California Environmental Protection Agency AIR RESOURCES BOARD	Honda Motor Co., Ltd.	EXECUTIVE ORDER U-U-001-0357 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.270A5A	243, 270	4-stroke, ≥ 225 cc	Gasoline

DURABILITY HOURS	SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
500	EM	Walk-Behind Lawnmower, Riding Mower, Compressor, Pump, Generator Set, Tiller
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	8.0	549	*
FAMILY EMISSION LEVEL	11.9	*	*
CERTIFICATION LEVEL	8.0	354	*

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 5 day of November 2007.

Annette Hebert

Annette Hebert, Chief
Mobile Source Operations Division

Attachment 1 of 7

Model Year: 2008
Manufacturer: Honda Motor Co., Ltd.
Engine Family: 8HNXS.270A5A

Issued: 10/12/2007
Revised:
E.O. Number: U-U-1-357

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
	8243H01A	50-State	242.8	73.0/58.0	20° BTDC	5.3	3600	15.3 N.m	2500	EM
	8243H03A	50-State	242.8	73.0/58.0	20° BTDC	5.3	3600	15.3 N.m	2500	EM
	8243H04A	50-State	242.8	73.0/58.0	20° BTDC	5.3	3600	15.3 N.m	2500	EM
	8243H05A	50-State	242.8	73.0/58.0	20° BTDC	5.3	3600	15.3 N.m	2500	EM
	8243H07A	50-State	242.8	73.0/58.0	20° BTDC	5.3	3600	15.3 N.m	2500	EM
	8243H08A	50-State	242.8	73.0/58.0	20° BTDC	5.3	3600	15.3 N.m	2500	EM
	8243H08B	50-State	242.8	73.0/58.0	20° BTDC	5.3	3600	15.3 N.m	2500	EM
	8243H10A	50-State	242.8	73.0/58.0	20° BTDC	5.3	3600	15.3 N.m	2500	EM
	8243H11A	50-State	242.8	73.0/58.0	20° BTDC	5.3	3600	15.3 N.m	2500	EM
	8243H12A	50-State	242.8	73.0/58.0	20° BTDC	5.3	3600	15.3 N.m	2500	EM
X	8243H13B	50-State	242.8	73.0/58.0	20° BTDC	5.3	3600	15.3 N.m	2500	EM

Attachment 2 of 7

Model Year: 2008
Manufacturer: Honda Motor Co., Ltd.
Engine Family: 8HNXS.270A5A

Issued: 10/12/2007
Revised:
E.O. Number: U-U-1-357

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
	8243H14F	50-State	242.8	73.0/58.0	20° BTDC	5.3	3600	15.3 N.m	2500	EM
	8243H15A	50-State	242.8	73.0/58.0	20° BTDC	5.3	3600	15.3 N.m	2500	EM
	8243H16A	50-State	242.8	73.0/58.0	20° BTDC	5.3	3600	15.3 N.m	2500	EM
	8243H17A	50-State	242.8	73.0/58.0	20° BTDC	5.3	3600	15.3 N.m	2500	EM
	8243H18A	50-State	242.8	73.0/58.0	20° BTDC	5.3	3600	15.3 N.m	2500	EM
	8243H19A	50-State	242.8	73.0/58.0	20° BTDC	5.3	3600	15.3 N.m	2500	EM
	8243H20A	50-State	242.8	73.0/58.0	20° BTDC	5.3	3600	15.3 N.m	2500	EM
	8243H20B	50-State	242.8	73.0/58.0	20° BTDC	5.3	3600	15.3 N.m	2500	EM
	8243H21A	50-State	242.8	73.0/58.0	20° BTDC	5.3	3600	15.3 N.m	2500	EM
	8243H22A	50-State	242.8	73.0/58.0	20° BTDC	5.3	3600	15.3 N.m	2500	EM
	8243H22B	50-State	242.8	73.0/58.0	20° BTDC	5.3	3600	15.3 N.m	2500	EM

Attachment 3 of 7

Model Year: 2008
Manufacturer: Honda Motor Co., Ltd.
Engine Family: 8HNXS.270A5A

Issued: 10/11/2007
Revised:
E.O. Number: U-U-1-357

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
	8243H51A	50-State	242.8	73.0/58.0	20° BTDC	5.3	3600	15.3 N.m	2500	EM
	8243H52B	50-State	242.8	73.0/58.0	20° BTDC	5.3	3600	15.3 N.m	2500	EM

Attachment 4 of 7

Model Year: 2008
Manufacturer: Honda Motor Co., Ltd.
Engine Family: 8HNXS.270A5A

Issued: 10/11/2007
Revised:
E.O. Number: U-U-1-357

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
	8270H01B	50-State	270.1	77.0/58.0	20° BTDC	6.0	3600	17.7 N.m	2500	EM
	8270H02A	50-State	270.1	77.0/58.0	20° BTDC	6.0	3600	17.7 N.m	2500	EM
	8270H02B	50-State	270.1	77.0/58.0	20° BTDC	6.0	3600	17.7 N.m	2500	EM
	8270H03A	50-State	270.1	77.0/58.0	20° BTDC	6.0	3600	17.7 N.m	2500	EM
	8270H06A	50-State	270.1	77.0/58.0	20° BTDC	6.0	3600	17.7 N.m	2500	EM
	8270H09A	50-State	270.1	77.0/58.0	20° BTDC	6.0	3600	17.7 N.m	2500	EM
	8270H10A	50-State	270.1	77.0/58.0	20° BTDC	6.0	3600	17.7 N.m	2500	EM

Attachment 5 of 7

Model Year: 2008
Manufacturer: Honda Motor Co., Ltd.
Engine Family: 8HNXS.270A5A

Issued: 10/11/2007
Revised:
E.O. Number: U-U-1-357

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
	8270H11A	50-State	270.1	77.0/58.0	20° BTDC	6.0	3600	17.7 N.m	2500	EM
	8270H13A	50-State	270.1	77.0/58.0	20° BTDC	6.0	3600	17.7 N.m	2500	EM
	8270H14A	50-State	270.1	77.0/58.0	20° BTDC	6.0	3600	17.7 N.m	2500	EM
	8270H15A	50-State	270.1	77.0/58.0	20° BTDC	6.0	3600	17.7 N.m	2500	EM
	8270H15B	50-State	270.1	77.0/58.0	20° BTDC	6.0	3600	17.7 N.m	2500	EM
	8270H20B	50-State	270.1	77.0/58.0	20° BTDC	6.0	3600	17.7 N.m	2500	EM

Attachment 6 of 7

Model Year: 2008
Manufacturer: Honda Motor Co., Ltd.
Engine Family: 8HNXS.270A5A

Issued: 10/11/2007
Revised:
E.O. Number: U-U-1-357

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
	8270H21B	50-State	270.1	77.0/58.0	20° BTDC	6.0	3600	17.7 N.m	2500	EM
	8270H22A	50-State	270.1	77.0/58.0	20° BTDC	6.0	3600	17.7 N.m	2500	EM
	8270H23A	50-State	270.1	77.0/58.0	20° BTDC	6.0	3600	17.7 N.m	2500	EM
	8270H24A	50-State	270.1	77.0/58.0	20° BTDC	6.0	3600	17.7 N.m	2500	EM
	8270H25A	50-State	270.1	77.0/58.0	20° BTDC	6.0	3600	17.7 N.m	2500	EM
	8270H26A	50-State	270.1	77.0/58.0	20° BTDC	6.0	3600	17.7 N.m	2500	EM
	8270H27A	50-State	270.1	77.0/58.0	20° BTDC	6.0	3600	17.7 N.m	2500	EM
	8270H28A	50-State	270.1	77.0/58.0	20° BTDC	6.0	3600	17.7 N.m	2500	EM
	8270H28B	50-State	270.1	77.0/58.0	20° BTDC	6.0	3600	17.7 N.m	2500	EM
	8270H29A	50-State	270.1	77.0/58.0	20° BTDC	6.0	3600	17.7 N.m	2500	EM

Attachment 7 of 7

Model Year: 2008
Manufacturer: Honda Motor Co., Ltd.
Engine Family: 8HNXS.270A5A

Issued: 10/11/2007
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E.O. Number: U-U-1-357

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
	8270H51B	50-State	270.1	77.0/58.0	20° BTDC	6.0	3600	17.7 N.m	2500	EM
	8270H52B	50-State	270.1	77.0/58.0	20° BTDC	6.0	3600	17.7 N.m	2500	EM
	8270H53B	50-State	270.1	77.0/58.0	20° BTDC	6.0	3600	17.7 N.m	2500	EM
	8270H54A	50-State	270.1	77.0/58.0	20° BTDC	6.0	3600	17.7 N.m	2500	EM
	8270H55A	50-State	270.1	77.0/58.0	20° BTDC	6.0	3600	17.7 N.m	2500	EM