

STG Donaclone: Field Proven and Reliable Heavy-Duty Workhorse for Construction & Off-Highway Applications

That Donaldson's STG Donaclone™ is arguably the most commonly used air cleaner, on the widest variety of heavy-duty equipment in the world, is a testament to its reliability and durability. With its two-stage air cleaning, heavy-duty construction, and variety of configurations, the STG works well in many heavy-duty applications like scrapers, crawlers, dumpers and haul trucks.

Powerful Two-Stage Filtration

The first stage of this powerful air cleaner consists of a cluster of Donaclone™ tubes. They spin the incoming air to create a centrifugal force that separates up to 95% 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.

This pre-cleaned dust is collected in a dust cup on the bottom of the air cleaner housing.

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!



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

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 operates well mounted horizontally or vertically. (Note that if mounting horizontally, the Vacuator™ Valve option on the dust cup is necessary.)

Mounting: Sturdy mounting brackets are attached to the top section of the STG; you will also need to order one separate mounting band for the lower body.

If you're replacing a worn out air cleaner, be sure to check ductwork, clamps, and other intake system parts that may also need replacing.

STG air cleaners feature a corrosion-resistant, chemical-resistant polymer coating. This black coating isn't paint, rather it's a pigmented polyester that provides a long-lived, hard protective finish.

Versatile STG Provides Airflow to 50 m³/min. Choose Peripheral or Tubular Inlet, Horizontal or Vertical Mount

Applications

- Allows 11 to 50 m³/min. airflow throughput per air cleaner
- Horizontal or vertical installation
- Off-road, high dust conditions

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 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 (see photo 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 95% of incoming dust to 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: (1) the quick-release style for easy, manual emptying, or (2) a dust cup with a Donaldson Vacuator Valve that expels the dust automatically
- All models include a fitting for a filter service indicator

Filter Features

- Replacement main filter choices: Standard life filters (for scheduled maintenance) and Donaldson Endurance extended service high efficiency filters
- Safety filter on all models



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.

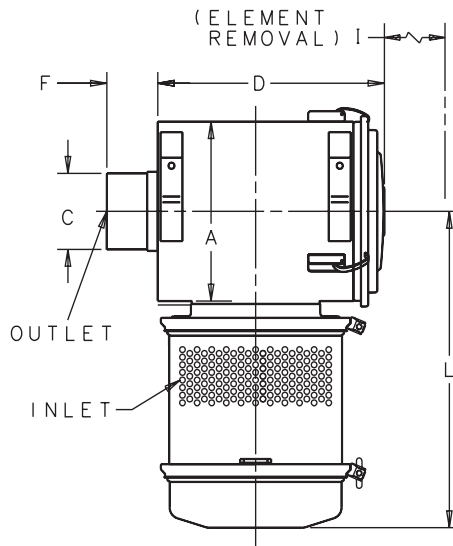
The Donaclone tubes spin the air so that centrifugal force causes the heavier dust particles to separate from the airstream.

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

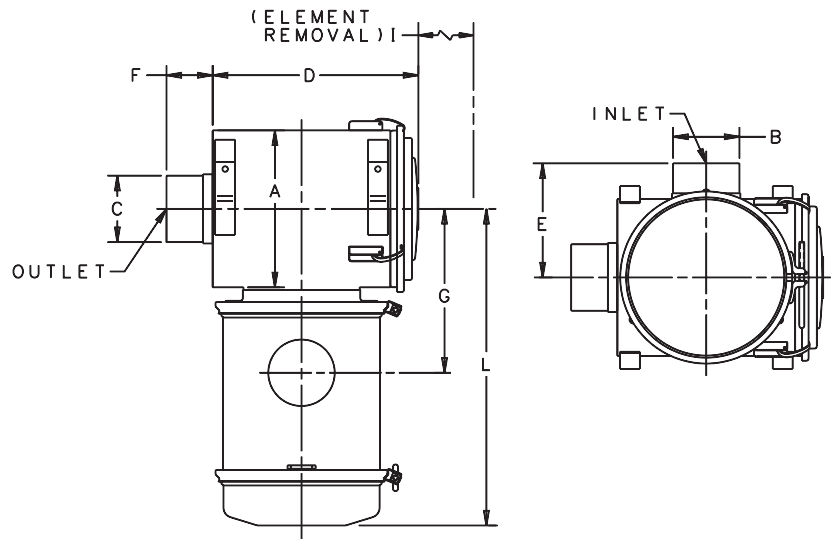
The specially-developed pleated media in the primary filter stops up to 99.9% of the remaining dust, allowing clean air to pass to the engine.

