California Environmental Protection Agency AIR RESOURCES BOARD	Honda Motor Co., Ltd.	EXECUTIVE ORDER U-U-001-0517 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)
2011	BHNXS.6882AA	688	4-stroke, ≥ 225 cc	Gasoline

DURABILITY HOURS	SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
1000	EM	Walk-Behind Mower, Riding Mower, Compressor, Pressure Washer, Generator Set, Commercial Turf
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	8.1	*	*
CERTIFICATION LEVEL	6.5	440	*

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 2010.

D Nguyen
for Annette Hebert, Chief
Mobile Source Operations Division

Attachment 1 of 4

Model Year: 2011
Manufacturer: Honda Motor Co., Ltd.
Engine Family: BHNXS.6882AA

Issued: 7/22/2010
Revised:
E.O. Number: U-U-001-0517

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
	B2HJ0100RD	50-State	688.0	78.0/72.0	9° BTDC	15.7	3600	48.2 N.m	2000	EM
	B2HJ0200RD	50-State	688.0	78.0/72.0	9° BTDC	15.7	3600	48.2 N.m	2000	EM
	B2HJ0300RD	50-State	688.0	78.0/72.0	9° BTDC	15.7	3600	48.3 N.m	2500	EM
	B2HK0100-D	50-State	688.0	78.0/72.0	9° BTDC	16.6	3600	48.3 N.m	2500	EM
	B2HK0200RD	50-State	688.0	78.0/72.0	9° BTDC	16.6	3600	48.3 N.m	2500	EM
	B2HK0300RD	50-State	688.0	78.0/72.0	9° BTDC	16.6	3600	48.3 N.m	2500	EM
	B2HK0400-D	50-State	688.0	78.0/72.0	9° BTDC	16.6	3600	48.3 N.m	2500	EM

Attachment 2 of 4

Model Year: 2011
Manufacturer: Honda Motor Co., Ltd.
Engine Family: BHNXS.6882AA

Issued: 7/22/2010
Revised:
E.O. Number: U-U-001-0517

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
	B2HH0100-D	50-State	688.0	78.0/72.0	9° BTDC	15.1	3600	48.2 N.m	2000	EM
	B2HH0100RD	50-State	688.0	78.0/72.0	9° BTDC	15.1	3600	48.2 N.m	2000	EM
	B2HH0200-D	50-State	688.0	78.0/72.0	9° BTDC	15.1	3600	48.2 N.m	2000	EM
	B2HH0300RD	50-State	688.0	78.0/72.0	9° BTDC	15.1	3600	48.2 N.m	2000	EM
	B2HH0400RD	50-State	688.0	78.0/72.0	9° BTDC	15.1	3600	48.2 N.m	2000	EM
	B2HH0500-D	50-State	688.0	78.0/72.0	9° BTDC	15.1	3600	48.2 N.m	2000	EM
	B2HH0600RD	50-State	688.0	78.0/72.0	9° BTDC	15.1	3600	48.2 N.m	2000	EM
	B2HH0700RD	50-State	688.0	78.0/72.0	9° BTDC	15.1	3600	48.2 N.m	2000	EM
	B2HH0800RD	50-State	688.0	78.0/72.0	9° BTDC	15.1	3600	48.2 N.m	2000	EM
	B2HH0900-D	50-State	688.0	78.0/72.0	9° BTDC	15.1	3600	48.2 N.m	2000	EM

Attachment 3 of 4

Model Year: 2011
Manufacturer: Honda Motor Co., Ltd.
Engine Family: BHNXS.6882AA

Issued: 7/22/2010
Revised:
E.O. Number: U-4-001-0517

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
	B2HH1000RD	50-State	688.0	78.0/72.0	9° BTDC	15.1	3600	48.2 N.m	2000	EM

Attachment 4 of 4

Model Year: 2011
Manufacturer: Honda Motor Co., Ltd.
Engine Family: BHNXS.6882AA

Issued: 7/22/2010
Revised:
E.O. Number: U-U-001-0517

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
	B2HV0100RD	50-State	688.0	78.0/72.0	9° BTDC	14.6	3600	45.1 N.m	2500	EM
	B2HV0200RD	50-State	688.0	78.0/72.0	9° BTDC	14.6	3600	45.1 N.m	2500	EM
	B2HW0100RD	50-State	688.0	78.0/72.0	9° BTDC	15.8	3600	49.7 N.m	2500	EM
	B2HW0200RD	50-State	688.0	78.0/72.0	9° BTDC	15.8	3600	49.7 N.m	2500	EM
X	B2HX0100RD	50-State	688.0	78.0/72.0	9° BTDC	16.5	3600	48.5 N.m	2500	EM
	B2HX0200RD	50-State	688.0	78.0/72.0	9° BTDC	16.5	3600	48.5 N.m	2500	EM
	B2HX0300RD	50-State	688.0	78.0/72.0	9° BTDC	16.5	3600	48.5 N.m	2500	EM