

Off-Road Products		SKYLINE™	PHOENIX®	LONESTAR®
Filter Type		Active diesel particulate filter with electric heater regeneration	Active diesel particulate filter with diesel burner regeneration	Passive diesel particulate filter with NOx reduction
CARB Verification <sup>1</sup>	Engine PM Limit	0.40 g/bhp-hr PM and lower	0.20 g/bhp-hr PM and lower	0.12 g/bhp-hr PM and lower
	Engine Model Years	1996-2007	1996-2009	1996-2009
	Engine Displacement	Up to 15 liters	Up to 12 liters	150-350 horsepower
CARB Exclusions <sup>1</sup>		No 2-stroke engines No OE diesel particulate filter No OE oxidation catalyst No external EGR	No 2-stroke engines No OE diesel particulate filter No OE oxidation catalyst No external EGR	No 2-stroke engines No OE diesel particulate filter No external EGR Turbo charged engines only
Typical Applications		Light Duty Cycle: captive yard based equipment including fork lifts, cranes, yard goats and others	Light Duty Cycle: construction equipment, fork lifts, cranes, yard goats, agricultural equipment, tracked equipment and others	loaders, graders, excavators, scrapers, cranes and other construction equipment
PM Reduction		Greater than 85% (Level 3+)	Greater than 85% (Level 3+)	Greater than 85% (Level 3+)
NOx Reduction		None	None	At least 40%
Fuel Compatibility		<ul style="list-style-type: none"> <li>• ULSD</li> <li>• Up to B20</li> </ul>	ULSD	<ul style="list-style-type: none"> <li>• ULSD</li> <li>• Up to B20</li> </ul>
Exhaust Temperature Requirement		None	None	260° C for at least 70% time
Regeneration Type		Active (electric heater)	Active (diesel burner)	Passive
Regeneration Time		4 hours	2 hours	n/a
Engine Run Time Between Regenerations		Consult Cleaire dealer <sup>2</sup>	Consult Cleaire dealer <sup>2</sup>	n/a
Eligible for Local, State and Federal Funding Programs		Yes	Yes	Yes

<sup>1</sup> Check verification for specific application criteria and requirements. <sup>2</sup> Based on engine condition, maintenance practices and duty cycle.  
NOTE: Product specifications are for reference only and may vary or change without notice.

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