



## STG Donaclone: Field Proven & Reliable

### Heavy-Duty Workhorse for Construction & Off-Highway Applications

Donaldson's STG Donaclone™ air cleaner has been applied to a wide variety of heavy-duty equipment around the world. Its broad application is a testament to its reliability and durability.

#### Powerful Two-Stage Filtration

The first stage of this powerful air cleaner consists of a cluster of our Donaldson Donaclone™ tubes. They spin the incoming air to create a centrifugal force that separates up to 97% of the dust and dirt in the airstream. Donaclone™ tubes have no moving parts — so there is nothing to break down or maintain. They function properly whenever the engine is running.

Pre-cleaned dust falls into the dust cups and expels through Vacuator™ Valves at the bottom of the air cleaner.

The second stage of filtration is the primary filter, a cylindrical-shaped unit of specially-developed pleated filter media, designed to trap and stop dust particles, both large and small. The result is air to your engine that is up to 99.9% contaminant free!

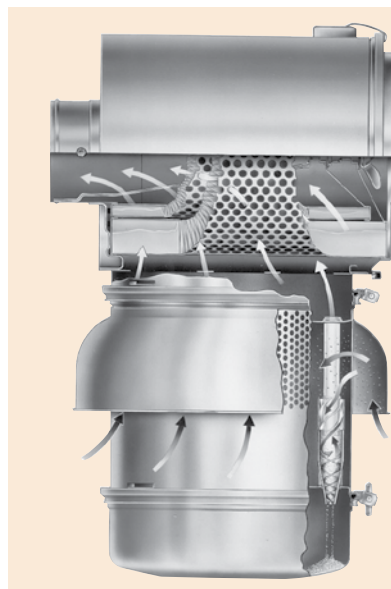
A safety filter, which fits inside the primary filter, is standard on all models for protection during primary filter changeout. Physical orientation does not affect the proper functioning of either cleaning stage. The STG can be mounted horizontally or vertically. If mounting horizontally, the Vacuator™ Valve option on the dust cup is required.



*This STG Donaclone, mounted on a large mining machine, is protecting the engine from harmful dirt in this severe dust environment.*

**Mounting:** Sturdy mounting brackets are attached to the top section of the STG. For secure mounting, Donaldson recommends an additional mounting band for the lower body.

STG air cleaners feature a corrosion-resistant, chemical-resistant coating that provides a long-lasting, hard protective finish.



#### How the Two-Stage STG Donaclone Works

Air is drawn in through the perforations in the lower part of the unit and forced down through a bank of Donaclone tubes. The Donaclone tubes spin the air so that centrifugal force causes the heavier dust particles to separate from the airstream.

While these particles fall into the cup at the bottom, the partially cleaned air is directed upward, into the primary filter in the upper portion of the unit for the second stage of filtration.

