

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; 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;

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engine and emission control system produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2008	8CPXL15.2ESW	15.2	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Direct Diesel Injection, Turbocharger, Charge Air Cooler and Engine Control Module			Loader, Tractor, Dozer, Generator and Industrial Equipment	

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbon (HC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

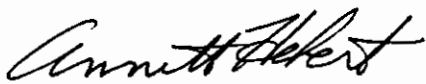
RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
225 ≤ KW < 560	Tier 3	STD	N/A	N/A	4.0	3.5	0.20	20	15	50
		CERT	--	--	3.4	3.4	0.15	11	6	15

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

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

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this 20 day of December 2007.


 Annette Hebert, Chief
 Mobile Source Operations Division

Engine Model Summary Template

ATTACHMENT 1 OF 3

U-R-001-0325

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: (bs/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
Engine Family	1_Cert Engine	2_Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (bs/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
8CPXL15.2ESW	C15	717@1800	399	241.7	NA	NA	NA	NA	EM. DI. TC, EGM, CAC
8CPXL15.2ESW	2	412@2100	222	156.5	1465@1400	292	137.7	137.7	EM. DI. TC,
8CPXL15.2ESW	3	361@2100	194	137	1283@1400	259	122.1	122.1	EM. DI. TC,
8CPXL15.2ESW	4	347@1850	197	122.8	1449@1300	296	129.4	129.4	EM. DI. TC,
8CPXL15.2ESW	5	475@2100	249	176	1601@1400	333	157	157	EM. DI. TC,
8CPXL15.2ESW	6	433@1800	246	148.8	1516@1400	316	148.7	148.7	EM. DI. TC,
8CPXL15.2ESW	7	447@1800	261	157.8	1305@1350	269	122	122	EM. DI. TC,
8CPXL15.2ESW	8	430@1800	254	153.5	1322@1425	272	130.1	130.1	EM. DI. TC,
8CPXL15.2ESW	9	457@1700	273	155.8	1779@1200	360	145.4	145.4	EM. DI. TC,
8CPXL15.2ESW	10	469@1800	269	162.6	1779@1200	356	143.6	143.6	EM. DI. TC,
8CPXL15.2ESW	11	436@1700	255	145.8	1692@1200	344	138.9	138.9	EM. DI. TC,
8CPXL15.2ESW	12	413@1700	244	139.4	1606@1200	324	130.8	130.8	EM. DI. TC,
8CPXL15.2ESW	13	540@2000	288	193.8	1736@1400	351	165.5	165.5	EM. DI. TC,
8CPXL15.2ESW	14	540@2100	280	198	1817@1400	364	171.2	171.2	EM. DI. TC,
8CPXL15.2ESW	15	580@2100	309	218.3	1954@1400	389	183.1	183.1	EM. DI. TC,
8CPXL15.2ESW	16	595@2100	318	224.3	2005@1400	398	187.3	187.3	EM. DI. TC,
8CPXL15.2ESW	17	401@1800	235	142	1387@1250	286	120.1	120.1	EM. DI. TC,
8CPXL15.2ESW	18	375@1800	219	132.4	1354@1250	278	116.9	116.9	EM. DI. TC,
8CPXL15.2ESW	19	401@1900	220	140.6	1438@1200	304	122.6	122.6	EM. DI. TC,
8CPXL15.2ESW	20	408@1700	244	139.4	1589@1200	326	131.7	131.7	EM. DI. TC,
8CPXL15.2ESW	21	389@1700	232	132.9	1512@1200	311	125.7	125.7	EM. DI. TC,
8CPXL15.2ESW	22	369@1700	221	126.4	1435@1200	299	120.6	120.6	EM. DI. TC,
8CPXL15.2ESW	23	394@1800	231	139.7	1498@1200	308	124.2	124.2	EM. DI. TC,
8CPXL15.2ESW	24	359@1800	210	127	1286@1200	266	107.4	107.4	EM. DI. TC,
8CPXL15.2ESW	25	354@1800	210	126.9	1285@1200	273	110.4	110.4	EM. DI. TC,
8CPXL15.2ESW	26	331@1800	194	117.6	1232@1200	258	104.2	104.2	EM. DI. TC,
8CPXL15.2ESW	27	347@1850	207	128.7	1449@1300	297	130	130	EM. DI. TC,
8CPXL15.2ESW	28	409@1800	240	145.4	1561@1200	319	129	129	EM. DI. TC,

Engine Model Summary Template

ATTACHMENT 2 OF 3

U-R-001-0325

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
8CPXL15.2ESW	29	C15	440@2100	231	162.8	1482@1200	301	141.9	EM. DI. TC, CAC, ECM
8CPXL15.2ESW	30	C15	474@2100	244	172.8	1685@1400	342	161.2	EM. DI. TC,
8CPXL15.2ESW	31	C15	530@2100	281	198.2	1850@1400	374	175.9	EM. DI. TC,
8CPXL15.2ESW	32	C15	347@1850	200	124.5	1449@1300	297	129.8	EM. DI. TC,
8CPXL15.2ESW	33	C15	569@1800	332	201	NA	NA	NA	EM. DI. TC,
8CPXL15.2ESW	34	C15	569@1800	332	201	NA	NA	NA	EM. DI. TC,
8CPXL15.2ESW	35	C15	642@1800	373	226	NA	NA	NA	EM. DI. TC,
8CPXL15.2ESW	36	C15	642@1800	363	171	NA	NA	NA	EM. DI. TC,
8CPXL15.2ESW	37	C15	713@1800	397	240	NA	NA	NA	EM. DI. TC,
8CPXL15.2ESW	38	C15	713@1800	397	240	NA	NA	NA	EM. DI. TC,
8CPXL15.2ESW	39	C15	500@1900	292	187	1743@1300	357	156	EM. DI. TC,
8CPXL15.2ESW	40	C15	460@1800	279	169	1537@1300	325	142	EM. DI. TC,
8CPXL15.2ESW	41	C15	511@1800	310	188	1711@1300	358	156	EM. DI. TC,
8CPXL15.2ESW	42	C15	478@1800	280	170	1591@1300	322	141	EM. DI. TC,
8CPXL15.2ESW	43	C15	437@1800	258	156	1452@1300	295	129	EM. DI. TC,
8CPXL15.2ESW	44	C15	540@2100	281	198	1817@1400	362	170	EM. DI. TC,
8CPXL15.2ESW	45	C15	478@1800	280	170	1581@1300	322	141	EM. DI. TC,
8CPXL15.2ESW	46	C15	437@1800	258	156	1451@1300	295	129	EM. DI. TC,
8CPXL15.2ESW	47	C15	642@1800	365	220.7	NA	NA	NA	EM. DI. TC,
8CPXL15.2ESW	48	C15	642@1800	365	220.7	NA	NA	NA	EM. DI. TC,
8CPXL15.2ESW	49	C15	503@1500	344	173.6	NA	NA	NA	EM. DI. TC,
8CPXL15.2ESW	50	C15	642@1800	344	173.6	NA	NA	NA	EM. DI. TC,
8CPXL15.2ESW	51	C15	436@1900	245	156	1538@1425	315	151	EM. DI. TC,
8CPXL15.2ESW	52	C15	436@1900	246	157	1538@1425	315	151	EM. DI. TC,
8CPXL15.2ESW	53	C15	394@1800	231	140	1498@1200	308	124	EM. DI. TC,
8CPXL15.2ESW	54	C15	354@1800	202	122	1285@1200	262	106	EM. DI. TC,
8CPXL15.2ESW	55	C15	440@2100	231	163	1483@1400	301	142	EM. DI. TC,
8CPXL15.2ESW	56	C15	475@2100	249	176	1601@1400	333	157	EM. DI. TC,

Engine Model Summary Template

ATTACHMENT 3 of 3

U-R-001-0325

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8CPXL15.2ESW	57	C15	393@1800	233	140.8	1330@1200	272	109.9	EM. DI. TC, CAC, ECM
8CPXL15.2ESW	58	C15	362@1800	213	129.2	1282@1200	265	107.1	EM. DI. TC,
8CPXL15.2ESW	59	C15	362@1800	214	129.8	1283@1200	267	107.7	EM. DI. TC,
8CPXL15.2ESW	60	C15	333@1800	201	121.9	1235@1200	258	104	EM. DI. TC,
8CPXL15.2ESW	61	C15	443@2100	230	162.2	1574@1400	317	149.5	EM. DI. TC,
8CPXL15.2ESW	62	C15	361@2100	191	135	1283@1400	264	124	EM. DI. TC
8CPXL15.2ESW	63	C15	412@2100	213	150.3	1465@1400	300	141.3	EM. DI. TC,
8CPXL15.2ESW	64	C15	413@1700	244	139.5	1606@1200	324	130.8	EM. DI. TC,
8CPXL15.2ESW	65	C15	512@1800	297	180	1631@1350	338	154	EM. DI. TC,
8CPXL15.2ESW	66	C15	433@1800	249	151	1516@1400	312	147	EM. DI. TC,
8CPXL15.2ESW	67	C15	436@1700	255	146	1692@1200	344	139	EM. DI. TC,
8CPXL15.2ESW	68	C15	475@2100	249	176	1601@1400	333	157	EM. DI. TC,
8CPXL15.2ESW	69	C15	359@1800	209	127	1286@1200	268	108	EM. DI. TC,
8CPXL15.2ESW	70	C15	394@1800	229	139	1498@1200	306	123	EM. DI. TC,
8CPXL15.2ESW	71	C15	394@1800	230	140	1498@1200	307	124	EM. DI. TC,
8CPXL15.2ESW	72	C15	359@1800	210	128	1286@1200	269	109	EM. DI. TC,
8CPXL15.2ESW	73	C15	362@1800	215	130	1283@1200	267	108	EM. DI. TC, ▼

Engine Model Summary Template

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
8CPXL15.2ESW	80			251	152		282	114	
8CPXL15.2ESW	81			233	141				
8CPXL15.2ESW	82			233	141				
8CPXL15.2ESW	83			217	131		262	106	
8CPXL15.2ESW	84	C15	469@1800	269	163	1779@1200	356	144	EM, DI, TC,
8CPXL15.2ESW	85	C15	457@1700	281	161	1779@1200	360	145	EM, DI, TC,