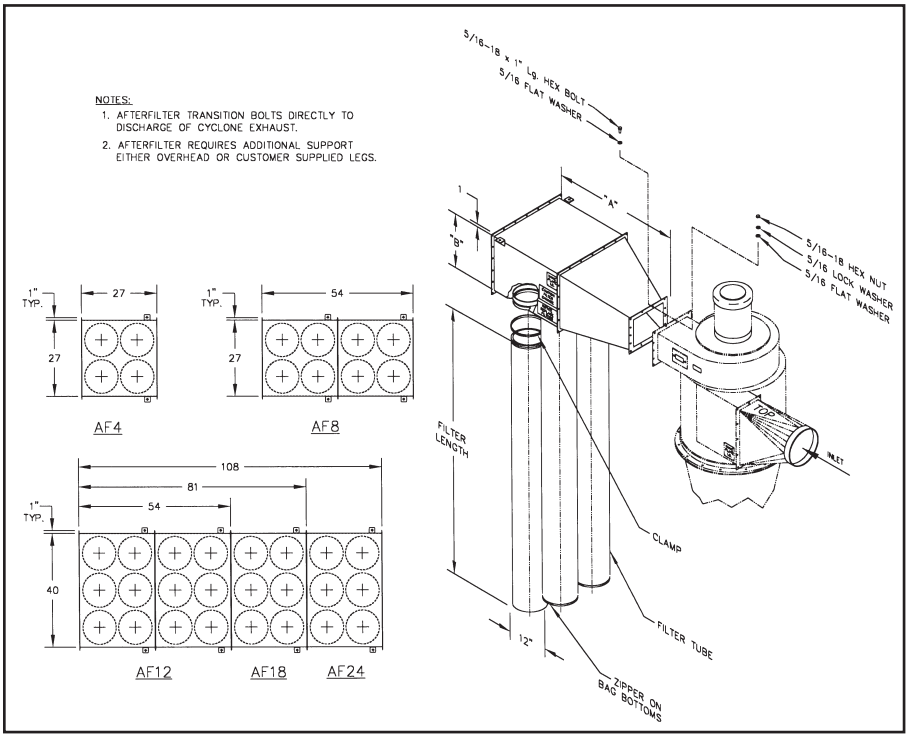

Figure 7B.
Direct Connection
Afterfilter Assembly

Rotary Airlock Installation

If a rotary airlock was ordered with the unit, the hopper discharge will have a throw-out bin adapter on the cone discharge. In most cases, the throw-out bin will already be bolted to the adapter (see Figure 8). Ensure that the bolts connecting the adapter and the throw-out bin to the cone discharge are securely tightened.

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

⚠ WARNING

All electrical connections must be performed by a qualified electrician according to all applicable codes. Refer to the nameplate and/or attached documentation for voltage, amperage, cycle and proper wiring.

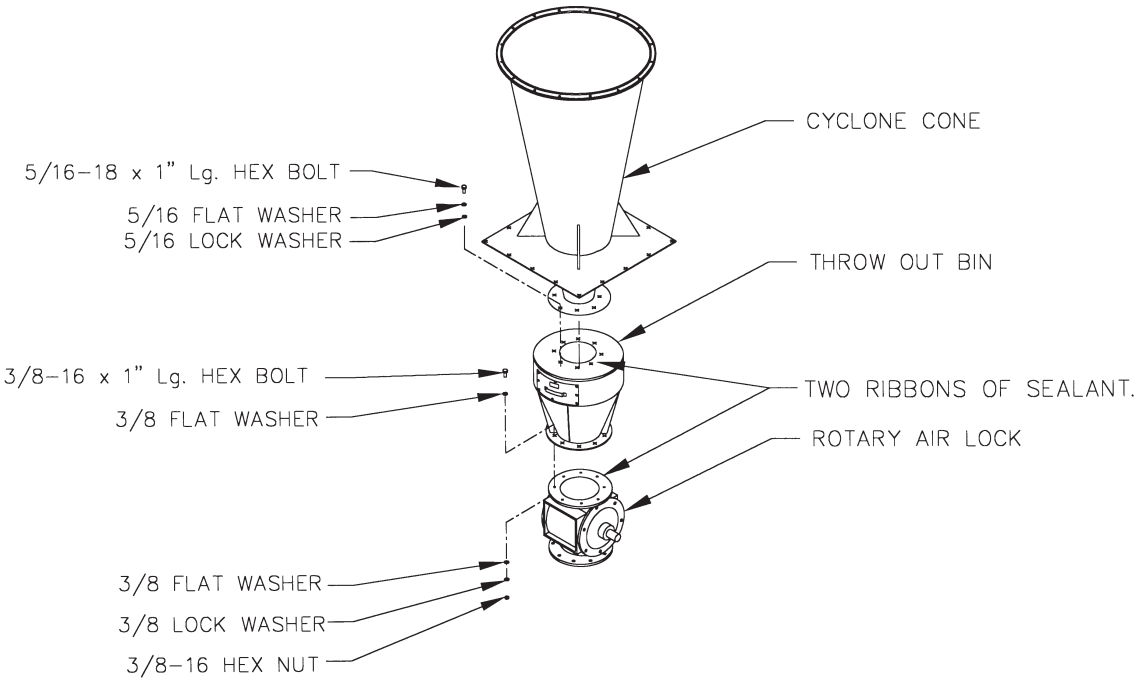

Figure 8. Rotary Airlock Installation

Duct Silencer Installation

A duct-type silencer is designed to screw directly to the fan outlet transition. Make sure there is adequate room for the silencer in the direction of discharge. Provide at least 24" 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.

The silencer will require separate support. DO NOT use the fan transition to support the silencer. Apply silicone around the outside of the transition, lift the silencer into position and secure with sheet metal screws. Install permanent supports (not supplied by Parker) and tighten all hardware before removing the lifting device.

Drum Lid Installation

Remove the drum lid package from its shipping carton. Place the drum lid on a standard 55 gallon drum. Slide the 8” hose over the drum lid and secure with a hose clamp. Position the drum assembly(s) under the unit, slide the hose up onto the discharge adapter collar on the cone and secure with a hose clamp (see Figure 9).

