

Pursuant to the authority vested in the Air Resources Board by Health and Safety Code (HSC) Division 26, Part 5, Chapter 2; and pursuant to the authority vested in the undersigned by HSC Sections 39515 and 39516 and Executive Order G-45-9; and

Pursuant to the December 15, 1998 Settlement Agreement between the Air Resources Board and the manufacturer, and any modifications thereof to the Settlement Agreement;

**IT IS ORDERED AND RESOLVED:** That the following engine and emission control systems produced by the manufacturer are certified as described below for use in on-road motor vehicles with a manufacturer's gross vehicle weight rating (GVWR) over 14,000 pounds. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	ENGINE SIZE (liter)	FUEL TYPE	STANDARDS & TEST PROCEDURE	INTENDED SERVICE CLASS
2002	2CPXH0442HRK	7.2	Diesel	Diesel	Medium-Heavy-Duty
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			ENGINE MODELS / CODES (rated power in horsepower, hp)		
DDI, TC, CAC, ECM			See Attachment		
<small>ABBREVIATIONS: OC=oxidizing catalyst TWC=three-way catalyst WU (prefix)=warm-up catalyst O2S=oxygen sensor HO2S=heated O2S TBI=throttle body fuel injection MFI=multipoint fuel injection SFI=sequential MFI DDI/IDI=direct/indirect diesel injection TC/SC=turbo/super charger CAC=charge air cooler EGR=exhaust gas recirculation AIR=secondary air injection PAIR=pulsed AIR SP=smoke puff limiter ECM/PCM=engine/powertrain control module EM=engine modification 2 (prefix)=parallel 2 (suffix)=in series</small>					

The following are the exhaust emission standards (STD), or family emission limit(s) (FEL) as applicable, and certification levels (CERT) for this engine family for hydrocarbons (HC) or non-methane hydrocarbons (NMHC), oxides of nitrogen (NOx), or NMHC+NOx, carbon monoxide (CO), particulate matter (PM), and formaldehyde (HCHO) in grams per brake horsepower-hour (g/bhp-hr) under the "Federal Test Procedure" (FTP) (Title 13, California Code of Regulations, (13 CCR) Section 1956.1 (urban bus) or 1956.8 (other than urban bus)), and under the "Euro III Test Procedure" (EURO) in the Settlement Agreement, including a EURO's "Not-to-Exceed" NOx standard: (The emission standards and certification levels for default operations permitted under 13 CCR Section 1956.1 or 1956.8 are in parentheses.)

* = not applicable	HC		NMHC		NOx		NMHC+NOx		CO		PM		HCHO	
	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO
(DIRECT) STD	1.3	1.3	*	*	4.0	4.0	*	*	15.5	15.5	0.10	0.10	*	*
AVERAGE STD	*	*	*	*	*	*	*	*	*	*	*	*	*	*
FEL	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CERT	0.5	0.1	*	*	3.8	3.9	*	*	1.1	0.6	0.09	0.06	*	*

**BE IT FURTHER RESOLVED:** That certification to the FEL(s) listed above, as applicable, is subject to the following terms, limitations and conditions. The FEL(s) is the emission level declared by the manufacturer and serves in lieu of an emission standard for certification purposes in any averaging, banking, or trading (ABT) programs. It will be used for determining compliance of any engine in this family and compliance with such ABT programs.

**BE IT FURTHER RESOLVED:** That for the listed engine models, the manufacturer has submitted the materials to demonstrate certification compliance with 13 CCR Sections 1965 (emission control labeling), and 2035 et seq. (emission control system warranty).

**BE IT FURTHER RESOLVED:** That the listed engine models are conditionally certified subject to the following conditions: (1) The Settlement Agreement is in effect; and, (2) The manufacturer is in compliance with all applicable certification requirements of the Settlement Agreement and any modifications thereof.

Engines certified under this Executive Order shall conform to all applicable California emission regulations and all requirements under the Settlement Agreement and any modifications thereof.

The Bureau of Automotive Repair will be notified by copy of this Executive Order.

**This Executive Order is not valid for engines produced on or after October 1, 2002.**

Executed at El Monte, California on this 20<sup>th</sup> day of December 2001.

*R. B. Summerfield*  
R. B. Summerfield, Chief  
Mobile Source Operations Division

# Engine Model Summary Form

**Manufacturer:** Caterpillar Inc.  
**Engine category:** On-highway MHDD  
**EPA Engine Family:** 2CPXH0442HRK  
**Mfr Family Name:** NA  
**Process Code:** New Submission

1. Engine Code	2. Engine Model	3. BHP @ RPM (SAE Gross)	4. Fuel Rate: mm/stroke @ peak HP (for diesel only)	5. Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6. Torque @ RPM (SEA Gross)	7. Fuel Rate: mm/stroke @ peak torque	8. Fuel Rate: (lbs/hr) @ peak torque	9. Emission Control Device Per SAE J1930
Cert Eng '98	3126	330 @ 2400	149	120.2	860 @ 1440	168	81.5	EM, DI, TC, ECM,
1	3126	330 @ 2400	157	126.7	860 @ 1440	169	81.9	EM, DI, TC, ECM,
2	3126	300 @ 2200	151	111.8	860 @ 1440	170	82.2	EM, DI, TC, ECM,
3	3126	300 @ 2200	150	111.2	800 @ 1440	157	76.0	EM, DI, TC, ECM,
4	3126	275 @ 2200	137	101.1	860 @ 1440	171	82.6	EM, DI, TC, ECM,
5	3126	275 @ 2200	137	101.1	800 @ 1440	158	76.7	EM, DI, TC, ECM,
6	3126	250 @ 2200	128	94.8	800 @ 1440	164	79.4	EM, DI, TC, ECM,
7	3126	250 @ 2200	126	93.0	660 @ 1440	131	63.5	EM, DI, TC, ECM,
8	3126	230 @ 2200	115	85.1	660 @ 1440	130	62.8	EM, DI, TC, ECM,
9	3126	210 @ 2200	99	73.6	605 @ 1400	115	55.8	EM, DI, TC, ECM,
10	3126	210 @ 2200	101	75.1	520 @ 1440	101	49.0	EM, DI, TC, ECM,
11	3126	216 @ 2400	98	79.0	520 @ 1440	100	48.3	EM, DI, TC, ECM,
12	3126	207 @ 2300	96	74.2	520 @ 1440	101	49.1	EM, DI, TC, ECM,
13	3126	175 @ 2200	86	63.3	420 @ 1440	82	39.8	EM, DI, TC, ECM,

ATTACHMENT  
 (TC, CAC, ECM, etc)

A-13-147.