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Agency Secretary

Air Resources Board

Alan C. Lloyd, Ph.D.
Chairman

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Arnold Schwarzenegger
Governor

Dear Independent Heavy-Duty Engine Rebuilder:

The Air Resources Board (ARB) has recently learned that some independent engine rebuilders may not be aware of the requirement for installing Low NOx Software, at engine rebuild, which applies to most 1993 through 1998 model year heavy-duty engines. Be advised that failure to install Low NOx Software as required, or removal of Low NOx Software once installed, may constitute tampering and result in civil penalties. The installation of Low NOx Software requires manufacturer-specific computer codes available only at authorized dealers, distributors, repair facilities, and rebuild facilities. Low NOx Software is available now at these facilities, and will be installed at no charge to the customer.

Engine manufacturers were required to develop low NOx software as part of the federal Consent Decree and California Settlement Agreements, to mitigate excess “off-cycle” emissions of oxides of nitrogen (NOx). Each engine manufacturer developed low NOx software for certain model-year engines. Caterpillar, Cummins, and Renault have low NOx software for 1993-1998 model year heavy-duty diesel truck engines. Detroit Diesel, Mack, and Volvo have low NOx software for 1994-1998 model year heavy-duty diesel truck engines. International has low NOx software for its 1998 model year heavy duty diesel truck engines. A list of engines that have low NOx software available is attached (Attachment 1).

For the purpose of low NOx software installation at time of engine rebuild, an engine rebuild means an activity occurring over one or more maintenance or repair events involving the disassembly of the engine, including removal of the cylinder heads, and the replacement or reconditioning of more than one Major Cylinder Component in more than half of the cylinders for heavy heavy-duty engines that have accumulated more than 290,000 miles or for medium heavy-duty engines that have accumulated more than 185,000 miles. Major Cylinder Component means a piston assembly, cylinder liner, connecting rod, or piston ring set.

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our Website: <http://www.arb.ca.gov>.

California Environmental Protection Agency

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Independent Rebuilders

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The ARB is currently implementing a Voluntary Software Upgrade Program (Voluntary Program) to reduce NOx emissions from this engine population. Under the Voluntary Program, Low NOx software will be installed on California registered eligible engines, at no cost to the vehicle owner/operator, at a time other than engine rebuild. Low NOx software installation will be tracked by both Engine Serial Number and Vehicle Identification Number as part of this program. Engines rebuilt without low NOx software installed may be identified during this process.

Thank you for your attention to this matter. We hope this clarifies the requirement that you send your engine rebuild customers to an authorized dealer who can install Low NOx software. If you have any questions regarding Low NOx software, installation requirements, or the Voluntary Program, please contact Ms. Lisa Jennings, Air Pollution Specialist, Planning and Regulatory Development, at (916) 322-6913.