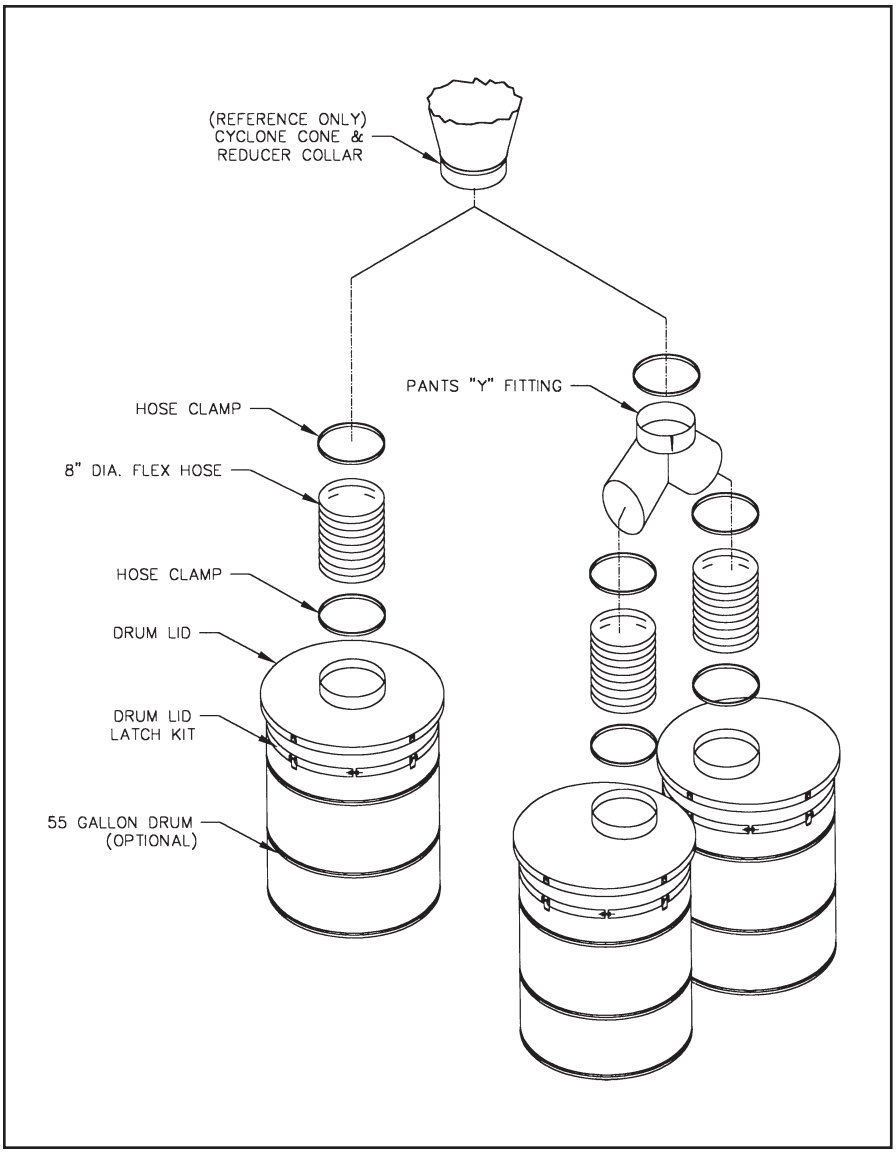

Figure 9.
Drum Lid Installation

C-Series Afterfilter Assembly

NOTE: Familiarize yourself with components as shown in Figures 10 and 11. Do not tighten bolts until all posts and panels are in place.

Position hopper/leg assembly. Note slide gates and orient the slide for easy access for dust drum removal.

Install two corner posts in back left and back right corners. Secure with 3/8” -16 x 1” hex head bolts, 3/8” lock washers and 3/8” flat washers. Orient posts over bolt hole locations as shown in drawing.

Install one corner post with door hinge attached in front left corner. Secure with 3/8” - 16 x 1” hex head bolts, 3/8” lock washers and 3/8” flat washers.

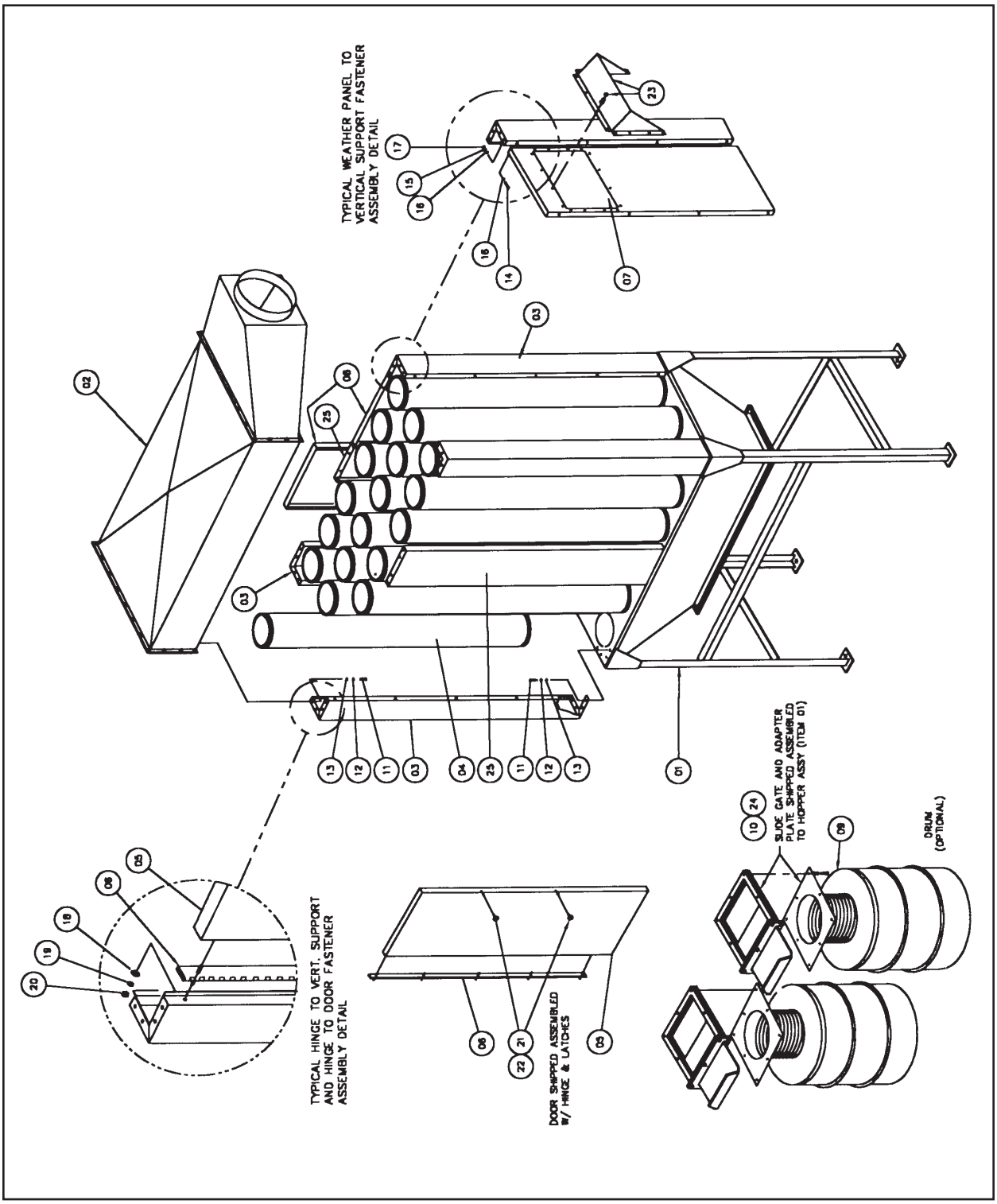

Figure 10. Remote Connection Afterfilter Assembly

Install front center panel (models C18 and C27). Orient panel as shown in Figure 9. Secure top and bottom with 3/8" - 16 hardware.

Install rear center panel (models C18 and C27). Orient panel using the same bolt hole alignment as the corner posts.

Install two side and two rear weather panels (see Figure 9). Secure with 5/16" - 18 x 1" bolts, flat washers, lock washers and nuts (eight sets per panel). Hand tighten the hardware.

Install two weather door weldments. Secure with 5/16" - 18 x 1/2" pan head screen, 5/16" flat washers, 5/16" lock washers and 5/16" - 18 nut (five sets per panel). Hand tighten the hardware. Attach fluted male knob into weld nuts in center post.

