

Heavy-Duty Two-Stage Filtration for Diesel Engines Operating in Severe Dust Conditions

Heavy construction vehicles (haul trucks, crawlers, dozers), above ground and underground mining machines, agricultural equipment (combines, tractors) and other off-highway vehicles and engines that operate daily in intensely dusty environments need powerful, reliable air filtration systems to protect them and keep them running reliably.

Donaldson S Series Air Cleaners provide:

- Durable, reliable protection
- Two cleaning stages to handle very dusty conditions
- Choice of filtration efficiency, Donaldson (standard) and Donaldson Endurance™ (high efficiency) replacement filters
- Low restriction so the engine receives a high volume of air
- Sturdy, vibration-resistant, long-life construction

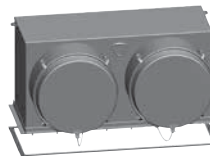
SSG Air Cleaner



SRG Air Cleaner



SRG Air Cleaner Conversion Kit



STG Air Cleaner



STB Air Cleaner



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Donaclone® Tubes

The pre-cleaner of our S Series air cleaners uses clusters of Donaclone tubes positioned ahead of the primary filter. The Donaclone tube has no mechanical moving parts, so there's nothing to break down; it works automatically and properly whenever the engine is on.

Air is drawn into the tube and spun. Centrifugal force separates much of the dirt in the airstream. Dirt falls out the bottom of the tube, while the cleaned air is drawn up through the middle of the tube and into the primary filter for further cleaning. Using the pre-cleaner as a first stage of filtration results in more effective engine air filtration and longer service life for the primary filter.



Attention: Upgrade SRG Models to Newer Filtration Technology!

The SRG air cleaner models will be phased out over time and replaced with our new SSG air cleaners.

Upgrade your housing to an SSG style with RadialSeal™ filters for faster filter changeout.

SRG Housing Item No.	SRG to SSG Kit Kit No.	SSG Housing Item No.
G200008	X009702	G200087
G200013	X009701	G200086
G290000	X009230	G290057
G290023	X009230	G290052
G290012	X009231	G290053



Designed for the Worst Dust Conditions

New Choice for Construction and Off-Highway Applications

The SSG Air Cleaner offers design improvements over our older SRG air cleaner style.

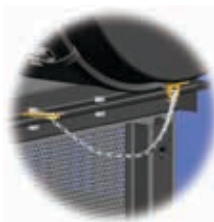
Design Improvements

The SSG Air Cleaner has filters that use RadialSeal™ sealing technology, compared to axial seal style filters.

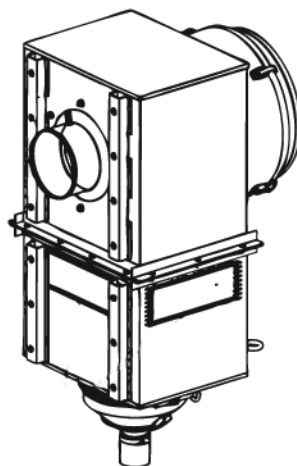
This single design improvement eliminates the need to replace filter and cover gaskets, which means less service time and fewer parts to inventory.



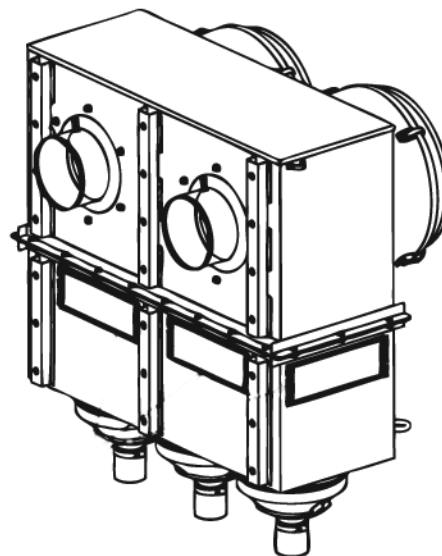
Additional design improvements: the air cleaner service cover now has quick-release cover latches and a chain that connects it to the housing.



The large, massive mining vehicle in the picture above is an ideal match for the Donaldson SSG Air Cleaner.



Mounting (back) side view of an SSG 20 model



Mounting (back) side view of an SSG 29 model

Versatile SSG Provides Airflow to 4800 cfm With Improved Design Features Compared to our Older SRG Model

Applications

- Allows 1700 to 2400 cfm airflow throughput for the SSG 20 model and 2580 to 4800 cfm airflow throughput for the SSG 29 models
- Horizontal installation
- Off-road, heavy or extreme dust conditions
- Ideal for scrapers, earth movers, graders and haul trucks

Air Cleaner Features

- Single and dual outlet models — two high-flow models available
- Inlet has perforated holes on three sides; rain shrouds available if required
- Filters have urethane end caps with RadialSeal™ sealing technology
- Built-in pre-cleaning tubes separate up to 97% of the in-coming dust
- Latch-style cover with attached safety chain for faster and simpler filter service
- Constructed of heavy-gauge steel with a primed, ready-to-paint finish
- Same overall package size as older Donaldson SRG axial seal style housings
- Dust Dumpa tube accessory available — simplifies routine air cleaner inspections

Filter Features

- Replacement primary filter choices: Standard life filters (for scheduled maintenance) and Donaldson Endurance™ extended service high efficiency filters for restriction maintenance practices. Air cleaners ship with the standard filters.
- Grab handles on the primary filter to help remove the loaded filter during service
- Safety filter on all models



Dust Dumpa kits installed on a Donaldson SSG29 with rain shields. Notice the piles of dust gathered on the platform during vehicle operation.

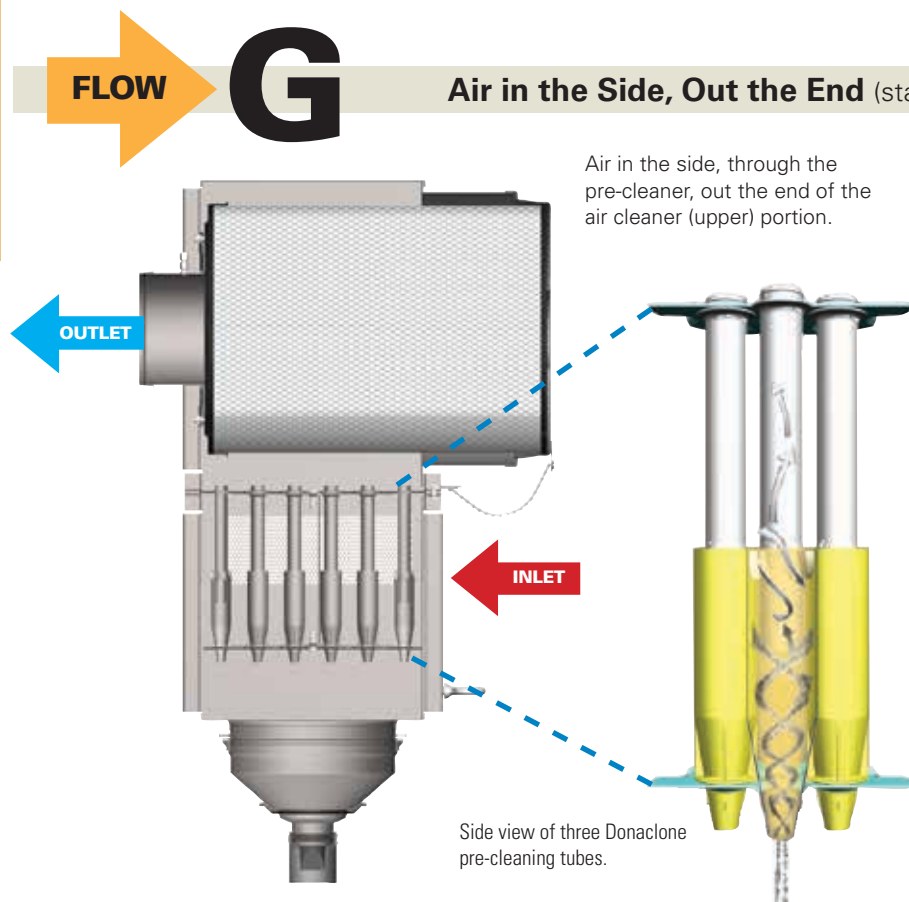
Powerful Two-Stage Filtration

The first stage of this powerful air cleaner consists of hundreds of our exclusive, patented Donaclone™ pre-cleaner tubes. Each tube spins 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.

The pre-cleaned dust is automatically ejected from the dust cup with a Vacuator™ Valve, which is located below the lower housing body.



The second stage of filtration is the primary filter. A safety filter, which fits inside the primary filter, is standard on all models for protection during primary filter change out.



Initial Airflow Restriction

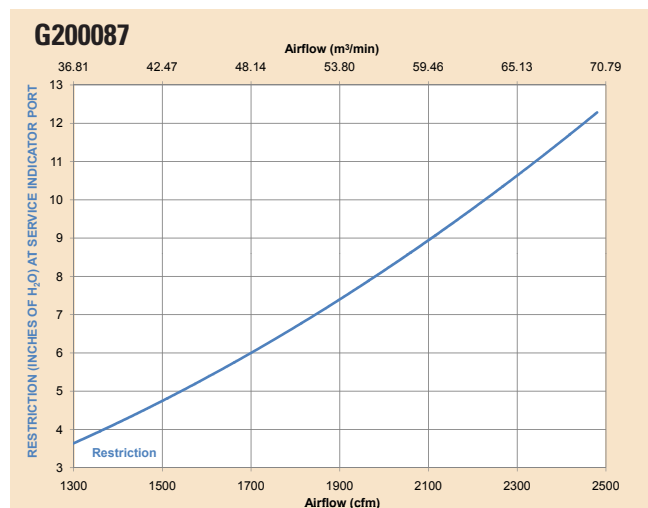
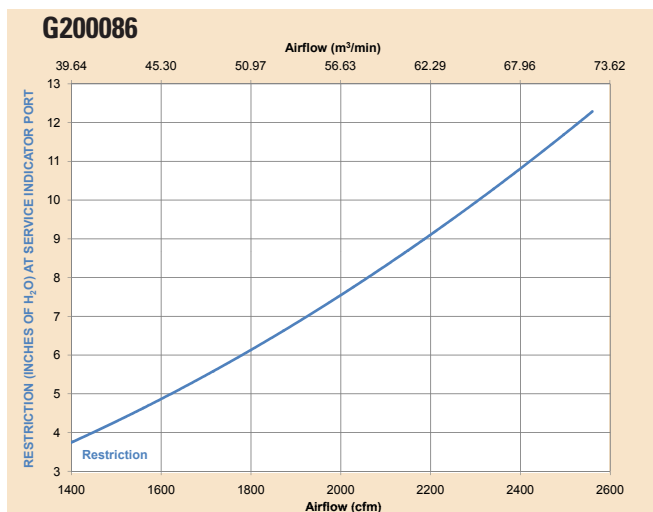
CFM @ 6"	"H ₂ O 8"	Air Cleaner Model
SINGLE OUTLET MODELS		
1700	1980	G200087
1780	2060	G200086
2100	2400	G200088*
DUAL OUTLET MODELS		
2580	3000	G290057
3340	3800	G290052
3600	4080	G290053
4200	4800	G290055*

*Sized to accommodate higher airflow.