STG Specifications

With Peripheral Inlet



With Tubular Inlet



Heavy Dust Conditions

Air Cleaner Model No.	Airflow Range m ³ /min.			Dimensions (mm)								
	150 mm H ₂ O	200 mm H ₂ O	255 mm H ₂ O	A	B	C	D	E	F	G	I	L
	STG with Peripheral Inlet											
G140076	20	24	27	356	-	152	441	-	99	393	387	614
G160077	29	33	37	406	-	178	500	-	99	439	432	664
G161006	38,5	44,5	50	406	-	203	662	-	89	439	594	684
STG with Tubular Inlet												
G120332	11	13	15	300	127	127	392	200	100	293	335	560
G140445	17	19	22	356	152	152	441	254	99	334	387	614
G160445	26	30	34	406	178	178	498	279	98	376	438	668
G161020*	32	37	41,5	406	152	203	662	255	89	257	594	668

* G161020 has two inlets, each 152 mm in diameter.
 Note: All STG models are tapped to accept a filter service indicator.

STG Donaclone™ with Peripheral Inlet - Service Parts

G140076

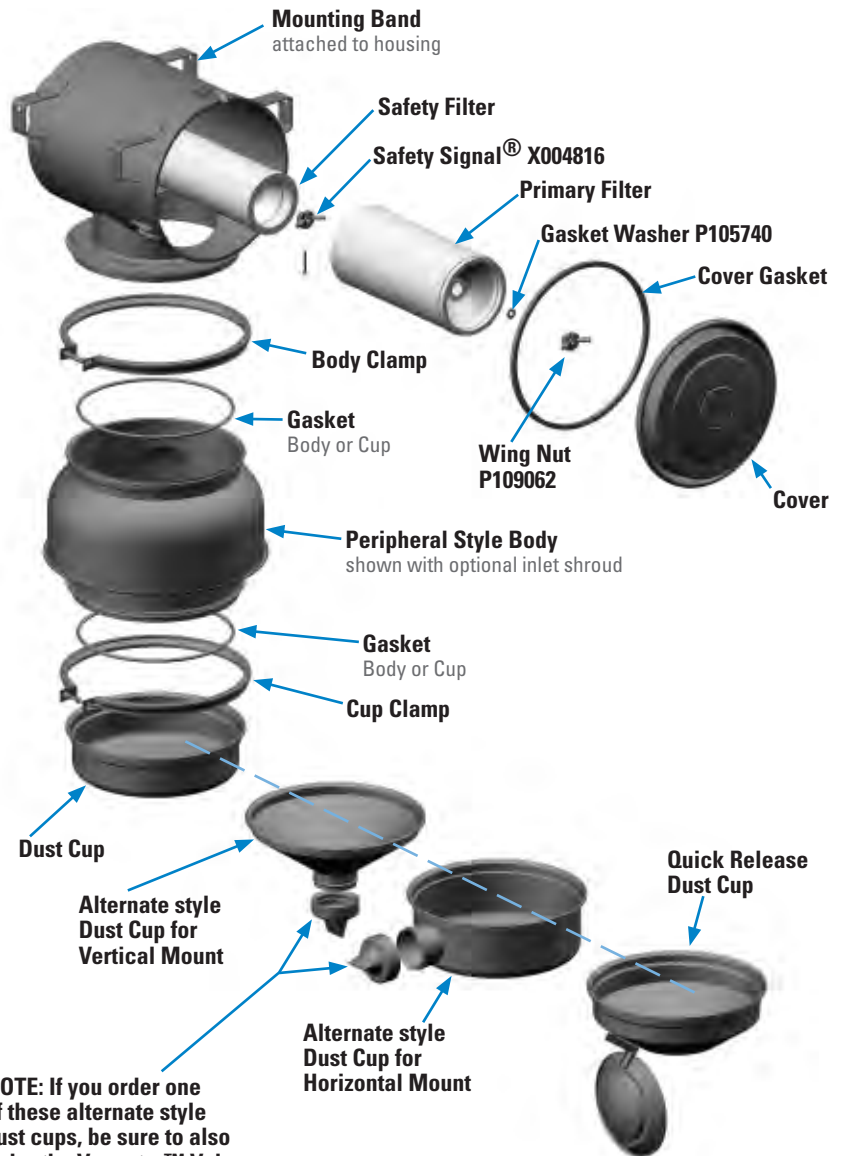
body, lower.....	P102256
clamp, cup.....	P100866
cover latch assembly.....	P017617
dust cup.....	P100860
filter, primary - SM.....	P181041
filter, primary - ES & HE.....	P185041
filter, primary.....	P182041
filter, safety.....	P119370
gasket, body or cup.....	P017335
gasket, cover.....	P016972
gasket kit.....	X003538
gasket washer.....	P105740
inlet shroud (optional).....	P102870
mounting band.....	H000350
safety signal indicator.....	X004816
spring clip & pin.....	X005555
wing nut.....	P109062