## Versatile STG Provides Airflow to 1760 cfm Choose Peripheral or Tubular Inlet, Horizontal or Vertical Mount

### Applications

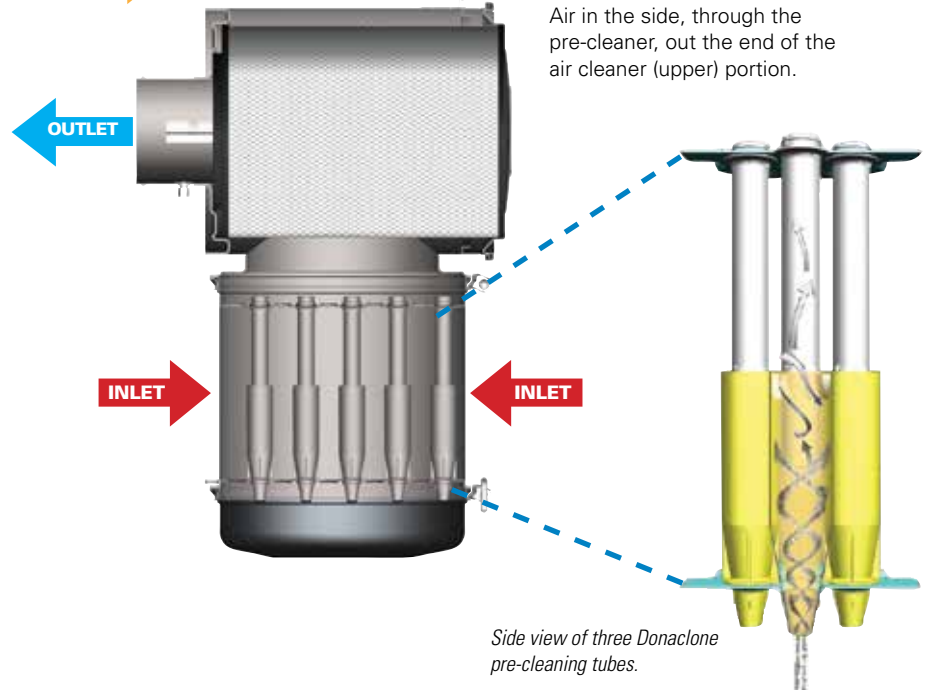
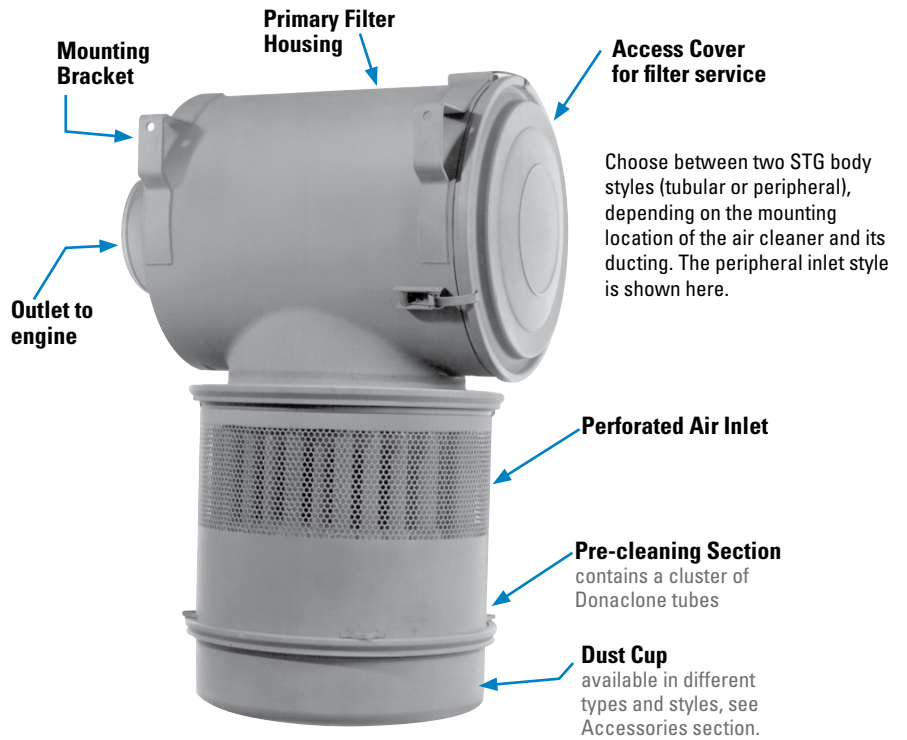
- Allows 390 to 1760 cfm airflow throughput per air cleaner
- Horizontal or vertical installation
- Off-road, high dust conditions
- Ideal for scrapers, earth movers, graders

### Air Cleaner Features

- Very reliable. Only one critical filter seal.
- Airflow throughput can be doubled by using two air cleaners
- Two body styles (peripheral inlet, shown on right, and tubular inlet) to accommodate location and ducting
- Optional inlet shroud available for peripheral style
- When the air cleaner is mounted directly on the engine and there is clearance around it for airflow, choose the peripheral inlet style (shown on right)
- When the air cleaner is mounted above the cab or somewhere far from the engine to get above the dust cloud, choose the tubular inlet style, which will accept ducting into the inlet
- Built-in Donaclone pre-cleaning tubes separate up to 97% of incoming dust to the dust cup before it reaches the filter, resulting in more thorough cleaning and fewer filter changes.
- Choose the dust cup best suited to your maintenance practices. For choices see Accessories section.
- All models include a fitting for a filter service indicator

