

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)
2017	HFPXL03.4FSD	3.4	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Electronic Direct Injection, Turbocharger, Charge Air Cooler, Electronic Control Module, Exhaust Gas Recirculation, Diesel Oxidation Catalyst, Selective Catalytic Reduction - Urea, and Ammonia Oxidation			Loader, Tractor, Generator Set, and Other Industrial Equipment	

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
56 ≤ kW < 130	Tier 4 Final	STD	0.19	0.40	N/A	5.0	0.02	N/A	N/A	N/A
		CERT	0.004	0.33	--	0.05	0.02	--	--	--

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 New 2011 and Later Tier 4 Off-Road Compression-Ignition Engines, Parts I-D" adopted October 20, 2005 and last amended October 25, 2012.

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 9th day of December 2016.


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

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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
HFPXL03.4FSD	F5BFL414J*B	F5BFL414J*B	121 @ 2200	92	N/A	363 @ 1400	111	N/A	DDI ECM TC CAC DOC SCR-U AMOX EGR.
HFPXL03.4FSD	F5GFL414J*B	F5GFL414J*B	121 @ 2200	92	N/A	363 @ 1400	111	N/A	DDI ECM TC CAC DOC SCR-U AMOX EGR.
HFPXL03.4FSD	F5BFL414J*B	^{854F-E34TAN 4260/2200} F5BFL414J*B	121 @ 2200	92	N/A	363 @ 1400	111	N/A	DDI ECM TC CAC DOC SCR-U AMOX EGR.
HFPXL03.4FSD	F5BFL414J*B	C3.4B 4260/2200	121 @ 2200	92	N/A	363 @ 1400	111	N/A	DDI ECM TC CAC DOC SCR-U AMOX EGR.
HFPXL03.4FSD	F5BFL414H*B	F5BFL414H*B	84 @ 2200	63	N/A	262 @ 1400	78	N/A	DDI ECM TC CAC DOC SCR-U AMOX EGR.
HFPXL03.4FSD	F5GFL414H*B	F5GFL414H*B	84 @ 2200	63	N/A	262 @ 1400	78	N/A	DDI ECM TC CAC DOC SCR-U AMOX EGR.
HFPXL03.4FSD	F5BFL414H*B	^{864F-E34TAN 4270/2200} F5BFL414H*B	84 @ 2200	63	N/A	262 @ 1400	78	N/A	DDI ECM TC CAC DOC SCR-U AMOX EGR.
HFPXL03.4FSD	F5BFL414H*B	C3.4B 4270/2200	84 @ 2200	63	N/A	262 @ 1400	78	N/A	DDI ECM TC CAC DOC SCR-U AMOX EGR.
HFPXL03.4FSD	F5BFL414E*B	F5BFL414E*B	94 @ 2200	70	N/A	293 @ 1400	86	N/A	DDI ECM TC CAC DOC SCR-U AMOX EGR.