G160077

body, lower.....	P115023
clamp, body.....	P100780
clamp, cup.....	P100789
cover.....	P109153
cover latch assembly.....	P017617
dust cup.....	P100794
dust cup, quick release.....	P107377
dust cup, vac valve, horz.....	P103530
dust cup, vac valve, vert.....	P104973
filter, primary - SM.....	P181039
filter, primary - ES & HE.....	P185039
filter, primary.....	P182039
filter, safety.....	P114931
gasket, body or cup.....	P017336
gasket, cover.....	P017367
gasket kit.....	X003539
gasket washer.....	P105740
inlet shroud (optional).....	P101759
mounting band.....	H000351
safety signal indicator.....	X004816
spring clip & pin.....	X005555
wing nut.....	P109062

G161006

clamp, body.....	P100780
clamp, cup.....	P100789
dust cup.....	P100794
dust cup, quick release.....	P107377
dust cup, vac valve, horz.....	P103530
dust cup, vac valve, vert.....	P104973
filter, primary - SM.....	P181042
filter, primary - ES & HE.....	P185042
filter, primary.....	P182042
filter, safety.....	P128408
gasket, body or cup.....	P017336
gasket, cover.....	P017367
gasket kit.....	X003539
gasket washer.....	P105740
inlet shroud (optional).....	P101759
mounting band.....	H000351
safety signal indicator.....	X004816
wing nut.....	P109062



NOTE: If you order one of these alternate style dust cups, be sure to also order the Vacuator™ Valve P112803

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

Spring Clip & Pin Repair Kit X005555

Use it to repair the P017617 latch assembly



STG Donaclone™ with Tubular Inlet - Service Parts

G120332

body, lower.....	P110875
dust cup, quick release	P107375
filter, primary - SM	P181044
filter, primary - ES & HE.....	P185044
filter, primary.....	P1820443
filter, safety	P119371
gasket, body or cup	P017804
gasket, cover.....	P017365
gasket washer.....	P105740
mounting band.....	H0003492
safety signal indicator.....	X004816
spring clip & pin	X005555
wing nut	