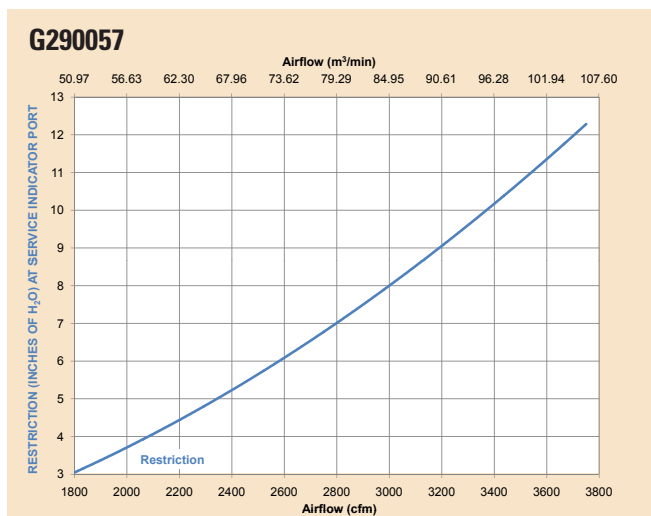
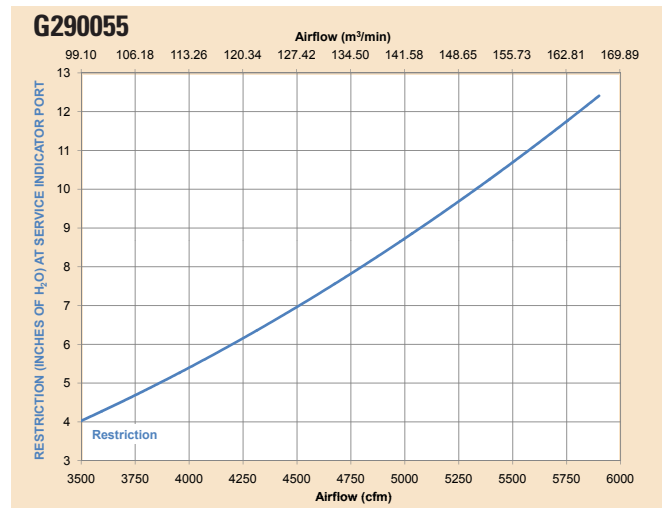
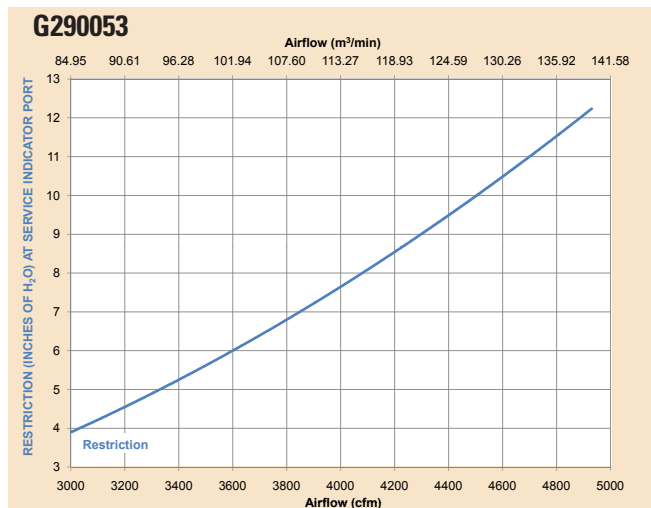
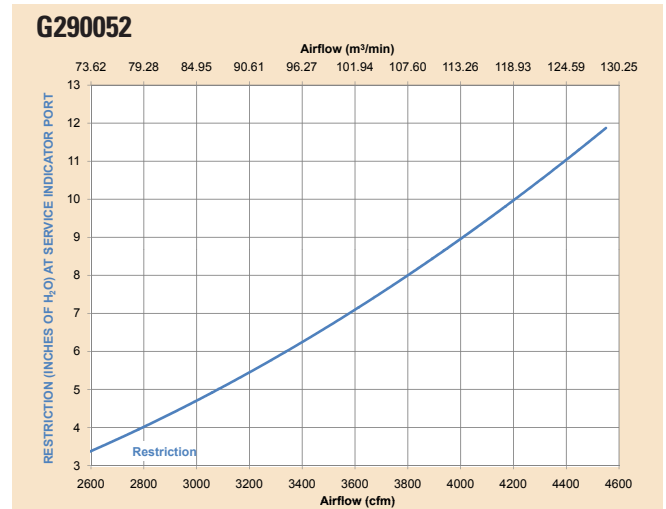
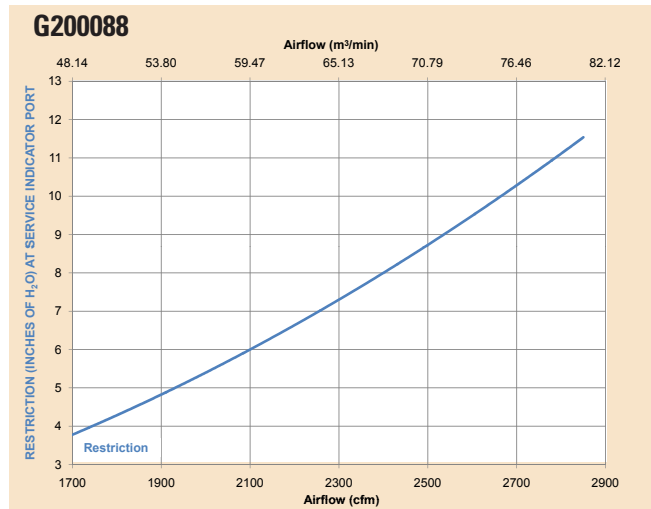
When Selecting an Air Cleaner . . .

Determine the airflow requirements of your engine, then find the corresponding cfm airflow in the table above. 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.

SSG Air Cleaner Performance Curves



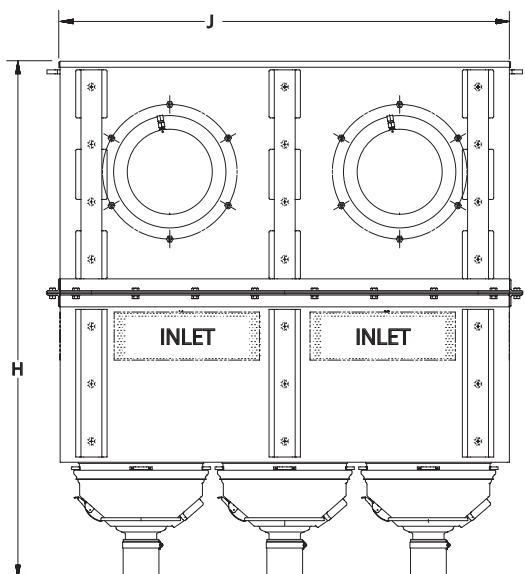
continued — S&S Air Cleaner Performance Curves



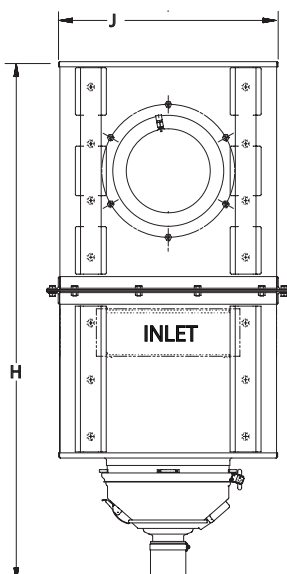


SSG Specification Illustrations

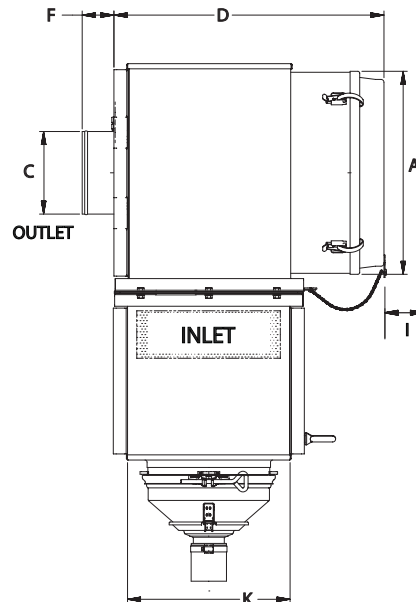
Front View Dual Outlet



Front View Single Outlet



Side View Dual and Single



SSG Specifications

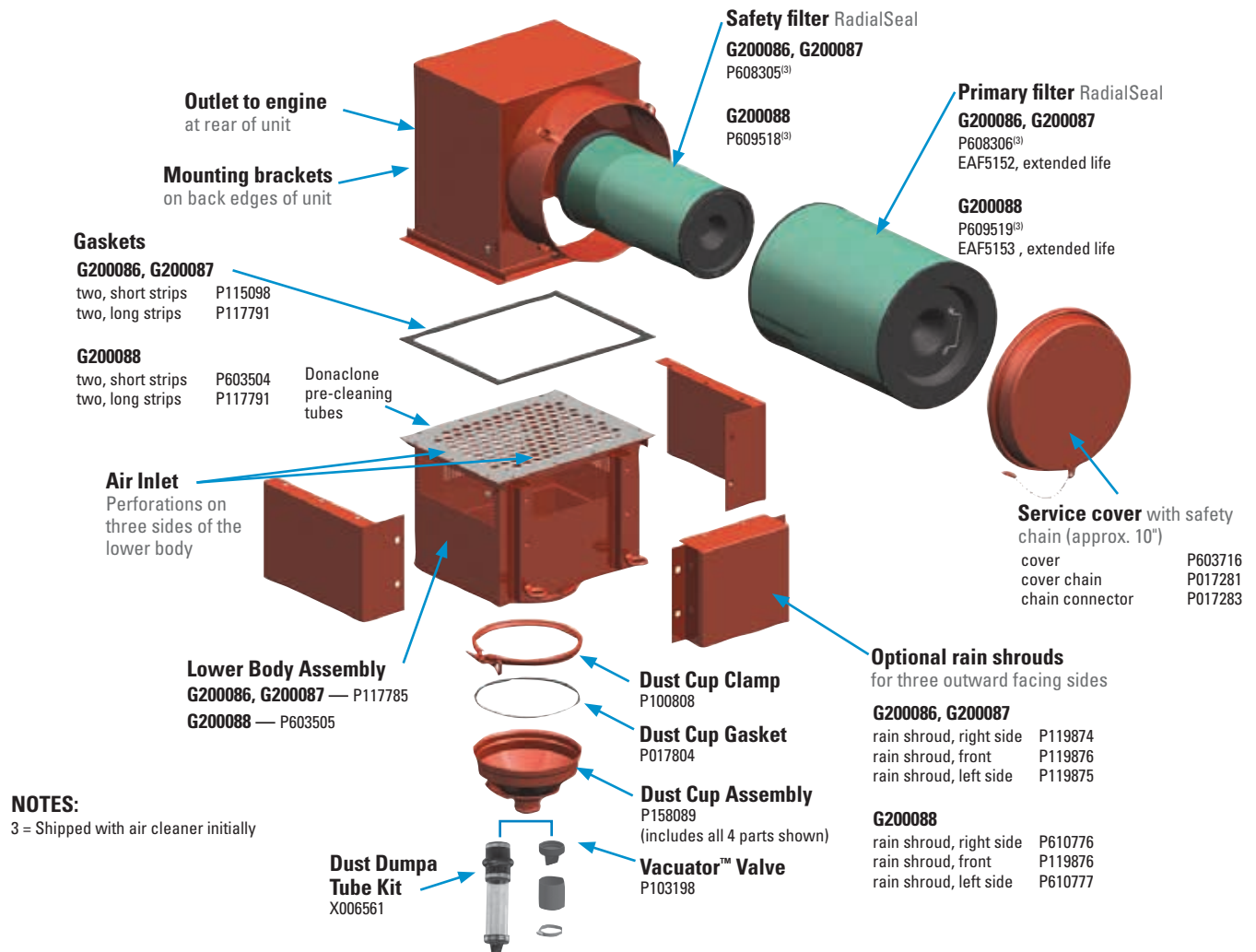
Air Cleaner Models	Body Diameter (A)		Outlet Diameter (C)		Length (D)		Outlet Length (F)		Height (H)		Service Clearance (I)		Width (J)		Depth (K)		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lbs	kg
SINGLE OUTLET MODELS																		
G200087	19.67	500	8.0	203	26.2	665	3	76	50.15	1274	22.0	559	21.00	533	15.75	400	200	91
G200086	19.67	500	10.0	254	26.2	665	3	76	50.15	1274	22.0	559	21.00	533	15.75	400	200	91
G200088	19.67	500	10.0	254	31.4	798	3	76	50.15	1274	27.0	686	21.00	533	23.50	597	240	109
DUAL OUTLET MODELS																		
G290057	19.67	500	8.0	203	26.2	665	3	76	49.42	1255	22.0	559	43.00	1092	15.75	400	340	154
G290052	19.67	500	8.0	203	26.2	665	3	76	49.42	1255	22.0	559	43.00	1092	15.75	400	340	154
G290053	19.67	500	10.0	254	26.2	665	3	76	49.42	1255	22.0	559	43.00	1092	15.75	400	340	154
G290055	19.67	500	10.0	254	31.4	798	3	76	49.42	1255	27.0	686	43.00	1092	23.50	597	420	190

Accessories Recommendations

Air Cleaner Model	Outlet Band Clamp	Hump-hose Connector	Elbows		Restriction Indicator
			45°	90°	
G200088	P148350	P111414	P114313	P114314	X002277
G290055	P148350	P111414	P114313	P114314	X002277
G290057	P148349	P112608	P112606	P112605	X002277

Service Parts Listing by Model Number

Single Outlet Model — SSG 20



Dust Dumpa Tube Extension

How it works: When installed on the dust cups on the lower assembly, the rubber connector vibrates during normal vehicle operation and gravity expels the pre-cleaned dust.