### Filter Features

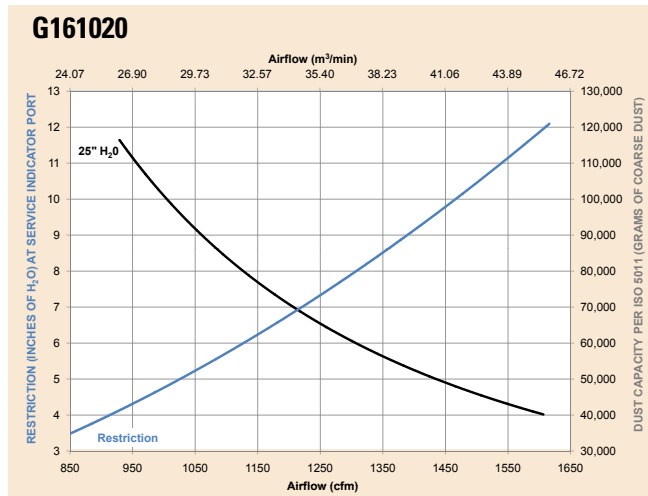
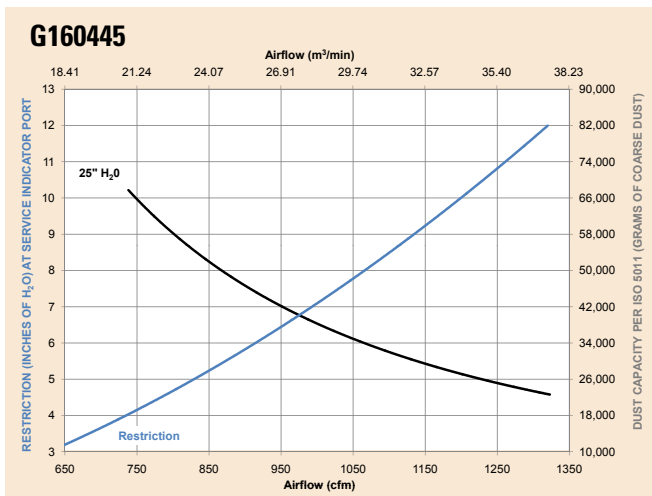
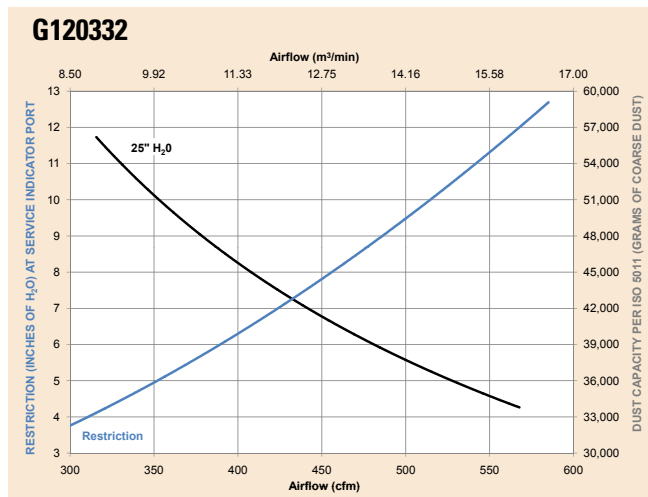
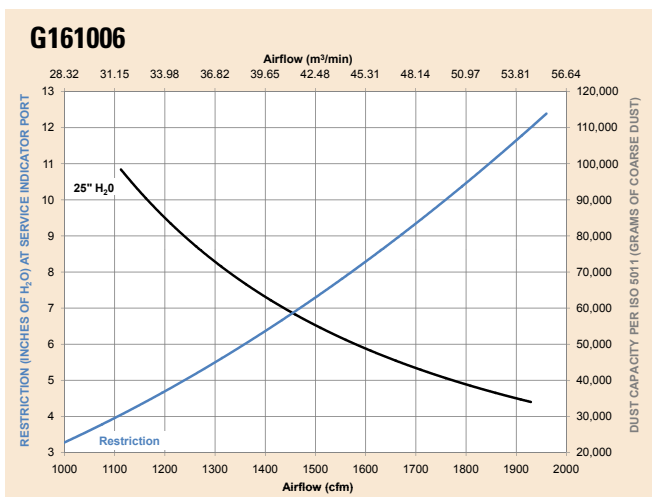
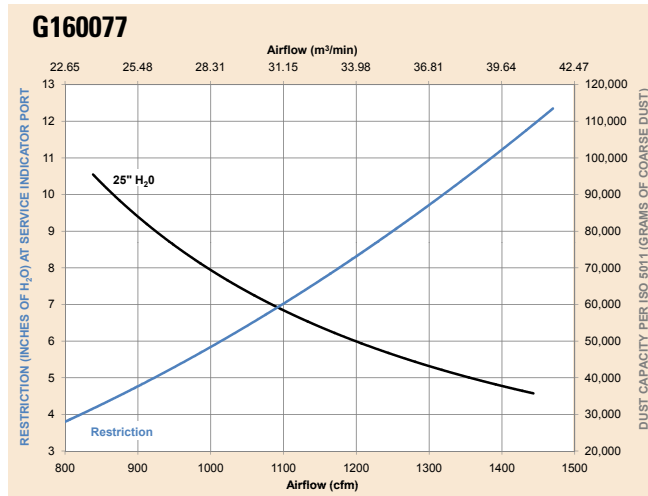
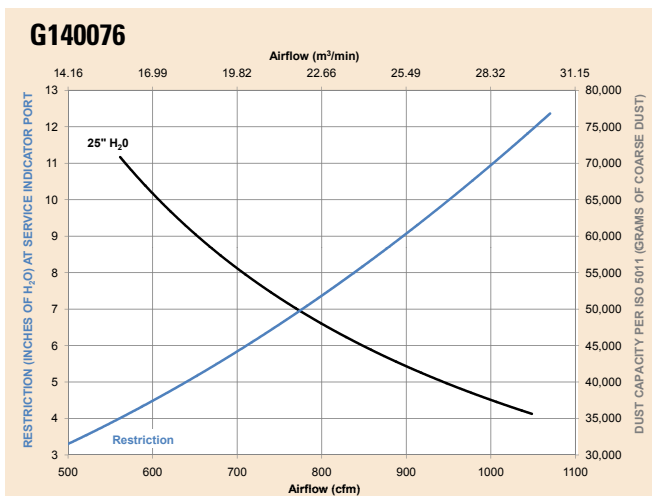
- Replacement primary filter choices: Standard life filters (for scheduled maintenance) and Donaldson Blue® Ultra-Web® HD ultra-high efficiency, extended service filters for servicing by restriction
- Uses standard airflow filters
- Safety filter on all models