Sincerely,

/s/

James R. Ryden, Chief
Enforcement Division

Attachment

cc: Mr. Paul Jacobs, Chief
Mobile Source Enforcement Branch

Mr. Jack Kitowski, Chief
On Road Controls Branch

Ms. Renee Kemena, Manager
Planning and Regulatory Development

Ms. Lisa Jennings, Air Pollution Specialist
Mobile Source Control Division

Attachment

Low NOx Rebuild Engines (Electronically-Controlled)		
Make and Year	Engine Model	Notes
Caterpillar 1993 – 1998	3406E	Engine Serial Number (ESN) 5EK05767 through 5EK99381
Caterpillar 1993 – 1998	3406E	ESN: 6TS00097 through 6TS27803
Caterpillar 1993 – 1998	3406E	ESN: 1LW00001 through 1LW33262
Caterpillar 1993 – 1998	3406E	ESN: Reman 4AS00001 through 4AS00385
Caterpillar 1993 – 1998	3126	ESN: 1WM00210 through 1WM26819
Caterpillar 1993 – 1998	3126	ESN: 4ES000226 through 4ES00454
Caterpillar 1993 – 1998	3126	ESN: Reman 6RW00001 and up
Caterpillar 1993 – 1998	3126B	ESN: 7AS00001 through 7AS32636
Caterpillar 1993 – 1998	3116	ESN: 8WL00297 through 8WL07351
Caterpillar 1993 – 1998	3176B	ESN: 9CK00647 through 9CK32795
Caterpillar 1993 – 1998	3176B	ESN: Reman 3LZ00001 and up
Caterpillar 1993 – 1998	C-10	ESN: 2PN01000 through 2PN07278
Caterpillar 1993 – 1998	C-10	ESN: 8YS00449 through 8YS07060
Caterpillar 1993 – 1998	C-10	ESN: Reman AKB00001 and up
Caterpillar 1993 – 1998	C-12	ESN: 1YN01200 through 1YN12844
Caterpillar 1993 – 1998	C-12	ESN: 9NS00372 through 9NS19786
Caterpillar 1993 – 1998	C-12	ESN: Reman ALS00001 and up
Cummins 1993 – 1998	ISB	Critical Parts List Number (CPL) 2446 through 2451
Cummins 1993 – 1998	M11	CPL 1855, 1856, 1857, 2036, 2037, 2370, and 2371
Cummins 1993 – 1998	N14	CPL 1573, 1574, 1807, 1809, 1844, 1987, 2025, 2026, 2027, 2389, 2390, and 2391
Detroit Diesel Corp. 1994 – 1997	S60 6067-GK60	ESN 6R157655 through 6R472018
Detroit Diesel Corp. 1994 – 1997	S60 6067-GK28	ESN 6R157655 through 6R472018
Detroit Diesel Corp. 1998	S60 6067-TK60	ESN 6R157655 through 6R472018
Detroit Diesel Corp. 1998	S60 6067-TK28	ESN 6R157655 through 6R472018
Detroit Diesel Corp. 1998	S60 6067-PK60	ESN 6R157655 through 6R472018
Detroit Diesel Corp. 1998	S60 6067-PK28	ESN 6R157655 through 6R472018
Detroit Diesel Corp. 1994 – 1995	S60 6067-WK60	ESN 6R157655 through 6R472018
Detroit Diesel Corp. 1994 – 1995	S60 6067-WK28	ESN 6R157655 through 6R472018
Detroit Diesel Corp. 1996 – 1997	S60 6067-SK60	ESN 6R157655 through 6R472018
Detroit Diesel Corp. 1996 – 1997	S60 6067-SK28	ESN 6R157655 through 6R472018
Mack 1994 – 1998	EM7-275	ESN 4B through 8R
Mack 1994 – 1998	EM7-300	ESN 4B through 8R
Mack 1994 – 1998	E7-300	ESN 4B through 8R
Mack 1994 – 1998	E7-310/330	ESN 4B through 8R
Mack 1994 – 1998	E7-330/350	ESN 4B through 8R
Mack 1994 – 1998	E7-350	ESN 4B through 8R
Mack 1994 – 1998	E7-355/380	ESN 4B through 8R
Mack 1994 – 1998	E7-375	ESN 4B through 8R
Mack 1994 – 1998	E7-400	ESN 4B through 8R
Mack 1994 – 1998	E7-427	ESN 4B through 8R
Mack 1994 – 1998	E7-454	ESN 4B through 8R
Mack 1994 – 1998	E7-460	ESN 4B through 8R
Renault 1993 –1998	MIDR06.02.26	
Navistar/International 1998	DT 466E	Engine Family Number (EFN) WNVXH0466FNA
Navistar/International 1998	DT 466E	EFN: WNVXH0466CCB, WNVXH0466FNC
Navistar/International 1998	DT 466E	EFN: WNVXH0466CCD
Navistar/International 1998	530E	EFN: WNVXH0530FNA, WNVXH0530CCB

Low NOx Rebuild Engines (Electronically-Controlled)

Navistar/International 1998	530E	EFN: WNVXH0530FNC, WNVXH0530CCD
Volvo 1994 – 1998	VE D12	Engine Family Name (EFNa) RVT12.EJDBRA
Volvo 1994 – 1998	VE D12	EFNa: SVT12.EJDBRA, TVT12.EJDBRA
Volvo 1994 – 1998	VE D12A	EFNa: VVT12.EJDBRA
Volvo 1994 – 1998	VE D12B-345 EPG	EFNa: WVTXH12.150S
Volvo 1994 – 1998	VE D12B-385 EPG	EFNa: WVTXH12.150S
Volvo 1994 – 1998	VE D12B-425 EPG	EFNa: WVTXH12.150S
Volvo 1994 – 1998	VE D12B-345 VEB	EFNa: WVTXH12.150S
Volvo 1994 – 1998	VE D12B-385 VEB	EFNa: WVTXH12.150S
Volvo 1994 – 1998	VE D12B-425 VEB	EFNa: WVTXH12.150S
Volvo 1994 – 1998	VE D7C-275	EFNa: WVTXH07.350S
Volvo 1994 – 1998	VE D7C-300	EFNa: WVTXH07.350S