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

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.

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Design Improvements

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 incoming 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

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.
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
SGG Donaclone™ Air Cleaners

continued — SSG Air Cleaner Performance Curves

<table>
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<th>Diagram</th>
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www.buydonaldson.com
SSG Donaclone™ Air Cleaners

SSG Specification Illustrations

SSG Specifications

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<tr>
<th>Air Cleaner Models</th>
<th>Body Diameter (A) in</th>
<th>Outlet Diameter (C) in</th>
<th>Length (D) in</th>
<th>Outlet Length (F) in</th>
<th>Height (H) in</th>
<th>Service Clearance (I) mm</th>
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Accessories Recommendations

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<tr>
<th>Air Cleaner Model</th>
<th>Outlet Band Clamp</th>
<th>Hump-hose Connector</th>
<th>Elbows 45°</th>
<th>Elbows 90°</th>
<th>Restriction Indicator</th>
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Service Parts Listing by Model Number

SSG Donaclone™ Air Cleaners

Single Outlet Model — SSG 20

Gaskets
- G200086, G200087
  - two, short strips (P115098, P117791)
  - two, long strips (P115099, P117790)
- G200088
  - two, short strips (P603504, P117791)
  - two, long strips (P603505, P117791)

Air Inlet
- Perforations on three sides of the lower body

Outlet to engine
- at rear of unit

Mounting brackets
- on back edges of unit

Donaclone pre-cleaning tubes

Primary filter
- RadialSeal
- G200086, G200087
  - P608305
- P600518
- G200088
  - P600519

Lower Body Assembly
- G200086, G200087
  - P117785
- G200088
  - P603505

Secondary filter
- RadialSeal
- G200086, G200087
  - P608306
  - EAF5152, extended life
- G200088
  - P600519
  - EAF5153, extended life

Vacuator™ Valve
- P103198

Optional rain shrouds
- for three outward facing sides
  - G200086, G200087
  - G200088

Service cover
- with safety chain (approx. 10”)
  - P603716
  - P017281
  - P017283

Service Parts Listing by Model Number

NOTES:
3 = Shipped with air cleaner initially

Dust Dumpa Tube Kit
- X006561

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.

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.

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<th>Air Cleaner</th>
<th>Standard Life</th>
<th>High Efficiency</th>
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If it's Blue it's True!

Blue filters have Ultra-Web® Filtration Technology
### Dual Outlet Model — SSG 29

#### Outlet to Engine
- Mounting brackets on back edges of unit
- Outlet at rear of unit

#### Air Inlet
- Perforations on three sides of the lower body

#### Lower Body Assembly
- Gasket: G290052, G290053, G290057
  - two, short strips: P115056
  - two, long strips: P115096
- G290055
  - two, short strips: P603504
  - two, long strips: P115096

#### Dust Cup Assembly
- Dust Cup Clamp: P100808
- Dust Cup Gasket: P158889
  (includes all 4 parts shown)

#### Safety Filter
- RadialSeal
- G290052, G290053, G290057
  - P608305
- G290055
  - P609518

#### Primary Filter
- RadialSeal
- G290052, G290053, G290057
  - P608306
  - EAF5152, high efficiency
- G290055
  - P609519
  - EAF5153, high efficiency

#### Optional Rain Shrouds
- For 3 outward facing sides
  - G290052, G290053, G290057
    - rain shroud, right side: P119874
    - rain shroud, front: P119877
    - rain shroud, left side: P119875
- G290055
  - rain shroud, right side: P610776
  - rain shroud, front: P119877
  - rain shroud, left side: P610777

#### Service Cover
- With safety chain (approx. 10”)
  - cover: P603716
  - cover chain: P017281
  - chain connector: P017283

#### Dust Dumpa Tube Kit
- X006561 (3 req’d)

### 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 the 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.

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

www.buydonaldson.com
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 & 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.

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.

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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.

[Scan QR code or go to http://www.youtube.com/user/donaldsonengine to watch videos on how to service Donaldson Air Cleaners, like the SSG.](http://www.youtube.com/user/donaldsonengine)
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.

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™ Air Cleaners

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.

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

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.

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

Choose between two STG body styles (tubular or peripheral), depending on the mounting location of the air cleaner and its ducting. The peripheral inlet style is shown here.