## STG Air Cleaner Performance Curves (Restriction & Dust Capacity)\*

Determine the airflow requirements of your engine, then find the corresponding cfm airflow in the table on the next page. The restriction numbers (shown in inches of water) indicate the approximate initial restriction of each model air cleaner at that cfm. If there are two air cleaner models that fit your parameters, choosing the one with the lower restriction will provide longer filter service life. When calculating total initial restriction of the entire air intake system, include the restriction caused by ducting, elbows, and pre-cleaners. See pages 271-272 for ducting restriction estimates.



\*Results generated using laboratory testing pursuant to ISO5011. Actual performance during use may vary depending on multiple factors, including specific product configuration, external conditions and application.

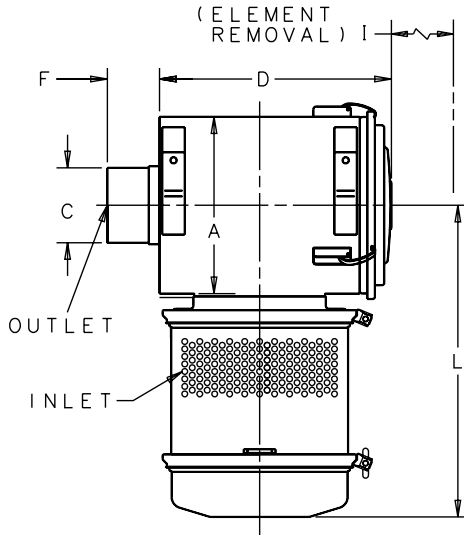
## Initial Airflow Restriction

Air Cleaner Model	CFM @ "H <sub>2</sub> O		
	6"	8"	10"
<b>STG WITH PERIPHERAL INLET</b>			
G140076	710	840	950
G160077	1015	1175	1320
G161006	1360	1570	1760

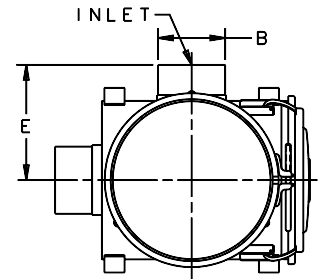
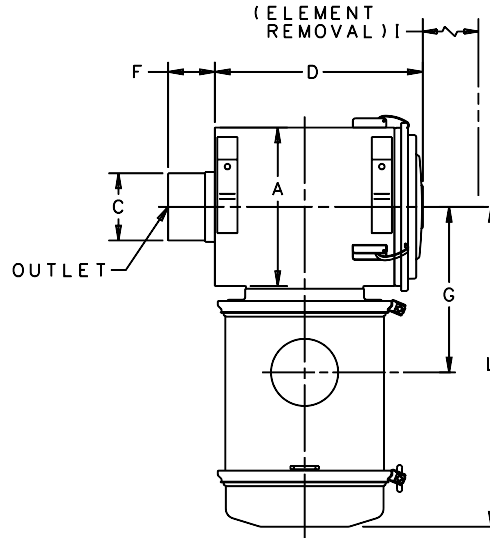
Air Cleaner Model	CFM @ "H <sub>2</sub> O		
	6"	8"	10"
<b>STG WITH TUBULAR INLET</b>			
G120332	390	455	515
G160445	915	1065	1200
G161020	1127	1308	1466

## STG Specification Illustrations

### Peripheral Inlet Side View



### Tubular Inlet Side View



## STG Donaclone™ Specifications

Air Cleaner Models	Body Diameter (A)		Inlet Diameter (B)		Outlet Diameter (C)		Length (D)		Inlet Length (F)		Inlet Length (G)		Service Clearance (I)		Length (L)		Weight			
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lbs	kg		
<b>STG WITH PERIPHERAL INLET</b>																				
G140076	14.00	356	n/a		6.00	152	17.38	441	n/a	3.88	99	15.47	393	15.25	387	24.16	614	75	34	
G160077	16.00	406	n/a		7.00	178	19.69	500	n/a	3.88	99	17.29	439	17.00	432	26.16	664	91	41	
G161006	16.00	406	n/a		8.00	203	26.06	662	n/a	3.50	89	17.30	439	23.38	594	26.93	684	115	52	
<b>STG WITH TUBULAR INLET</b>																				
G120332	11.81	300	5.00	127	5.00	127	15.43	392	7.88	200	3.94	100	11.54	293	13.19	335	22.06	560	53	24
G160445	16.00	406	7.00	178	7.00	178	19.59	498	11.00	279	3.87	98	14.81	376	17.25	438	26.31	668	93	42
G161020 <sup>1</sup>	16.00	406	6.00	152	8.00	203	26.06	662	10.02	255	3.50	89	14.06	357	23.38	594	26.31	668	120	55

1 - G161020 has two inlets, each 6" (152mm) in diameter

NOTE: All STG models are tapped to accept a filter service indicator

## Accessory Recommendations

Air Cleaner Model	Mounting Band Metal	Outlet Band Clamp	Hump-hose Connector	Elbows			Restriction Indicator	Inlet Hood	
				45°	90°	90° Reducing		Plastic	Metal
G120332	H000349	P148345	P105610	P109021	P107844	P143895	X002277	H000469	H000165
G140076	H000350	P148347	P105612	P105547	P105535	P143895	X002277		
G160077	H000351	P148348	P105613	P105548	P105536		X002277		
G161006	H000351	P629991	P112608	P112606	P112605		X002277		
G161020	H000351	P148347	P105612	P105547	P105535		X002277		



## STG Peripheral Service Parts

### G140076 STG-PERIPHERAL

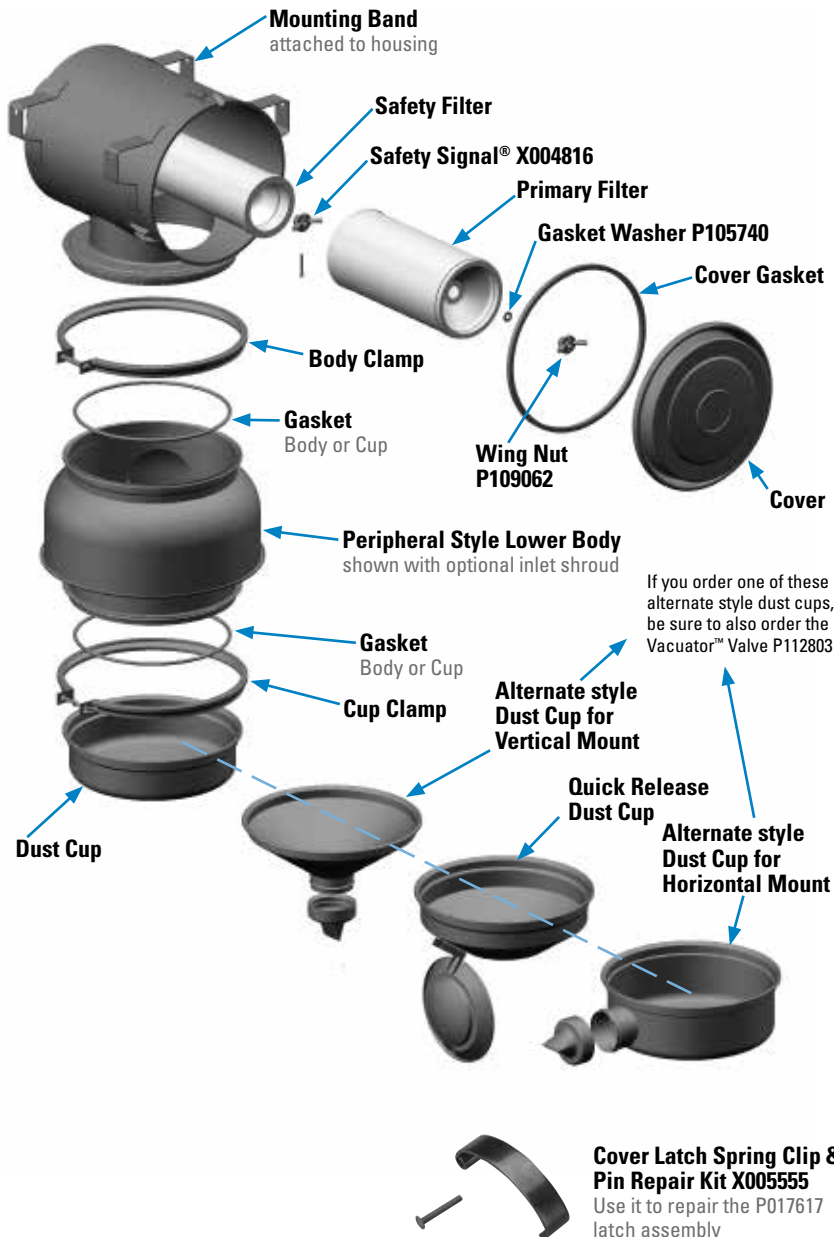
Body, lower .....	P102256
Clamp, cup .....	P100866
Cover latch assembly .....	P017617
Dust cup .....	P100860 ....3
Elbow, 45° .....	P105547
Elbow, 90° .....	P105535
Filter, primary .....	P182041 ....3
Filter, primary-Donaldson Blue® ... DBA7041	
Filter, primary - SM .....	P181041
Filter, safety .....	P119370
Gasket kit .....	X003538 ....9
Gasket washer .....	P105740
Gasket, body or cup .....	P017335
Gasket, cover .....	P016972
Inlet shroud .....	P102870
Mounting band .....	H000350 ....2
SafetySignal indicator .....	X004816
Spring clip & pin .....	X005555
Wing nut .....	P109062