NOTE: If threaded knob binds in door slot, loosen pan head bolt/nuts and adjust door upward to position door so knobs thread easily. Tighten pan head bolt/nuts.

Tighten all fittings.

Raise plenum assembly with hydraulic lift truck forks (or other suitable means) and set on top of corner post with bolt holes aligned. Secure with 3/8" - 16 hardware as before with plenum supported. Leave hardware hand tightened until all hardware is in place. Tighten all hardware connections. Remove support.

Install snap ring bags. Hold the end of the bag and flex the "snap ring" at the bag end to seat the ring in the plenum assembly. Start at the back corner of the unit. Repeat this procedure for the snap ring on the other end of the bag to seat it in the hopper tubesheet. Repeat this procedure for each bag. Ensure each snap ring is firmly seated in its respective tubesheet hole (see Figure 12). Continue working toward the front of the unit until all bags are installed.

4.5 Electrical Installation

⚠ WARNING

All electrical work should be done by a qualified electrician in accordance with local electrical codes. Disconnect electrical power before installing or servicing any electrical equipment. See Figure 13 for wiring connections.

NOTE: All electrical work must be performed by a qualified electrician according to the most stringent applicable codes. Be sure to use proper size starter, conduit and wiring for blower motor.

Start fan motor and visually check for proper rotation as indicated by the "rotation arrow" decal on the fan housing.

NOTE: While rotating backwards, the fan will still deliver approximately 40% of its rated air volume but will require more horsepower than proper rotation. It is extremely important to ensure proper fan rotation.

If your collector has a belt-driven blower wheel, DO NOT attempt to make any pulley changes. Each pulley is sized for proper operation prior to shipment. No changes should be made unless specifically directed by Parker Hannifin.

Item	C9 Part #	C18 Part #	C27 Part #	Description	C9E Qty	C9W Qty	C18E Qty	C18W Qty	C27E Qty	C27E Qty
1	18-1309	18-1308	18-1307	Hopper Weldment	1	1	1	1	1	1
2	02-6257	02-6258	02-6259	Plenum Assembly	1	1	1	1	1	1
3	10-8799	10-8799	10-8799	Corner Support, Afterfilter	4	4	4	4	4	4
4	10-8799	33-0208	33-0208	Filter Bag, 8” dis. x 75 1/2	9	9	18	18	27	27
5	10-8794	10-8794	10-8794	Weather Door Assembly	N/A	1	N/A	2	N/A	3
6	18-2154	18-2154	18-2154	Hinge	N/A	1	N/A	2	N/A	3
7	10-8797	10-8797	10-8797	Outlet Panel, 18 x 30 opng	1	1	1	1	1	1
8	10-8795	10-8795	10-8795	Weather Panel	N/A	2	N/A	3	N/A	41
9	03-1105	03-1105	03-1105	Drum Lid Kit	1	1	2	2	3	3
10	18-0944	18-0944	18-0944	Adapter Plate	1	1	2	2	3	3
11	30-0147	30-0147	30-0147	Bolt-HX 3/8-16 x 1,ST,ZP	32	32	48	48	64	64
12	30-0153	30-0153	30-0153	WSH-Lck,Sptrng, 3/8 reg	32	32	48	48	64	64
13	30-0094	30-0094	30-0094	WSH-FLT,STD/PLT, 3/8	32	32	48	48	64	64
14	30-0010	30-0010	30-0010	Bolt-HX 5/16-18 x 1,ST,ZP	N/A	30	N/A	40	N/A	50
15	30-0051	30-0051	30-0051	WSH-Lck,Sptrng, 5/16 reg	N/A	30	N/A	40	N/A	50
16	30-0050	30-0050	30-0050	WSH-FLT,STD/PLT, 5/16	N/A	60	N/A	80	N/A	100
17	30-0005	30-0005	30-0005	Nut-HX, 5/16-18,ST,ZP	N/A	30	N/A	40	N/A	50
18	30-0049	30-0049	30-0049	WSH-FLT,STD/PLT, 1/4	N/A	20	N/A	40	N/A	60
19	30-0042	30-0042	30-0042	WSH-Lck,Sptrng, 1/4 reg	N/A	10	N/A	20	N/A	30
20	30-0004	30-0004	30-0004	Nut-HX, 1/4 -20,ST,ZP	N/A	10	N/A	20	N/A	30
21	39-0263	39-0263	39-0263	Latch	N/A	2	N/A	4	N/A	6
22	39-0265-42	39-0265-42	39-0265-42	Latch Pawl/CAM	N/A	2	N/A	4	N/A	6
23	10-8802	10-8802	10-8802	Hood w/Install Hdw (optnl)	N/A	1	N/A	1	N/A	1
24	02-6041	02-6041	02-6041	Slide Gate Assembly	1	1	2	2	3	3
25	10-8800	10-8800	10-8800	Middle Support Panel	N/A	N/A	2	2	4	4

