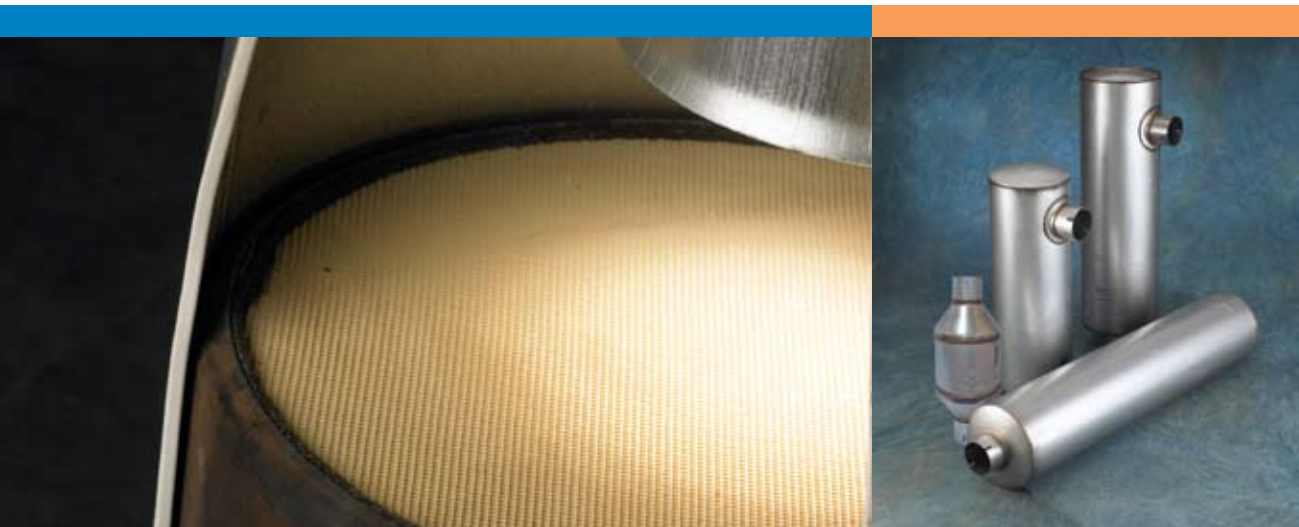


**A Cost-Effective Emissions Retrofit Solution
with No Maintenance –
the Diesel Oxidation Catalyst (DOC)**



Donaldson's DOC retrofit emissions products are a proven, reliable solution for reducing diesel emissions.

The DOC Muffler is a direct replacement for most original equipment mufflers; the DOCs are to be installed ahead of your existing muffler.

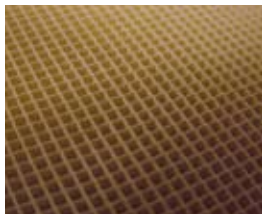
These products offer a cost-effective emissions solution designed for four stroke, on-road 1960-2006 model year engines rated from 150-600 horsepower.



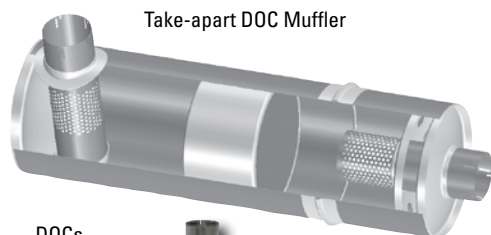
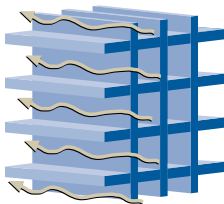
Donaldson®

DOCs or DOC Mufflers – a cost-effective solution ... for Emission Reduction

One-piece DOC Muffler



Diesel oxidation catalysts (DOCs) have thousands of small open channels. DOC technology is a flow-through emissions technology.



Take-apart DOC Muffler

DOCs
See back page



Broad Engine Coverage

- Four-stroke diesel engines for on-road applications with engine horsepower ranges of 150-600 hp
- Take-apart style DOC Muffler models ideal for older vehicles (1960-1990) that tend to generate greater emissions. This design provides easy access to the catalyst in the event of face plugging from engine malfunction

Easy to Install

- DOC Mufflers are direct replacements for most OEM mufflers, DOCs are designed to be installed in-line into the existing exhaust system between the muffler and the turbocharger
- No maintenance requirement

Compliant

- Verified by U.S. EPA Voluntary Retrofit Program with no model year limitations
- Verified for CARB's Diesel Risk Reduction Program (DRRP) for model year 1988-2002 ⁽⁴⁾
- Removes 15-30% of diesel particulate matter (PM)
- Meets U.S. Federal noise regulations
- Meets Engine OE backpressure limits