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

<table>
<thead>
<tr>
<th>CFM @ &quot;H2O&quot;</th>
<th>Air Cleaner Model</th>
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</thead>
<tbody>
<tr>
<td>6&quot;</td>
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<tr>
<td>8&quot;</td>
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<td>10&quot;</td>
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<tr>
<td>STG WITH PERIPHERAL INLET</td>
<td></td>
</tr>
<tr>
<td>710</td>
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<tr>
<td>1015</td>
<td>1175</td>
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<tr>
<td>1360</td>
<td>1570</td>
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<tr>
<td>STG WITH TUBULAR INLET</td>
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<tr>
<td>390</td>
<td>455</td>
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<td>915</td>
<td>1065</td>
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<td>1127</td>
<td>1308</td>
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</table>

STG Specifications

STG Donaclone™ Specifications

<table>
<thead>
<tr>
<th>Air Cleaner Models</th>
<th>Body Diameter (A)</th>
<th>Inlet Diameter (B)</th>
<th>Outlet Diameter (C)</th>
<th>Length (D)</th>
<th>(E)</th>
<th>Inlet Length (F)</th>
<th>Service Clearance (I)</th>
<th>Weight (L) lbs kg</th>
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<td>STG WITH PERIPHERAL INLET</td>
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<tr>
<td>1 - G161020 has two inlets, each 6&quot; (152mm) in diameter</td>
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</table>

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

Accessory Recommendations

<table>
<thead>
<tr>
<th>Air Cleaner Model</th>
<th>Mounting Band Metal</th>
<th>Outlet Band Clamp</th>
<th>Hump-hose Connector</th>
<th>45º</th>
<th>90º Reducing</th>
<th>Elbows 90º</th>
<th>Restriction Indicator</th>
<th>Inlet Hood Metal</th>
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<tbody>
<tr>
<td>G120332</td>
<td>H000349</td>
<td>P148345</td>
<td>P105610</td>
<td>P109021</td>
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<td>X002277</td>
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### STG Peripheral Service Parts

<table>
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<tr>
<th>Part Description</th>
<th>Code</th>
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<td>Cover latch assembly</td>
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<tr>
<td>Dust cup</td>
<td>P100960</td>
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<tr>
<td>Elbow, 45°</td>
<td>P105547</td>
</tr>
<tr>
<td>Elbow, 90°</td>
<td>P105535</td>
</tr>
<tr>
<td>Filter, primary</td>
<td>P182041</td>
</tr>
<tr>
<td>Filter, primary - ES &amp; HE</td>
<td>EAF5041</td>
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<tr>
<td>Filter, primary - SM</td>
<td>P181041</td>
</tr>
<tr>
<td>Filter, safety</td>
<td>P118370</td>
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<tr>
<td>Gasket kit</td>
<td>X003538</td>
</tr>
<tr>
<td>Gasket washer</td>
<td>P105740</td>
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<tr>
<td>Gasket, body or cup</td>
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<tr>
<td>Gasket, cover</td>
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<td>Inlet shroud</td>
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<td>Mounting band</td>
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<td>Safety Signal indicator</td>
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<tr>
<td>Spring clip &amp; pin</td>
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</tr>
<tr>
<td>Wing nut</td>
<td>P109062</td>
</tr>
</tbody>
</table>

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

### X006561
- Length 16.54" / 420mm

### Alternate Style Dust Cup

- Quick Release Dust Cup
- Alternate style Dust Cup for Vertical Mount
- Alternate style Dust Cup for Horizontal Mount

---

**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.

**If you order one of these alternate style dust cups, be sure to also order the Vacuator™ Valve P112803.**
## STG Tubular Service Parts

### G120332  STG-TUBULAR

- **Body, lower**: P110875
- **Dust cup, quick release**: P107375
- **Filter, primary**: P182044
- **Filter, primary - ES & HE**: EAF5044
- **Filter, primary - SM**: P181044
- **Filter, safety**: P118371
- **Gasket washer**: P105740
- **Gasket, body or cup**: P017904
- **Gasket, cover**: P017365
- **Safety Signal indicator**: X004816
- **Spring clip & pin**: X005555
- **Wing nut**: P109062

### G140445  STG-TUBULAR

- **Body, lower**: P114100
- **Cover latch assembly**: P017617
- **Dust cup**: P100860
- **Filter, primary - SM**: P181041
- **Filter, primary - ES & HE**: EAF5041
- **Filter, primary**: P182041
- **Filter, safety**: P118370
- **Gasket kit**: X003538
- **Gasket washer**: P105740
- **Gasket, body or cup**: P017335
- **Gasket, cover**: P016972
- **Mounting band**: H000350
- **Safety Signal indicator**: X004816
- **Spring clip & pin**: X005555
- **Wing nut**: P109062

### G160445  STG-TUBULAR

- **Cover**: P109153
- **Cover latch assembly**: P017617
- **Dust cup**: P100794
- **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**: P182039
- **Filter, safety**: P114931
- **Gasket, body or cup**: P017336
- **Gasket, cover**: P017367
- **Gasket kit**: X003539
- **Mounting band**: H000351
- **Spring clip & pin**: X005555

### G161020  STG-TUBULAR

- **Dust cup**: P100794
- **Dust cup, quick release**: P107377
- **Dust cup, VacValve, horz**: P103530
- **Dust cup, VacValve, vert**: P104973
- **Filter, primary**: P182042
- **Filter, primary - ES & HE**: EAF5042
- **Filter, primary - SM**: P181042
- **Filter, safety**: P128408
- **Gasket kit**: X003539
- **Gasket washer**: P105740
- **Gasket, body or cup**: P017336
- **Gasket, cover**: P017367
- **Mounting band**: H000351
- **Outlet band clamp**: P148347
- **Safety Signal 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

---

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

**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” / 572.3mm
- **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!*

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.

