News from Honda

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For Immediate Release

Honda Launches All-New Mid GX Engine Lineup

New Models for Commercial Power Equipment Market Designed with Technologically Advanced Features for Lower Emissions, Lower Noise, Lower Vibration

ALPHARETTA, Ga., January 18, 2011 – At the 2011 World of Concrete trade venue, an international event dedicated to the commercial concrete and masonry construction industries, Honda today announced the launch of its all-new mid GX engines line. Completely redesigned for 2011, the new GX120, the GX160 and the GX200 are single-cylinder, horizontal-shaft engines that replace the existing GX120, GX160 and GX200 models. The lineup is an ideal fit for an array of commercial turf applications and equipment including generators; construction/industrial equipment; agricultural equipment; water pumps; and pressure washers.

The new Honda mid GX engines, while being dimensionally equivalent and having the same power output of the models they replace, boast increased performance resulting, in part, from the incorporation of these innovative features:

- improved fuel economy through changes in valve timing, compression ratio, carburetor settings, and cooling system modifications;
- new, more stringent emissions standards met through changes in valve timing; carburetor settings; and other proprietary components;
- low noise levels achieved via a change in muffler structure design, breather valve, push rod materials, and crank/case cover rigidity; reduced vibration accomplished through use of a lighter engine piston.

The new mid GX engines also are equipped with a number of design enhancements, including a new carburetor chamber coating; a recoil rope design change; the addition of a

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carburetor filter; and an improved fuel tank guard – all of which improve their fuel economy, reliability and durability.

"As a global environmental leader, Honda developed our new mid GX engines with technologically advanced features that contribute to lower emissions, lower noise, lower vibration and nearly 100 percent installation capability for OEMs in the commercial power equipment market," said Mike Rudolph, senior manager, Honda Engines. "Because the new engines essentially match the dimensions of the existing GX models they replace, original equipment manufacturers will not have to modify the designs of their commercial equipment."

A Closer Look at Emissions Standards in 2011 and Beyond

The new Honda GX120, GX160 and GX200 mid GX engines meet EPA Phase 3 exhaust and evaporative emissions standards – the most stringent emission regulations in the world. As background, the EPA has finalized a new emission control program to reduce hydrocarbon emissions from small spark-ignition engines by approximately 35 percent. These new exhaust emissions standards will take effect in 2011 or 2012, depending on the size of the engine. The final rule also includes new standards to reduce evaporative emissions from these fuel systems. Ultimately, these standards will serve to reduce the ozone and carbon monoxide levels produced by these engines.

The design configuration of the new Honda mid GX models reduces pollutants such as hydrocarbons (HCs) and nitrous oxide (NOx) while maintaining the same level of output power as the previous Honda GX models they replace. "The engines reduce HCs by reducing oil consumption via a redesigned piston shape and piston ring along with a modified carburetor setting. In addition, the engine designs reduce NOx emissions through an adjustment in ignition timing which reduces combustion temperature and pressure," explained Rudolph.

Reduction of Noise and Vibration and in the New Honda Mid GX Models

In the new mid range GX160 engines, the composition of the push rods has been changed from steel to aluminum. Because the cylinder heads also are constructed from aluminum, this design change equalizes the linear expansion coefficient (the ratio at which the length of the push rod changes from reaction to engine heat) of the push rods. This improvement reduces the valve clearance (caused by the thermal expansion of the push rods and the cylinders) which reduces the tappet noise. The new engines also exhibit three primary design enhancements that contribute to class-leading low noise operations. Enhancements to the muffler, the breather valve and the case cover (GX160/200 models only) result in lower noise levels:

Current Honda GX120: 101 dBA	**New Honda GX120:** 99 dBA – dual silent spec
Current Honda GX160: 102 dbA	**New Honda GX160:** 99 dBA – dual silent spec
Current Honda GX200: 103 dbA	**New Honda GX200:** 101 dBA – dual silent spec

Turning to the issue of vibration, any engine generates vibration through the reciprocal movement of the pistons. In the new mid GX models, the piston weight has been reduced and the crank weight has been adjusted according to the piston weight and connecting rod weight. As a result, the crankshaft rotates to counterbalance the reciprocal movement force of the pistons – reducing primary engine vibration.

All three new mid GX models – the GX120, the GX160 and the GX200 – carry the Honda industry-competitive, three-year warranty. Comprehensive details about this warranty offering and other consumer information can be found at www.honda.com.

Honda is the world's largest manufacturer of engines, producing and marketing more than 23 million units globally in 2009 for a diverse array of automotive, motorcycle, marine, and power equipment products. Honda Engines offers a complete line of small, general purpose engines for commercial, rental industry, and consumer applications. Honda engines

supply smooth and dependable power for more than 3,000 different product applications including pressure washers, lawnmowers, and rescue and construction equipment.

Specifications for Honda Mid GX Engines			
	GX120	***GX160***	***GX200***
Engine Type	Air-cooled, 4-stroke, OHV, single cylinder		
Bore X Stroke (inches/mm)	2.4" X 1.7" (60 mm X 42 mm)	2.7" X 1.8" (68 mm X 45 mm)	2.7" X 2.1" (68 mm x 54 mm)
Displacement	7.2 cubic in. (118 cm^3)	9.9 cubic in. (163 cm^3)	12 cubic in. (196 cm^3)
Compression Ratio	8.5 : 1	9.0 : 1	8.5 : 1
Net Power (kW/rpm)*	3.5 hp (2.6 kW)	4.8 hp (3.6 kW)	5.5 hp (4.1 kW)
Net Torque*	5.4 lbs. ft. (7.3 Nm)	7.6 lbs. ft. (10.3 Nm)	9.1 lbs. ft. (12.4 Nm)
PTO Shaft Rotation	Counterclockwise (from PTO shaft side)		
Ignition System	Transistor Magneto		
Starting System	Recoil Starter		
Carburetor	Butterfly		
Lubrication System	Splash		
Governor System	Mechanical		
Air Cleaner	Dual Element		
Oil Capacity	0.59 US qt. (0.56 L)	0.61 US qt. (0.58 L)	0.63 US qt. (0.60 L)
Fuel Tank Capacity	2.1 US qt. (2.0 L)	3.3 US qt. (3.1 L)	3.3 US qt. (3.1 L)
Evaporative Emissions	Low permeation hose and purge joint provided		
Exhaust Emissions	Certified for use in all 50 states		
Dimensions (L X W X H)	12.0" (305 mm) X 13.4" (341 mm) X 13.0" (329 mm)	12.3" (312 mm) X 13.6" (346 mm) X 13.6" (346 mm)	12.6" (321 mm) X 14.8" (376 mm) X 13.6" (346 mm)
Dry Weight	29 lbs. (13.0 kg)	33 lbs. (15.1 kg)	35 lbs. (16.1 kg)

* The power rating of the engines indicated in this document measures the net power output at 3600 rpm (7000 rpm for model GXH50, GXV50, GX25 and GX35) and net torque at 2500 rpm, as tested on a production engine. Mass production engines may vary from this value. Actual power output for the engine installed in the final machine will vary depending on numerous factors, including the operating speed of the engine in application, environmental conditions, maintenance and other variables.

Editor's Note:

Honda Power Equipment, a division of American Honda Motor Co., Inc., markets a complete range of outdoor power equipment, including outboard marine engines, general purpose engines, generators, lawnmowers, pumps, snowblowers, tillers and trimmers for commercial, rental and residential applications. Its comprehensive product line is powered exclusively by environmentally advanced 4-stroke engines.

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Consumer information regarding Honda products is available at www.honda.com.