### G160077 STG-PERIPHERAL

Body, lower .....	P115023
Clamp, body .....	P100780
Clamp, cup .....	P100789
Cover .....	P109153
Cover latch assembly .....	P017617
Dust cup .....	P100794 ....3
Dust cup, quick release .....	P107377
Dust cup, VacValve, horz .....	P103530
Dust cup, VacValve, vert .....	P104973
Filter, primary .....	P182039 ....3
Filter, primary-Donaldson Blue® ... DBA7039	
Filter, primary - SM .....	P181039
Filter, safety .....	P114931
Gasket kit .....	X003539 ....9
Gasket washer .....	P105740
Gasket, body or cup .....	P017336
Gasket, cover .....	P017367
Inlet shroud .....	P101759
Mounting band .....	H000351 ....2
Outlet band clamp .....	P148348
SafetySignal indicator .....	X004816
Spring clip & pin .....	X005555
Wing nut .....	P109062

### G161006 STG-PERIPHERAL

Body, lower .....	P115023
Clamp, body .....	P100780
Clamp, cup .....	P100789
Dust cup .....	P100794 ....3
Dust cup, quick release .....	P107377
Dust cup, VacValve, horz .....	P103530
Dust cup, VacValve, vert .....	P104973
Filter, primary .....	P182042 ....3
Filter, primary-Donaldson Blue® ... DBA7042	
Filter, primary - SM .....	P181042
Filter, safety .....	P128408
Gasket kit .....	X003539 ....9
Gasket washer .....	P105740
Gasket, body or cup .....	P017336
Gasket, cover .....	P017367
Inlet shroud .....	P101759
Mounting band .....	H000351 ....2
Mounting band .....	H000351 ....2
SafetySignal indicator .....	X004816
Wing nut .....	P109062



**NOTES:**  
 2 = Two required for proper installation  
 3 = Shipped with air cleaner initially  
 9 = Gasket Kit includes all gaskets listed

SM=Scheduled Maintenance  
 Donaldson Blue® = High Efficiency, Extended Service

**Simplify Service With Dust Dumpa Kits!**  
 If your current STG air cleaner has adequate clearance, one of the Dust Dumpa kits has the potential to save service time.

X006562 includes new gasket  
 Length 22.55" / 5723mm  
 Not for horizontal mounted air cleaners.

X006561  
 Length 16.54" / 420mm



**STG Tubular Service Parts**

**G120332 STG-TUBULAR**

Body, lower .....	P110875
Dust cup, quick release .....	P107375
Filter, primary .....	P182044 .....3
Filter, primary-Donaldson Blue®... DBA5044	
Filter, primary - SM .....	P181044
Filter, safety .....	P119371
Gasket washer .....	P105740
Gasket, body or cup .....	P017804
Gasket, cover .....	P017365
SafetySignal indicator .....	X004816
Spring clip & pin .....	X005555
Wing nut .....	P109062

