California Environmental Protection Agency AIR RESOURCES BOARD	CUMMINS INC.	EXECUTIVE ORDER U-R-002-0378 New Off-Road Compression-Ignition Engines

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 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)
2007	7CEXL0661AAF	11.0	Diesel	8000

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

The engine models and codes are attached.

The following are the exhaust certification standards (STD), or family emission limit(s) (FEL) as applicable, 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
130 ≤ kW < 450	Tier 3	STD	N/A	N/A	4.0	3.5	0.20	20	15	50
		FEL	N/A	N/A	3.9	N/A	0.15	N/A	N/A	N/A
		CERT	--	--	3.8	0.9	0.10	16	1	33

BE IT FURTHER RESOLVED: That the family emission limit(s) (FEL) is an emission level declared by the manufacturer for use in any averaging, banking and trading program and in lieu of an emission standard for certification. It serves as the applicable emission standard for determining compliance of any engine within this engine family under 13 CCR Sections 2423 and 2427.

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 6 day of November 2006.

Annette Hebert, Chief
Mobile Source Operations Division

Engine Model Summary Form

U-R-002-0378

ATTACHMENT Pg 1 of 1

Manufacturer: **Cummins Inc.**

Engine category: **Nonroad CI**

EPA Engine Family: **7CEXL0661AAF**

Mfr Family Name: **F353**

Process Code: **New Submission**

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
8495:FR20002	QSM11-C	400@1800	241	146.4	1400@1400	296	139.9	DDI,ECM,TC,CAC
8495:FR20026	QSM11-C	360@1800	214	129.9	1260@1400	264	124.5	DDI,ECM,TC,C
8471:FR20001	QSM11-C	400@2100	208	147.5	1400@1400	296	139.9	DDI,ECM,TC,C
8471:FR20003	QSM11-C	400@2100	208	147.5	1400@1400	296	139.9	DDI,ECM,TC,C
8471:FR20004	QSM11-C	400@2100	208	147.5	1400@1400	296	139.9	DDI,ECM,TC,C
8471:FR02999	QSM11-C	375@2100	198	139.9	1400@1400	296	139.9	DDI,ECM,TC,C
8608:FR20042	QSM11-C	335@2100	184	130.3	1235@1400	266	125.4	DDI,ECM,TC,C
8608:FR20043	QSM11-C	290@2100	157	111.2	1090@1400	235	111.1	DDI,ECM,TC,C
8608:FR20096	QSM11-C	300@2000	177	119.6	1162@1400	251	118.7	DDI,ECM,TC,C
8545:FR20021	QSM11-C	335@2100	184	130.3	1235@1400	266	125.4	DDI,ECM,TC,C
8545:FR20022	QSM11-C	300@2100	165	117.0	1050@1400	229	108.0	DDI,ECM,TC,C
8545:FR20088	QSM11-C	330@2100	191	135.5	1235@1400	263	124.0	DDI,ECM,TC,C
8608:FR20173	QSM11-C	310@2100	181	128.2	1161@1400	248	117.1	DDI,ECM,TC,C