



Pursuant to the authority vested in the Air Resources Board by Health and Safety Code Division 26, Part 5, Chapter 2; and pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: The 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 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 SIZES (L)	FUEL TYPE ¹	STANDARDS & TEST PROCEDURE	INTENDED SERVICE CLASS ²	ECS & SPECIAL FEATURES ³	DIAGNOSTIC ⁶
2009	9CPXH0763E1A	12.5	Diesel	Diesel	HHDD	DDI, TC, CAC, ECM, EGR-C, PTOX, SPL	EMD
PRIMARY ENGINE'S IDLE EMISSIONS CONTROL ⁵		ADDITIONAL IDLE EMISSIONS CONTROL ⁵					
ESS or 30g		N/A					
ENGINE (L)	ENGINE MODELS / CODES (rated power, in hp)						
12.5	See attachment for engine models and ratings (Clean idle engines indicated by "-30g" suffix in engine code)						

¹ =not applicable; GVWR=gross vehicle weight rating; 13 CCR xyz=Title 13, California Code of Regulations, Section xyz; 40 CFR 86.abc=Title 40, Code of Federal Regulations, Section 86.abc; L=liter, hp=horsepower, kw=kilowatt; hr=hour;
² CNG/LNG=compressed/liquefied natural gas; LPG=liquefied petroleum gas; E85=85% ethanol fuel; MF=multi fuel a.k.a. BF=bi fuel; DF=dual fuel; FF=flexible fuel;
³ L/M/H HDD=light/medium/heavy heavy-duty diesel; UB=urban bus; HDO=heavy duty Otto;
⁴ ECS=emission control system; TWC/OC=three-way/oxidizing catalyst; NAC=NOx adsorption catalyst; SCR-U / SCR-N=selective catalytic reduction - urea / - ammonia; WU (prefix) =warm-up catalyst; DPF=diesel particulate filter; PTOX=periodic trap oxidizer; HO2S/O2S=heated/oxygen sensor; HAFS/AFS=heated/air-fuel-ratio sensor (a.k.a., universal or linear oxygen sensor); TBI=throttle body fuel injection; SF/MFI=sequential/multi port fuel injection; DGI=direct gasoline injection; GCARB=gaseous carburetor; ID/DDI=indirect/direct diesel injection; TC/SC=turbo/super charger; CAC=charge air cooler; EGR / EGR-C=exhaust gas recirculation / cooled EGR; PAIR/AIR=pulsed/secondary air injection; SPL=smoke puff limiter; ECM/PCM=engine/powertrain control module; EM=engine modification; 2 (prefix)=parallel; (2) (suffix)=in series;
⁵ ESS=engine shutdown system (per 13 CCR 1956.8(a)(6)(A)(1); 30g=30 g/hr NOx (per 13 CCR 1956.8(a)(6)(C); APS =internal combustion auxiliary power system; ALT=alternative method (per 13 CCR 1956.8(a)(6)(D); Exempt=exempted per 13 CCR 1956.8(a)(6)(B) or for CNG/LNG fuel systems; N/A=not applicable (e.g., Otto engines and vehicles);
⁶ EMD=engine manufacturer diagnostic system (13 CCR 1971); OBD=on-board diagnostic system (13 CCR 1971.1);

Following are: 1) the FTP exhaust emission standards, or family emission limit(s) as applicable, under 13 CCR 1956.8; 2) the EURO and NTE limits under the applicable California exhaust emission standards and test procedures for heavy-duty diesel engines and vehicles (Test Procedures); and 3) the corresponding certification levels, for this engine family. "Diesel" CO, EURO and NTE certification compliance may have been demonstrated by the manufacturer as provided under the applicable Test Procedures in lieu of testing. (For flexible- and dual-fueled engines, the CERT values in brackets [] are those when tested on conventional test fuel. For multi-fueled engines, the STD and CERT values for default operation permitted in 13 CCR 1956.8 are in parentheses.).