Figure 11. Afterfilter Parts List

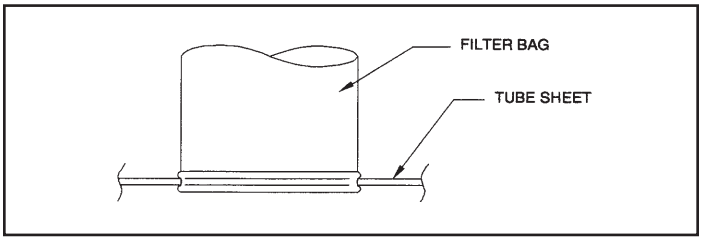

Figure 12.
Installation of Filter Bag in Tubesheet

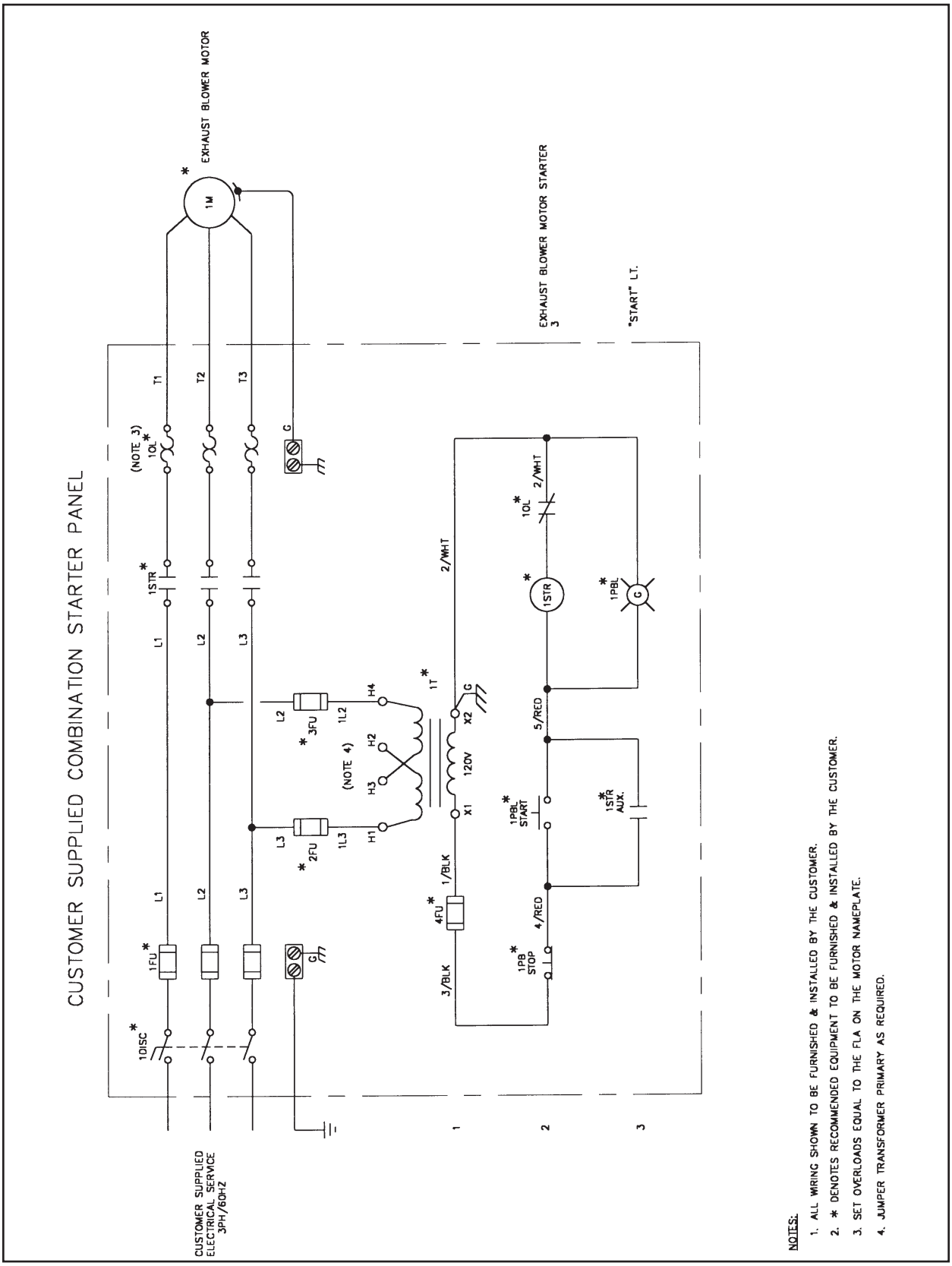

Figure 13. Wiring Diagram

5. Operation

5.1 Start-Up

⚠ CAUTION

The blower compartment bolt-on panel must be installed before operating the dust collector.

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

Start fan motor and check for proper rotation. A rotation arrow is located on the fan housing. If the fan is rotating in the opposite direction, disconnect the power to the motor starter, interchange any two wires on the output side of the starter (three-phase systems only), engage starter disconnect, then start fan and recheck rotation.

Before each start-up, verify that hopper slide gates are closed. DUST-HOG High Efficiency Cyclone Dust Collector drum lids with gasketing and drums must be firmly in place and tight fitting. Ductwork slide gates must be open. Check exhaust for any obstruction.

To operate the cyclone dust collector, simply turn on the blower.

NOTE: Running fan in incorrect rotation for an extended period of time will cause fan motor damage and reduce life of fan motor.

Adjust airflow with volume control damper(s) (not supplied by Parker) on individual ductwork drops.

5.2 Check List

Always verify that any hopper slide gates are closed and that the doors, drum lids and gaskets are in place. The material being collected will not separate from the airstream if any leakage occurs around the base or drum. Failure to adhere to these instructions may also cause the motor to overload. Verify that exhaust air remains visibly clean. If an emission develops, examine drums, drum lids, etc. for possible leaks.

6. Service

⚠ CAUTION

Shut off the unit. Disconnect and lockout all electrical power to the dust collector prior to performing service work.

BEFORE SERVICING, NOTE THE FOLLOWING:

1. Disconnect electrical power to the unit and control panel.
2. Wear appropriate protective clothing when servicing the dust collector.
3. Collected dust may be hazardous. Consult proper authorities for handling and disposal.
4. Collected dust may be a potential fire hazard. DO NOT perform grinding or operations involving open flames unless fire protection measures are in place. Refer to Section 1 for additional precautions.
5. Disposal of collected dust must be according to state and local environmental regulations.

6.1 Dust Removal

Turn off the dust collector and empty the dust storage drum/container as necessary to prevent dust from accumulating. Empty the dust storage drum or hopper when two-thirds full. If dust levels in storage containers are allowed to accumulate to a high level, dust may be drawn through the unit and discharged out the exhaust.

NOTE: Do not allow the drum or hopper to overfill. This can cause poor collector performance and require extensive cleanup if the dust overflows when the collecting device is removed.

6.2 Servicing the Direct Drive Motor and Fan (C190-C3000)

⚠ WARNING

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

Periodically inspect the fan blades to ensure proper fan life. Clean the fan to remove any deposited material if required.

For motor maintenance, follow the manufacturer's directions. If your motor requires servicing under the motor manufacturer's warranty, contact an authorized service center. Motors are greased at the factory and do not need lubrication at time of installation. However, regreasing may be necessary after 1,000 hours of use. As a guideline, grease the motor every 3,600 hours with high grade ball and roller bearing grease. Recommended greases are Shell Dolium R or Chevron SRI#2.

6.3 Servicing the Belt Driven Fan and Motor (C3600-C4400)

⚠ WARNING

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

For motor maintenance, follow the manufacturer's directions. If your motor requires servicing under the motor manufacturer's warranty, contact an authorized service center. Motors are greased at the factory and do not need lubrication at time of installation. However, regreasing may be necessary after 1,000 hours of use. As a guideline, grease the motor every 3,600 hours with high grade ball and roller bearing grease. Recommended greases are Shell Dolium R or Chevron SRI#2.

All bearings used are sealed, have been lubricated at the factory and do not need lubrication at the time of installation. Subsequent lubrication will be required and the motor and bearing manufacturer's recommendations should be followed. Use the following instructions as guidelines.

The fan bearings should be relubricated at six week intervals when utilized for eight-hour workday operations. The fan bearings should be relubricated more frequently if operation time is longer than eight hours per day. When lubricating, be sure to grease both bearings and use high grade medium weight ball bearing grease.

It is also recommended that you consult your lubricant supplier regarding proper greases for both the motor and fan bearings. Proper grease should be based on hours of usage and environmental conditions.

If any bearing operates roughly, the unit should be shut down and the bearing replaced immediately.

6.4 Belt Adjustment and Replacement

The belts on your new unit have been properly adjusted at the factory. However, before operating, it is suggested that belts be checked and re-adjusted if necessary. Recheck belts several times in the first days of operation and at least twice a month for the following six months. Thereafter, belts should be checked at each greasing. The drive used on this unit is equipped with banded belts and matching sheaves which transmit much higher horsepower per belt than older type belts.

Because much higher tension is required, it is advisable that the tension be checked with a tester or springs scale (see Figure 14).

To adjust belts, loosen bolts on motor mounting plate, adjust tension screws on adjustment bracket in or out (depending on desired adjustment), then re-tighten bolts on motor mounting plate.

Do not over tighten. Too much or too little tension will damage the drive belts and bearings. Check the tension frequently to be sure the deflection is at the value determined.

To replace worn belts, loosen bolts on motor mounting plate and remove tension screws so the old belts can be removed from the sheaves. Remove the tension bracket and the bolts from the upper bearing bracket. Rotate the bracket 90° and remove old belt. Put new belt on and reverse the disassembly order to re-assemble.