G140445

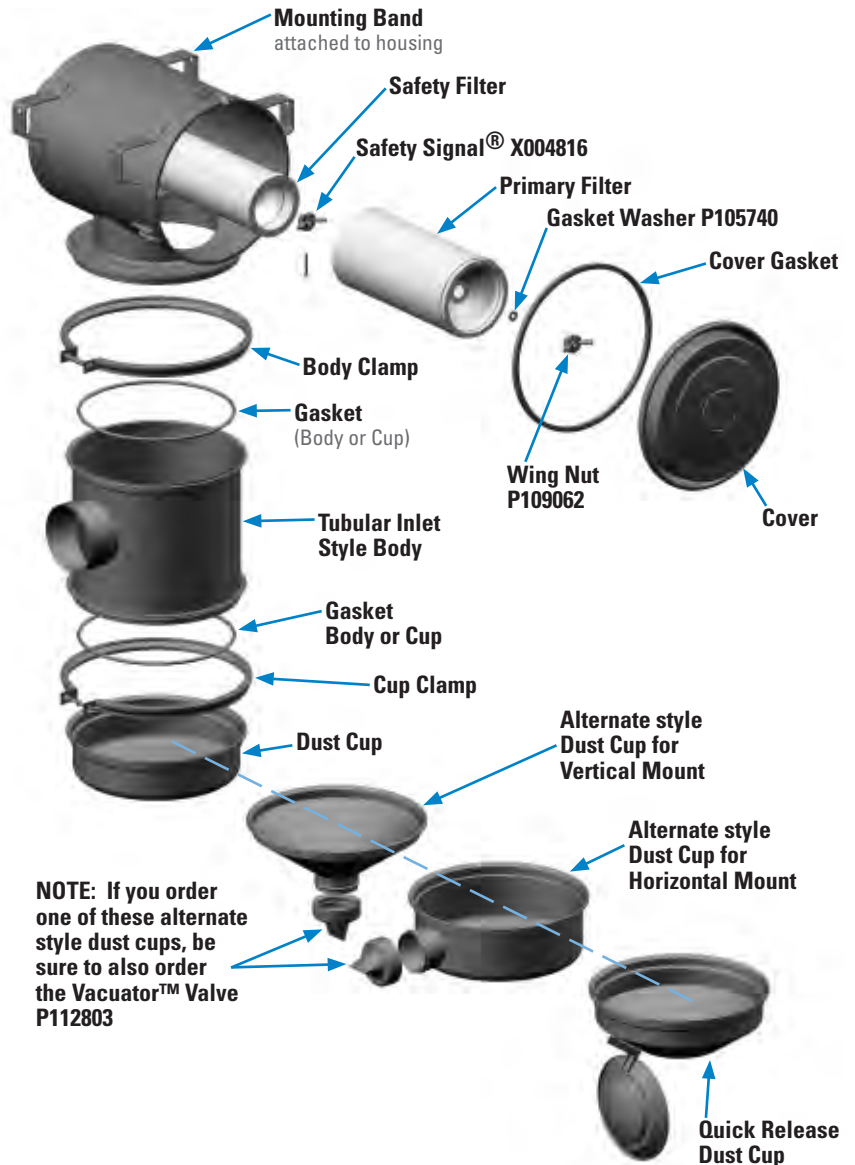
air inlet hood.....	H000606
lower body.....	P114100
cover latch assembly	P017617
dust cup.....	P1008603
dust cup, quick release	P107377
dust cup, vac valve, horz	P103746
dust cup, vac valve, vert	P105016
filter, primary - SM	P181041
filter, primary - ES & HE.....	P185041
filter, primary.....	P1820413
filter, safety	P119370
gasket, body or cup	P017335
gasket, cover	P016972
gasket kit	X0035389
gasket washer.....	P105740
mounting band.....	H0003502
safety signal indicator.....	X004816
spring clip & pin	X005555
wing nut.....	P109062

G160445

cover	P109153
cover latch assembly	P017617
dust cup.....	P1007943
dust cup, quick release	P107377
dust cup, vac valve, horz	P103530
dust cup, vac valve, vert	P104973
filter, primary - SM	P181039
filter, primary - ES & HE.....	P185039
filter, primary.....	P1820393
filter, safety	P114931
gasket, body or cup	P017336
gasket, cover	P017367
gasket kit	X0035399
gasket washer.....	P105740
mounting band.....	H0003512
safety signal indicator.....	X004816
spring clip & pin	X005555
wing nut.....	P109062

G161020

dust cup.....	P1007943
dust cup, quick release	P107377
dust cup, vac valve, horz	P103530
dust cup, vac valve, vert	P104973
filter, primary - SM	P181042
filter, primary - ES & HE.....	P185042
filter, primary.....	P1820423
filter, safety	P128408
gasket, body or cup	P017336
gasket, cover	P017367
gasket kit	X0035399
gasket washer.....	P105740
mounting band.....	H0003512
safety signal indicator.....	X004816
wing nut.....	P109062



NOTES:

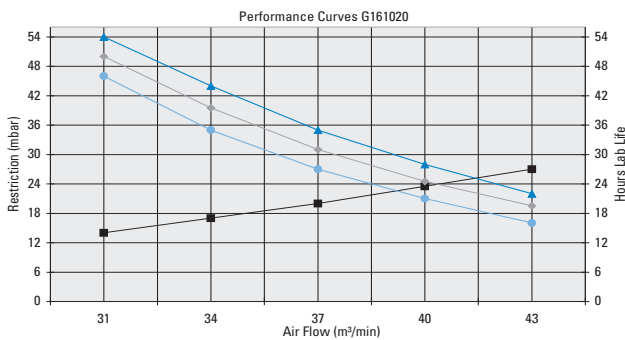
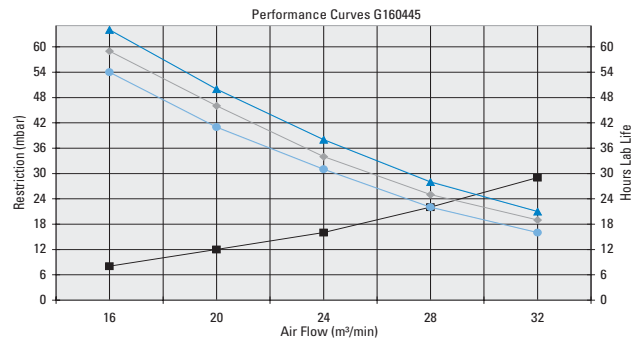
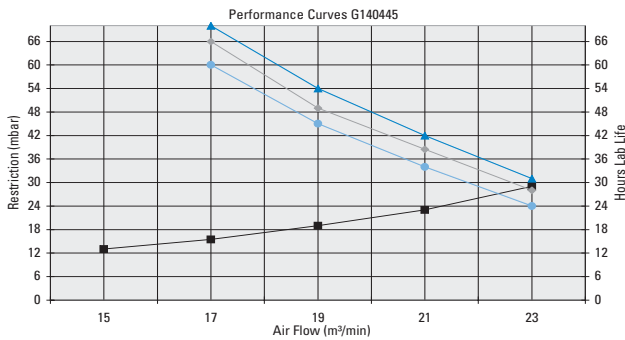
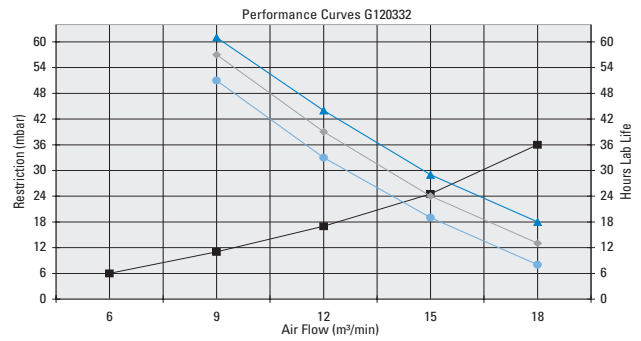
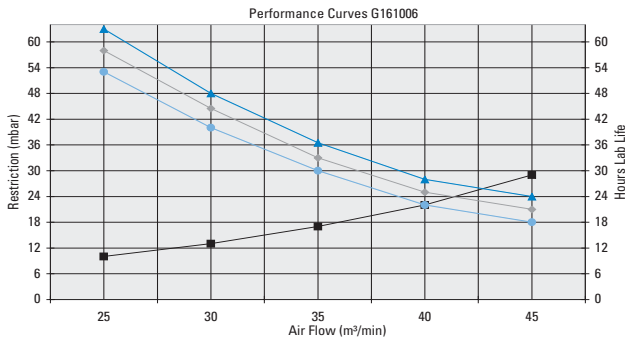
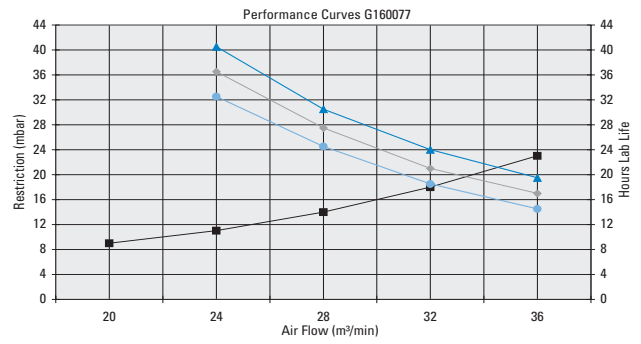
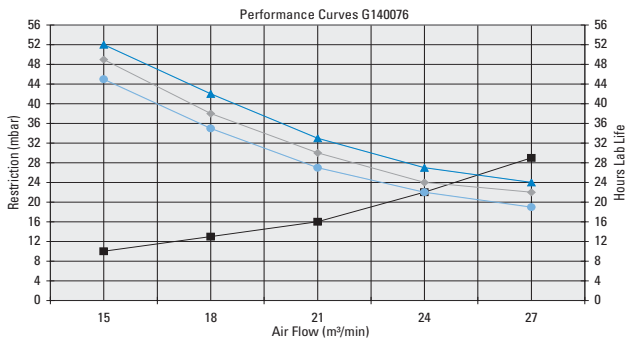
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When specifying an Air Cleaner...