- Improves dust evacuation from the air cleaner
- Clear tube allows for visual inspection of dust collection
- Reduces air cleaner inspection time
- Ships fully assembled
- Proper conversion requires drop down tube for every dust cup

For more information features and dimensions, see accessories section.



Part No. X006561

SSG Housing Primary Filter Choices

For high efficiency filtration, upgrade to Donaldson Endurance™ Air Filters with Ultra-Web® Filtration Technology. SSG Air Cleaners and retrofit kits ship with standard life filters.

Air Cleaner	Standard Life	High Efficiency
G200086	P608306	EAF5152
G200087	P608306	EAF5152
G200088	P609519	EAF5153

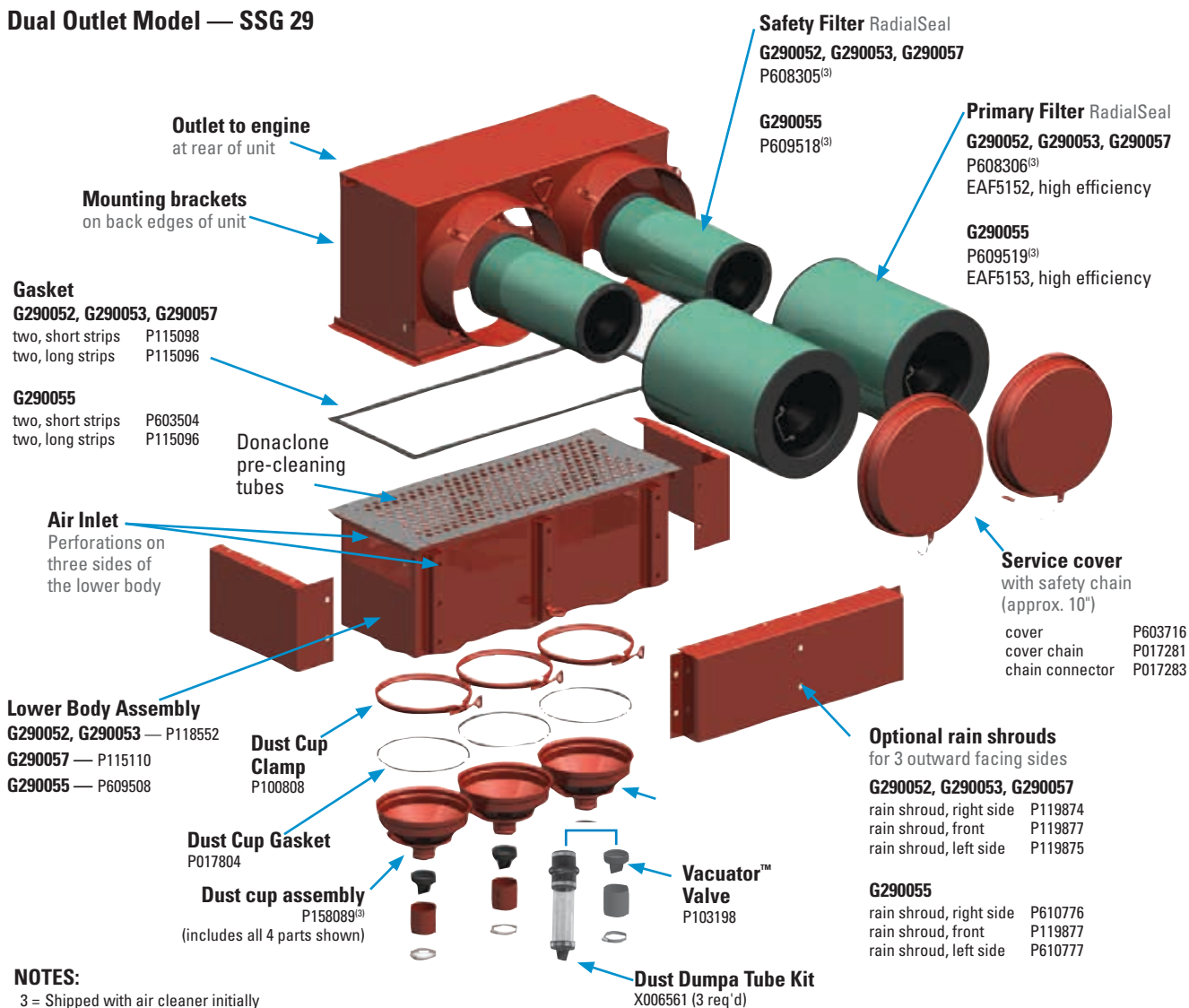
If it's Blue it's True!
Blue filters have Ultra-Web® Filtration Technology





Service Parts Listing by Model Number

Dual Outlet Model — SSG 29



Dust Dumpa Tube Extension

How it works: When installed on the dust cups on the lower assembly, the rubber connector vibrates during normal vehicle operation and gravity expels the pre-cleaned dust.

- Improves dust evacuation from the air cleaner
- Clear tube allows for visual inspection of dust collection
- Reduces air cleaner inspection time
- Ships fully assembled
- Proper conversion requires drop down tube for every dust cup



Part No. X006561

For more information features and dimensions, see accessories section.

SSG Housing Primary Filter Choices

For high efficiency filtration, upgrade to Donaldson Endurance™ Air Filters with Ultra-Web® Filtration Technology. SSG Air Cleaners and retrofit kits ship with standard life filters.

Air Cleaner	Standard Life	High Efficiency
G290052	P608306	EAF5152
G290053	P608306	EAF5152
G290055	P609519	EAF5153
G230057	P608306	EAF5152

If it's Blue it's True!
Blue filters have Ultra-Web® Filtration Technology



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.

SERVICE TRAINING VIDEOS



<http://www.youtube.com/user/donaldsonengine>

Donaldson Service Training Videos are on YouTube. Scan the QR code or go to <http://www.youtube.com/user/donaldsonengine> to watch videos on how to service Donaldson Air Cleaners, like the SSG.

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 & Check the Vacuator™ Valve

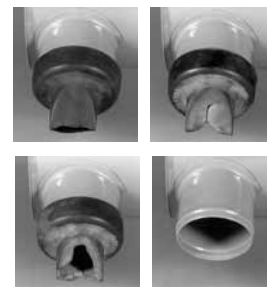
Shut off the engine. The dust cup should be emptied when it is 2/3 full. Frequency of dust cup service varies with dust severity. On dust cups with a Vacuator™ Valve, dust cup service is minimal.

Just check the Vacuator™ Valve to see that it is not inverted, damaged or plugged. If it looks damaged or is missing, replace it immediately. When reinstalling the dust cup, be sure it seals properly 360° around the air cleaner body.

The optional Donaldson Dust Dumpa tube extension is available for the SSG.



If your SSG Air Cleaner has a dust cup with a Vacuator Valve, replace it immediately if it is inverted or looks like any of the images below.

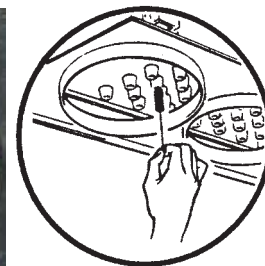


3

Inspect the Donaclone™ Pre-Cleaning Tubes

Visually check the Donaclone tubes. Generally, the tubes are self-cleaning and need no service, but under unusual circumstances, plugging can occur. In those circumstances, cleaning with a stiff brush may be required.

Never clean Donaclone tubes with compressed air unless both the primary and safety filters are properly fitted in place. Do not steam-clean Donaclone tubes.



Continued on next page



4 Remove the Primary Filter and Visually Inspect the Safety Filter

When the restriction indicates that filter service is required, unfasten or unlatch the filter service cover. Because the filter fits tightly over the outlet tube there will be some initial resistance, similar to breaking the seal on a jar. Grasp the filter service handle and pull the filter out. Gently move the filter from side to side to break the seal, but avoid knocking the filter against the housing during removal.

Visually check safety filter for damage and replace if damaged, but do not remove it unless a change-out is necessary. You should replace the safety filter every three primary filter changes. Also verify that the safety filter is properly seated in the housing. If the safety filter is removed and the new filter is not to be installed immediately, be sure to cover the seal tube with a cloth or the housing cover.

Wipe the interior of the air cleaner with a clean damp cloth.



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 Inspect and Install the New Filter(s)

Inspect the new filter carefully, paying attention to the inside of the open end, which is the sealing area. NEVER install a damaged filter. A new Donaldson RadialSeal™ filter may have a dry lubricant on the seal to aid installation.

If you are servicing the safety filter, make sure it is seated into position before installing the primary filter.

Insert the new filter carefully by hand, making certain it is completely seated into the air cleaner housing before securing the cover in place.

The critical sealing area will compress slightly, adjust itself and distribute the sealing pressure evenly. To complete a tight seal, apply pressure by hand at the outer rim of the filter, not at the center. (Avoid pushing on the center of the end cap.) No cover pressure is required to hold the seal.



Note: NEVER use the service cover to push the filter into place! Using the cover to push the filter in could cause damage to the housing or cover fasteners and will void the warranty.

If the service cover contacts the filter before it is fully in place, remove the cover and push the filter (by hand) further into the air cleaner and try again. The cover should go on with no extra force.

Once the filter is in place, secure the service cover.



6 Inspect Air Cleaner System

Finally, inspect and tighten all air cleaner system hoses, tubing and connections. If there are holes or damage, replace immediately. Reset filter service indicators if they don't automatically reset.





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!

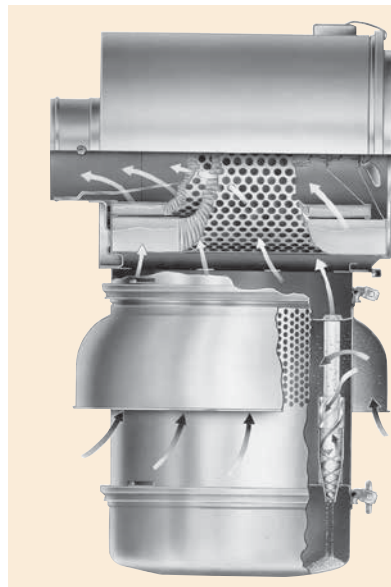
A safety filter, which fits inside the primary filter, is standard on all models for protection during primary filter changeout. Physical orientation does not affect the proper functioning of either cleaning stage! The STG can be mounted horizontally or vertically. If mounting horizontally, the Vacuator™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

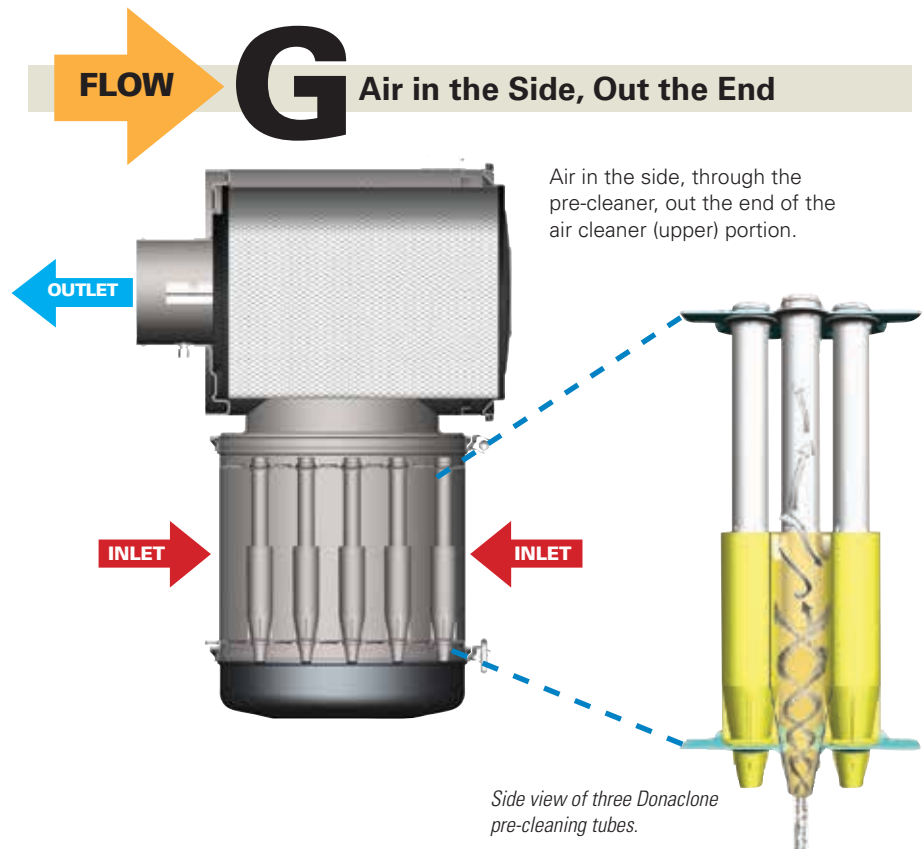
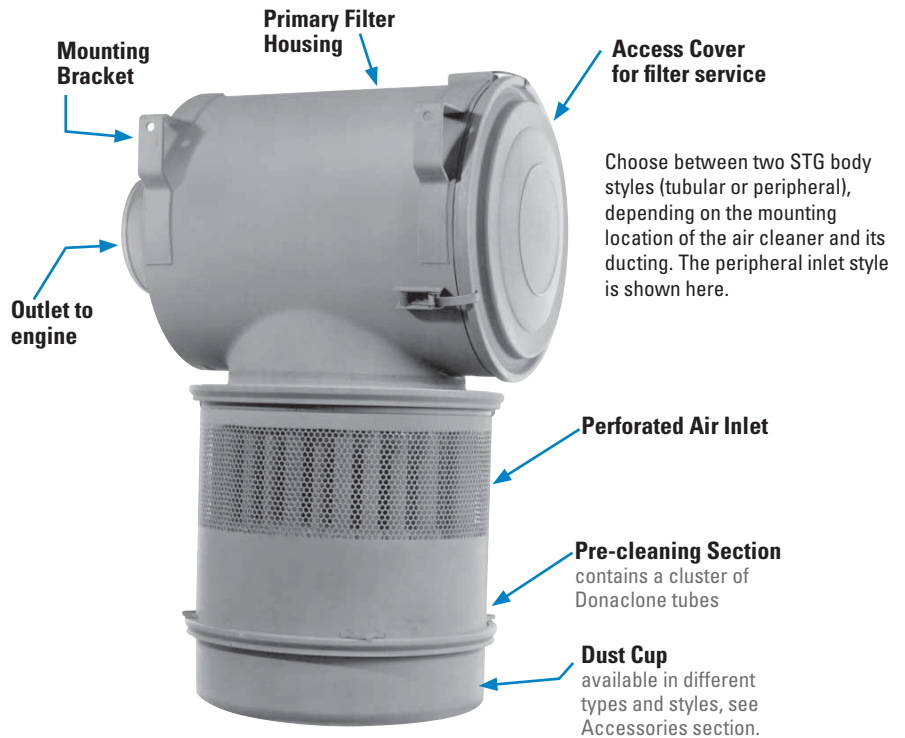
- Allows 390 to 1760 cfm airflow throughput per air cleaner
- Horizontal or vertical installation
- Off-road, high dust conditions
- Ideal for scrapers, earth movers, graders

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

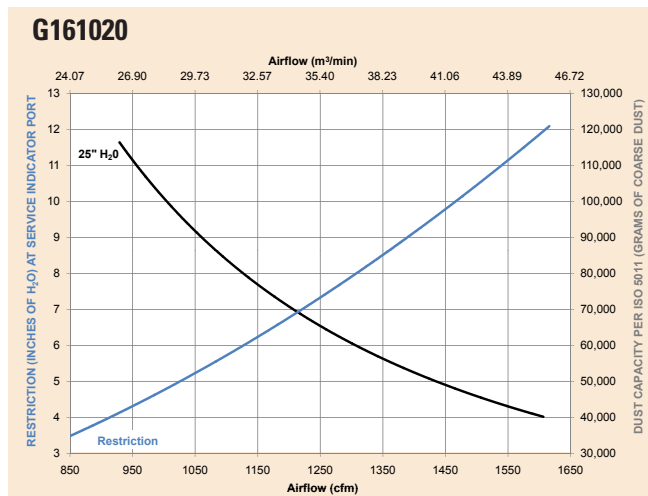
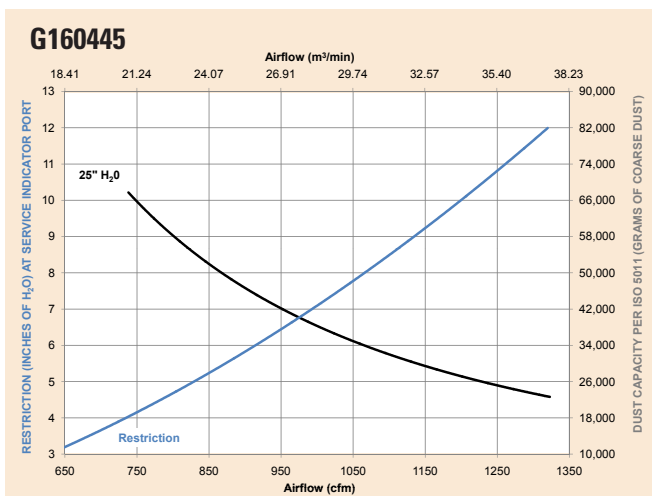
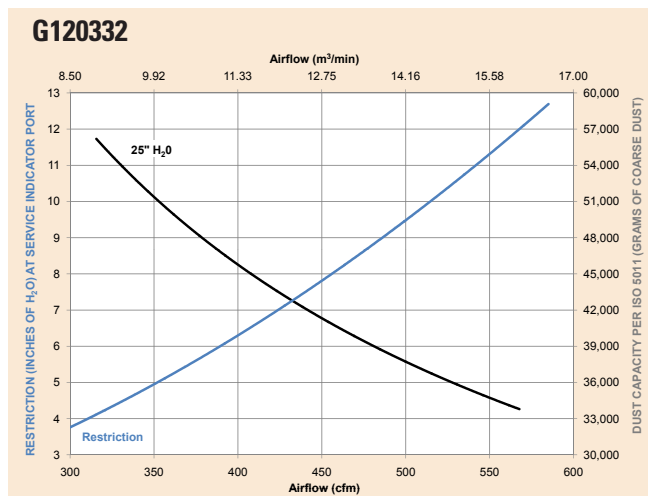
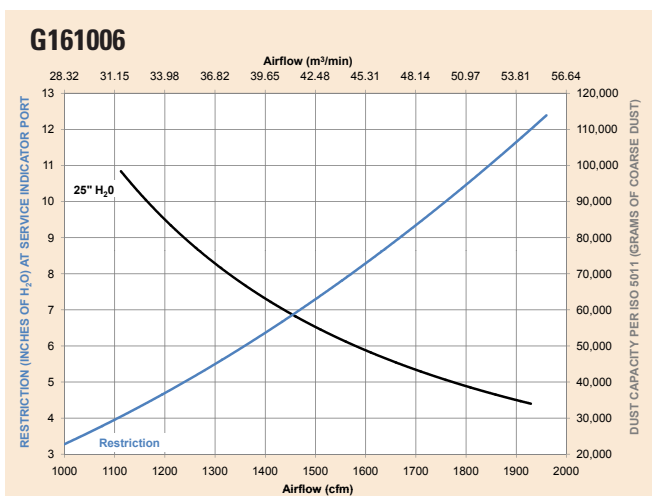
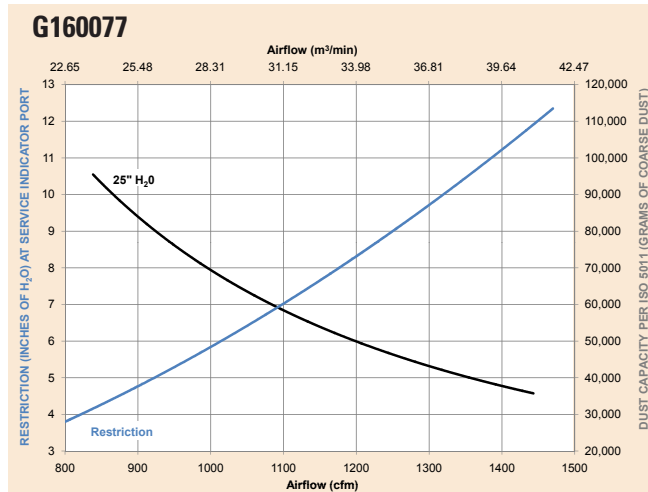
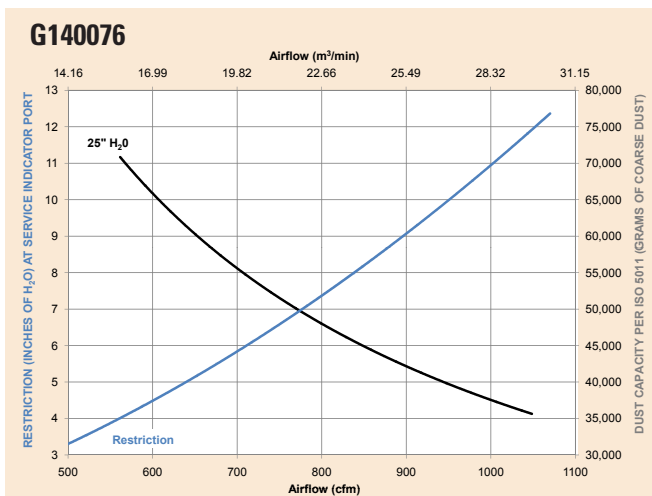
- Replacement primary filter choices: Standard life filters (for scheduled maintenance) and Donaldson Endurance™ extended service, high efficiency filters for servicing by restriction
- Uses standard airflow filters
- Safety filter on all models





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.