Replacement belts should be ordered and installed in complete matched sets or one banded belt. Include old belt number(s) when reordering.

Model	Nominal Belt Span	Deflection Force - lbs		Deflection
		New Belt	Used Belt	
C3620	21 3/8	9.1	7.1	11/32
C3625	21 3/8	13.2	8.8	11/32
C2630	21 3/8	13.2	8.8	11/32
C4440	21 3/8	20.1	13.7	11/32
C4450	21 3/8	20.1	13.7	11/32

General Rules of Tensioning

1. Ideal tension is the lowest tension at which the belt will not slip under peak conditions.
2. Check tension frequently during the first 24-48 hours of operation.
3. Over-tensioning shortens belt and bearing life.
4. Keep belts free from foreign material which may cause slippage.
5. Make V-belt inspections on a regular basis. Re-tension when slipping. Never apply belt dressing as this will damage the belt and cause early failure.

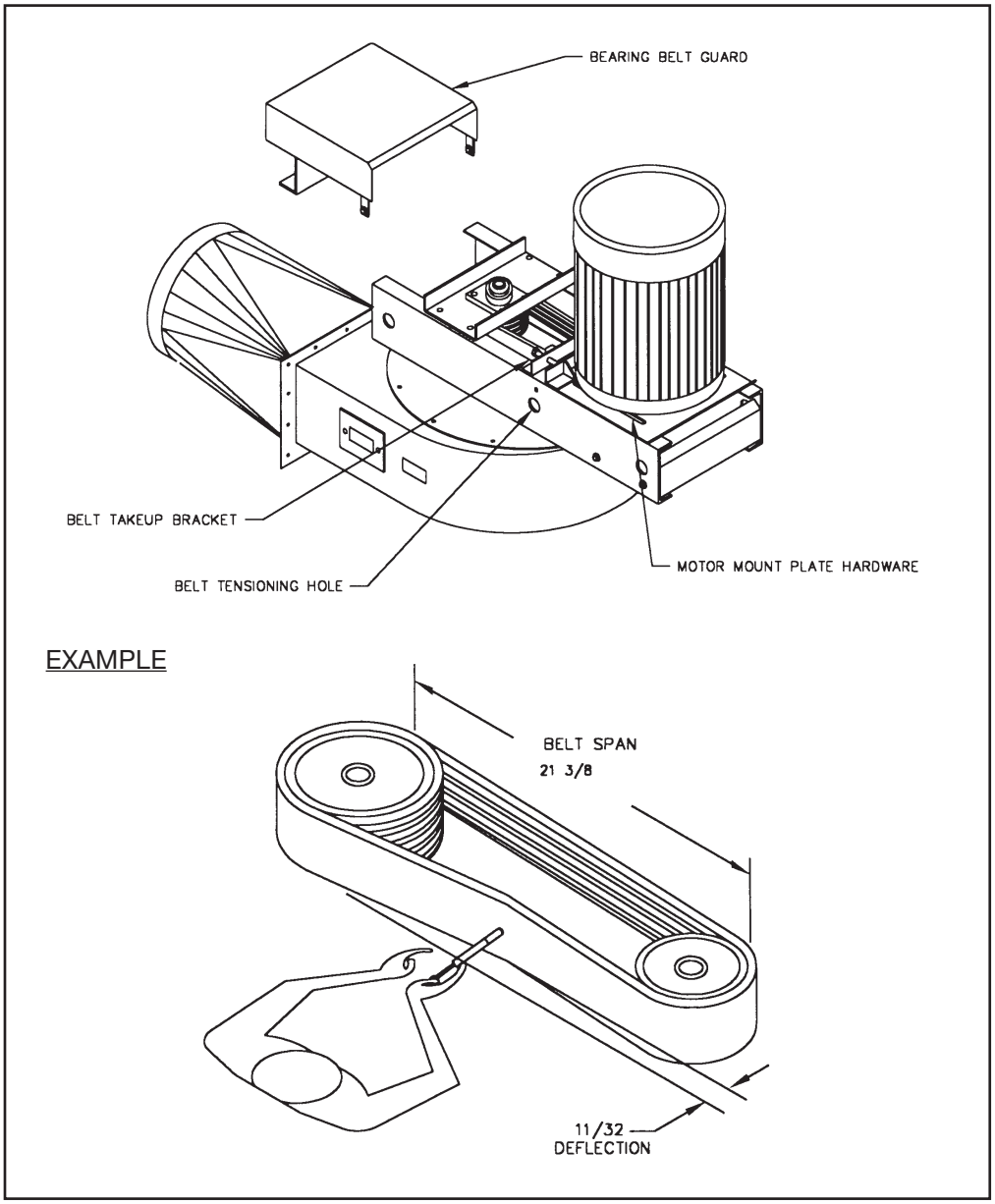

Figure 14.
Belt Adjustment Diagram

6.5 Afterfilters

The afterfilter bags on the Cyclone Dust Collector are semi-permanent and will give you long, efficient service if you perform routine maintenance.

After each day's operation, shake the filter bag(s) vigorously to remove the clinging material. If the afterfilter bag has a zipper-closed bottom, always empty the bag after shaking. For C-Series afterfilters, open slide gates before shaking bags so dust can fall into drums. Close slide gates after cleaning is completed. Care should be taken to prevent tearing or puncturing the filter fabric.

When adequate air volume cannot be restored by shaking the bags, simply remove them and replace with new filters. Under normal operating conditions, afterfilter bags should be replaced every two years for best performance. Be sure to include the model and serial number of your cyclone dust collector when ordering replacement afterfilter bags (see Specification Table in Section 4.4).

7. Troubleshooting Guide

Use the troubleshooting guide to correct any problems that occur with your dust collection unit.
If the problem or condition continues, contact Parker customer service at 1-800-343-4048.

Problem	Possible Causes	Possible Solutions
Fan motor won't start or won't stay running.	Input circuit not operational.	Check input power to motor circuits for proper voltage on each phase.
	Improper electrical wiring.	Check and correct internal motor wiring for proper connections based on the incoming line voltage. Wiring diagram is found on lead access plate.
	Starter overloads are tripped.	Check for proper motor starter overload rating against full load amps on the motor nameplate. Adjust or replace overloads as required.
	Cone discharge is open to atmosphere.	Ensure drum is properly sealed against drum lid package. Ensure drum lid package is properly installed.
	Fan rotation is backwards.	Correct the rotation. See Section 5.1 "StartUp."
	Fan damper is not properly adjusted.	Check motor current draw and close fan or silencer dampers until amperage draw is below full load amp rating of the motor.
Dust emissions from clean air discharge.	Storage container is full.	Inspect and empty container as required.
	Leak in drum lid hose (drum models only).	Use a test cigarette and check for pinhole leak in hose. Replace if required.
Insufficient airflow.	Fan rotation is backwards.	If the fan is not rotating in the correct direction, see Section 5.1 "Start-Up" to reverse the rotation.
	Loose or open access door.	Tighten access door and drum lid connection.
	Duct damper(s) or system damper is not positioned properly.	Adjust dampers to allow for sufficient air volume.
	Air inlet(s) obstructed.	Inspect and clean all hoods or other machine connections.
	Large leak in storage container.	Check for a large leak in the storage compartment or container. In 55 gallon drum applications, make sure the drum is under the drum lid and sealed. On hopper models, make sure the slide gate is closed if the hopper does not have a drum connection.
	Plugged ductwork.	Check for obstructions in the ductwork or the exhaust. Check ducts and hoods for improper sizing.
	Leaks in ductwork.	Check for loose, leaky joints in the ductwork. Fix or replace as required.