Determine the Airflow Requirements of your engine, then find the corresponding m³/min. airflow in the charts below. The restriction numbers - shown in mbar at the left side of the chart - indicate the approximate initial restriction of each model air cleaner at that m³/min. When calculating total initial restriction of the entire air intake system, include the restriction caused by ducting, elbows, pre-cleaners, etc. The estimated lab life hours are indicated at the right side of the chart.

STG Performance Curves



Restr. A/c Piezo
 LL50mbar
 LL62mbar
 LL75mbar

All performance curves are according ISO 5011 standards - Restriction measured at Piezo
 All tests are done with ISO Coarse at Dust Concentration of 1g/m³

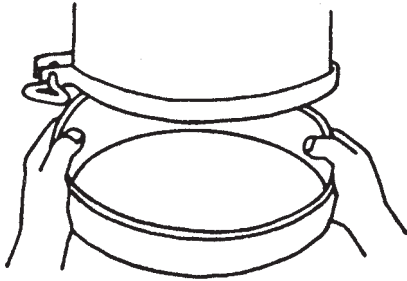
1 Measure Restriction

Measure the restriction of the air cleaner with a Donaldson filter service indicator, service gauge, or a water manometer via the restriction tap provided on the air cleaner or the transfer pipe. Replace the filter only when the restriction level has reached the maximum recommended by the engine or equipment manufacturer.



2 Empty the Dust Cup

The dust cup should be dumped when 2/3 full. (Frequency of dust cup service varies with dust severity.) When reinstalling dust cup, be sure it



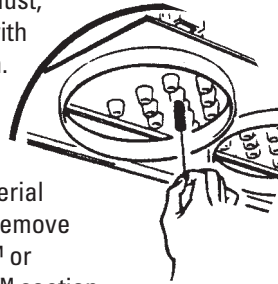
seals 360° around the air cleaner body. On dust cups with Vacuator™ Valve, dust cup service is minimal; just check the Vacuator™ Valve to see that it is not inverted, damaged or plugged. If it is damaged, replace it immediately.



Vacuator™ Valve

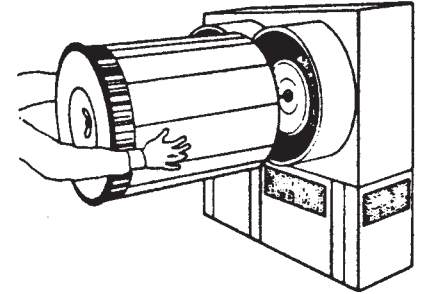
3 Check Tubes for Plugging

When the dust cup is removed, check the tubes. Generally, Donaclone™ and Strata™ tubes are self-cleaning and need no service. Under special circumstances, however, plugging can begin. Visual inspection is adequate. If the tubes carry light dust, remove it with a stiff brush. If heavy plugging with fibrous material is evident, remove the Strata™ or Donaclone™ section and clean it with compressed air or water no hotter than 72°C.



Cleaning Note: 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 Change the Filter

When restriction indicates that filter service is required, loosen the wing nut and remove the primary filter. If the new filter is not to be installed immediately, be sure to cover the inlet with a cloth or the housing cover so that dirt is not ingested.

Before installing the new filter, inspect it for shipping damage and gasket integrity. If there is damage, DO NOT install it!

If the wing nut is held in place on the used filter with a C clip, remove it and reinstall on the new filter. Carefully install the new filter and the wing nut. Reset the filter service indicator to green.

5 Check System

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