

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-14-012;

**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)
2015	FHZXL3.43C43	3.432	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Mechanical Direct Injection, Electronic Control Module, Exhaust Gas Recirculation, Diesel Oxidation Catalyst, Periodic Trap Oxidizer			Pump, Compressor	

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for non-methane hydrocarbon (NMHC), 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 (%)		
			NMHC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
19 ≤ kW < 56	Tier 4 Final	STD	N/A	N/A	4.7	5.0	0.03	N/A	N/A	N/A
		CERT	--	--	3.9	0.02	0.01	--	--	--

**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).

**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 and last amended October 25, 2012.

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 12<sup>th</sup> day of January 2015.

  
 Annette Hebert, Chief  
 Emissions Compliance, Automotive Regulations and Science Division

Detailed engine models summarization of the engine family FHZXL3.43C43

Attachment 1 of 3

U-R-03A-0301  
1/7/15



EPA Engine Family Name	Engine Model	Engine Code	Rated power (kW)	Rated Speed (RPM)	Maximum Torque (N*m)	Speed at Maximum Torque	Fuel Rate at Maximum Torque	Fuel Rate at Rated Speed (mm3/stroke)	Emission Control System
FHZXL3.43C43	4M43Z	cs-4M43Z-2800	46,7	2800	159,2	2800	44,5	44,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43Z	cs-4M43Z-2750	46,1	2750	160,2	2750	44,5	44,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43Z	cs-4M43Z-2700	45,6	2700	161,3	2700	44,5	44,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43Z	cs-4M43Z-2650	45,3	2650	163,2	2650	44,5	44,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43Z	cs-4M43Z-2600	44,9	2600	164,9	2600	45,0	45,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43Z	cs-4M43Z-2550	44,4	2550	166,3	2550	45,0	45,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43Z	cs-4M43Z-2500	44,0	2500	168,1	2500	46,0	46,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43Z	cs-4M43Z-2450	43,6	2450	169,9	2450	46,0	46,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43Z	cs-4M43Z-2400	43,0	2400	171,1	2400	46,0	46,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43Z	cs-4M43Z-2350	42,5	2350	172,7	2350	46,0	46,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43Z	cs-4M43Z-2300	44,7	2300	185,6	2300	49,5	49,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43Z	cs-4M43Z-2250	44,2	2250	187,6	2250	49,5	49,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43Z	cs-4M43Z-2200	43,4	2200	188,4	2200	49,5	49,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43Z	cs-4M43Z-2150	42,5	2150	188,8	2150	49,5	49,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43Z	cs-4M43Z-2100	41,7	2100	189,6	2100	49,5	49,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43Z	cs-4M43Z-2050	41,0	2050	191,0	2050	49,5	49,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43Z	cs-4M43Z-2000	40,4	2000	192,9	2000	49,5	49,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43Z	cs-4M43Z-1950	39,2	1950	192,0	1950	49,0	49,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43Z	cs-4M43Z-1900	38,4	1900	193,0	1900	49,0	49,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43Z	cs-4M43Z-1850	37,5	1850	193,6	1850	49,0	49,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43Z	cs-4M43Z-1800	36,5	1800	193,6	1800	49,0	49,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43Z	cs-4M43Z-1750	35,4	1750	193,2	1750	48,0	48,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43Z	cs-4M43Z-1700	34,3	1700	192,7	1700	48,0	48,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43Z	cs-4M43Z-1650	33,5	1650	193,9	1650	48,0	48,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43Z	cs-4M43Z-1600	32,5	1600	194,0	1600	48,0	48,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43Z	cs-4M43Z-1550	31,3	1550	192,8	1550	48,0	48,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43Z	cs-4M43Z-1500	30,0	1500	191,0	1500	48,0	48,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4L43C	cs-4L43C-3150	44,2	3150	134,0	3150	42,0	42,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4L43C	cs-4L43C-3000	44,2	3000	140,7	3000	42,5	42,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4L43C	cs-4L43C-2950	44,0	2950	142,4	2950	42,5	42,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4L43C	cs-4L43C-2900	43,7	2900	143,9	2900	42,5	42,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4L43C	cs-4L43C-2850	43,6	2850	145,9	2850	42,5	42,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4L43C	cs-4L43C-2800	43,2	2800	147,3	2800	42,5	42,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4L43C	cs-4L43C-2750	43,0	2750	149,3	2750	43,0	43,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4L43C	cs-4L43C-2700	42,3	2700	149,6	2700	43,0	43,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4L43C	cs-4L43C-2650	42,1	2650	151,7	2650	43,0	43,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4L43C	cs-4L43C-2600	42,0	2600	154,3	2600	43,5	43,5	DDI/ECM/EGR/DOC/DPF