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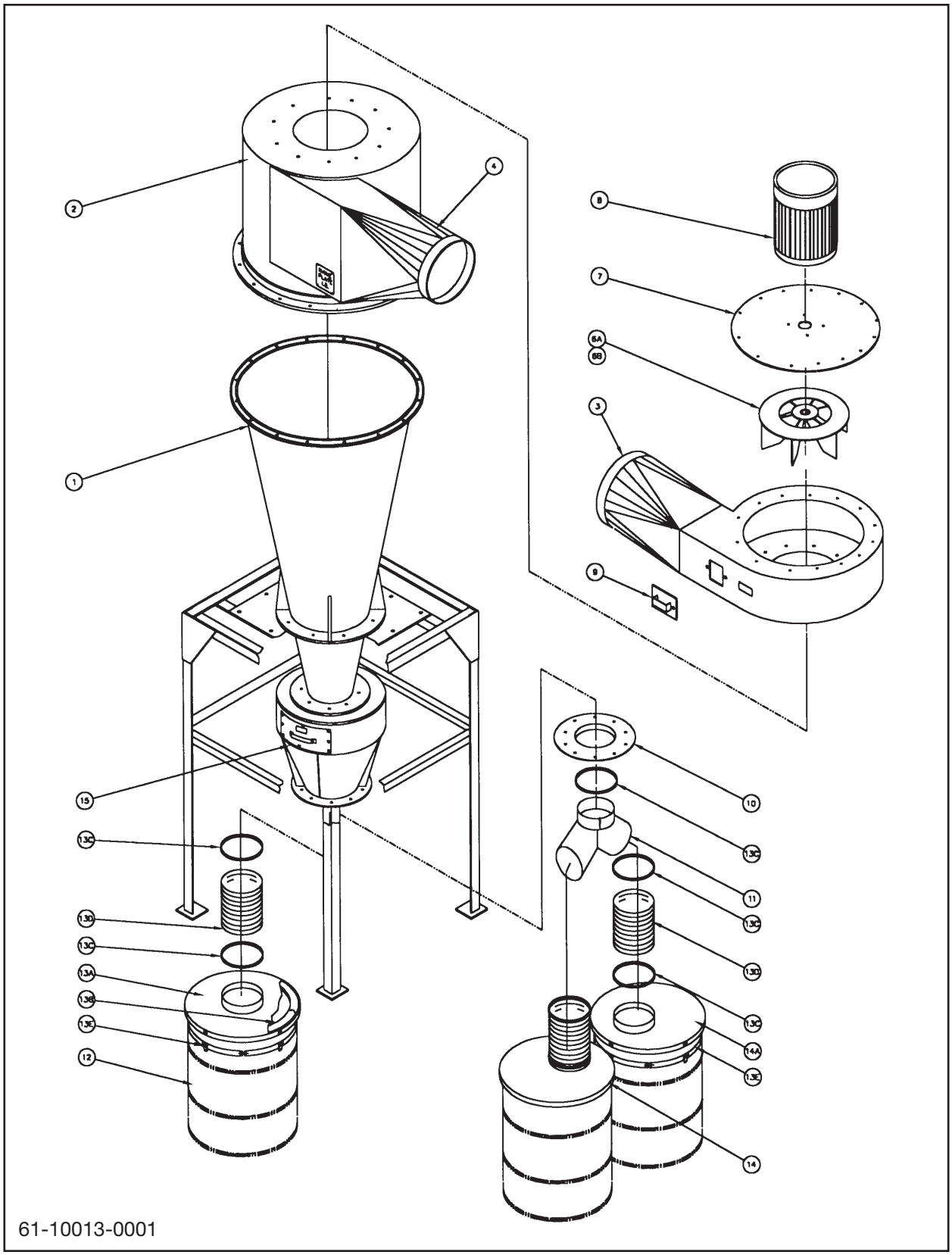
8. Illustrated Parts

