California Environmental Protection Agency AIR RESOURCES BOARD	Honda Motor Co., Ltd.	EXECUTIVE ORDER U-U-001-0367 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.389A5A	338, 389	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	9.8	*	*
CERTIFICATION LEVEL	6.4	364	*

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, Chief
Mobile Source Operations Division

Attachment 1 of 9

Model Year: 2008
Manufacturer: Honda Motor Co., Ltd.
Engine Family: 8HNXS.389A5A

Issued: 10/19/2007
Revised:
E.O. Number: U-U-1-367

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
	8338H01A	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM
X	8338H02A	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM
	8338H03F	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM
	8338H04A	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM
	8338H05B	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM
	8338H07B	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM
	8338H08A	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM
	8338H13B	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM
	8338H15A	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM
	8338H16A	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM

Attachment 2 of 9

Model Year: 2006
Manufacturer: Honda Motor Co., Ltd.
Engine Family: 8HNXS.389A5A

Issued: 10/19/2007
Revised:
E.O. Number: U-U-1-367

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
	8338H17A	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM
	8338H18A	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM
	8338H19A	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM
	8338H20A	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM
	8338H21A	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM
	8338H22B	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM
	8338H23A	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM
	8338H24B	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM
	8338H25A	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM
	8338H26A	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM

Attachment 3 of 9

Model Year: 2006
Manufacturer: Honda Motor Co., Ltd.
Engine Family: 8HNXS.389A5A

Issued: 10/19/2007
Revised:
E.O. Number: U-U-1-367

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
	8338H27A	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM
	8338H28A	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM
	8338H29A	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM
	8338H30A	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM
	8338H31A	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM
	8338H32A	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM
	8338H33B	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM
	8338H34B	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM
	8338H35B	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM
	8338H36A	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM
	8338H36B	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM

Attachment 4 of 9

Model Year: 2008
Manufacturer: Honda Motor Co., Ltd.
Engine Family: 8HNXS.389A5A

Issued: 10/19/2007
Revised:
E.O. Number: U-U-1-367

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
	8338H37A	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM
	8338H38A	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM
	8338H39A	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM
	8338H47A	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM
	8338H48A	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM
	8338H51B	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM
	8338H53B	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM
	8338H0AA	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM
	8338H0BA	50-State	338.0	82.0/64.0	25° BTDC	7.1	3600	22.1 N.m	2500	EM

Attachment 5 of 9

Model Year: 2008
Manufacturer: Honda Motor Co., Ltd.
Engine Family: 8HNXS.389A5A

Issued: 10/19/2007
Revised:
E.O. Number: U-U-1-367

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
	8389H01A	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H02A	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H03B	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H04A	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H08B	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H09B	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H10B	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H12B	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H15B	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM

Attachment 6 of 9

Model Year: 2008
Manufacturer: Honda Motor Co., Ltd.
Engine Family: 8HNXS.389A5A

Issued: 10/19/2007
Revised:
E.O. Number: U-U-1-367

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
	8389H17A	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H19A	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H19B	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H20A	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H21B	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H24B	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H25A	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H26A	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H28A	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM

Attachment 7 of 9

Model Year: 2008
Manufacturer: Honda Motor Co., Ltd.
Engine Family: 8HNXS.389A5A

Issued: 10/19/2007
Revised:
E.O. Number: U-U-1-367

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
	8389H30A	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H30B	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H31B	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H47A	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H48B	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H49A	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H51A	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H52B	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H53B	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H54B	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM

Attachment 8 of 9

Model Year: 2008
Manufacturer: Honda Motor Co., Ltd.
Engine Family: 8HNXS.389A5A

Issued: 10/19/2007
Revised:
E.O. Number: U-U-1-367

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
	8389H57B	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H58B	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H59B	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H0AA	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H0BA	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H0CA	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H0DA	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H0EA	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H0FA	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H0GB	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM

Attachment 9 of 9

Model Year: 2008
Manufacturer: Honda Motor Co., Ltd.
Engine Family: 8HNXS.389A5A

Issued: 10/19/2007
Revised:
E.O. Number: U-U-1-367

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
	8389H0HA	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H0JB	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H5AB	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H5BB	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H5CB	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM
	8389H5DB	50-State	389.3	88.0/64.0	25° BTDC	8.2	3600	25.1 N.m	2500	EM