in g/bhp-hr	NMHC		NOx		NMHC+NOx		CO		PM		HCHO	
	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO	FTP	EURO
STD	0.14	0.14	*	*	*	*	15.5	15.5	0.01	0.01	*	*
FEL	*	*	1.16	1.16	1.3	1.3	*	*	*	*	*	*
CERT	0.05	0.06	1.162	1.105	1.21	1.17	1.72	0.03	0.002	0.002	*	*
NTE	0.21		1.74		2.0		19.4		0.02		*	

⁴ g/bhp-hr=grams per brake horsepower-hour; FTP=Federal Test Procedure; EURO=Euro III European Steady-State Cycle, including RMCSET=ram mode cycle supplemental emissions testing; NTE=Not-to-Exceed; STD=standard or emission test cap; FEL=family emission limit; CERT=certification level; NMHC/HC=non-methane/hydrocarbon; NOx=oxides of nitrogen; CO=carbon monoxide; PM=particulate matter; HCHO=formaldehyde.

BE IT FURTHER RESOLVED: 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: Except in vehicle applications exempted per 13 CCR 1956.8(a)(6)(B), engines in this engine family certified under 13 CCR 1956.8(a)(6)(C) [30 g/hr NOx] and section 35.B.4 of the incorporated "California Exhaust Emissions Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles" (HDDE Test Procedures) adopted Dec. 12, 2002, as last amended Sep. 1, 2006, shall be provided with an approved "Certified Clean Idle" label that shall be affixed to the vehicle into which the engine is installed;

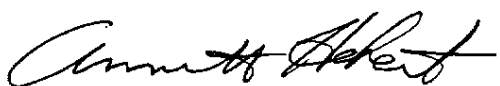
BE IT FURTHER RESOLVED: The listed engine models have been certified to the split engine family standards under 13 CCR 1956.8(b) [diesel engines] or 13 CCR 1956.8(d) [Otto engines] and the incorporated 40 CFR 86.007-15(m)(9).

BE IT FURTHER RESOLVED: For the listed engine models the manufacturer has submitted the materials to demonstrate certification compliance with 13 CCR 1965 (emission control labels) and 13 CCR 2035 et seq. (emission control warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

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

Executed at El Monte, California on this 2 day of February 2009.


Annette Hebert, Chief
Mobile Source Operations Division

Engine Model Summary Template

A-013-0197

attachment

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
30	013	385@1800	246	148.7	1450@1200	277	111.7	DDI EM, DI, TC
31	013	425@1800	259	156.6	1550@1200	286	115.6	TC, ECM EM, DI, TC
32	013	425@1800	260	157.5	1550@1200	299	120.6	ECM EM, DI, TC
33	013	425@1800	261	158.2	1450@1200	278	112.2	CAC EM, DI, TC
34	013	425@1800	259	156.6	1650@1200	301	121.6	EGRC EM, DI, TC
35	015	425@1800	260	157.5	1650@1200	319	128.7	TOX EM, DI, TC
36	013	425@1800	261	158.2	1450@1200	278	112.2	EM, DI, TC
37	013	445@1800	269	162.9	1750@1200	332	134.2	EM, DI, TC
38	013	445@1800	271	163.9	1750@1200	340	137.3	EM, DI, TC
39	013	445@1800	271	164.0	1550@1200	298	120.2	EM, DI, TC
40	013	445@1800	269	162.9	1750@1200	332	134.2	EM, DI, TC
41	013	445@1800	271	164.0	1550@1200	298	120.2	EM, DI, TC
42	013	525@1800	310	187.6	1750@1200	334	135.0	EM, DI, TC
43	013	525@1800	310	187.6	1750@1200	334	135.0	EM, DI, TC
44	013	350@1800	206	124.5	1250@1200	255	102.9	EM, DI, TC
45	013	485@1800	293	177.2	1750@1200	332	134.2	EM, DI, TC
46	013	485@1800	292	176.6	1750@1200	338	136.5	EM, DI, TC
47	013	485@1800	292	176.6	1550@1200	298	120.4	EM, DI, TC
48	013	485@1800	292	176.6	1650@1200	314	126.6	EM, DI, TC
49	013	485@1800	292	176.6	1650@1200	314	126.6	EM, DI, TC
50	013	525@1800	310	187.6	1750@1200	334	135.0	EM, DI, TC
51	013	525@1800	310	187.6	1750@1200	334	135.0	EM, DI, TC
52	013	365@1800	215	130.0	1450@1200	301	121.4	EM, DI, TC
53	013	395@1800	242	146.7	1450@1200	268	108.0	EM, DI, TC
54	013	395@1800	249	150.5	1450@1200	282	113.6	EM, DI, TC
55	013	425@1800	259	156.8	1450@1200	268	108.0	EM, DI, TC
56	013	425@1800	266	161.2	1450@1200	282	113.6	EM, DI, TC
57	013	425@1800	259	156.8	1550@1200	289	116.6	EM, DI, TC