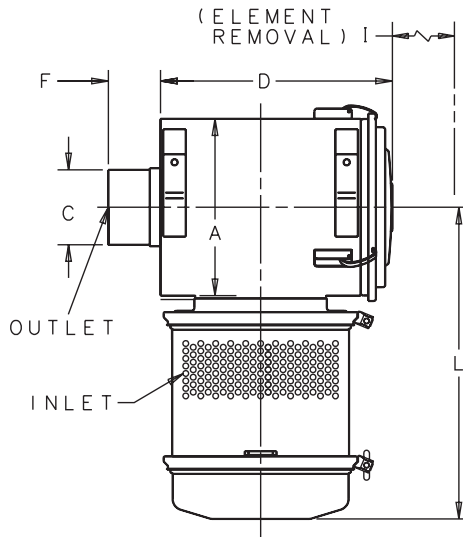
Initial Airflow Restriction

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

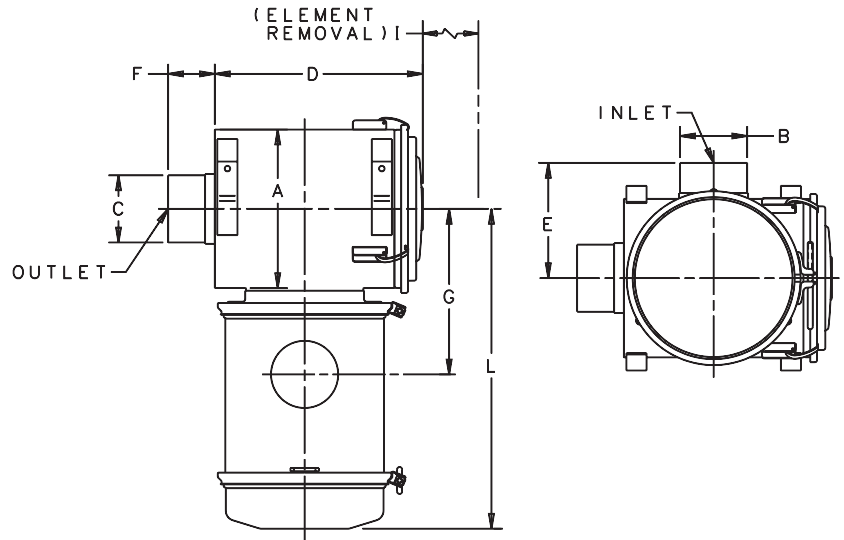
6"	CFM @ "H ₂ O	8"	10"	Air Cleaner Model
STG WITH TUBULAR INLET				
390	455	515		G120332
915	1065	1200		G160445
1127	1308	1466		G161020

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)		(E)		Inlet Length (F)		(G)		Service Clearance (I)		(L)		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lbs	kg
STG WITH PERIPHERAL INLET																				
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
STG WITH TUBULAR INLET																				
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 ¹	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	P148349	P112608	P112606	P112605		X002277		
G161020	H000351	P148347	P105612	P105547	P105535		X002277		



STG Peripheral Service Parts

G140076 STG-PERIPHERAL

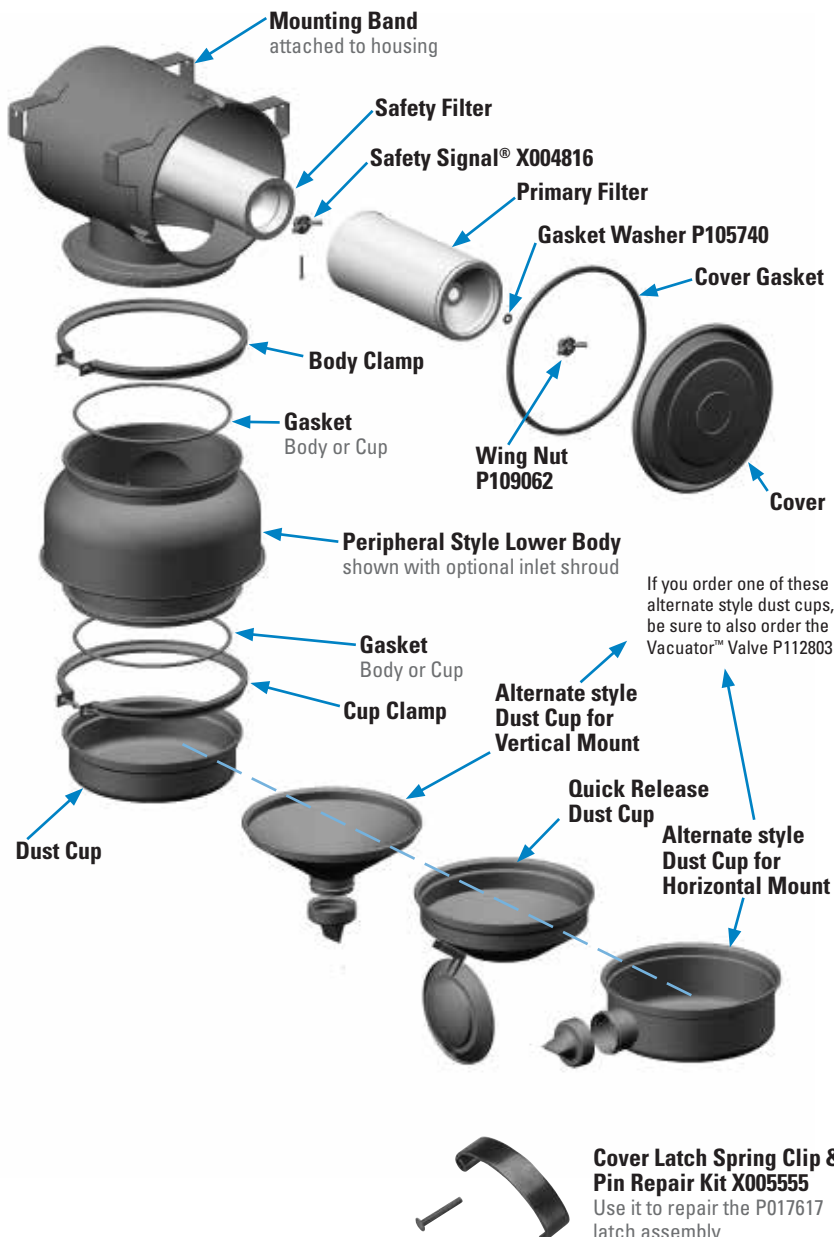
Body, lower	P102256
Clamp, cup	P100866
Cover latch assembly	P017617
Dust cup	P1008603
Elbow, 45°	P105547
Elbow, 90°	P105535
Filter, primary	P1820413
Filter, primary - ES & HE	EA5041
Filter, primary - SM	P181041
Filter, safety	P119370
Gasket kit	X0035389
Gasket washer	P105740
Gasket, body or cup	P017335
Gasket, cover	P016972
Inlet shroud	P102870
Mounting band	H0003502
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	P1007943
Dust cup, quick release	P107377
Dust cup, VacValve, horz	P103530
Dust cup, VacValve, vert	P104973
Filter, primary	P1820393
Filter, primary - ES & HE	EA5039
Filter, primary - SM	P181039
Filter, safety	P114931
Gasket kit	X0035399
Gasket washer	P105740
Gasket, body or cup	P017336
Gasket, cover	P017367
Inlet shroud	P101759
Mounting band	H0003512
Outlet band clamp	P148348
SafetySignal indicator	X004816
Spring clip & pin	X005555
Wing nut	P109062

G161006 STG-PERIPHERAL

Clamp, body	P100780
Clamp, cup	P100789
Dust cup	P1007943
Dust cup, quick release	P107377
Dust cup, VacValve, horz	P103530
Dust cup, VacValve, vert	P104973
Filter, primary	P1820423
Filter, primary - ES & HE	EA5042
Filter, primary - SM	P181042
Filter, safety	P128408
Gasket kit	X0035399
Gasket washer	P105740
Gasket, body or cup	P017336
Gasket, cover	P017367
Inlet shroud	P101759
Mounting band	H0003512
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

ES = Extended Service
HE = High Efficiency
SM = Scheduled Maintenance

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	P1820443
Filter, primary - ES & HE	EAF5044
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

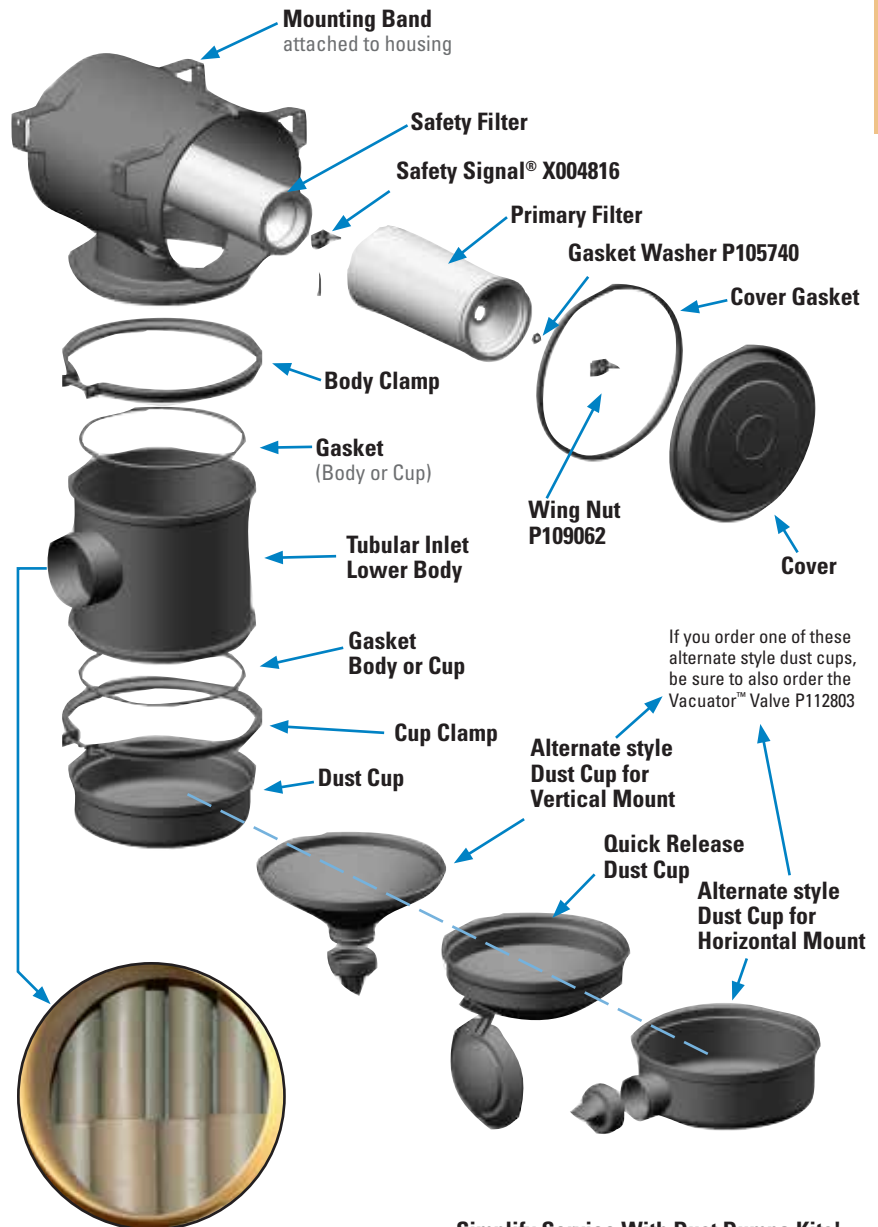
Body, lower	P114100
Cover latch assembly	P017617
Dust cup	P1008603
Filter, primary - SM	P181041
Filter, primary - ES & HE	EAF5041
Filter, primary	P1820413
Filter, safety	P119370
Gasket kit	X003538
Gasket washer	P105740
Gasket, body or cup	P017335
Gasket, cover	P016972
Mounting band	H0003502
SafetySignal indicator	X004816
Spring clip & pin	X005555
Wing nut	P109062

G160445 STG-TUBULAR

Cover	P109153
Cover latch assembly	P017617
Dust cup	P1007943
Dust cup, quick release	P107377
Dust cup, VacValve, horz	P103530
Dust cup, VacValve, vert	P104973
Filter, primary - SM	P181039
Filter, primary - ES & HE	EAF5039
Filter, primary	P1820393
Filter, safety	P114931
Gasket, body or cup	P017336
Gasket, cover	P017367
Gasket kit	X0035399
Mounting band	H0003512
Spring clip & pin	X005555

G161020 STG-TUBULAR

Dust cup	P1007943
Dust cup, quick release	P107377
Dust cup, VacValve, horz	P103530
Dust cup, VacValve, vert	P104973
Filter, primary	P1820423
Filter, primary - ES & HE	EAF5042
Filter, primary - SM	P181042
Filter, safety	P128408
Gasket kit	X0035399
Gasket washer	P105740
Gasket, body or cup	P017336
Gasket, cover	P017367
Mounting band	H0003512
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:

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

ES = Extended Service
 HE = High Efficiency
 SM = Scheduled Maintenance

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 Donaclone™ Air Cleaners

Service Instructions



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.

