California Environmental Protection Agency AIR RESOURCES BOARD	TOYOTA INDUSTRIAL EQUIPMENT MFG., INC.	EXECUTIVE ORDER U-L-004-0023 New Off-Road Large Spark-Ignition Engines At & 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
2009	9TIEB02.204Y	2.237	Gasoline, LPG, Gasoline-LPG Dual Fuel, Gasoline-CNG Dual Fuel

DURABILITY HOURS	SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT USAGE
5000	Three-Way Catalytic Converter, Heated Oxygen Sensor, Multiport Fuel Injection	Forklift and Tractor

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	CO
Exhaust Standards	0.8	20.6
Certification Levels	0.3	15.1

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)(2)(a).

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 17th day of November 2008

Annette Hebert, Chief
Mobile Source Operations Division

ATTACHMENT Pg 1 of 1

Model Year: 2009
Manufacturer Name: TOYOTA INDUSTRIAL EQUIPMENT
Engine Family: 9TIEB02.204Y
OFF-ROAD LSI ENGINE SUPPLEMENTAL INFORMATION

Page: _____
Issued: _____
Revised: _____
E.O.#: U-L-004-0023

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

S13. Engine Model	S14. Engine Code	S15. Sales Codes (Check ALL appropriate)			S16. Eng. Displ. (Liters)	S17. Rated Power (HP)	S18. Rated Speed (RPM)	S19. Peak Torque (FT-LB)	S20. Peak Torque Speed (RPM)
		Calif. Only	49-State	50-State					
4YH(G)	50S			X	2.237	59	2570	121	2570
4Y(G)	50S			X	2.237	51	2570	118	2100
4YL(G)	50S			X	2.237	48	2250	118	2100
4YH(G/LP)	50S			X	2.237	56(LPG) 57(G)	2570	118(LPG) 119(G)	2200(LPG) 2570(G)
4Y(G/LP)	50S			X	2.237	51(LPG) 51(G)	2570	118(LPG) 118(G)	2100(LPG) 2100(G)
4YL(G/LP)	50S			X	2.237	48(LPG) 48(G)	2250	118(LPG) 118(G)	2100(LPG) 2100(G)
4YH(LPG)	50S			X	2.237	56	2570	118	2200
4Y(LPG)	50S			X	2.237	51	2570	118	2100
4YL(LPG)	50S			X	2.237	48	2250	118	2100
4YH(G/CN)	50S			X	2.237	50(CNG) 56(G)	2570	108(CNG) 113(G)	1600(CNG) 2570(G)
4Y(G/CN)	50S			X	2.237	50(CNG) 51(G)	2570	108(CNG) 113(G)	1600(CNG) 2200(G)