

## Appendix C: List of Currently Verified Technologies

### LEVEL 1 SYSTEMS FOR ON-ROAD APPLICATIONS

Product Name	P L U S	Technology Type	PM Reduction	NOx Reduction	Applicability
Donaldson DCM 6000	+	DOC	25%	N/A	1988-1990 on-road; CARB diesel; biodiesel.*
Donaldson 6000 + Spiracle	+	DOC + crankcase filter	25%	N/A	1988-2002 on-road; CARB diesel; biodiesel.*
Donaldson DCM 6100 + Spiracle	+	DOC + crankcase filter	25%	N/A	1991-2002; CARB diesel; biodiesel.*
Donaldson DCM 6100	+	DOC	25%	N/A	1994-2002; CARB diesel; biodiesel.*
Engine Control System AZ Purifier & Purifmuffler	+	DOC	25%	N/A	1991-2003 Cummins and Navistar on-road; 1973-1993 DDC 2 stroke; 1991-2002 HHD certain model Cummins and DDC; CARB diesel; biodiesel.*

PLUS Systems (+) indicate 2009 N02 compliance.

\* These systems have been verified for use with biodiesel blends subject to certain requirements.

Note: List of verified technologies as of September 2007. An updated list can be found on the ARB website: <http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm>

## LEVEL 1 SYSTEMS FOR OFF-ROAD APPLICATIONS

Product Name	PLUS	Technology Type	PM Reduction	NOx Reduction	Applicability
Donaldson 6000 + Spiracle (off-road)	+	DOC + crankcase filter	25%	N/A	Off-road port equipment; CARB diesel; biodiesel.*
Engine Control System AZ Purifier & Purifmuffler	+	DOC	25%	N/A	1996-2002 off-road; CARB diesel; biodiesel.*
Extengine	+	DOC + SCR	25%	80%	1991-1995 Cummins 5.9 liter off-road; CARB diesel.
Paceco Corporation		DPF	25%	N/A	Pre-1996 model year or Tier 1, 2, or 3 certified off-road diesel engines on rubber-tired gantry cranes. Biodiesel.*

PLUS Systems (+) indicate 2009 N02 compliance.

\* These systems have been verified for use with biodiesel blends subject to certain requirements.

Note: List of verified technologies as of September 2007. An updated list can be found on the ARB website: <http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm>

## LEVEL 2 SYSTEMS FOR ON-ROAD APPLICATIONS

Product Name	P L U S	Technology Type	PM Reduction	NOx Reduction	Applicability
Donaldson	+	Flow Through Filter	50%	N/A	1991-2002 on-road; CARB diesel; biodiesel.*
Environmental Solutions Worldwide Particulate Reactor™		DOC	50%	N/A	Select model years 1991-1997. Biodiesel.*
Lubrizol PuriNOx	+	Emulsified Fuel	50%	15%	1988-2003 on-road.

PLUS Systems (+) indicate 2009 NO<sub>2</sub> compliance.

\* These systems have been verified for use with biodiesel blends subject to certain requirements.

Note: List of verified technologies as of September 2007. An updated list can be found on the ARB website: <http://www.arb.ca.gov/diesel/verde/vt/cvt.htm>

## LEVEL 2 SYSTEMS FOR OFF-ROAD APPLICATIONS

Product Name	P L U S	Technology Type	PM Reduction	NOx Reduction	Applicability
Engine Control System AZ Purimuffler /Purifier	+	DOC + Alt Fuel	50%	20%	1996-2002 off-road; PuriNOx
Thermo King PDPF™	+	FTF	50%	N/A	1985-2002 transport refrigeration unit engines; 15 ppm sulfur diesel. Read Executive Order for detailed engine matching requirements.

PLUS Systems (+) indicate 2009 N02 compliance.

Note: List of verified technologies as of September 2007. An updated list can be found on the ARB website: <http://www.arb.ca.gov/diesel/verde/vt/cvt.htm>

## LEVEL 2 SYSTEM FOR STATIONARY APPLICATIONS

Product Name	P L U S	Technology Type	PM Reduction	NOx Reduction	Applicability
Rypos ADPF	+	DPF	50%	N/A	1996-2006 stationary engines; CARB diesel.

PLUS Systems (+) indicate 2009 N02 compliance.