HFPXL03.4FSD	F5GFL414E*B	F5GFL414E*B	94 @ 2200	70	N/A	293 @ 1400	86	N/A	DDI ECM TC CAC DOC SCR-U AMOX EGR.
HFPXL03.4FSD	F5BFL414E*B	^{854F-E34TAN 4278/2200} F5BFL414E*B	94 @ 2200	70	N/A	293 @ 1400	86	N/A	DDI ECM TC CAC DOC SCR-U AMOX EGR.
HFPXL03.4FSD	F5BFL414E*B	C3.4B 4278/2200	94 @ 2200	70	N/A	293 @ 1400	86	N/A	DDI ECM TC CAC DOC SCR-U AMOX EGR.
HFPXL03.4FSD	F5BFL414A*B	F5BFL414A*B	101 @ 2200	75	N/A	319 @ 1400	95	N/A	DDI ECM TC CAC DOC SCR-U AMOX EGR.
HFPXL03.4FSD	F5GFL414A*B	F5GFL414A*B	101 @ 2200	75	N/A	319 @ 1400	95	N/A	DDI ECM TC CAC DOC SCR-U AMOX EGR.
HFPXL03.4FSD	F5BFL414A*B	^{864F-E34TAN 4268/2200} F5BFL414A*B	101 @ 2200	75	N/A	319 @ 1400	95	N/A	DDI ECM TC CAC DOC SCR-U AMOX EGR.
HFPXL03.4FSD	F5BFL414A*B	C3.4B 4268/2200	101 @ 2200	75	N/A	319 @ 1400	95	N/A	DDI ECM TC CAC DOC SCR-U AMOX EGR.
HFPXL03.4FSD	F5BFL414B*B	F5BFL414B*B	111 @ 2200	83	N/A	341 @ 1400	101	N/A	DDI ECM TC CAC DOC SCR-U AMOX EGR.
HFPXL03.4FSD	F5GFL414B*B	F5GFL414B*B	111 @ 2200	83	N/A	341 @ 1400	101	N/A	DDI ECM TC CAC DOC SCR-U AMOX EGR.
HFPXL03.4FSD	F5BFL414B*B	^{854F-E34TAN 4264/2200} F5BFL414B*B	111 @ 2200	83	N/A	341 @ 1400	101	N/A	DDI ECM TC CAC DOC SCR-U AMOX EGR.
HFPXL03.4FSD	F5BFL414B*B	C3.4B 4264/2200	111 @ 2200	83	N/A	341 @ 1400	101	N/A	DDI ECM TC CAC DOC SCR-U AMOX EGR.
HFPXL03.4FSD	F5BFL414F*B	F5BFL414F*B	88 @ 2500	62	N/A	274 @ 1400	84	N/A	DDI ECM TC CAC DOC SCR-U AMOX EGR.
HFPXL03.4FSD	F5GFL414F*B	F5GFL414F*B	88 @ 2500	62	N/A	274 @ 1400	84	N/A	DDI ECM TC CAC DOC SCR-U AMOX EGR.
HFPXL03.4FSD	F5BFL414F*B	^{864F-E34TAN 4282/2500} F5BFL414F*B	88 @ 2500	62	N/A	274 @ 1400	84	N/A	DDI ECM TC CAC DOC SCR-U AMOX EGR.
HFPXL03.4FSD	F5BFL414F*B	C3.4B 4282/2500	88 @ 2500	62	N/A	274 @ 1400	84	N/A	DDI ECM TC CAC DOC SCR-U AMOX EGR.
HFPXL03.4FSD	F5BFL414D*B	F5BFL414D*B	101 @ 2500	70	N/A	319 @ 1400	95	N/A	DDI ECM TC CAC DOC SCR-U AMOX EGR.
HFPXL03.4FSD	F5GFL414D*B	F5GFL414D*B	101 @ 2500	70	N/A	319 @ 1400	95	N/A	DDI ECM TC CAC DOC SCR-U AMOX EGR.