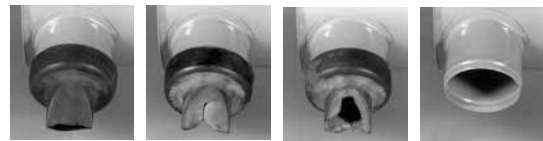
On dust cups with a Vacuator Valve, dust cup service is minimal. Just check the Vacuator Valve to see that it is not inverted, damaged or plugged. If it is damaged or missing, replace it immediately.

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.

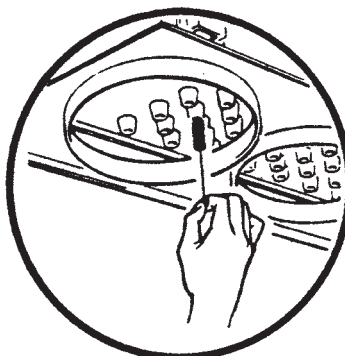


3 Inspect the Donaclone™ Pre-Cleaning Tubes

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



STG Donaclone™ Air Cleaners

Service Instructions



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.

Save Maintenance Time & Costs

Convert Older SRG Housings to new SSG Housing Style!



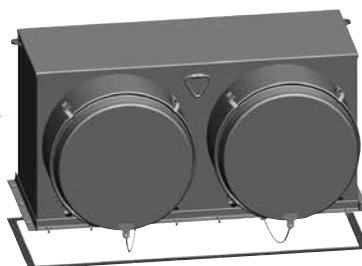
Replacing an older SRG housing with the new SSG housing allows you to simplify your routine filter service — no more separate gaskets at each filter change or removing a bolted on cover. SSG filters have RadialSeal™ end caps that provide a more reliable, consistent seal. Choose from an upper assembly conversion kit or you may want to install a complete new housing if your current SRG assembly needs repair or is reaching the end of its useful life.



SRG29 Housing



Upper Body Conversion Kit



SSG29 Housing



Kit Order Information

SRG Housing Item No.	SRG to SSG Kit* Kit No.	SSG Housing Item No.
G200008	X009702	G200087
G200013	X009701	G200086
G290000	X009230	G290057
G290023	X009230	G290052
G290012	X009231	G290053

* The finish on the replacement kit upper assembly is a white, powdered-coated paint. Installation instructions are included with the kit.

Other Changes That Can Save You Time and \$\$ After Converting to an SSG!

Upgrade to Donaldson Endurance™ Filters

Donaldson Endurance, high efficiency filters are available for the SSG product line. These filters have Donaldson's advanced Ultra-Web® Filtration Technology to protect your engines from submicron and mixed contaminant.



Install Dust Dumpa

Dust Dumpa is a direct replacement to our dust cups. You can greatly reduce, if not eliminate, the routine step of emptying the dust cup — two models available X006561 [left] and X006562 [right].





SRG Donaclone Protects the Largest Engines

For Simpler Service, Convert Your Old SRG to an SSG Style!

Upgrade old SRG housings two ways: upgrade kit or a new SSG air cleaner

Applications

- Allows 1700 to 4080 cfm airflow throughput per air cleaner — use two air cleaners to double airflow throughput
- Designed for large, high horsepower, off-road equipment
- For large engines operating in severe dust environments

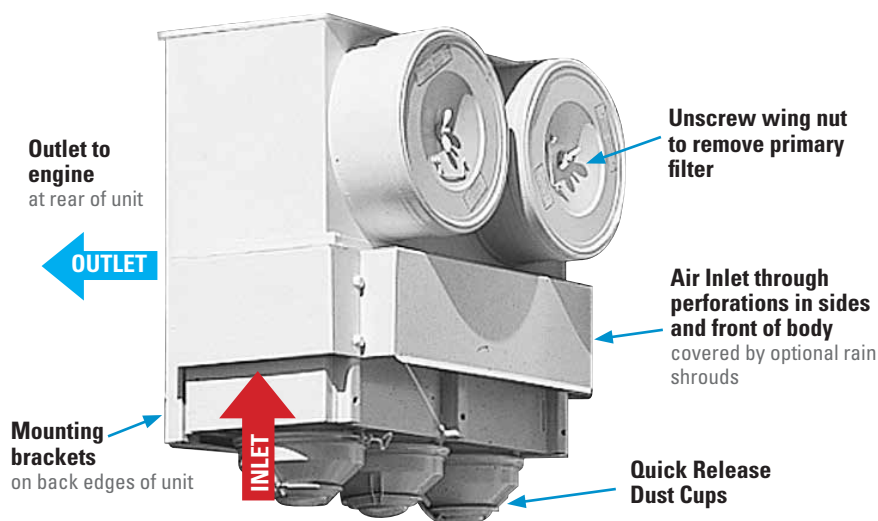
Air Cleaner Features

- Single outlet: SRG20 (1 filter)
Dual outlet: SRG29 (2 filters)
- Very reliable. Only one critical filter seal. No moving parts.
- Built-in Donaclone™ pre-cleaning tubes separate up to 97% of incoming dust to dust cup before it reaches the filter
- SRG air cleaners are finished with a red oxide primer, ready to be painted to match your equipment
- Dust cup options:
 - Dust Cup Kit with Dust Dumpa
 - Quick-release, for manual dumping (shipped with SRG initially)
 - Vacuator™ Valve, for automatic dumping (optional replacement style)
- Vertical mounting
- Perforated inlets on all models
- Heavy metal rain shrouds available optionally
- Taps for filter service indicators on all models
- Optional Dust Dumpa to simplify dust cup maintenance.

A huge double-unit SRG29 engine air cleaner, protects this haul truck under severely dusty operating conditions. The SRG29 has three dust cups on the bottom of the unit.



This SRG20 (single outlet style) with rain shroud is easy to service because the access cover, which is out front, is attached to the filter. Simply unscrew the wing nut and pull the filter out horizontally. Inside, a safety filter protects the air inlet during filter service.



STOP!

The SRG air cleaner models will be phased out over time and replaced with our new SSG air cleaners that have design improvements over this style.

Upgrade from SRG housings to new SSG!

SRG Model	SSG Model
G200008	G200087
G200013	G200086
G290000	G290057
G290023	G290052
G290012	G290053

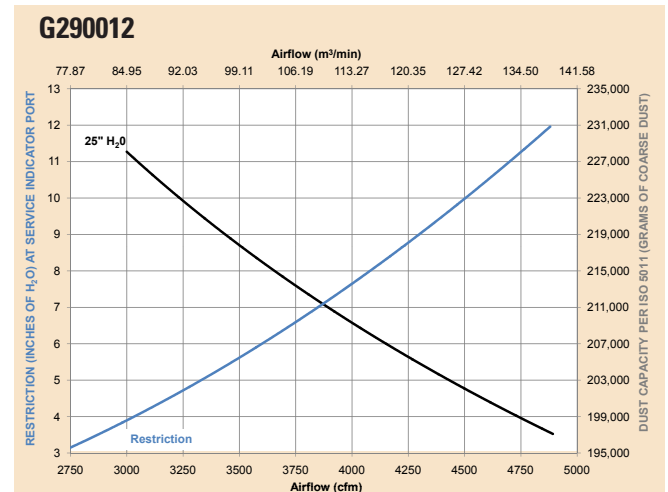
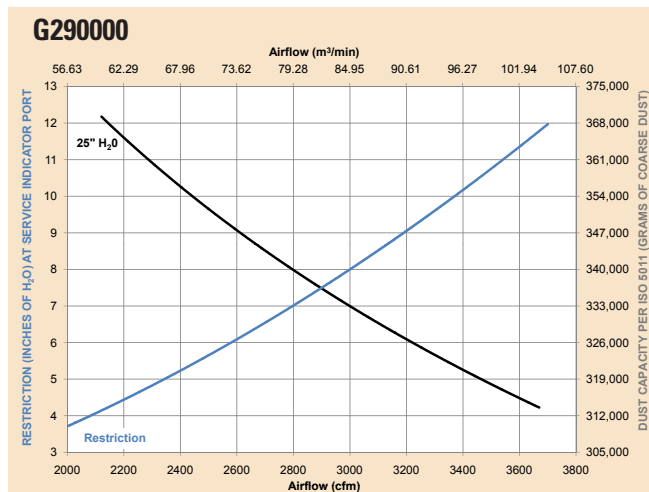
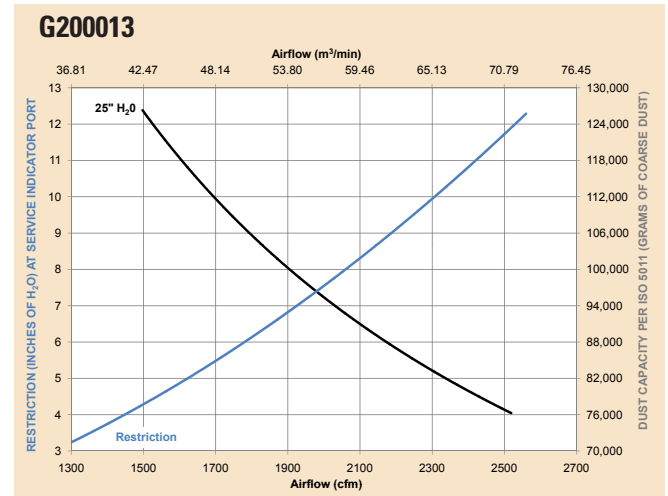
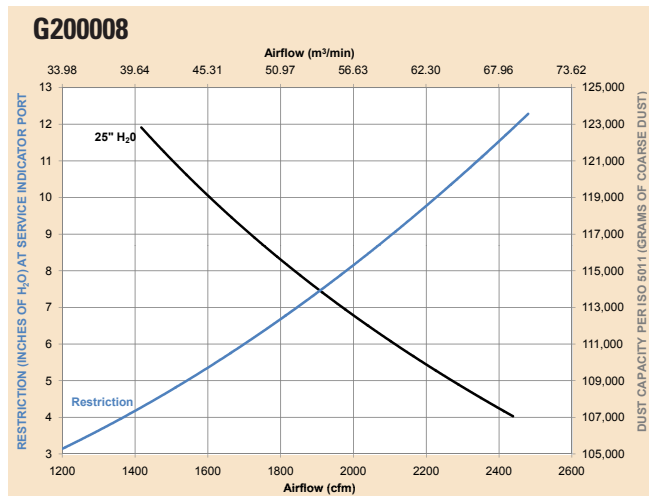
Initial Airflow Restriction

CFM @ "H ₂ O 6"	"H ₂ O 8"	Air Cleaner Model
1700	1980	G200008
1780	2060	G200013
2580	3000	G290000
3340	3800	G290023
3600	4080	G290012

When Selecting an Air Cleaner . . .

