

Racor's Closed (CCV) and Open (CV) Crankcase Ventilation Systems Help Comply with RICE-NESHAP Regulations

Market Application Publication



Application

Diesel engine equipped stationary power units over 100 horsepower. Some applications include generators, air compressors, water pumps, and hydraulic power packs.

The Problem

Meeting the Reciprocating Internal Combustion Engines National Emission Standards for Hazardous Air Pollutants (RICE-NESHAP) regulation that will take effect on May of 2013. Non-emergency diesel engines over 100 horsepower are required to be fitted with a closed or open crankcase ventilation system.



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Racor's Solution:

Racor's open and closed crankcase filters remove particles of contamination and oil mist down to .3 microns at a 99.5% efficiency level. Racor's crankcase ventilations systems help comply with RICE-NESHAP requirements by capturing and recycling hazardous air pollutants.

How the solution works:

Crankcase fumes are directed through Racor's high-efficiency crankcase filter. This occurs via the natural positive crankcase pressure of the engine (open system), or via a vacuum assist from the engine's turbocharger (closed system). Contaminated crankcase gasses are filtered to remove contamination, soot and oil. In an open system, the remaining fumes are vented to the atmosphere. In a closed system, the remaining fumes stay in the engine, never allowing polluted air to enter the atmosphere.



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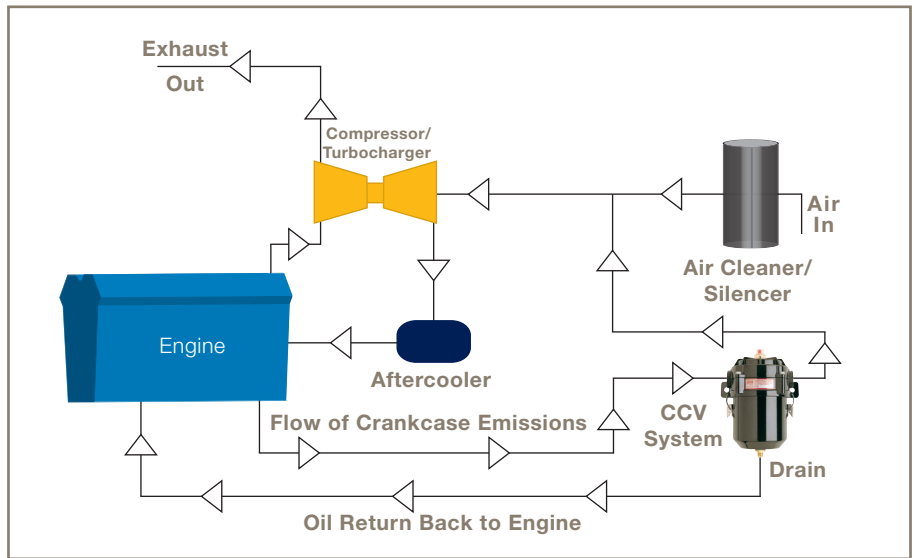
Closed Crankcase Ventilation System

In a robust, compact package, the patented Racor Closed Crankcase Ventilation (CCV) Filter System provides superior oil coalescence and crankcase pressure control under the most severe conditions. The only routine maintenance required for the CCV system is filter replacement.

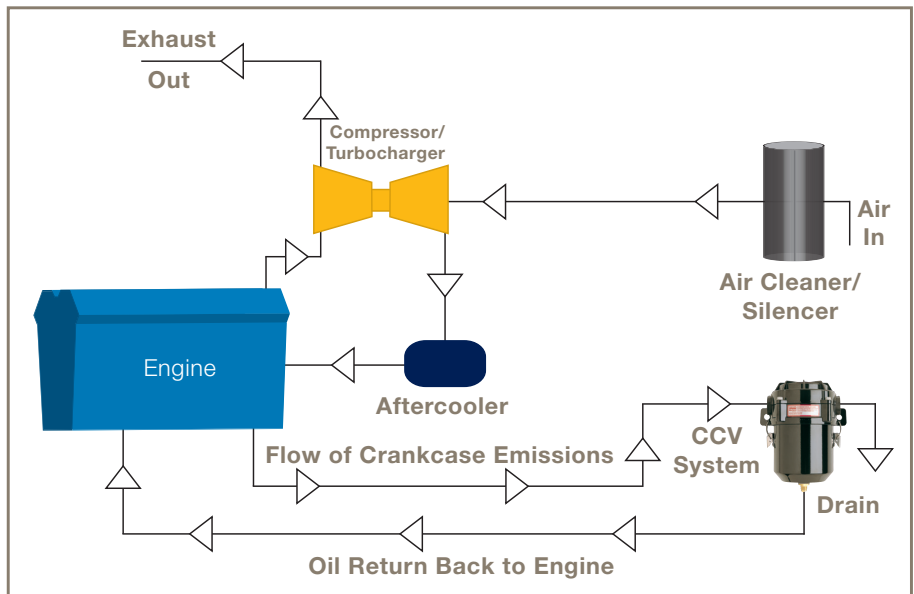
Open Crankcase Ventilation System

In an open system, the crankcase breather is connected to the Crankcase Ventilation (CV) filter assembly. The CV outlet is open to atmosphere. This configuration is simple to install and is an effective oil mist removal system for applications which allow crankcase venting to atmosphere. There may be some visible blow-by gases present from the CV outlet.

How the Closed Crankcase Ventilation System Works



How the Open Crankcase Ventilation System Works



Prime KW	Engine HP	Closed Crankcase Filter	Open Crankcase Filter
35 - 225	60 - 350	CCV4500	CV4501
225 - 400	350 - 650	CCV6000	CV6001
400 - 900	650 - 1300	CCV8000	CV8001
900 - 1300	1300 - 1900	CCV12000	CV12001
1300 - 2000	1900 - 2900	(2) x CCV8000	(2) X CV8001
2000 - 2500	2900 - 3700	(2) X CCV12000	(2) X CV12001