

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 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 engines and emission control systems 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)
2009	9HZXL2.57C41	2.574	Diesel	5000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Direct Diesel Injection			Pump, Generator Set, Other 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
8 ≤kW < 37	Tier 4 Interim	OPTIONAL STD	N/A	N/A	7.5	5.5	0.30	N/A	N/A	N/A
		CERT	--	--	7.4	3.2	0.18	--	--	--


BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has complied with the more stringent set of standards from the various power categories in conformance with Section 1039.230 (e) of the "California Exhaust Emission Standards and Test Procedures for 2008 and Later Tier 4 Off-Road Compression-Ignition Engines, Part I-C" adopted October 20, 2005.

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 12th day of December 2008.


 Annette Hebert, Chief
 Mobile Source Operations Division

Motorcraft
Nonind CI

Notes

Attachment

p 5 of 14

U-R-034-0203

Engine Model Summary Template

Engine Family	1 Engine Code	2 Engine Model	31 HP (kW)	32 Fuel System	33 Fuel System	34 Fuel System	35 Fuel System	36 Fuel System	37 Fuel System	38 Fuel System	39 Fuel System	40 Fuel System	41 Fuel System	42 Fuel System	43 Fuel System	44 Fuel System	45 Fuel System	46 Fuel System	47 Fuel System	48 Fuel System	49 Fuel System	50 Fuel System	51 Fuel System	52 Fuel System	53 Fuel System	54 Fuel System	55 Fuel System	56 Fuel System	57 Fuel System	58 Fuel System	59 Fuel System	60 Fuel System	61 Fuel System	62 Fuel System	63 Fuel System	64 Fuel System	65 Fuel System	66 Fuel System	67 Fuel System	68 Fuel System	69 Fuel System	70 Fuel System	71 Fuel System	72 Fuel System	73 Fuel System	74 Fuel System	75 Fuel System	76 Fuel System	77 Fuel System	78 Fuel System	79 Fuel System	80 Fuel System	81 Fuel System	82 Fuel System	83 Fuel System	84 Fuel System	85 Fuel System	86 Fuel System	87 Fuel System	88 Fuel System	89 Fuel System	90 Fuel System	91 Fuel System	92 Fuel System	93 Fuel System	94 Fuel System	95 Fuel System	96 Fuel System	97 Fuel System	98 Fuel System	99 Fuel System	100 Fuel System																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
3800L27504	NA	2341Z	35.482500	47.0	7.2	67.02750	46.5	7.3	69.02800	46.5	7.3	71.02850	47.0	7.2	67.02750	47.0	7.2	69.02800	47.0	7.2	71.02850	47.5	7.3	73.02900	48.0	7.4	75.02950	48.5	7.5	77.03000	49.0	7.6	79.03050	49.5	7.7	81.03100	50.0	7.8	83.03150	50.5	7.9	85.03200	51.0	8.0	87.03250	51.5	8.1	89.03300	52.0	8.2	91.03350	52.5	8.3	93.03400	53.0	8.4	95.03450	53.5	8.5	97.03500	54.0	8.6	99.03550	54.5	8.7	101.03600	55.0	8.8	103.03650	55.5	8.9	105.03700	56.0	9.0	107.03750	56.5	9.1	109.03800	57.0	9.2	111.03850	57.5	9.3	113.03900	58.0	9.4	115.03950	58.5	9.5	117.04000	59.0	9.6	119.04050	59.5	9.7	121.04100	60.0	9.8	123.04150	60.5	9.9	125.04200	61.0	10.0	127.04250	61.5	10.1	129.04300	62.0	10.2	131.04350	62.5	10.3	133.04400	63.0	10.4	135.04450	63.5	10.5	137.04500	64.0	10.6	139.04550	64.5	10.7	141.04600	65.0	10.8	143.04650	65.5	10.9	145.04700	66.0	11.0	147.04750	66.5	11.1	149.04800	67.0	11.2	151.04850	67.5	11.3	153.04900	68.0	11.4	155.04950	68.5	11.5	157.05000	69.0	11.6	159.05050	69.5	11.7	161.05100	70.0	11.8	163.05150	70.5	11.9	165.05200	71.0	12.0	167.05250	71.5	12.1	169.05300	72.0	12.2	171.05350	72.5	12.3	173.05400	73.0	12.4	175.05450	73.5	12.5	177.05500	74.0	12.6	179.05550	74.5	12.7	181.05600	75.0	12.8	183.05650	75.5	12.9	185.05700	76.0	13.0	187.05750	76.5	13.1	189.05800	77.0	13.2	191.05850	77.5	13.3	193.05900	78.0	13.4	195.05950	78.5	13.5	197.06000	79.0	13.6	199.06050	79.5	13.7	201.06100	80.0	13.8	203.06150	80.5	13.9	205.06200	81.0	14.0	207.06250	81.5	14.1	209.06300	82.0	14.2	211.06350	82.5	14.3	213.06400	83.0	14.4	215.06450	83.5	14.5	217.06500	84.0	14.6	219.06550	84.5	14.7	221.06600	85.0	14.8	223.06650	85.5	14.9	225.06700	86.0	15.0	227.06750	86.5	15.1	229.06800	87.0	15.2	231.06850	87.5	15.3	233.06900	88.0	15.4	235.06950	88.5	15.5	237.07000	89.0	15.6	239.07050	89.5	15.7	241.07100	90.0	15.8	243.07150	90.5	15.9	245.07200	91.0	16.0	247.07250	91.5	16.1	249.07300	92.0	16.2	251.07350	92.5	16.3	253.07400	93.0	16.4	255.07450	93.5	16.5	257.07500	94.0	16.6	259.07550	94.5	16.7	261.07600	95.0	16.8	263.07650	95.5	16.9	265.07700	96.0	17.0	267.07750	96.5	17.1	269.07800	97.0	17.2	271.07850	97.5	17.3	273.07900	98.0	17.4	275.07950	98.5	17.5	277.08000	99.0	17.6	279.08050	99.5	17.7	281.08100	100.0	17.8	283.08150	100.5	17.9	285.08200	101.0	18.0	287.08250	101.5	18.1	289.08300	102.0	18.2	291.08350	102.5	18.3	293.08400	103.0	18.4	295.08450	103.5	18.5	297.08500	104.0	18.6	299.08550	104.5	18.7	301.08600	105.0	18.8	303.08650	105.5	18.9	305.08700	106.0	19.0	307.08750	106.5	19.1	309.08800	107.0	19.2	311.08850	107.5	19.3	313.08900	108.0	19.4	315.08950	108.5	19.5	317.09000	109.0	19.6	319.09050	109.5	19.7	321.09100	110.0	19.8	323.09150	110.5	19.9	325.09200	111.0	20.0	327.09250	111.5	20.1	329.09300	112.0	20.2	331.09350	112.5	20.3	333.09400	113.0	20.4	335.09450	113.5	20.5	337.09500	114.0	20.6	339.09550	114.5	20.7	341.09600	115.0	20.8	343.09650	115.5	20.9	345.09700	116.0	21.0	347.09750	116.5	21.1	349.09800	117.0	21.2	351.09850	117.5	21.3	353.09900	118.0	21.4	355.09950	118.5	21.5	357.10000	119.0	21.6	359.10050	119.5	21.7	361.10100	120.0	21.8	363.10150	120.5	21.9	365.10200	121.0	22.0	367.10250	121.5	22.1	369.10300	122.0	22.2	371.10350	122.5	22.3	373.10400	123.0	22.4	375.10450	123.5	22.5	377.10500	124.0	22.6	379.10550	124.5	22.7	381.10600	125.0	22.8	383.10650	125.5	22.9	385.10700	126.0	23.0	387.10750	126.5	23.1	389.10800	127.0	23.2	391.10850	127.5	23.3	393.10900	128.0	23.4	395.10950	128.5	23.5	397.11000	129.0	23.6	399.11050	129.5	23.7	401.11100	130.0	23.8	403.11150	130.5	23.9	405.11200	131.0	24.0	407.11250	131.5	24.1	409.11300	132.0	24.2	411.11350	132.5	24.3	413.11400	133.0	24.4	415.11450	133.5	24.5	417.11500	134.0	24.6	419.11550	134.5	24.7	421.11600	135.0	24.8	423.11650	135.5	24.9	425.11700	136.0	25.0	427.11750	136.5	25.1	429.11800	137.0	25.2	431.11850	137.5	25.3	433.11900	138.0	25.4	435.11950	138.5	25.5	437.12000	139.0	25.6	439.12050	139.5	25.7	441.12100	140.0	25.8	443.12150	140.5	25.9	445.12200	141.0	26.0	447.12250	141.5	26.1	449.12300	142.0	26.2	451.12350	142.5	26.3	453.12400	143.0	26.4	455.12450	143.5	26.5	457.12500	144.0	26.6	459.12550	144.5	