DUST-HOG Cyclone C190 Series

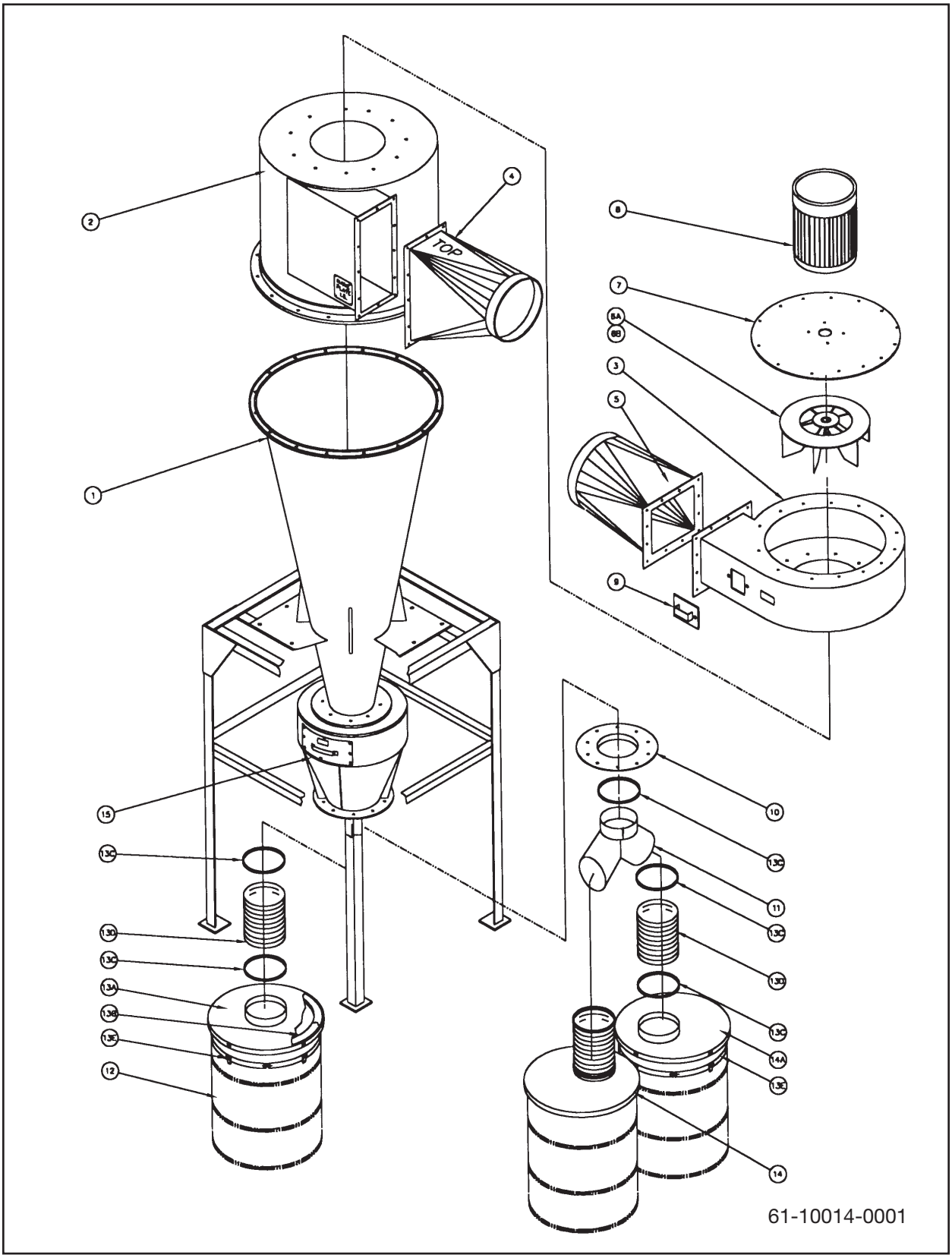


61-10013-0001

C190 SERIES

Item No.	Part No.	Description	Quantity
1	181335	Cone Weldment	1
2	18-1232	Inlet Barrel with Inlet Transition	1
3	18-1334	Fan Housing with Outlet Transition	1
6A	32-0211	Fan Wheel Radial	1
6B	32-0253	Fan Wheel Radial (Alum.)	1
7	10-6353	Motor Mtg. Plate	1
8	Call Factory	Motor- 2HP	1
9	10-6402	Inspection Cover	1
10	Call Factory	Adapter Plate	1
11	15-0539	Y Fitting 45° 8 x 8 x 8	1
12	45-0237	55 Gallon Drum	1
13	03-1143	Drum Lid Kit	1
13A	02-6029	Drum Lid with Gaskets, 8” Collar	1
13A	02-6144	Drum Lid with Gaskets and Latch Keepers, 8”	1
13B	42-0315	Gasket Section, Drum Lid	2
13C	15-0005	Hose Clamp, 8” Dia.	1
13D	15-0201	Flex Duct, 8” Dia., 15” Long (or as required)	1
13E	02-6115	Drum Lid Latch Kit Drum Band Assembly	1
14	03-1256	8” Drum Lid Kit Offset	1
15	Call Factory	Throw-Out Bin	1

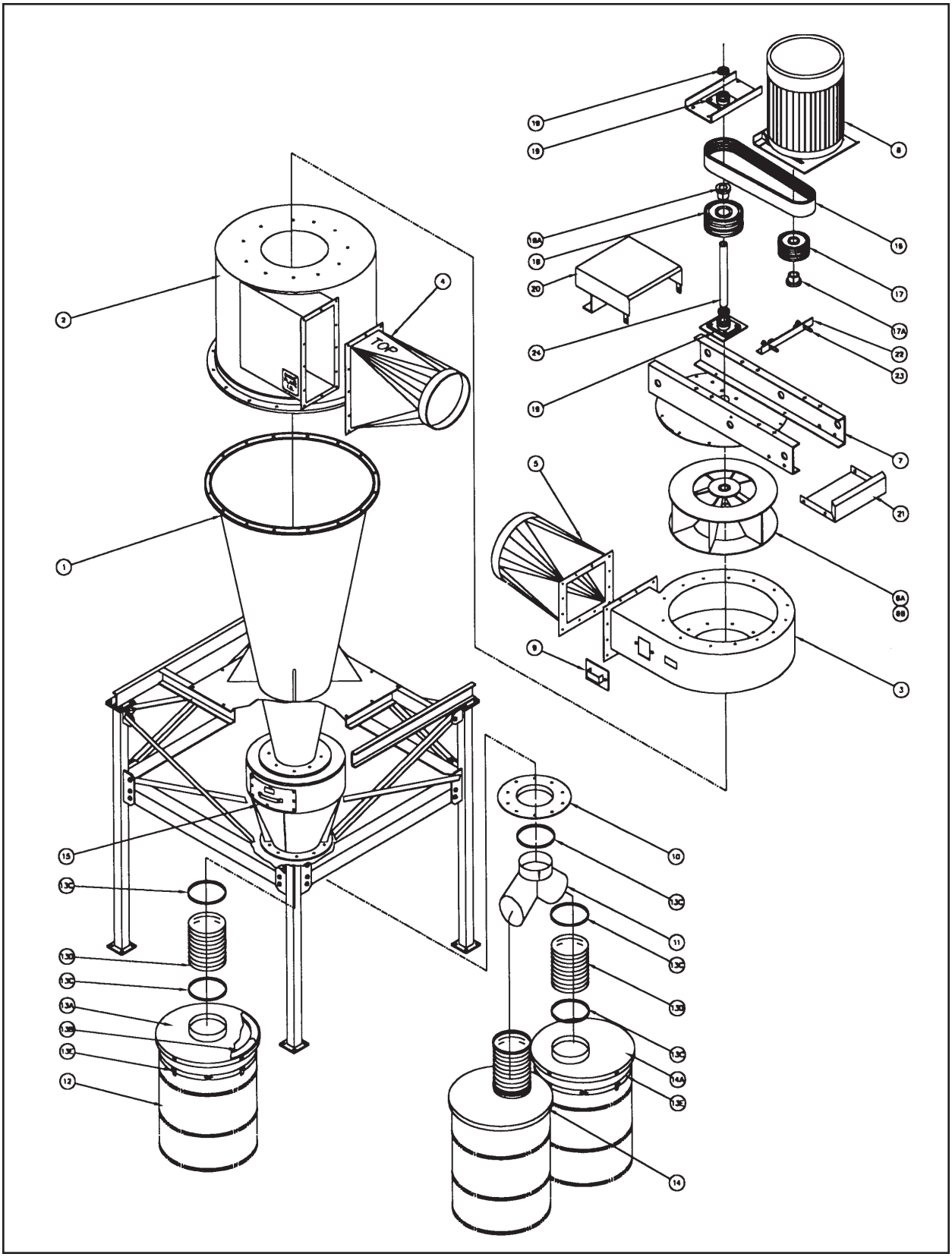
DUST-HOG Cyclone C200 - C3000 Series



C200 - C3000 SERIES

Item No.	C200 Part No.	C240 Part No.	C3000 Part No.	Description	Quantity
1	18-1337	18-1341	18-1200	Cone Weldment	1
2	18-1225	18-1234	18-1189	Inlet Barrel	1
3	18-1338	18-1340	18-1201	Fan Housing	1
4	18-1226	18-1233	18-1202	Inlet Transition	1
5	18-1224	18-1235	18-1203	Outlet Transition	1
6A	32-0213	-	-	Fan Wheel Radial C203	1
	32-0214	-	-	Fan Wheel Radial C205	1
	-	32-0217	-	Fan Wheel Radial C247	1
	-	-	32-0219	Fan Wheel Radial C3010	1
	-	-	32-0220	Fan Wheel Radial C3015	1
6B	32-0254	-	-	Fan Wheel Radial (alum.) C203	1
	32-0255	-	-	Fan Wheel Radial (alum.) C205	1
	-	32-0266	-	Fan Wheel Radial (alum.) C247	1
	-	-	32-0258	Fan Wheel Radial (alum.) C3010	1
	-	-	32-0259	Fan Wheel Radial (alum.) C3015	1
7	10-7200	10-6429	10-6457	Motor Mtg. Plate	1
8	Call Factory	-	-	Motor - 3HP	1
	-	Call Factory	-	Motor - 7.5HP	1
	-	-	Call Factory	Motor- 10HP	1
8A	Call Factory	-	-	Motor - 5HP	1
			Call Factory	Motor- 15HP	1
9	10-6402	10-6402	10-6402	Inspection Cover	1
10	Call Factory	Call Factory	Call Factory	Adapter Plate	1
11	15-0539	15-0539	15-0539	Y-Fitting 45° 8 x 8 x 8	1
12	45-0237	45-0237	45-0237	55 Gallon Drum	1
13	03-1143	03-1143	03-1143	Drum Lid Kit	1
13A	02-6029	02-6029	02-6029	Drum Lid with Gaskets, 8” Collar	1
13A	02-6144	02-6144	02-6144	Drum Lid with Gaskets & Latch Keepers, 8”	1
13B	42-0315	42-0315	42-0315	Gasket Section, Drum Lid	2
13C	15-0005	15-0005	15-0005	Hose Clamp, 8” Dia.	1
13D	15-0201	15-0201	15-0201	Flex Duct, 8” Dia., 15” Long (or as required)	1
13E	02-6115	02-6115	02-6115	Drum Lid Latch Kit Drum Band Assembly	1
14	03-1256	03-1256	03-1256	8” Drum Lid Kit Offset	1
15	Call Factory	Call Factory	Call Factory	Throw-Out Bin	1