**G140445 STG-TUBULAR**

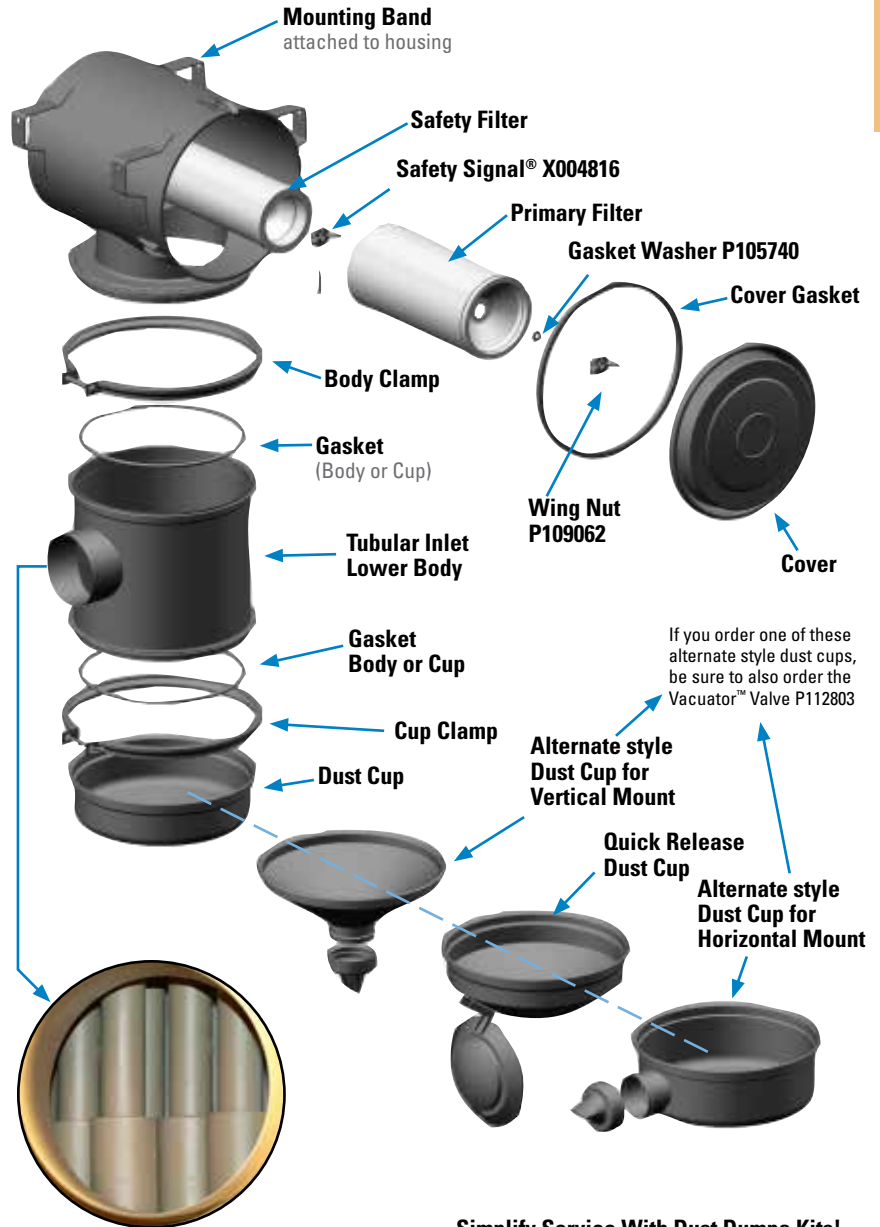
Body, lower .....	P114100
Cover latch assembly .....	P017617
Dust cup .....	P100860 .....3
Filter, primary - SM .....	P181041
Filter, primary-Donaldson Blue®... DBA7041	
Filter, primary .....	P182041 .....3
Filter, safety .....	P119370
Gasket kit .....	X003538
Gasket washer .....	P105740
Gasket, body or cup .....	P017335
Gasket, cover .....	P016972
Mounting band .....	H000350 .....2
SafetySignal indicator .....	X004816
Spring clip & pin .....	X005555
Wing nut .....	P109062

**G160445 STG-TUBULAR**

Cover .....	P109153
Cover latch assembly .....	P017617
Dust cup .....	P100794 .....3
Dust cup, quick release .....	P107377
Dust cup, VacValve, horz .....	P103530
Dust cup, VacValve, vert .....	P104973
Filter, primary - SM .....	P181039
Filter, primary-Donaldson Blue®... DBA7039	
Filter, primary .....	P182039 .....3
Filter, safety .....	P114931
Gasket, body or cup .....	P017336
Gasket, cover .....	P017367
Gasket kit .....	X003539 .....9
Mounting band .....	H000351 .....2
Spring clip & pin .....	X005555

**G161020 STG-TUBULAR**

Dust cup .....	P100794 .....3
Dust cup, quick release .....	P107377
Dust cup, VacValve, horz .....	P103530
Dust cup, VacValve, vert .....	P104973
Filter, primary .....	P182042 .....3
Filter, primary-Donaldson Blue®... DBA7042	
Filter, primary - SM .....	P181042
Filter, safety .....	P128408
Gasket kit .....	X003539 .....9
Gasket washer .....	P105740
Gasket, body or cup .....	P017336
Gasket, cover .....	P017367
Mounting band .....	H000351 .....2
Mounting bands, metal .....	H000351
Outlet band clamp .....	P148347
SafetySignal indicator .....	X004816
Wing nut .....	P109062



Inlet view of Donaclone™ pre-cleaning tubes inside the Lower Body Assembly.

