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)
2011	BCEXL0275AAG	4.5	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Direct Diesel Injection, Turbocharger, Charge Air Cooler, and Electronic Control Module	Loader, Tractor, Dozer, Pump, and Compressor

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
75 ≤ kW < 130	Tier 3	STD	N/A	N/A	4.0	5.0	0.30	20	15	50
		CERT	--	--	3.8	0.9	0.13	1	1	3

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 3rd day of September 2010.

J. Lorenzo

Annette Hebert, Chief
Mobile Source Operations Division

Engine Model Summary Template

U-12-002-0558
Attachment
4/7/2011
pg 1/2

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
BCEXL0275AAG	8725;FR91995	QSB4.5	170@2200	133	65.8	475@1500	145	48.9	DDI TC CAC
BCEXL0275AAG	8725;FR91487	QSB4.5	170@2500	122	68.6	460@1500	140	47.2	DDI TC CAC
BCEXL0275AAG	8725;FR91485	QSB4.5	155@2000	129	58.0	460@1500	140	47.2	DDI TC CAC
BCEXL0275AAG	8725;FR91601	QSB4.5	160@2500	124	69.9	460@ 500	140	47.2	DDI TC CAC
BCEXL0275AAG	8725;FR91604	QSB4.5	160@2400	122	65.9	460@1500	140	47.2	DDI TC CAC
BCEXL0275AAG	8725;FR91605	QSB4.5	160@2300	127	65.6	460@1500	140	47.2	DDI TC CAC
BCEXL0275AAG	8725;FR91608	QSB4.5	160@2200	130	64.2	460@1500	140	47.2	DDI TC CAC
BCEXL0275AAG	8755;FR91609	QSB4.5	130@2200	104	51.4	457@1500	135	45.5	DDI TC CAC
BCEXL0275AAG	8755;FR91664	QSB4.5	148@2300	113	58.5	441@1500	134	45.2	DDI TC CAC
BCEXL0275AAG	8755;FR91602	QSB4.5	130@2500	101	56.5	457@1500	140	47.1	DDI TC CAC
BCEXL0275AAG	8755;FR91665	QSB4.5	130@2300	104	53.5	376@1500	126	42.4	DDI TC CAC
BCEXL0275AAG	8755:FR91486	QSB4.5	152@2200	123	60.7	405@1500	136	45.7	DDI TC CAC
BCEXL0275AAG	8755;FR91612	QSB4.5	139@2000	125	56.2	372@1500	117	39.4	DDI TC CAC
BCEXL0275AAG	8755;FR91614	QSB4.5	132@2000	116	52.1	368@1500	129	43.3	DDI TC CAC
BCEXL0275AAG	8755;FR92326	QSB4.5	125@2200	100	74.2	395@1400	123	58.1	DDI TC CAC
BCEXL0275AAG	8756;FR91613	QSB4.5	140@2000	121	54.1	432@1500	135	45.6	DDI TC CAC
BCEXL0275AAG	8756;FR91615	QSB4.5	128@2000	111	74.7	403@1400	126	39.7	DDI TC CAC
BCEXL0275AAG	8756;FR91618	QSB4.5	109@2000	98	44.0	338@1500	112	37.9	DDI TC CAC
BCEXL0275AAG	8756;FR92115	QSB4.5	140@2200	115	56.8	433@1600	126	45.2	DDI TC CAC
BCEXL0275AAG	8756;FR92116	QSB4.5	128@2200	106	52.2	430@1600	111	39.9	DDI TC CAC
BCEXL0275AAG	8756;FR92117	QSB4.5	109@2200	93	45.7	338@1500	116	39.1	DDI TC CAC
BCEXL0275AAG	8756;FR92234	QSB4.5	125@2100	103	48.6	408@1400	129	40.7	DDI TC CAC
BCEXL0275AAG	8756;FR92205	QSB4.5	130@2200	97	47.3	382@1500	129	43.7	DDI TC CAC
BCEXL0275AAG	8754;FR91603	QSB4.5	110@2500	85	47.5	360@1500	123	41.6	DDI TC CAC
BCEXL0275AAG	8754;FR91611	QSB4.5	110@2200	90	44.5	360@1500	126	42.4	DDI TC CAC
BCEXL0275AAG	8754;FR91622	QSB4.5	110@1800	110	44.3	360@1300	113	33.0	DDI TC CAC
BCEXL0275AAG	8754;FR91666	QSB4.5	121@2200	95	47.0	346@1500	114	38.4	DDI TC CAC
BCEXL0275AAG	1100;FR91964	QSB5-G3	145@1800	135	54.7	NA	NA	NA	DDI TC CAC

Engine Model Summary Template

U-R-002-0558
Attachment pg 2/2
4/7/2004

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
BCEXL0275AAG	1100;FR91964	QSB5-G3	126@1500	140	47.1	NA	NA	NA	DDI TC CAC
BCEXL0275AAG	1100;FR92203	QSB5-G2	129@1800	122	49.4	NA	NA	NA	DDI TC CAC
BCEXL0275AAG	1100;FR92203	QSB5-G2	113@1500	127	42.9	NA	NA	NA	DDI TC CAC
BCEXL0275AAG	1100;FR92202	QSB5-G1	118@1800	116	46.9	NA	NA	NA	DDI TC CAC
BCEXL0275AAG	1100;FR92202	QSB5-G1	100@1500	119	40.0	NA	NA	NA	DDI TC CAC
BCEXL0275AAG	8755:FR92807	QSB4.5	120@2500	88.9	50	350@1500	111.2	37.5	DDI TC CAC
BCEXL0275AAG	8755:FR91616	QSB4.5	130@2000	117	52.5	457@1500	137	43.0	DDI TC CAC
BCEXL0275AAG	8755:FR91621	QSB4.5	130@1800	127	51.6	457@1400	125	36.4	DDI TC CAC
BCEXL0275AAG	2743:FR92383	QSB5-G4	160@1800	123	49.9	NA	NA	NA	DDI,TC,CAC
BCEXL0275AAG	2743:FR92383	QSB5-G4	138@1500	130	43.8	NA	NA	NA	DDI,TC,CAC