Handwritten notes in a vertical oval on the right side of the table, with a long arrow pointing downwards from the top of the oval to the bottom of the table. The notes include: DDI, TC, ECM, CAC, EGRC, TOX.

Engine Model Summary Template

A-013-0197

attachment

Engine Family	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	C13	525@1800	324	195.9	1750@1200	343	138.6	EM, DI, TC,
	1	C13	485@1800	291	176.1	1650@1200	302	122.1	EM, DI, TC,
	2	C13	485@1800	287	173.5	1650@1200	314	126.6	EM, DI, TC,
	3	C13	395@1800	238	144.1	1450@1200	268	108.4	EM, DI, TC,
	4	C13	395@1800	246	149.2	1450@1200	276	111.2	EM, DI, TC,
	5	C13	445@1800	270	163.2	1650@1200	301	121.6	EM, DI, TC,
	6	C13	445@1800	270	163.4	1650@1200	328	130.3	EM, DI, TC,
	7	C13	425@1800	259	156.6	1550@1200	286	115.6	EM, DI, TC,
	8	C13	425@1800	260	157.5	1550@1200	299	120.6	EM, DI, TC,
	9	C13	445@1800	271	163.9	1550@1200	286	115.3	EM, DI, TC,
	10	C13	445@1800	271	164.0	1550@1200	298	120.2	EM, DI, TC,
	11	C13	425@1800	272	164.7	1550@1200	303	122.5	EM, DI, TC,
	12	C13	425@1800	272	164.7	1550@1200	303	122.5	EM, DI, TC,
	13	C13	485@1800	296	179.3	1550@1200	286	115.6	EM, DI, TC,
	14	C13	485@1800	293	177.3	1550@1200	298	120.4	EM, DI, TC,
	15	C13	425@1800	259	156.7	1450@1200	265	107.1	EM, DI, TC,
	16	C13	425@1800	261	158.2	1450@1200	278	112.2	EM, DI, TC,
	17	C13	365@1800	237	143.3	1450@1200	279	112.8	EM, DI, TC,
	18	C13	365@1800	237	143.3	1450@1200	279	112.8	EM, DI, TC,
	21	C13	320@1800	212	128.2	1150@1200	228	92.2	EM, DI, TC,
	22	C13	320@1800	212	128.2	1150@1200	228	92.2	EM, DI, TC,
	23	C13	365@1800	236	143.2	1350@1200	260	105.1	EM, DI, TC,
	24	C13	365@1800	236	143.2	1350@1200	260	105.1	EM, DI, TC,
	25	C13	420@1800	266	161.0	1550@1220	304	122.6	EM, DI, TC,
	26	C13	420@1800	266	161.0	1550@1200	304	122.6	EM, DI, TC,
	27	C13	385@1800	248	150.5	1350@1200	263	106.2	EM, DI, TC,
	28	C13	385@1800	248	150.5	1350@1200	263	106.2	EM, DI, TC,
	29	C13	385@1800	246	148.7	1450@1200	277	111.7	EM, DI, TC,

DDI
 SPL
 TC
 ECM
 CAC
 EGR-C
 Prox



Engine Model Summary Template

A-013-0197
attachment

Engine Code	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
58	C13	425@1800	266	161.2	1550@1200	303	122.2	DDI, EM, DI, TC,
59	C13	425@1800	266	161.2	1450@1200	282	113.6	SPL, EM, DI, TC,
60	C13	425@1800	259	156.8	1650@1200	311	125.7	TC, EM, DI, TC,
61	C13	425@1800	266	161.2	1650@1200	323	130.3	ECM, EM, DI, TC,
62	C13	425@1800	266	161.2	1450@1200	282	113.6	CAC, EM, DI, TC,
63	C13	425@1800	259	156.8	1550@1200	289	116.6	EGR-C, EM, DI, TC,
64	C13	425@1800	266	161.2	1550@1200	303	122.2	PTOX, EM, DI, TC,
65	C13	445@1800	272	164.9	1650@1200	311	125.7	EM, DI, TC,
66	C13	445@1800	270	163.6	1650@1200	323	130.3	EM, DI, TC,
1-30g	C13	485@1800	291	176.1	1650@1200	302	122.1	EM, DI, TC,
2-30g	C13	485@1800	287	173.5	1650@1200	314	126.6	EM, DI, TC,
3-30g	C13	395@1800	238	144.1	1450@1200	268	108.4	EM, DI, TC,
4-30g	C13	395@1800	246	149.2	1450@1200	276	111.2	EM, DI, TC,
5-30g	C13	445@1800	270	163.2	1650@1200	301	121.6	EM, DI, TC,
6-30g	C13	445@1800	270	163.4	1650@1200	328	130.3	EM, DI, TC,
7-30g	C13	425@1800	259	156.6	1550@1200	286	115.6	EM, DI, TC,
8-30g	C13	425@1800	260	157.5	1550@1200	299	120.6	EM, DI, TC,
9-30g	C13	445@1800	271	163.9	1550@1200	286	115.3	EM, DI, TC,
10-30g	C13	445@1800	271	164.0	1550@1200	298	120.2	EM, DI, TC,
11-30g	C13	425@1800	272	164.7	1550@1200	303	122.5	EM, DI, TC,
12-30g	C13	425@1800	272	164.7	1550@1200	303	122.5	EM, DI, TC,
13-30g	C13	485@1800	296	179.3	1550@1200	286	115.6	EM, DI, TC,
14-30g	C13	485@1800	293	177.3	1550@1200	298	120.4	EM, DI, TC,
15-30g	C13	425@1800	259	156.7	1450@1200	265	107.1	EM, DI, TC,
16-30g	C13	425@1800	261	158.2	1450@1200	278	112.2	EM, DI, TC,
17-30g	C13	365@1800	237	143.3	1450@1200	279	112.8	EM, DI, TC,
18-30g	C13	365@1800	237	143.3	1450@1200	279	112.8	EM, DI, TC,
21-30g	C13	320@1800	212	128.2	1150@1200	228	92.2	EM, DI, TC,