Note: List of verified technologies as of September 2007. An updated list can be found on the ARB website: <http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm>

### LEVEL 3 SYSTEMS FOR ON-ROAD APPLICATIONS

Product Name	P L U S	Technology Type	PM Reduction	NOx Reduction	Applicability
Cleaire Horizon	+	DPF	85%	N/A	Most on-road diesel engines through 2006 model year; Certain MY 2006 and 1993 or older engines with OEM diesel oxidation catalysts; CARB diesel; biodiesel.* Conditionally verified for off-road engines.
Cleaire Longview		Lean NOx Catalyst and DPF	85%	25%	1993-2003 model year on-road; CARB diesel.
Donaldson DPM		DPF	85%	NA	1993-2004 on-road; CARB diesel; biodiesel.*
Engine Control System Purifilter (Low Load)	+	DPF	85%	NA	1994-2003 on-road; CARB diesel; biodiesel.*
Engine Control System Purifilter (High Load)		DPF	85%	NA	1994-2003 on-road; CARB diesel; biodiesel.*
HUSS Umwelttechnik FS-MK	+	DPF	85%	NA	Most on-road and off-road diesel engines through 2006 model year. CARB diesel; biodiesel.*
International Truck and Engine Corporation DPX		DPF	85%	NA	1994-2003 on-road Navistar (International); CARB diesel.

PLUS Systems (+) indicate 2009 N02 compliance.

\* These systems have been verified for use with biodiesel blends subject to certain requirements.

Note: List of verified technologies as of September 2007. An updated list can be found on the ARB website: <http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm>

### LEVEL 3 SYSTEMS FOR ON-ROAD APPLICATIONS

Product Name	P L U S	Technology Type	PM Reduction	NOx Reduction	Applicability
Johnson Matthey Reformulated CRT		DPF	85%	NA	1994 - 2006 on-road; CARB diesel; biodiesel.*
Johnson Matthey EGRT	+	EGR/DPF	85%	40%	2000 International DT-466, 2000 Cummins ISM 2001 Cummins ISB, 1998-2002 Cummins ISC, 2001 Cummins ISL, 2001 MY DDC - 50, and 2001 DDC - 60. on-road; CARB diesel.

PLUS Systems (+) indicate 2009 N02 compliance.

\* These systems have been verified for use with biodiesel blends subject to certain requirements.

Note: List of verified technologies as of September 2007. An updated list can be found on the ARB website: <http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm>

### LEVEL 3 SYSTEMS FOR OFF-ROAD APPLICATIONS

Product Name	P L U S	Technology Type	PM Reduction	NOx Reduction	Applicability
Cleaire Horizon	+	DPF	85%	N/A	Most on-road diesel engines through 2006 model year; Certain MY 2006 and 1993 or older engines with OEM diesel oxidation catalysts; CARB diesel; biodiesel.* Conditionally verified for off-road engines.
Engine Control System Combifilter	+	DPF	85%	NA	1996-2007 off-road; CARB diesel; biodiesel.*
Engine Control System Combifilter	+	DPF	85%	NA	1996-2007 off-road; CARB diesel; biodiesel.*
HUSS Umwelttechnik FS-MK	+	DPF	85%	NA	Most on-road and off-road diesel engines through 2006 model year. CARB diesel; biodiesel. *

PLUS Systems (+) indicate 2009 N02 compliance.

\* These systems have been verified for use with biodiesel blends subject to certain requirements.

Note: List of verified technologies as of September 2007. An updated list can be found on the ARB website: <http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm>

### LEVEL 3 SYSTEMS FOR STATIONARY APPLICATIONS

Product Name	P L U S	Technology Type	PM Reduction	NOx Reduction	Applicability
CleanAIR Permit	+	DPF	85%	NA	Stationary emergency and prime generators; CARB diesel; biodiesel.*
EGR Technologies LLC/CleanAIR Systems		EGR/DPF	85%	50%	Conditional verification for stationary prime and emergency standby generator sets and pumps $\leq$ 600 hp and $\leq$ 0.4 g/bhp-hr PM. Biodiesel.*
Johnson Matthey CRT		DPF	85%	NA	Stationary emergency and prime generators. Conditionally verified for stationary pumps.
MIRATECH Corporation	+	DPF	85%	NA	Stationary emergency and prime generators with a PM emission rate of 0.2 g/bhp-hr or less.
Rypos Inc. HDPF/C™	+	Hybrid DPF	85%	NA	1996-2007 stationary emergency standby generators and pumps with a PM emission rate of 0.2 g/bhp-hr or less and certified to Tier 1, Tier 2, or Tier 3 off-road diesel engine standards; CARB diesel; biodiesel.*
Sud-Chemie Inc. EnviCat-DPF™	+	DPF	85%	NA	Stationary prime and emergency standby generators and pumps; CARB diesel; biodiesel.*

PLUS Systems (+) indicate 2009 NO2 compliance.

\* These systems have been verified for use with biodiesel blends subject to certain requirements.

Note: List of verified technologies as of September 2007. An updated list can be found on the ARB website: <http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm>