California Environmental Protection Agency AIR RESOURCES BOARD	Honda Motor Co., Ltd.	EXECUTIVE ORDER U-U-001-0378 New Off-Road Small Spark-Ignition Engines at or Below 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 engine and emission control systems produced by the manufacturer are certified for use in small 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 (cc)	ENGINE CLASS	FUEL TYPE (CNG/LNG=compressed/liquefied natural gas LPG=liquefied petroleum gas)
2008	8HNXS.163A5A	163	4-stroke, >80 cc- < 225 cc	Gasoline

DURABILITY HOURS	SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
500	EM	Walk-Behind Lawnmower, Compressor, Pump, Pressure Washer, Generator Set, Tiller, Other OEM Product
ENGINE CODES/MODELS (rated power in kilowatt, kW)	See Attachment	

ABBREVIATIONS: EM=engine modification TWC/OC=three-way/oxidizing catalyst WUTWC/WUOC=warm-up TWC/OC O2S=oxygen sensor HO2S=heated O2S EGR=exhaust gas recirculation AIR=secondary air injection PAIR=pulsed AIR MFI=multi port fuel injection SFI=sequential MFI TBI=throttle body fuel injection DFI=direct fuel injection TC/SC=turbo/super charger CAC=charge air cooler 2(prefix)=parallel (2)(suffix)=in series ECM=engine control module

The following are the hydrocarbon plus oxides of nitrogen (HC+NOx), carbon monoxide (CO), and particulate matter (PM) emission standards (Title 13, California Code of Regulations, (13 CCR) Section 2403(b)), 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 Section 90.109 of the "California Exhaust Emission Standards and Test Procedures for 2005 and Later Small Off-Road Engines," adopted July 26, 2004.

*=not applicable	HC+NOx (g/kW-hr)	CO (g/kW-hr)	PM (g/kW-hr)
STANDARD	10.0	549	*
FAMILY EMISSION LEVEL	11.1	*	*
CERTIFICATION LEVEL	9.4	318	*

BE IT FURTHER RESOLVED: That the family emission level(s) (FELs), as applicable, is an emission limit declared by the manufacturer for use in the 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 2403(e)(1) and 2407(a).

BE IT FURTHER RESOLVED: That for the listed engines, the manufacturer has submitted, and the Executive Officer hereby approves, the information and materials to demonstrate certification compliance with 13 CCR Section 2404 (emission control labels) and 13 CCR Sections 2405 and 2406 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

Quarterly reports of engines produced in this engine family for sale in California shall be submitted to the Executive Officer no later than 45 days after the end of each calendar quarter.

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 24th day of December 2007.

Raphael Susnowitz

for Annette Hebert, Chief
Mobile Source Operations Division

Attachment 1 of 4

Model Year: 2008
Manufacturer: Honda Motor Co.,Ltd.
Engine Family: 8HNXS.163A5A

Issued: 6/27/2007
Revised: 11/20/2007
E.O. Number: U-U-001-0378

Small Off-Road Engine Model Summary Form

Units for Table: kw

Worst Case?	47. Model Designation	48. Sales Code	49. Displ (cc)	50. Bore/ Stroke	51. Ignition Timing	52. Max Power	53. Rated Speed (RPM)	54. Rated Torque	55. Torque Speed (RPM)	56. Emiss Control Sys
X	8163H01A	50-State	163.4	68.0/45.0	25° BTDC	3.6	3600	10.3 N.m	2500	EM
	8163H02A	50-State	163.4	68.0/45.0	25° BTDC	3.6	3600	10.3 N.m	2500	EM
	8163H03A	50-State	163.4	68.0/45.0	25° BTDC	3.6	3600	10.3 N.m	2500	EM
	8163H04A	50-State	163.4	68.0/45.0	25° BTDC	3.6	3600	10.3 N.m	2500	EM
	8163H05A	50-State	163.4	68.0/45.0	25° BTDC	3.6	3600	10.3 N.m	2500	EM
	8163H05B	50-State	163.4	68.0/45.0	25° BTDC	3.6	3600	10.3 N.m	2500	EM
	8163H06A	50-State	163.4	68.0/45.0	25° BTDC	3.6	3600	10.3 N.m	2500	EM
	8163H06B	50-State	163.4	68.0/45.0	25° BTDC	3.6	3600	10.3 N.m	2500	EM
	8163H07A	50-State	163.4	68.0/45.0	25° BTDC	3.6	3600	10.3 N.m	2500	EM
	8163H08A	50-State	163.4	68.0/45.0	25° BTDC	3.6	3600	10.3 N.m	2500	EM

Attachment 2 of 4

Model Year: 2008
Manufacturer: Honda Motor Co.,Ltd.
Engine Family: 8HNXS.163A5A

Issued: 6/27/2007
Revised: 11/20/2007
E.O. Number: U-U-001-0378

Small Off-Road Engine Model Summary Form

Units for Table:

Worst Case?	47. Model Designation	48. Sales Code	49. Displ (cc)	50. Bore/ Stroke	51. Ignition Timing	52. Max Power	53. Rated Speed (RPM)	54. Rated Torque	55. Torque Speed (RPM)	56. Emiss Control Sys
	8163H10A	50-State	163.4	68.0/45.0	25° BTDC	3.6	3600	10.3 N.m	2500	EM
	8163H12A	50-State	163.4	68.0/45.0	25° BTDC	3.6	3600	10.3 N.m	2500	EM
	8163H13A	50-State	163.4	68.0/45.0	25° BTDC	3.6	3600	10.3 N.m	2500	EM
	8163H14B	50-State	163.4	68.0/45.0	25° BTDC	3.6	3600	10.3 N.m	2500	EM
	8163H15A	50-State	163.4	68.0/45.0	25° BTDC	3.6	3600	10.3 N.m	2500	EM
	8163H16A	50-State	163.4	68.0/45.0	25° BTDC	3.6	3600	10.3 N.m	2500	EM
	8163H17A	50-State	163.4	68.0/45.0	25° BTDC	3.6	3600	10.3 N.m	2500	EM

Attachment 3 of 4

Model Year: 2008
Manufacturer: Honda Motor Co.,Ltd.
Engine Family: 8HNXS.163A5A

Issued: 6/27/2007
Revised: 11/20/2007
E.O. Number: U-U-001-0378

Small Off-Road Engine Model Summary Form

Units for Table: kW

Worst Case?	47. Model Designation	48. Sales Code	49. Displ (cc)	50. Bore/ Stroke	51. Ignition Timing	52. Max Power	53. Rated Speed (RPM)	54. Rated Torque	55. Torque Speed (RPM)	56. Emiss Control Sys
	8163H20A	50-State	163.4	68.0/45.0	25° BTDC	3.6	3600	10.3 N.m	2500	EM
	8163H20B	50-State	163.4	68.0/45.0	25° BTDC	3.6	3600	10.3 N.m	2500	EM
	8163H21A	50-State	163.4	68.0/45.0	25° BTDC	3.6	3600	10.3 N.m	2500	EM
	8163H21B	50-State	163.4	68.0/45.0	25° BTDC	3.6	3600	10.3 N.m	2500	EM
	8163H22A	50-State	163.4	68.0/45.0	25° BTDC	3.6	3600	10.3 N.m	2500	EM
	8163H23A	50-State	163.4	68.0/45.0	25° BTDC	3.6	3600	10.3 N.m	2500	EM
	8163H25B	50-State	163.4	68.0/45.0	25° BTDC	3.6	3600	10.3 N.m	2500	EM
	8163H26B	50-State	163.4	68.0/45.0	25° BTDC	3.6	3600	10.3 N.m	2500	EM
	8163H27A	50-State	163.4	68.0/45.0	25° BTDC	3.6	3600	10.3 N.m	2500	EM
	8163H28A	50-State	163.4	68.0/45.0	25° BTDC	3.6	3600	10.3 N.m	2500	EM
	8163H30A	50-State	163.4	68.0/45.0	25° BTDC	3.6	3600	10.3 N.m	2500	EM

Attachment 4 of 4

Model Year: 2008
Manufacturer: Honda Motor Co.,Ltd.
Engine Family: 8HNXS.163A5A

Issued: 6/27/2007
Revised: 11/20/2007
E.O. Number: U-U-001-0378

Small Off-Road Engine Model Summary Form

Units for Table: kW

Worst Case?	47. Model Designation	48. Sales Code	49. Displ (cc)	50. Bore/ Stroke	51. Ignition Timing	52. Max Power	53. Rated Speed (RPM)	54. Rated Torque	55. Torque Speed (RPM)	56. Emiss Control Sys
	8163H32A	50-State	163.4	68.0/45.0	25° BTDC	3.6	3600	10.3 N.m.	2500	EM