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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
HFPXL03.4FSD	F5BFL414D*B	854F-E34TAN 4274/2500	101 @ 2500	70	N/A	319 @ 1400	95	N/A	DDI ECM TC CAC DOC SCR-u AMOX EGR.
HFPXL03.4FSD	F5BFL414D*B	C3.4B 4274/2500	101 @ 2500	70	N/A	319 @ 1400	95	N/A	DDI ECM TC CAC DOC SCR-u AMOX EGR.
HFPXL03.4FSD	F5BFL414C*B	F5BFL414C*B	115 @ 2500	80	N/A	352 @ 1400	101	N/A	DDI ECM TC CAC DOC SCR-u AMOX EGR.
HFPXL03.4FSD	F5GFL414C*B	F5GFL414C*B	115 @ 2500	80	N/A	352 @ 1400	101	N/A	DDI ECM TC CAC DOC SCR-u AMOX EGR.
HFPXL03.4FSD	F5BFL414C*B	854F-E34TAN 4262/2500	115 @ 2500	80	N/A	352 @ 1400	101	N/A	DDI ECM TC CAC DOC SCR-u AMOX EGR.
HFPXL03.4FSD	F5BFL414C*B	C3.4B 4262/2500	115 @ 2500	80	N/A	352 @ 1400	101	N/A	DDI ECM TC CAC DOC SCR-u AMOX EGR.
HFPXL03.4FSD	F5GFL414J*B	854F-E34TAN 4260/2200	121 @ 2200	92	N/A	363 @ 1400	111	N/A	DDI ECM TC CAC DOC SCR-u AMOX EGR.
HFPXL03.4FSD	F5GFL414J*B	C3.4B 4260/2200	121 @ 2200	92	N/A	363 @ 1400	111	N/A	DDI ECM TC CAC DOC SCR-u AMOX EGR.
HFPXL03.4FSD	F5GFL414H*B	854F-E34TAN 4270/2200	84 @ 2200	63	N/A	262 @ 1400	78	N/A	DDI ECM TC CAC DOC SCR-u AMOX EGR.
HFPXL03.4FSD	F5GFL414H*B	C3.4B 4270/2200	84 @ 2200	63	N/A	262 @ 1400	78	N/A	DDI ECM TC CAC DOC SCR-u AMOX EGR.
HFPXL03.4FSD	F5GFL414E*B	854F-E34TAN 4276/2200	94 @ 2200	70	N/A	293 @ 1400	86	N/A	DDI ECM TC CAC DOC SCR-u AMOX EGR.
HFPXL03.4FSD	F5GFL414E*B	C3.4B 4276/2200	94 @ 2200	70	N/A	293 @ 1400	86	N/A	DDI ECM TC CAC DOC SCR-u AMOX EGR.
HFPXL03.4FSD	F5GFL414A*B	854F-E34TAN 4266/2200	101 @ 2200	75	N/A	319 @ 1400	95	N/A	DDI ECM TC CAC DOC SCR-u AMOX EGR.
HFPXL03.4FSD	F5GFL414A*B	C3.4B 4266/2200	101 @ 2200	75	N/A	319 @ 1400	95	N/A	DDI ECM TC CAC DOC SCR-u AMOX EGR.
HFPXL03.4FSD	F5GFL414B*B	854F-E34TAN 4264/2200	111 @ 2200	83	N/A	341 @ 1400	101	N/A	DDI ECM TC CAC DOC SCR-u AMOX EGR.
HFPXL03.4FSD	F5GFL414B*B	C3.4B 4264/2200	111 @ 2200	83	N/A	341 @ 1400	101	N/A	DDI ECM TC CAC DOC SCR-u AMOX EGR.
HFPXL03.4FSD	F5GFL414F*B	854F-E34TAN 4282/2500	88 @ 2500	62	N/A	274 @ 1400	84	N/A	DDI ECM TC CAC DOC SCR-u AMOX EGR.
HFPXL03.4FSD	F5GFL414F*B	C3.4B 4282/2500	88 @ 2500	62	N/A	274 @ 1400	84	N/A	DDI ECM TC CAC DOC SCR-u AMOX EGR.
HFPXL03.4FSD	F5GFL414D*B	854F-E34TAN 4274/2500	101 @ 2500	70	N/A	319 @ 1400	95	N/A	DDI ECM TC CAC DOC SCR-u AMOX EGR.
HFPXL03.4FSD	F5GFL414D*B	C3.4B 4274/2500	101 @ 2500	70	N/A	319 @ 1400	95	N/A	DDI ECM TC CAC DOC SCR-u AMOX EGR.
HFPXL03.4FSD	F5GFL414C*B	854F-E34TAN 4262/2500	115 @ 2500	80	N/A	352 @ 1400	101	N/A	DDI ECM TC CAC DOC SCR-u AMOX EGR.
HFPXL03.4FSD	F5GFL414C*B	C3.4B 4262/2500	115 @ 2500	80	N/A	352 @ 1400	101	N/A	DDI ECM TC CAC DOC SCR-u AMOX EGR.