Pursuant to the authority vested in the Air Resources Board by the Health and Safety Code, Division 26, Part 5, Chapters 1 and 2; and

Pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: That the following new large spark-ignition engines and emission control systems produced by the manufacturer are certified for use in off-road equipment as described below. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY NAME	ENGINE DISPLACEMENT (liters)	FUEL TYPE		
2008 8NSXB04.546C		4.5	Dual Fuel, Gasoline or LPG		
DURABILIT HOURS		IAL FEATURES &	TYPICAL EQUIPMENT USAGE		
5000	Body Injection	on (Gas and Dual Fuel), Throttle (LPG), Three-Way Catalytic Heated Oxygen Sensor	Forklift		
ENGINE MODELS (rated power in kilowatt, kW)		See Attached Model Pages			

The following are the hydrocarbon plus oxides of nitrogen (HC+NOx) and carbon monoxide (CO) exhaust certification emission standards (Title 13, California Code of Regulations, (13 CCR) Section 2433(b)(1)) and certification emission levels for this engine family in grams per kilowatt-hour (g/kW-hr). Engines within this engine family shall have closed crankcases in conformance with 13 CCR Section 2433(b)(3) of "California Exhaust and Evaporative Emission Standards and Test Procedures for New 2007 through 2009 Off-Road Large Spark-ignition Engines (2007- 2009 Test Procedure 1048)" amended March 2, 2007.

(g/kW-hr)	HC+NOx	со		
Exhaust Standards	1.3	11.1		
Certification Levels	0.8	9.5		

The following is the evaporative hydrocarbon emission standard (13 CCR Section 2433(b)(3)) and certification emission level for this engine family in grams per gallon of fuel tank capacity (g/gallon).

Evaporative Certification Method	HC Certification Level (g/gallon)	HC Certification Standard (g/gallon)		
Design Based	N/A	0.2		

BE IT FURTHER RESOLVED: That for the listed engines for the aforementioned model-year, the manufacturer has submitted, and the Executive Officer hereby approves, the information and materials to demonstrate certification compliance with 13 CCR Section 2433(c) (certification and test procedures), 13 CCR Section 2434 (emission control labels), and 13 CCR Sections 2435 and 2436 (emission control system warranty).

BE IT FURTHER RESOLVED: That the listed engine models have been certified to the optional HC+NOx and CO emission standard(s) listed above pursuant to 13 CCR 2433 (b)(1).

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 <u>30</u> day of August 2007.

Annette Hebert, Chief Mobile Source Operations Division

ATTACHHENT Pg lof 1

Model Year: <u>2008</u> Manufacturer Name: <u>NISSAN MOTOR CO., LTD</u> Engine Family: <u>8NSXB04.546C</u> OFF-ROAD LSI ENGINE SUPPLEMENTAL INFORMATION

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S12. MODEL SUMMARY	(Use an asterisk (*) to identif	lv worst-case engine model i	used for certification testing.)
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S13.	S14.		S15. les Cod	_	S16.	S17.	S18.	S19.	S20.
Engine Model	Engine Code	gine (Check ALL		L	L Eng.	Rated Power (kW)	Rated Speed (RPM)	Peak Torque (Nm)	Peak Torque Speed
		Calif. Only	49- State	50- State					(RPM)
TB45 MN-1				v	4.478	61.1	2450	271.7	1600
*TB45 MN-2				v	4.478	62.6	2450	281.6	1470
TB45 MN-3	(Gasoline)			v	4.478	61.1	2450	271.7	1600
	(LPG)			V	4.478	62.6	2450	281.6	1470
TB45 K-1				v	4.478	60.9	2400	271.8	1600
TB45 K-2				v	4.478	62.4	2400	281.3	1440
TB45 K-3	(Gasoline)			v	4.478	60.9	2400	271.8	1600
10431(-3	(LPG)			v	4.478	62.4	2400	281.3	1440
TB45 T-1				v	4.478	60.9	2450	272.4	1600
TB45 T-2				v	4.478	62.5	2450	282.3	1470
	(Gasoline)			v	4.478	60.9	2450	272.4	1600
тв45 Т-3	(LPG)			v	4.478	62.5	2450	282.3	1470
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