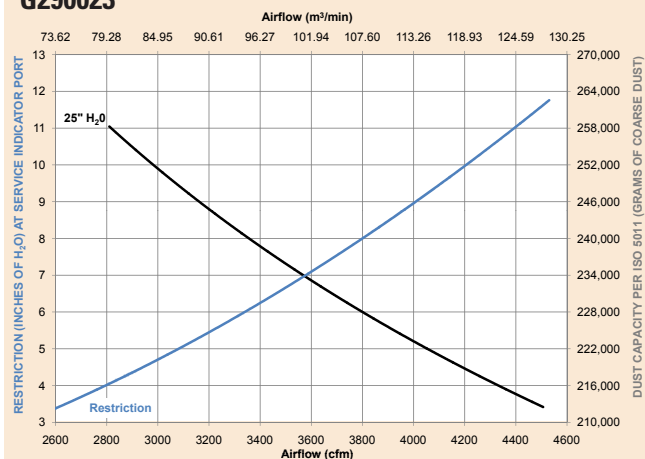
Determine the airflow requirements of your engine, then find the corresponding cfm airflow in the table at left. The restriction numbers (shown in inches of water) indicate the approximate initial restriction of each model air cleaner at that cfm. If there are two air cleaner models that fit your parameters, 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.

SRG Air Cleaner Performance Curves (Restriction & Dust Capacity)

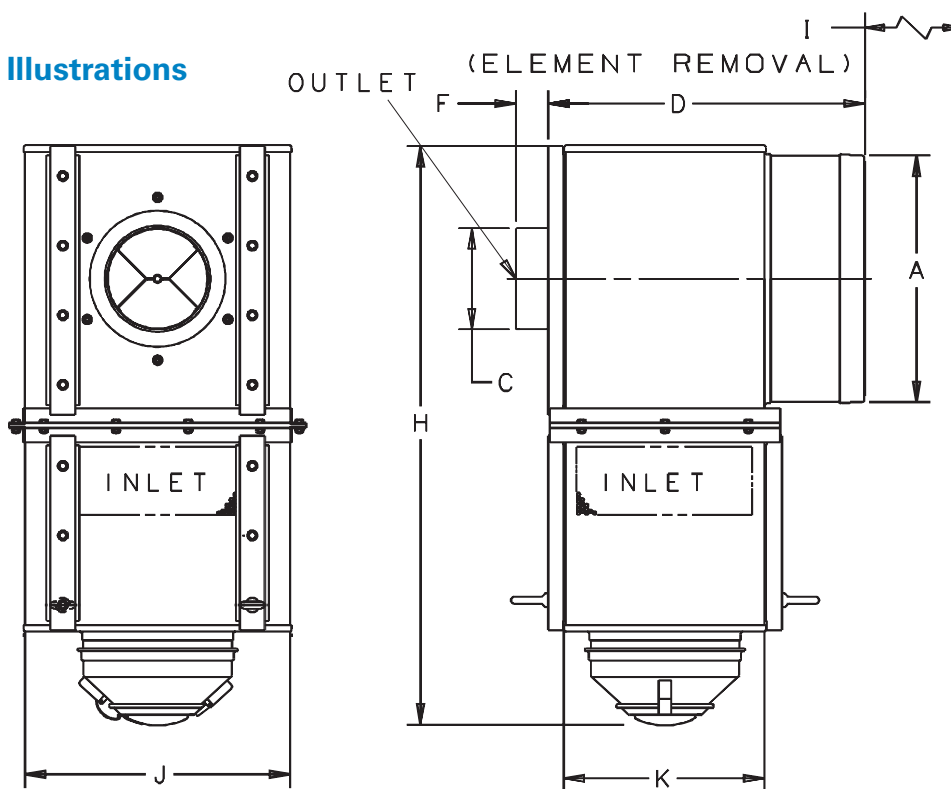




G290023



SRG Specification Illustrations



SRG Specifications

Air Cleaner Models	Body Diameter (A)		Outlet Diameter (C)		Length (D)		Outlet Length (F)		(H)		Service Clearance (I)		Width (J)		Depth (K)		Service Indicator Tap	Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm		lbs	kg
SINGLE OUTLET MODELS																			
G200008	19.50	495	8.00	203	25.03	636	2.54	65	46.13	1172	23.75	603	21.00	533	15.75	400	Yes	225	102
G200013	19.50	495	10.00	254	25.03	636	2.54	65	46.13	1172	23.75	603	21.00	533	15.75	400	Yes	200	91
DUAL OUTLET MODELS																			
G290000	19.50	495	8.00	203	25.03	636	2.54	65	45.28	1150	23.75	603	43.00	1092	15.75	400	Yes	340	154
G290012	19.50	495	10.00	254	25.03	636	2.54	65	45.28	1150	23.75	603	43.00	1092	15.75	400	Yes	340	154
G290023	19.50	495	8.00	203	25.03	636	2.54	65	45.28	1150	23.75	603	43.00	1092	15.75	400	Yes	340	154

SRG20 Service Parts

Primary Filter Choices

G200008

filter, primary - SM P181038
 filter, primary - ES & HE EAF5038
 filter, primary P182038 3

G200013

filter, primary - SM P181040
 filter, primary - ES & HE EAF5040
 filter, primary P182040 3

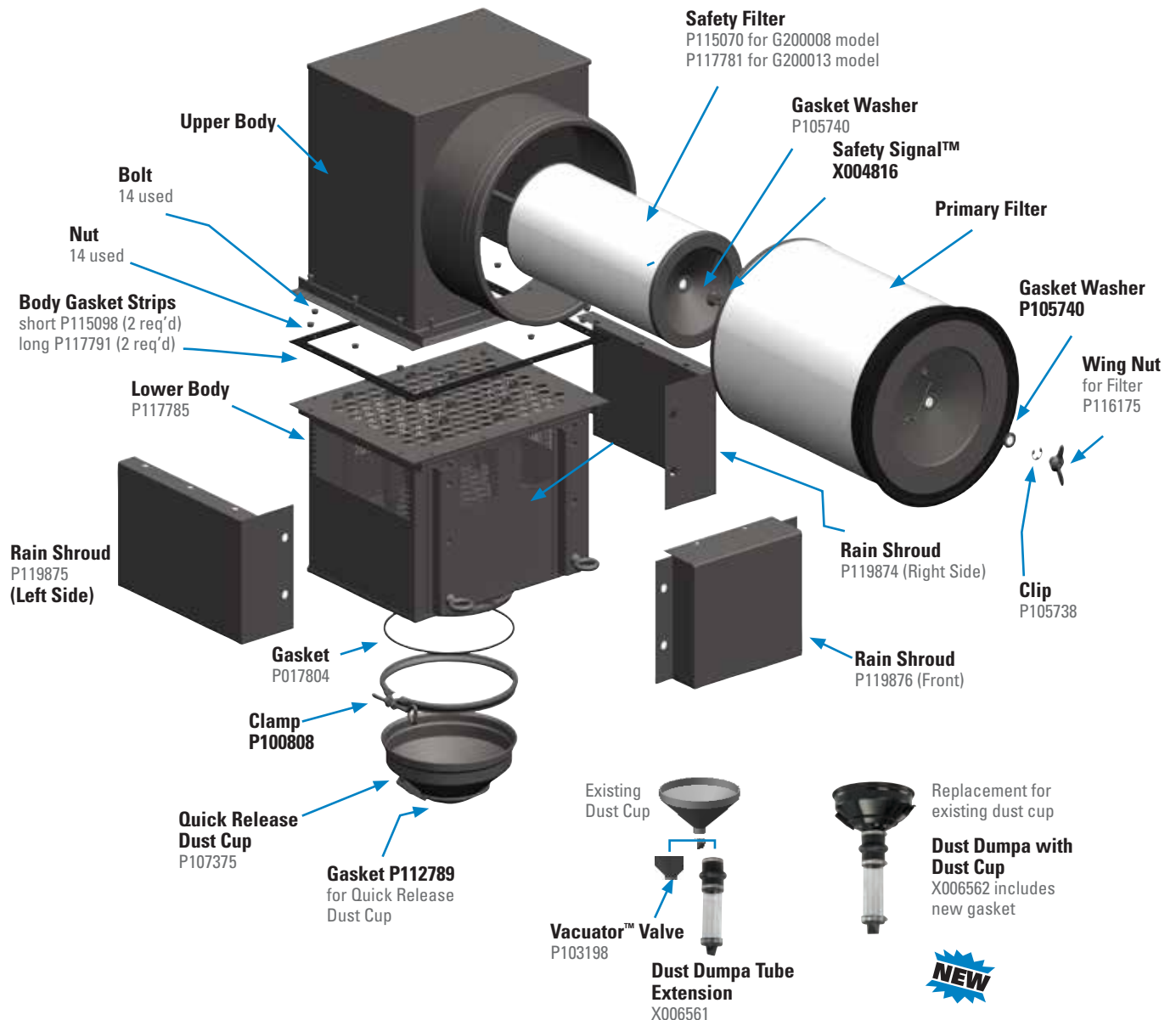
NOTES:

3 = Shipped with air cleaner initially

ES = Extended Service

HE = High Efficiency

SM = Scheduled Maintenance



Accessory Recommendations

Air Cleaner Model	Outlet Band Clamp	Hump-hose Connector	Elbows		Restriction Indicator
			45°	90°	
G200008	P148349	P112608	P112606	P112605	X002277
G200013	P148350	P111414	P114313	P114314	X002277
G290000	P148349	P112608	P112606	P112605	X002277
G290012	P148350	P111414	P114313	P114314	X002277
G290023	P148349	P112608	P112606	P112605	X002277



SRG29 Service Parts

Primary Filter Choices

G290000 & G290023

filter, primary - SM	P181038
filter, primary - ES & HE.....	EA5038
filter, primary.....	P1820383

G290012 Filters

filter, primary - SM	P181040
filter, primary - ES & HE.....	EA5040
filter, primary.....	P1820403

NOTES:

3 = Shipped with air cleaner initially

ES = Extended Service

HE = High Efficiency

SM = Scheduled Maintenance

Safety Filter

P115070 for G290000 & G290023 models
P117781 for G290012 model

Gasket Washer

P105740

Safety Signal™

X004816

Primary Filter

Gasket Washer

P105740

Wing Nut for Filter P116175

Clip

P105738

Rain Shroud

P119874 (Right Side)

Rain Shroud

P119877 (Front)

Bolt

25 used

Body Gasket Strips (4)

long P115096 (2 req'd)
short P115098 (2 req'd)

Nut

(25 used)

Lower Body

P115110

Rain Shroud

P119875
(Left Side)

Clamp (3)

P100808

Gasket (3)

P017804

Quick Release

Dust Cup (3)

P107375

Gasket

P112789
for Quick
Release Cup

Existing
Dust Cup

Vacuator™ Valve

P103198

Dust Dumpa Tube Extension

X006561

Replacement
for existing dust cup

Dust Dumpa with Dust Cup

X006562 includes
new gasket



Part No.
X006562

Dust Dumpa Tube Extension

How it works: When installed on the dust cups on the lower assembly, the rubber connector vibrates during normal vehicle operation and gravity expels the pre-cleaned dust.

- Improves dust evacuation from the air cleaner
- Clear tube allows for visual inspection of dust collection

- Reduces air cleaner inspection time
- Ships fully assembled
- Proper conversion requires a Dust Dumpa tube extension for every dust cup

Order X006562 if your housing has a quick release style dust cup. Order X006561 if regular dust cup.

For more information, see Accessories section.

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.