26.7	461.12600	145.0	26.8	463.12650	145.5	26.9	465.12700	146.0	27.0	467.12750	146.5	27.1	469.12800	147.0	27.2	471.12850	147.5	27.3	473.12900	148.0	27.4	475.12950	148.5	27.5	477.13000	149.0	27.6	479.13050	149.5	27.7	481.13100	150.0	27.8	483.13150	150.5	27.9	485.13200	151.0	28.0	487.13250	151.5	28.1	489.13300	152.0	28.2	491.13350	152.5	28.3	493.13400	153.0	28.4	495.13450	153.5	28.5	497.13500	154.0	28.6	499.13550	154.5	28.7	501.13600	155.0	28.8	503.13650	155.5	28.9	505.13700	156.0	29.0	507.13750	156.5	29.1	509.13800	157.0	29.2	511.13850	157.5	29.3	513.13900	158.0	29.4	515.13950	158.5	29.5	517.14000	159.0	29.6	519.14050	159.5	29.7	521.14100	160.0	29.8	523.14150	160.5	29.9	525.14200	161.0	30.0	527.14250	161.5	30.1	529.14300	162.0	30.2	531.14350	162.5	30.3	533.14400	163.0	30.4	535.14450	163.5	30.5	537.14500	164.0	30.6	539.14550	164.5	30.7	541.14600	165.0	30.8	543.14650	165.5	30.9	545.14700	166.0	31.0	547.14750	166.5	31.1	549.14800	167.0	31.2	551.14850	167.5	31.3	553.14900	168.0	31.4	555.14950	168.5	31.5	557.15000	169.0	31.6	559.15050	169.5	31.7	561.15100	170.0	31.8	563.15150	170.5	31.9	565.15200	171.0	32.0	567.15250	171.5	32.1	569.15300	172.0	32.2	571.15350	172.5	32.3	573.15400	173.0	32.4	575.15450	173.5	32.5	577.15500	174.0	32.6	579.15550	174.5	32.7	581.15600	175.0	32.8	583.15650	175.5	32.9	585.15700	176.0	33.0	587.15750	176.5	33.1	589.15800	177.0	33.2	591.15850	177.5	33.3	593.15900	178.0	33.4	595.15950	178.5	33.5	597.16000	179.0	33.6	599.16050	179.5	33.7	601.16100	180.0	33.8	603.16150	180.5	33.9	605.16200	181.0	34.0	607.16250	181.5	34.1	609.16300	182.0	34.2	611.16350	182.5	34.3	613.16400	183.0	34.4	615.16450	183.5	34.5	617.16500	184.0	34.6	619.16550	184.5	34.7	621.16600	185.0	34.8	623.16650	185.5	34.9	625.16700	186.0	35.0	627.16750	186.5	35.1	629.16800	187.0	35.2	631.16850	187.5	35.3	633.16900	188.0	35.4	635.16950	188.5	35.5	637.17000	189.0	35.6	639.17050	189.5	35.7	641.17100	190.0	35.8	643.17150	190.5	35.9	645.17200	191.0	36.0	647.17250	191.5	36.1	649.17300	192.0	36.2	651.17350	192.5	36.3	653.17400	193.0	36.4	655.17450	193.5	36.5	657.17500	194.0	36.6	659.17550	194.5	36.7	661.17600	195.0	36.8	663.17650	195.5	36.9	665.17700	196.0	37.0	667.17750	196.5	37.1	669.17800	197.0	37.2	671.17850	197.5	37.3	673.17900	198.0	37.4	675.17950	198.5	37.5	677.18000	199.0	37.6	679.18050	199.5	37.7	681.18100	200.0	37.8	683.18150	200.5	37.9	685.18200	201.0	38.0	687.18250	201.5	38.1	689.18300	202.0	38.2	691.18350	202.5	38.3	693.18400	203.0	38.4	695.18450	203.5	38.5	697.18500	204.0	38.6	699.18550	204.5	38.7	701.18600	205.0	38.8	703.18650	205.5	38.9	705.18700	206.0	39.0	707.18750	206.5	39.1	709.18800	207.0	39.2	711.18850	207.5	39.3	713.18900	208.0	39.4	715.18950	208.5	39.5	717.19000	209.0	39.6	719.19050	209.5	39.7	721.19100	210.0	39.8	723.19150	210.5	39.9	725.19200	211.0	40.0	727.19250	211.5	40.1	729.19300	212.0	40.2	731.19350	212.5	40.3	733.19400	213.0	40.4	735.19450	213.5	40.5	737.19500	214.0	40.6	739.19550	214.5	40.7	741.19600	215.0	40.8	743.19650	215.5	40.9	745.19700	216.0	41.0	747.19750	216.5	41.1	749.19800	217.0	41.2	751.19850	217.5	41.3	753.19900	218.0	41.4	755.19950	218.5	41.5	757.20000	219.0	41.6	759.20050	219.5	41.7	761.20100