Detailed engine models summarization of the engine family FHZXL3.43C43

Attachment 2 of 3

U-14-031-0301  
1/7/15



EPA Engine Family Name	Engine Model	Engine Code	Rated power (kW)	Rated Speed (RPM)	Maximum Torque (N*m)	Speed at Maximum Torque	Fuel Rate at Maximum Torque	Fuel Rate at Rated Speed (mm <sup>3</sup> /stroke)	Emission Control System
FHZXL3.43C43	4M43	cs-4M43-3150	49,9	3150	151,3	3150	44,0	44,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43	cs-4M43-3000	49,9	3000	158,8	3000	44,5	44,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43	cs-4M43-2950	49,3	2950	159,5	2950	44,5	44,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43	cs-4M43-2900	48,6	2900	160,1	2900	44,5	44,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43	cs-4M43-2850	48,4	2850	162,0	2850	44,5	44,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43	cs-4M43-2800	48,0	2800	163,9	2800	44,5	44,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43	cs-4M43-2750	47,5	2750	164,8	2750	44,5	44,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43	cs-4M43-2700	46,9	2700	165,9	2700	44,5	44,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43	cs-4M43-2650	46,6	2650	167,8	2650	44,5	44,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43	cs-4M43-2600	46,1	2600	169,4	2600	45,0	45,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43	cs-4M43-2550	45,6	2550	170,8	2550	45,0	45,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43	cs-4M43-2500	45,2	2500	172,5	2500	46,0	46,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43	cs-4M43-2450	44,7	2450	174,4	2450	46,0	46,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43	cs-4M43-2400	44,1	2400	175,5	2400	46,0	46,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43	cs-4M43-2350	43,6	2350	177,0	2350	46,0	46,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43	cs-4M43-2300	45,7	2300	189,9	2300	49,5	49,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43	cs-4M43-2250	45,2	2250	191,8	2250	49,5	49,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43	cs-4M43-2200	44,4	2200	192,6	2200	49,5	49,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43	cs-4M43-2150	43,4	2150	192,9	2150	49,5	49,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43	cs-4M43-2100	42,6	2100	193,7	2100	49,5	49,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43	cs-4M43-2050	41,9	2050	195,0	2050	49,5	49,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43	cs-4M43-2000	41,2	2000	196,9	2000	49,5	49,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43	cs-4M43-1950	40,0	1950	195,9	1950	49,0	49,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43	cs-4M43-1900	39,2	1900	196,8	1900	49,0	49,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43	cs-4M43-1850	38,2	1850	197,4	1850	49,0	49,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43	cs-4M43-1800	37,2	1800	197,4	1800	49,0	49,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43	cs-4M43-1750	36,1	1750	196,8	1750	48,0	48,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43	cs-4M43-1700	34,9	1700	196,2	1700	48,0	48,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43	cs-4M43-1650	34,1	1650	197,4	1650	48,0	48,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43	cs-4M43-1600	33,1	1600	197,4	1600	48,0	48,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43	cs-4M43-1550	31,8	1550	196,1	1550	48,0	48,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43	cs-4M43-1500	30,5	1500	194,2	1500	48,0	48,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43Z	cs-4M43Z-3150	48,4	3150	146,7	3150	44,0	44,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43Z	cs-4M43Z-3000	48,4	3000	154,1	3000	44,5	44,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43Z	cs-4M43Z-2950	47,8	2950	154,7	2950	44,5	44,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43Z	cs-4M43Z-2900	47,2	2900	155,4	2900	44,5	44,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4M43Z	cs-4M43Z-2850	47,0	2850	157,3	2850	44,5	44,5	DDI/ECM/EGR/DOC/DPF

Detailed engine models summarization of the engine family FHZXL3.43C43

Attachment 3 of 3

U-R-034-0301  
1/7/15



EPA Engine Family Name	Engine Model	Engine Code	Rated power (kW)	Rated Speed (RPM)	Maximum Torque (N*m)	Speed at Maximum Torque	Fuel Rate at Maximum Torque	Fuel Rate at Rated Speed (mm <sup>3</sup> /stroke)	Emission Control System
FHZXL3.43C43	4L43C	cs-4L43C-2550	41,7	2550	156,2	2550	43,5	43,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4L43C	cs-4L43C-2500	41,2	2500	157,3	2500	43,5	43,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4L43C	cs-4L43C-2450	40,7	2450	158,8	2450	43,5	43,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4L43C	cs-4L43C-2400	40,3	2400	160,2	2400	43,5	43,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4L43C	cs-4L43C-2350	39,6	2350	160,8	2350	43,5	43,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4L43C	cs-4L43C-2300	42,8	2300	177,8	2300	48,5	48,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4L43C	cs-4L43C-2250	42,4	2250	180,0	2250	48,5	48,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4L43C	cs-4L43C-2200	41,7	2200	180,9	2200	48,5	48,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4L43C	cs-4L43C-2150	40,8	2150	181,2	2150	48,5	48,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4L43C	cs-4L43C-2100	40,0	2100	182,0	2100	48,5	48,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4L43C	cs-4L43C-2050	39,1	2050	182,0	2050	48,5	48,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4L43C	cs-4L43C-2000	38,2	2000	182,4	2000	48,5	48,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4L43C	cs-4L43C-1950	37,6	1950	184,1	1950	48,0	48,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4L43C	cs-4L43C-1900	36,9	1900	185,5	1900	48,0	48,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4L43C	cs-4L43C-1850	36,1	1850	186,3	1850	48,0	48,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4L43C	cs-4L43C-1800	35,3	1800	187,3	1800	48,0	48,0	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4L43C	cs-4L43C-1750	34,0	1750	185,5	1750	46,5	46,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4L43C	cs-4L43C-1700	33,0	1700	185,4	1700	46,5	46,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4L43C	cs-4L43C-1650	31,9	1650	184,6	1650	46,5	46,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4L43C	cs-4L43C-1600	30,8	1600	183,8	1600	46,5	46,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4L43C	cs-4L43C-1550	29,8	1550	183,6	1550	46,5	46,5	DDI/ECM/EGR/DOC/DPF
FHZXL3.43C43	4L43C	cs-4L43C-1500	28,8	1500	183,3	1500	46,5	46,5	DDI/ECM/EGR/DOC/DPF