DUST-HOG Cyclone C3600 - C4400 Series



C3600 - C4400 SERIES

Item No.	C3600 Part No.	C4400 Part No.	Description	Quantity
1	18-1612	18-2065	Cone Weldment	1
2	18-1239	18-1242	Inlet Barrel Weldment	1
3	18-1659	18-1266	Fan Housing Weldment	1
4	18-0226	18-1259	Inlet Transition	1
5	18-1237	18-1258	Outlet Transition	1
6A	32-0221	-	Fan Wheel MH, M-15	
		32-0226	Fan Wheel Radial MH, M-17	1
6B	32-0247	-	Fan Wheel MH, M-15 (alum.)	
		32-0248	Fan Wheel Radial MH, M-17 (alum.)	1
7	18-1240	18-1241	Drive Frame Weldment	1
8	Call Factory	-	Motor- 20HP	
		Call Factory	Motor- 40HP	
8A	Call Factory	-	Motor- 25HP	
		Call Factory	Motor- 50HP	1
8B	Call Factory	-	Motor- 30HP	
			Motor- 15HP	1
9	18-1647	18-1647	Inspection Cover	1
10	Call Factory	18-2211	Adapter Plate	1
11	15-0539	15-0538	Y-Fitting 45°	1
12	45-0237	45-0237	55 Gallon Drum	1
13	03-1143	03-1143	Drum Lid Kit	1
13A	02-6029	02-6029	Drum Lid with Gaskets, 8” Collar	1
13A	02-6144	02-6144	Drum Lid with Gaskets & Latch Keepers, 8” Gasket	1
13B	42-0315	42-0315	Section, Drum Lid	2
13C	15-0005	15-0005	Hose Clamp, 8” Dia.	1
13D	15-0201	15-0201	Flex Duct, 8” Dia.,15” Long (or as required)	1
13E	02-6115	02-6115	Drum Lid Latch Kit Drum Band Assembly	1
14	03-1256	03-1256	8” Drum Lid Kit Offset	1
15	Call Factory	Call Factory	Throw-Out Bin	1
16	31-0205	-	Belt - 2 Rib Wedge Band, C3620	1
	31-0208	-	Belt - V-Banded C3625	1
	31-0206	-	Belt - V-banded C3630	1
		31-0206	Belt - V-banded C4440	1
		31-0207	Belt - V-banded C4450	1
17	31-0225	-	Sheave, Drive C3620	1
	31-0221	-	Sheave, Drive C3625	1
	31-0222	-	Sheave, Drive C3630	1
		31-0223	Sheave, Drive C4440	1
		31-0224	Sheave, Drive C4450	1
17A	31-0260	-	Bushing - Sheave, Drive 3620	1
	31-0226	-	Bushing - Sheave, Drive 3625	1
	31-0227	-	Bushing - Sheave, Drive 3630	1
		31-0228	Bushing - Sheave, Drive 4440	1
		31-0229	Bushing - Sheave, Drive 4450	1
18	31-0220	-	Sheave, Blower C3620	1
	31-0211	-	Sheave, Blower C3625	1
	31-0212	-	Sheave, Blower C3630	1
		31-0213	Sheave, Blower C4440	1
		31-0214	Sheave, Blower C4430	1
18A	31-0210	-	Bushing - Sheave, Blower C3620	1
	31-0216	-	Bushing - Sheave, Blower C3625	1
	31-0217	-	Bushing - Sheave, Blower C3630	1
		31-0218	Bushing - Sheave, Blower C4440 and C4450	1
19	31-0201	-	Bearing- Flange, 1-15/16”	2
		31-0202	Bearing - Flange, 2-7/16”	2
20	18-1250	18-1265	Bearing Cover	1
21	18-2063	18-2069	Drive Belt Guard	1
22	18-1260	18-1260	Belt Takeup Bracket	1
23	30-0678	30-0678	Adj. - Takeup Stud	2
24	35-1312	-	1-15/16” Dia. Fan Shaft	1
		35-1361	2-7/16” Dia. Fan Shaft	1

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.

Worldwide Filtration Manufacturing Locations

North America

Compressed Air Treatment

Industrial Gas Filtration and Generation Division
Lancaster, NY
716 686 6400
www.parker.com/igfg

Haverhill, MA
978 858 0505
www.parker.com/igfg

Engine Filtration

Racor
Modesto, CA
209 521 7860
www.parker.com/racor

Holly Springs, MS
662 252 2656
www.parker.com/racor

Hydraulic Filtration

Hydraulic & Fuel Filtration
Metamora, OH
419 644 4311
www.parker.com/hydraulicfilter

Laval, QC Canada
450 629 9594
www.parkerfarr.com

Velcon
Colorado Springs, CO
719 531 5855
www.velcon.com

Process Filtration

domnick hunter Process Filtration
SciLog
Oxnard, CA
805 604 3400
www.parker.com/processfiltration

Water Purification

Village Marine, Sea Recovery, Horizon Reverse Osmosis
Carson, CA
310 637 3400
www.parker.com/watermakers

Europe

Compressed Air Treatment

domnick hunter Filtration & Separation
Gateshead, England
+44 (0) 191 402 9000
www.parker.com/dhfns

Parker Gas Separations
Etten-Leur, Netherlands
+31 76 508 5300
www.parker.com/dhfns

Hiross Zander
Essen, Germany
+49 2054 9340
www.parker.com/hzfd

Padova, Italy
+39 049 9712 111
www.parker.com/hzfd

Engine Filtration & Water Purification

Racor
Dewsbury, England
+44 (0) 1924 487 000
www.parker.com/rfde

Racor Research & Development
Stuttgart, Germany
+49 (0)711 7071 290-10

Hydraulic Filtration

Hydraulic Filter
Arnhem, Holland
+31 26 3760376
www.parker.com/hfde

Urjala, Finland
+358 20 753 2500

Condition Monitoring
Parker Kittiwake
West Sussex, England
+44 (0) 1903 731 470
www.kittiwake.com

Process Filtration

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Parker Twin Filter BV
Birtley, England
+44 (0) 191 410 5121
www.parker.com/processfiltration

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Castle Hill, Australia
+61 2 9634 7777
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Pan American Division
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