EXECUTIVE ORDER U-L-053-0005 New Off-Road Large Spark-Ignition Engines Above 19 Kilowatts

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		
2013 DNSXB02.548D		2.5	Dual Fuel, Gasoline or LPG		
DURABILITY HOURS		IAL FEATURES & CONTROL SYSTEMS	TYPICAL EQUIPMENT USAGE		
Multiport Fuel Injection  5000 Body Injection (LP Converter, He		on (Gas and Dual Fuel), Throttle (LPG), Three-Way Catalytic Heated Oxygen Sensor	Forklift		
	NE MODELS er in kilowatt, kW)	See	Attachment		

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).

(g/kW-hr)	HC+NOx	co	
Exhaust Standards	0.8	20.6	
Certification Levels	0.4	5.6	

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).

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 \_\_\_\_\_ day of August 2012.

Annette Hebert, Chief

Mobile Source Operations Division

## ATTACHNEUT PS (OF )

Model Year: \_\_2013 \_\_ Manufacturer Name: \_\_NISSAN FORKLIFT CO., LTD Engine Family: \_\_DNFXB02,548D\_ OFF-ROAD LSI ENGINE SUPPLEMENTAL INFORMATION

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S12. MODEL SUMMARY (Use an asterisk (\*) to identify worst-case engine model used for certification testing.)

S12. MODEL SU S13.	S14.		S15.		S16.	S17.	S18.	S19.	S20.
Engine Model	Engine Code	Sales Codes (Check ALL appropriate)		LL	Eng. Displ.	Rated	Rated Speed	Peak Torque	Peak Torque
		Calif. Only	49- State	50- State	(Liters)	(kW)	(RPM)	(Nm)	Speed (RPM)
K25 N-1				٧	2.488	41.6	2700	158.1	1620
K25 N-2				٧	2.488	41.7	2700	182.9	1620
K25 N-3	(Gasoline)			٧	2.488	41.6	2700	158.1	1620
N25 N-5	(LPG)			٧	2.488	40.9	2700	180.0	1620
K25 M-1				٧	2.488	41.4	2700	158.0	1620
K25 M-2				٧	2.488	41.6	2700	182.7	1620
K25 M-3	(Gasoline)			٧	2.488	41.4	2700	158.0	1620
N25 W-5	(LPG)			V	2.488	40.9	2700	179.9	1620
K25 K-1				٧	2.488	41.5	2700	158.2	1620
K25 K-2				V	2.488	41.7	2700	183.4	1620
K25 K-3	(Gasoline)			V	2.488	41.5	2700	158.2	1620
N25 N-5	(LPG)			٧	2.488	41.0	2700	181.4	1620
*K25 T-1		X		٧	2.488	41.7	2800	156.9	1680
K25 T-2				٧	2.488	42.0	2800	182.9	1680
K25 T-3	(Gasoline)			٧	2.488	41.4	2700	156.9	1620
N25 1-3	(LPG)			٧	2.488	40.9	2700	180.0	1620