Acceptable Fuel Types

- Low Sulfur Diesel (LSD - < 500 ppm sulfur)
- Ultra Low Sulfur Diesel (ULSD - < 15 ppm sulfur)
- Biodiesel – maximum B20 blend (20% biodiesel/80% petrol diesel). Biodiesel blend stock must meet ASTM D 6751 and blend with ASTM D 975 (1-D or 2-D)

Durable and Warranted

- Meets U.S. EPA and CARB DRRP warranty requirements
- Constructed of aluminized-409 grade stainless steel for strength and corrosion resistance

Engineered for Performance

- Patented flow distribution devices¹ enhance catalyst performance, deliver uniform airflow and temperatures across the catalyst, and reduce exhaust backpressure

"Total Emissions" Approach to Eliminate Crankcase Emissions

Medium- and heavy-duty turbocharged diesel engines have open crankcase vents because blow-by contaminants can foul turbocharger and aftercooler components if unfiltered. The Donaldson Spiracle™ Crankcase Filtration System eliminates harmful and unwanted crankcase emissions and allows the crankcase to be closed without degrading performance.

Other Spiracle Crankcase Filtration System benefits include reducing in-cabin emissions and under hood odors/fumes. It also reduces engine oil consumption and maintains a cleaner engine compartment. For more information, go to www.donaldson.com/en/exhaust/support/datalibrary/002423.pdf

DOC Muffler + Spiracle CFS Kits are available. Contact Donaldson or visit www.donaldson.com/emissions.

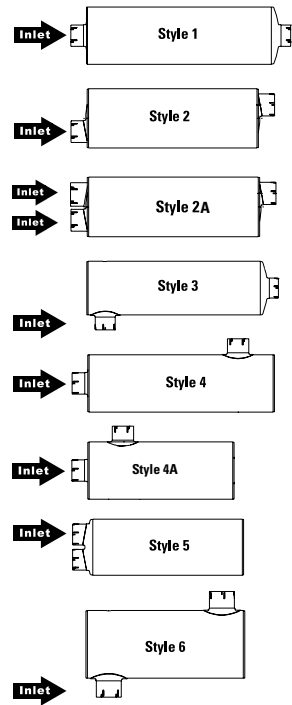
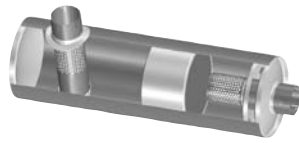


Style Guide

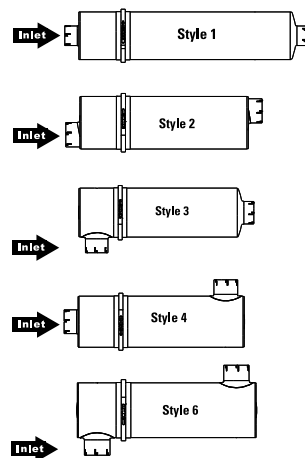
DOC Mufflers

Select a model based on your current muffler style, engine horsepower, and size for your vehicle or application.

1 Piece DOC Mufflers



Take-apart DOC Mufflers



- 1 - Donaldson DOC Mufflers are protected internationally by patents, both issued and pending.
- 2 - Higher horsepower engines (>450 hp) may need larger diameter converter mufflers or dual mufflers to accommodate the higher airflows and backpressure associated with those engines.
- 3 - In California, approved for 1988-2002; no limit by EPA