Motorfabrik Hatz
Nenrad CI

Attachment
Engine Model Summary Template

P 10 of 14

U-R-034-0203

Engine Code	1 Engine Code	2 Engine Model	3 Weight	4 Volume	5 Ratio	6 Fuel Use	7 Volume of Fuel	8 Volume of Fuel	9 Fuel Use	10 Fuel Use	11 Fuel Use	12 Fuel Use
WZSLC2-277641	WZ	33451	402.30200	51.0	0.1	133.06210	51.0	118.02510	50.0	118.02510	50.0	0.1
WZSLC2-277641	WZ	33451	402.302100	51.0	0.0	131.062100	51.0	116.025100	51.0	116.025100	51.0	0.1
WZSLC2-277641	WZ	33451	402.302100	51.0	0.0	131.062100	51.0	116.025100	51.0	116.025100	51.0	0.0
WZSLC2-277641	WZ	33451	402.302000	51.0	0.8	121.062000	51.0	121.062000	51.0	121.062000	51.0	0.8
WZSLC2-277641	WZ	33451	402.301900	50.0	0.9	122.018900	50.0	122.018900	50.0	122.018900	50.0	0.9
WZSLC2-277641	WZ	33451	402.301800	50.0	0.2	122.018000	50.0	122.018000	50.0	122.018000	50.0	0.2
WZSLC2-277641	WZ	33451	402.301800	50.0	0.1	122.018000	50.0	122.018000	50.0	122.018000	50.0	0.1
WZSLC2-277641	WZ	33451	417.811800	50.0	0.0	104.038000	50.0	104.038000	50.0	104.038000	50.0	0.0
WZSLC2-277641	WZ	33451	417.802000	50.0	0.7	104.038000	50.0	104.038000	50.0	104.038000	50.0	0.7
WZSLC2-277641	WZ	33451	417.802000	50.0	0.0	104.038000	50.0	104.038000	50.0	104.038000	50.0	0.0
WZSLC2-277641	WZ	33451	417.802000	50.0	0.5	104.038000	50.0	104.038000	50.0	104.038000	50.0	0.5
WZSLC2-277641	WZ	33451	402.302000	50.0	0.4	104.038000	50.0	104.038000	50.0	104.038000	50.0	0.4
WZSLC2-277641	WZ	33451	402.302000	50.0	0.2	104.038000	50.0	104.038000	50.0	104.038000	50.0	0.2
WZSLC2-277641	WZ	33451	402.302000	50.5	0.2	104.038000	50.5	104.038000	50.5	104.038000	50.5	0.2
WZSLC2-277641	WZ	33451	402.302000	50.5	0.1	104.038000	50.5	104.038000	50.5	104.038000	50.5	0.1
WZSLC2-277641	WZ	33451	402.302000	50.5	0.0	104.038000	50.5	104.038000	50.5	104.038000	50.5	0.0
WZSLC2-277641	WZ	33451	402.302000	50.5	0.5	104.038000	50.5	104.038000	50.5	104.038000	50.5	0.5
WZSLC2-277641	WZ	33451	402.302000	51.0	0.7	104.038000	51.0	104.038000	51.0	104.038000	51.0	0.7
WZSLC2-277641	WZ	33451	402.302000	51.0	0.5	104.038000	51.0	104.038000	51.0	104.038000	51.0	0.5
WZSLC2-277641	WZ	33451	402.302000	51.0	0.4	104.038000	51.0	104.038000	51.0	104.038000	51.0	0.4
WZSLC2-277641	WZ	33451Z	402.302000	51.0	0.0	107.062000	51.0	107.062000	51.0	107.062000	51.0	0.0
WZSLC2-277641	WZ	33451Z	402.302000	51.5	0.3	104.038000	51.5	104.038000	51.5	104.038000	51.5	0.3
WZSLC2-277641	WZ	33451Z	402.302000	52.0	0.0	104.038000	52.0	104.038000	52.0	104.038000	52.0	0.0
WZSLC2-277641	WZ	33451Z	402.302000	52.0	0.8	104.038000	52.0	104.038000	52.0	104.038000	52.0	0.8

DDI