**NOTES:**

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X006562 includes new gasket  
Length 22.55" / 5723mm  
Not for horizontal mounted air cleaners.



X006561  
Length 16.54" / 420mm



This servicing information is provided as a best practices guide. It is not intended to replace or supersede the service instructions supplied by your engine or vehicle manufacturer.

### 1 Check the Restriction

Replace the filter only when the restriction level has reached the maximum recommended by the engine or equipment manufacturer.



### 2 Empty the Dust Cup and Check the Vacuator™ Valves

Switch off the engine. The dust cup should be emptied when 2/3 full. Frequency of dust cup service varies with the dust severity.

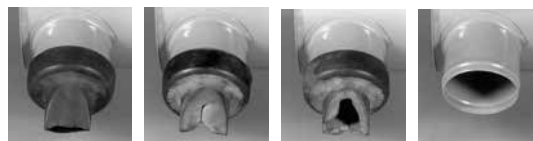
On dust cups with a Vacuator Valve, dust cup service is minimal. Just check the Vacuator Valve to see that it is not inverted, damaged or plugged. If it is damaged or missing, replace it immediately.

Visually inspect gasket between dust cup and lower body — if worn or damaged, replace.

*Tip: Save Service Time — Install Dust Dumpa on Vertical STG Air Cleaners!*



If your STG Air cleaner has a dust cup with a Vacuator Valve that is inverted or looks like any of the images below replace it immediately.

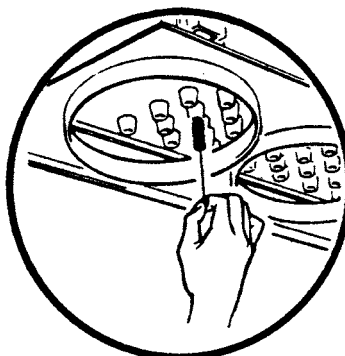


### 3 Inspect the Donaclone™ Pre-Cleaning Tubes

With the dust cup removed, check the tubes. Generally, the tubes are self-cleaning and need no service, but under unusual circumstances, plugging can occur. A visual inspection is usually adequate.

If the tubes carry light dust, remove it with a stiff brush. If plugging with fibrous material is evident, remove the Strata™ or Donaclone section. Clean it with compressed air or water no hotter than 160 °F / 72 °C.

Any time the Donaclone tube lower body is removed, the body gaskets should be replaced. When reinstalling the dust cup, be sure it seals 360° around the air cleaner body.



*Never clean Donaclone tubes with compressed air unless both the primary and safety filters are installed in the air cleaner.*

*Do not steam-clean Donaclone or Strata tubes.*

## 4 Remove the Primary Filter and Visually Inspect the Safety Filter

Unlatch the service cover to access the filters.

Loosen the wing nut and remove the primary filter. The wing nut on the old filter should be held in place with a clip. Visually inspect the safety filter but do not remove the filter unless it is damaged or due for change-out.

The safety filter should be replaced every three primary filter changes.



*Note: If you perform filter maintenance service on a schedule vs. using service indicators, you may want to write the service date on the filter end cap.*

*The safety filter should be replaced every three primary filter changes.*

## 5 Always Clean the Inside of the Filter Housing

Dirt left in the air cleaner housing can be harmful for your engine. Starting with the sealing surfaces, use a clean, damp cloth to wipe the inside surfaces clean. An improper gasket seal is one of the most common causes of engine contamination, so make sure that all hardened dirt ridges are completely removed.



*Continued on next page*





### 6 Install the New Filters

The safety filter should be replaced every three primary filter changes or as denoted by the SafetySignal™ service indicator. When replacing the safety filter, install the new filter immediately or cover the inlet with a cloth so that dirt is not ingested.

Before installing the new filters, inspect them for shipping damage and gasket integrity. If a filter is damaged, do not install it. If the safety filter is being replaced, and a SafetySignal is used, secure it in place with a cotter (split) pin.

Secure the primary filter in place with the wing nut (hand tighten) using a new gasket washer. Use a new wing nut clip and reset the filter service indicator.



### 7 Inspect Air Cleaner System

Finally, inspect and tighten all air cleaner system connections. If there are holes or damage, replace immediately. Inspect all air ducting for worn spots or damage. Annual replacement of air cleaner system gaskets is recommended.