DDI
SPL
TC
ECM
CAC
EGR-C
PTOX

Engine Model Summary Template

A-013-0177
attachment

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	
22-30g	C13	320@1800	212	128.2	1150@1200	228	92.2	DDI	EM, DI, TC,
23-30g	C13	365@1800	236	143.2	1350@1200	260	105.1	SPL	EM, DI, TC,
24-30g	C13	365@1800	236	143.2	1350@1200	260	105.1	TC	EM, DI, TC,
25-30g	C13	420@1800	266	161.0	1550@1220	304	122.6	ECM	EM, DI, TC,
26-30g	C13	420@1800	266	161.0	1550@1200	304	122.6	CAC	EM, DI, TC,
27-30g	C13	385@1800	248	150.5	1350@1200	263	106.2	EGR-C	EM, DI, TC,
28-30g	C13	385@1800	248	150.5	1350@1200	263	106.2	Ptoxc	EM, DI, TC,
29-30g	C13	385@1800	246	148.7	1450@1200	277	111.7		EM, DI, TC,
30-30g	C13	385@1800	246	148.7	1450@1200	277	111.7		EM, DI, TC,
31-30g	C13	425@1800	259	156.6	1550@1200	286	115.6		EM, DI, TC,
32-30g	C13	425@1800	260	157.5	1550@1200	299	120.6		EM, DI, TC,
33-30g	C13	425@1800	261	158.2	1450@1200	278	112.2		EM, DI, TC,
34-30g	C13	425@1800	259	156.6	1650@1200	301	121.6		EM, DI, TC,
35-30g	C13	425@1800	260	157.5	1650@1200	319	128.7		EM, DI, TC,
36-30g	C13	425@1800	261	158.2	1450@1200	278	112.2		EM, DI, TC,
37-30g	C13	445@1800	269	162.9	1750@1200	332	134.2		EM, DI, TC,
38-30g	C13	445@1800	271	163.9	1750@1200	340	137.3		EM, DI, TC,
39-30g	C13	445@1800	271	164.0	1550@1200	298	120.2		EM, DI, TC,
40-30g	C13	445@1800	269	162.9	1750@1200	332	134.2		EM, DI, TC,
41-30g	C13	445@1800	271	164.0	1550@1200	298	120.2		EM, DI, TC,
42-30g	C13	525@1800	310	187.6	1750@1200	334	135.0		EM, DI, TC,
43-30g	C13	525@1800	310	187.6	1750@1200	334	135.0		EM, DI, TC,
44-30g	C13	350@1800	206	124.5	1250@1200	255	102.9		EM, DI, TC,
45-30g	C13	485@1800	293	177.2	1750@1200	332	134.2		EM, DI, TC,
46-30g	C13	485@1800	292	176.6	1750@1200	338	136.5		EM, DI, TC,
47-30g	C13	485@1800	292	176.6	1550@1200	298	120.4		EM, DI, TC,
48-30g	C13	485@1800	292	176.6	1650@1200	314	126.6		EM, DI, TC,
49-30g	C13	485@1800	292	176.6	1650@1200	314	126.6		EM, DI, TC,

DDI
SPL
TC
ECM
CAC
EGR-C
Ptoxc



Engine Model Summary Template

A - 013 - 0197
attachment

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
50-30g	013	525@1800	310	187.6	1750@1200	334	135.0	DDI SPL TC EM, DI, TC,
51-30g	013	525@1800	310	187.6	1750@1200	334	135.0	EM, DI, TC,
52-30g	013	365@1800	215	130.0	1450@1200	301	121.4	ECM CAC EM, DI, TC,
53-30g	013	395@1800	242	146.7	1450@1200	268	108.0	EM, DI, TC,
54-30g	013	395@1800	249	150.5	1450@1200	282	113.6	EGR-C EM, DI, TC,
56-30g	013	425@1800	266	161.2	1450@1200	282	113.6	EM, DI, TC,
56-30g	013	425@1800	266	161.2	1450@1200	282	113.6	EM, DI, TC,
57-30g	013	425@1800	259	156.8	1550@1200	289	116.6	EM, DI, TC,
58-30g	013	425@1800	266	161.2	1550@1200	303	122.2	EM, DI, TC,
59-30g	013	425@1800	266	161.2	1450@1200	282	113.6	EM, DI, TC,
60-30g	013	425@1800	259	156.8	1650@1200	311	125.7	EM, DI, TC,
61-30g	013	425@1800	266	161.2	1650@1200	323	130.3	EM, DI, TC,
62-30g	013	425@1800	266	161.2	1450@1200	282	113.6	EM, DI, TC,
63-30g	013	425@1800	259	156.8	1550@1200	289	116.6	EM, DI, TC,
64-30g	013	425@1800	266	161.2	1550@1200	303	122.2	EM, DI, TC,
65-30g	013	445@1800	272	164.9	1650@1200	311	125.7	EM, DI, TC,
66-30g	013	445@1800	270	163.6	1650@1200	323	130.3	EM, DI, TC,
Cert Test 2	013	525@1800	326	197.5	1750@1200	354	143.0	EM, DI, TC,

DDI
SPL
TC
ECM
CAC
EGR-C
Pilot

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