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.

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.
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.

Kit Order Information

<table>
<thead>
<tr>
<th>SRG Housing Item No.</th>
<th>SRG to SSG Kit* Kit No.</th>
<th>SSG Housing Item No.</th>
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</tr>
<tr>
<td>G290012</td>
<td>X009231</td>
<td>G290053</td>
</tr>
</tbody>
</table>

* 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™ Air Cleaners

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.

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

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.

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.

Outlet to engine at rear of unit

Unscrew wing nut to remove primary filter

Air Inlet through perforations in sides and front of body covered by optional rain shrouds

Quick Release Dust Cups

Mounting brackets on back edges of unit

OUTLET

INLET
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!

<table>
<thead>
<tr>
<th>SRG Model</th>
<th>SSG Model</th>
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Initial Airflow Restriction

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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, choose 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)

G200008

G200013

G290000

G290012
### SRG Specifications

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<thead>
<tr>
<th>Air Cleaner Models</th>
<th>Body Diameter (A)</th>
<th>Outlet Diameter (C)</th>
<th>Length (D)</th>
<th>Outlet Length (F)</th>
<th>Service Clearance (I)</th>
<th>Width (J)</th>
<th>Depth (K)</th>
<th>Service Indicator Tap</th>
<th>Weight lbs</th>
<th>kg</th>
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<td><strong>SINGLE OUTLET MODELS</strong></td>
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<td><strong>DUAL OUTLET MODELS</strong></td>
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<td>65</td>
<td>45.28</td>
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**SRG Specification Illustrations**

![Illustration of SRG Donaclone™ Air Cleaners](image-url)
SRG Donaclone™ Air Cleaners

Primary Filter Choices

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
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</table>
| 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

Body Gasket Strips
- short P115098 (2 req’d)
- long P117791 (2 req’d)

Lower Body
- P117785

Rain Shroud
- P119875 (Left Side)
- P119874 (Right Side)
- P119876 (Front)

Gasket Washer
- P105740 for G200008 model
- P117781 for G200013 model

Wing Nut
- for Filter P116175

Clip
- P105738

Gasket Washer
- Nut P017804
- Bolt P100808

Quick Release Dust Cup
- P107375

Existing Dust Cup
- Replacement for existing dust cup

Dust Dumpa with Dust Cup
- X006562 includes new gasket

Accessory Recommendations

<table>
<thead>
<tr>
<th>Air Cleaner Model</th>
<th>Outlet Band Clamp</th>
<th>Hump-hose Connector</th>
<th>45° Elbows</th>
<th>90° Elbows</th>
<th>Restriction Indicator</th>
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<tr>
<td>G200008</td>
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**SRG29 Service Parts**

**Primary Filter Choices**

<table>
<thead>
<tr>
<th>G290000 &amp; G290023</th>
<th>G290012 Filters</th>
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<tbody>
<tr>
<td>filter, primary - SM .................................. P181038</td>
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<td>filter, primary - ES &amp; HE ................................ EAF5038</td>
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<td>filter, primary - SM .................................. P181040</td>
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<tr>
<td>filter, primary - ES &amp; HE ................................ EAF5040</td>
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<tr>
<td>filter, primary ........................................ P182040 ...3</td>
<td></td>
</tr>
</tbody>
</table>

**NOTES:**
3 = Shipped with air cleaner initially
ES = Extended Service
HE = High Efficiency
SM = Scheduled Maintenance

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**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.

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.

   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.

   View of Donaclone Tubes with Dust Cup removed.

Continued on next page
**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.

**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.
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.

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.
STB Strata™ Air Cleaners

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, scavenger 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)

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

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

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.

<table>
<thead>
<tr>
<th>CFM @ &quot;H2O&quot;</th>
<th>6&quot;</th>
<th>8&quot;</th>
<th>10&quot;</th>
<th>Air Cleaner Model</th>
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<tr>
<td>1050</td>
<td>1225</td>
<td>1400</td>
<td>B160071</td>
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</table>

STB Air Cleaner Performance Curve (Restriction & Dust Capacity)

Airflow Pattern “B”

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

Pre-Cleaner Section with Strata™ Tubes

Restriction
STB Strata™ Air Cleaners

STB B160071 Specifications

The STB is tapped to accept a filter service indicator.

Service Access Cover
part of the air cleaner assembly

Primary Filter
filter, primary - SM...P181039
filter, primary - ES...P182039

Gasket Washer
P105740

Safety Filter
P114931

Air Cleaner Assembly

Pre-cleaner Body Clamp
P013722

Pre-cleaner Body
H001009

Pre-cleaner Assembly
H000672
(Hood & Clamp)

Gasket Washer
P105740

Gasket Washer
P105740

Element Removal
17.24"
438mm

B160071 Service Parts

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