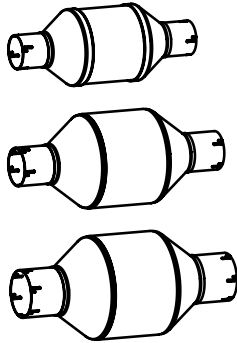
Style	Max. H.P. Rating (2)	Dimensions (in inches)						Engine Model Year & Type (3)	
		Body Dia.	Body Length	Inlet I.D.	Outlet I.D.	Overall Length	Offset Tube	Take-apart 1960-1990	One-piece 1991-2006 (4)
1	250	10.0	44.5	4.0	4.0	51.0			X009447 (replaces M101366)
		11.0	36.0	4.0	4.0	42.5			X009448 (replaces M111181)
	350	10.0	44.5	4.0	4.0	51.0		X009496 (replaces M101358)	X009501 (replaces M101262)
	400	11.0	36.0	4.0	4.0	42.5		X009484 (replaces M111195)	X009477 (replaces M111019)
	450	11.0	36.0	4.0	5.0	42.5		X009485 (replaces M111196)	X009482 (replaces M111051)
		10.0	44.5	4.0	5.0	51.0		X009497 (replaces M101359)	X009500 (replaces M101261)
	500	11.0	36.0	5.0	5.0	42.5		X009486 (replaces M111197)	X009478 (replaces M111020)
	525	10.0	44.5	5.0	5.0	51.0		X009498 (replaces M101360)	X009499 (replaces M101260)
	550	11.0	44.5	5.0	5.0	51.0			X009476 (replaces M111015)
	2	250	11.0	32.0	3.5	4.0	38.0		X009488 (replaces M111200)
8.25" x 11.5" (5)			30.0	3.5	4.0	36.5			X009444 (replaces M091112)
11.0			32.0	4.0	4.0	38.0			X009449 (replaces M111182)
400		11.0	32.0	4.0	5.0	38.0			X009508 (replaces M111229)
		11.0	32.0	4.0	4.0	38.0		X009487 (replaces M111199)	X009483 (replaces M111167)
500		11.0	32.0	5.0	5.0	38.0			X009473 (replaces M111294)
		11.0	36.0	5.0	5.0	42.0		X009492 (replaces M111267)	
2a		250	8.25" x 11.5" (5)	30.0	2.75	4.0	36.0		
3	250	10.0	44.5	4.0	5.0	48.0			X009459 (replaces M101429)
		11.0	36.0	4.0	4.0	39.5	3.8		X009450 (replaces M111183)
	400	10.0	32.0	4.0	5.0	36.0	4.3		X009503 (replaces M101400)
		11.0	36.0	4.0	4.0	39.5	3.8	X009489 (replaces M111201)	X009479 (replaces M111021)
	500	11.0	36.0	5.0	5.0	39.5	4.0	X009493 (replaces M111268)	X009474 (replaces M111295)
	525	10.0	44.5	5.0	5.0	48.0	5.5		X009502 (replaces M101379)
4	400	11.0	36.0	4.0	4.0	39.0	3.75	X009490 (replaces M111202)	X009480 (replaces M111022)
	450	11.0	36.0	5.0	5.0	39.0	4.0	X009494 (replaces M111269)	X009475 (replaces M111296)
4a	250	11.0	36.0	4.0	4.0	39.0	29.0		X009462 (replaces M111274)
	300	11.0	36.0	4.0	5.0	39.0	29.0		X009461 (replaces M111236)
	350	11.0	36.0	5.0	5.0	39.0	29.0		X009463 (replaces M111275)
5	250	11.0	30.0	4.0	4.0	33.8			X009451 (replaces M111184)
	350	11.0	30.0	4.0	4.0	33.8			X009504 (replaces M111141)
6	370	11.0	26.0	4.0	4.0	26.0	3.8 (2x)		X009481 (replaces M111023)
		11.0	36.0	4.0	4.0	36.0	3.8 (2x)	X009491 (replaces M111204)	
	400	10.0	36.0	5.0	5.0	36.0	4.0 (2x)	X009495 (replaces M111270)	

- 4 - Spiracle Crankcase Filtration System must be used with a DOC Muffler to meet CARB Level 1
- 5 - Oval muffler

Diesel Oxidation Catalysts (DOCs)

DOCs are designed to be installed in-line into the existing exhaust systems between the muffler and the turbocharger.

DOC



Max. H.P. Rating ⁽²⁾	Dimensions (in inches)					Engine Model Year ⁽³⁾
	Body Dia.	Body Length	Inlet I.D.	Outlet I.D.	Overall Length	1960-2006 ⁽⁴⁾
125	5.25	14.0	2.5	2.5	18.00	X009441 (replaces M055079)
175	6.25	14.25	2.5	2.5	18.25	X009442 (replaces M065164)
250	8.0	13.5	3.5	3.5	20.50	X009443 (replaces M080563)
400	10.0	16.0	4.0	4.0	23.50	X009458 (replaces M101381)
550	11.0	16.5	5.0	5.0	24.50	X009472 (replaces M111266)

2 - Higher horsepower engines (>450 hp) may need larger diameter converter mufflers or dual mufflers to accommodate the higher airflows and backpressure associated with those engines.

3 - In California, approved for 1988-2002; no limit by EPA

4 - Spiracle Crankcase Filtration System must be used with a DOC Muffler to meet CARB Level 1



DOC Muffler Mounting Kits

A Donaldson Emissions Hardware and Mounting Accessories brochure is viewable from www.donaldsonexhaust.com. See the Product Literature or search for document F111200.

Donaldson recommends replacing any original mounting hardware with new, heavy-duty versions. The addition of catalyzed substrate increases the overall weight and requires heavier-duty mounting bands and clamps. Donaldson recommends using two new mounting brackets and SealClamps™ for a DOC Muffler installation.

- Reuse existing frame mounting bolts
- Materials are either zinc-plated or aluminized mild steel.
- Emissions accessories are more durable compared to standard OE exhaust system components on pre-2007 vehicles.



Donaldson®

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