SERVICE TRAINING VIDEOS



<http://www.youtube.com/user/donaldsonengine>

Donaldson Service Training Videos are on YouTube. Scan the QR code or go to <http://www.youtube.com/user/donaldsonengine> to watch videos on how to service Donaldson Air Cleaners, like the SRG.

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 dust severity.

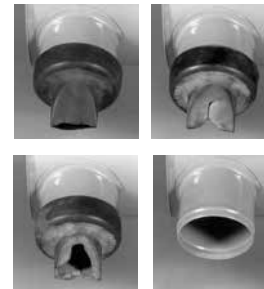
On dust cups with a Vacuator Valve, dust cup service is minimal. Just check the Vacuator Valve to see that it is not inverted, damaged or plugged. If it is damaged or missing, replace it immediately.

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 Cleaner Installations!



If your SRG Air Cleaner has a dust cup with a Vacuator Valve, replace it immediately if it is inverted or looks like any of the images below.



3 Inspect the Donaclone™ Pre-Cleaning Tubes

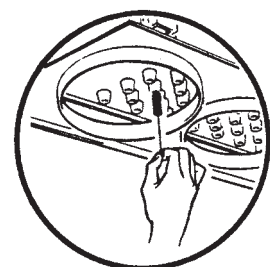
With the dust cup removed, check the tubes. Generally, the tubes are self-cleaning and need no service, but under unusual circumstances, plugging can occur. A visual inspection is usually adequate.

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.



View of Donaclone Tubes with Dust Cup removed.

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.



Continued on next page



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.



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.

Block the outlet tube of the air cleaner using a clean, dampened towel prior to proceeding with cleaning the inside of the housing to avoid contaminating the induction system.



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.



The All-in-One STB Strata™ System Air Cleaner and Pre-Cleaner In One Package

Applications

- Allows 1050 to 1400 cfm airflow throughput per air cleaner
- For severe dust conditions, usually off-road applications: crawler tractors, scrapers, loaders, large agricultural tractors
- Horizontal installation

Air Cleaner Features

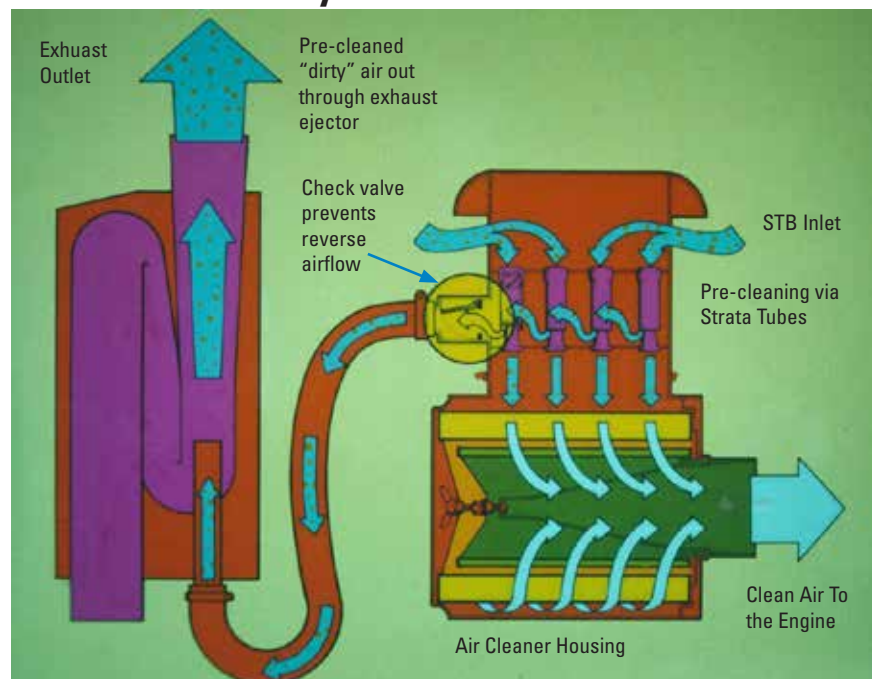
- Air cleaner and pre-cleaner in one package (exhaust ejector, scavenge hose and clamps sold separately)
- Pre-cleaned dust is ejected with the engine exhaust through an aspirated muffler or exhaust ejector
- Airflow pattern "B" air through the pre-cleaner, out the end of the air cleaner
- Perfect for:
 - turbocharged engines
 - intercooled engines
 - naturally aspirated engines
- Fitting for filter service indicator on all models
- Finished in corrosion-resistant paint
- Weight: 78 lbs. (35.4 kg)



The STB Strata™ System protects heavy-duty engines (like this one operating in severe dust conditions) with two-stage filtration and the convenience of aspirated dust ejection.

Ejector muffler, hose and clamps not included with B160071 — order parts separately.

How the STB System Works



Filter Features

- Two replacement filter choices: standard life filter for shops that service air cleaners on scheduled maintenance (shipped with STB initially), or extended life filter for those who measure restriction to obtain full filter life
- Safety filter on all models provide continuous protection during primary filter change out

For installation instructions on the STB system, see the Technical Reference section.

When Selecting an Air Cleaner . . .

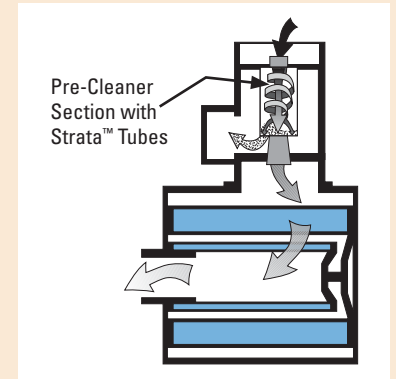
Determine the airflow requirements of your engine, then find the corresponding cfm airflow in the table at right. The restriction numbers (shown in inches of water) indicate the approximate initial restriction of each model air cleaner at that cfm. If there are two air cleaner models that fit your parameters, 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.

Initial Airflow Restriction

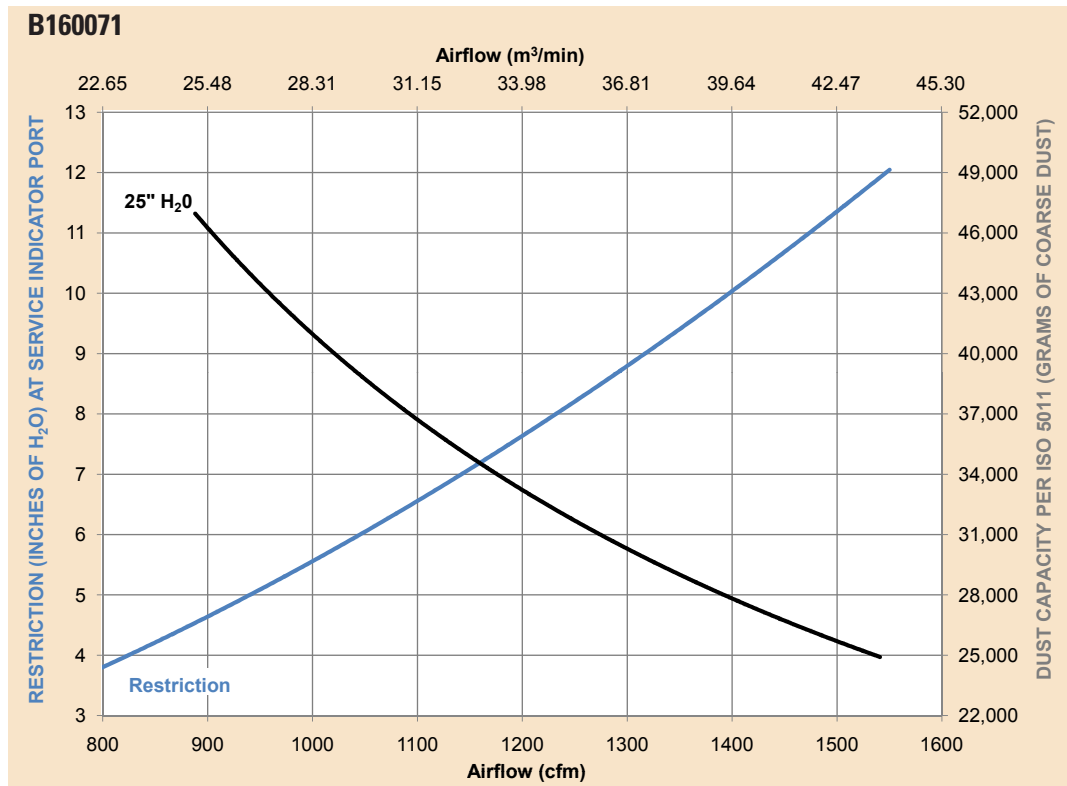
6"	CFM @ "H ₂ O		Air Cleaner Model
	8"	10"	
1050	1225	1400	B160071

Airflow Pattern "B"

Air in through the pre-cleaner, out the end of the air cleaner (lower) portion.

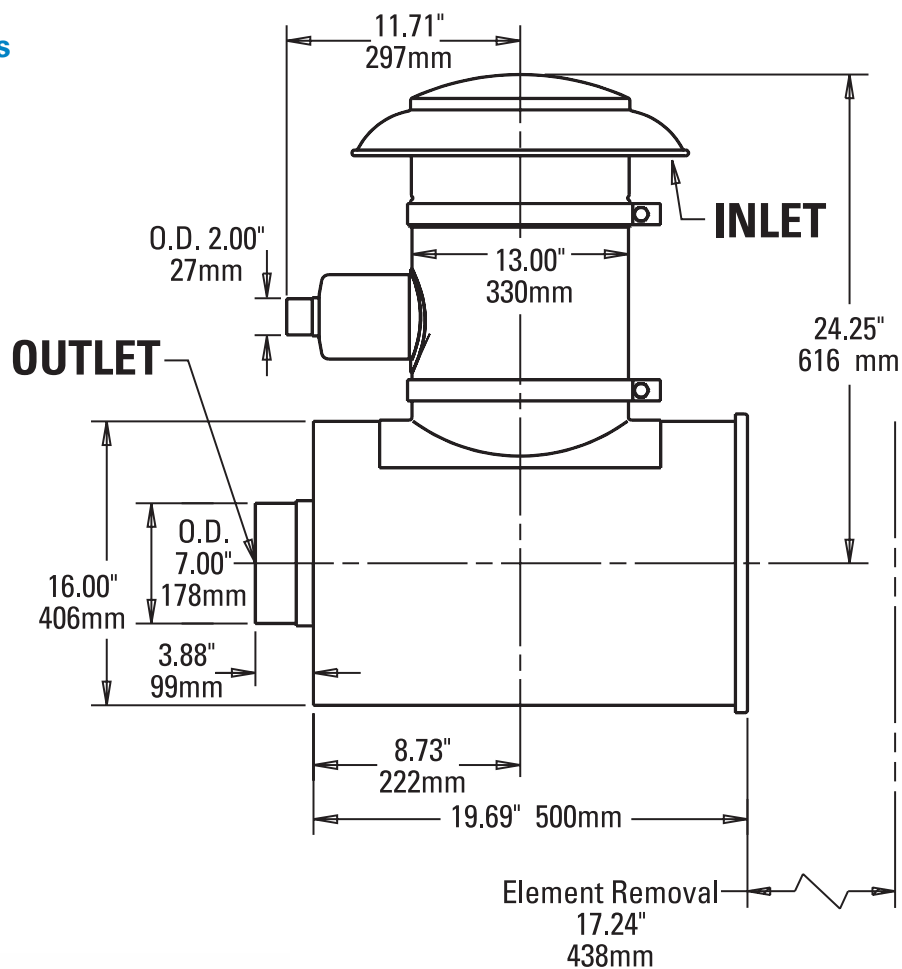


STB Air Cleaner Performance Curve (Restriction & Dust Capacity)





STB B160071 Specifications



B160071 Service Parts

