



Issue Brief

HONDA R&D AMERICAS CREATING NEW VALUE IN THE U.S.

Honda R&D Americas, Inc. (HRA) is responsible for creating advanced products and technologies that provide new value to Honda and Acura customers. HRA has the capability of “complete product creation” – developing all-new products, starting from market and technology research and design-styling through engineering design, prototype fabrication and testing, local parts procurement, and support for mass production preparation. With major facilities in California, Ohio, North Carolina and Florida, HRA is engaged in the development and testing of Honda and Acura automobiles, and Honda power sports and power equipment products, and is also taking a leading role in the advancement of leading-edge safety and environmental technologies.

Product Research & Development

- ◆ **From market and technology research to styling, engineering design, fabrication and testing to local parts procurement, Honda R&D Americas is helping create new value for Honda customers through innovation in the development of new Honda and Acura products.**
 - Many current Honda and Acura models sold in America – including five of seven light truck models – were researched, designed and developed by Honda R&D Americas. These include innovative and trend-setting products such as the Acura MDX sport-utility vehicle and Acura TL sedan, as well as the Honda Pilot SUV, Odyssey minivan, and Ridgeline truck.
 - The latest example of Honda’s ability to develop products and technologies from scratch in America is the 2011 Honda Odyssey minivan, the first U.S.-designed and developed Honda minivan and the highest sales volume model to be developed locally.
 - HRA is taking a leading role in the development of new Acura products, including the design and development of the next-generation Acura NSX supercar.
 - HRA is also leading the development of the next generation Civic for North American markets.

Product Styling Design

- ◆ **Honda R&D Americas’ Los Angeles Center and three California-based design studios are responsible for market research, concept development and styling for Honda and Acura products.**
 - The Honda Design Studio (part of the Los Angeles Center) is responsible for the market research, concept development and styling design of Honda-brand automobiles, light trucks, and motorcycles.
 - The Acura Design Studio in Torrance, CA is responsible for the market research, concept development and styling design of Acura automobiles and light trucks.
 - The Advanced Design Studio is responsible for creating future design concepts for Honda and Acura products and works closely with leading design schools.

Environmental Technology Development

- ◆ **In addition to its work on new vehicle design and development, Honda R&D Americas is engaged in programs to advance alternative-fuel technologies, including natural gas and hydrogen fuel cell electric vehicles.**
 - HRA has developed a new wind tunnel in Ohio that will play an important role in realizing further improvements to the aerodynamic efficiency of new vehicles, enhancing Honda’s global R&D capabilities and contributing to Honda’s focus on fuel efficiency leadership.
 - HRA supports the development and deployment of the advanced alternative-fuel vehicles such as the FCX Clarity hydrogen fuel-cell electric vehicle.

- HRA began operating a next-generation Honda Solar Hydrogen Station at its Torrance, CA, headquarters in January 2010. The new system is able to provide hydrogen for daily commuting in a fuel cell vehicle (10,000 miles per year) via an 8-hour overnight fill without the need for a compressor, thereby reducing system cost, complexity and size.
- HRA supports the Honda Electric Vehicle Demonstration program to research the challenges of realizing broader deployment of electric vehicle technologies, being undertaken with program partners at the City of Torrance, CA, Stanford University, and Google.
- HRA conducts collaborative research of the Civic Natural Gas vehicle’s environmental benefits and customer usage, to support the sales and marketing of natural gas-powered vehicles and the expansion of refueling infrastructure to help support retail vehicle sales.

Safety Technology Research and Development

- ◆ **Honda R&D Americas is also making significant contributions to Honda’s safety leadership.**
 - The HRA Ohio Center includes an Automotive Safety Research Facility that houses one of the world’s highest resolution crash test barriers and the world’s first pitching crash test simulation sled. This facility is responsible for the development and testing of nearly all safety systems on Honda’s U.S.-developed vehicles.
 - The U.S.-developed 2012 Acura TL is one of two vehicles to be the first in the industry to earn a GOOD rating from the Insurance Institute for Highway Safety (IIHS) in its stringent new small overlap frontal crash test.
 - The U.S.-developed 2011 Honda Odyssey first minivan and first non-luxury automobile to earn both a 5-star Overall Vehicle Score under the federal government’s newly modified New Car Assessment Program (NCAP) and a “Top Safety Pick” rating from the Insurance Institute for Highway Safety (IIHS).

Major North American R&D Facilities

Honda R&D Americas, Inc. operates 14 R&D facilities in North America including the following:

Los Angeles Center Torrance, Calif. (1975)	Automobile and motorcycle market research and concept development
	Honda Design Studio -- Torrance, Calif. (1975) Market research, concept development, and styling design for Honda automobiles.
	Acura Design Studio -- Torrance, Calif. (2007) Market research, concept development, and styling design for Acura automobiles.
	Advanced Design Studio – Los Angeles, Calif. (2006 – <i>relocated from Pasadena to Los Angeles in 2012</i>) Advanced concept development for next-generation Honda and Acura products.
Ohio Center Raymond, Ohio (1985)	Automobile and Motorcycle research and development; and Automotive Safety Research Facility
North Carolina Center Swepsonville, NC (1993)	Power Equipment product research, development and testing.
Marine Engine Research Facility Grant-Valkaria, Fla. (2008)	Marine engine research and testing.

Honda R&D Americas, Inc. - Vehicle Development History

Honda R&D Americas' is responsible for 24 Honda and Acura new-model developments (not including next-generation Acura NSX):

Next-generation Acura NSX (future)	The next-generation of Acura's supercar will showcase innovative new technologies including a Sport Hybrid Super-Handling All-Wheel Drive (SH-AWD) powertrain.
2011 Honda Odyssey	The fourth generation Honda minivan and the highest sales volume model to be designed and developed in North America. It is the first minivan to be awarded a 5-star rating Overall Vehicle Score and a "Top Safety Pick" rating under the NHTSA's and IIHS' revised crash safety ratings protocols.
2010 Acura ZDX	An all-new Acura vehicle concept – a 4-door coupe with SUV versatility and sports car-like dynamic performance
2009 Acura TL	Third generation of U.S. development for Acura's top-selling luxury sedan and one of two vehicles to be the first to earn a GOOD rating from the IIHS in its new frontal small overlap collision test (2012 model Acura TL)
2009 Honda Pilot	Second generation of U.S. development for Honda's award-winning, mid-size, eight passenger Honda SUV
2007 Acura MDX	Second generation of U.S. development for MDX, including the application of advanced new chassis and electrical system technologies researched and developed by HRA
2006 Civic Coupe and Civic Si	Sporty 2-door coupe and high-performance Si versions of 8 th generation Civic – 2006 North American, Canadian, and <i>Motor Trend</i> , Car of the Year
2006 Accord Sedan and Coupe	Mid-model refresh of 2003 Accord. First time HRA is responsible for global launch of new model including coordination of production launch in eight plants worldwide
2006 Honda Ridgeline	Honda's first-ever (in the US), and highly innovative pickup truck – 2006 <i>Motor Trend</i> , North American, and Canadian, Truck of the Year
2004 Acura TL	Second-generation of the TL developed by HRA, and America's best-selling luxury sedan in 2004, 2005 and 2006
2003 Honda Element	Innovative SUV with flat cargo floor, washable interior surfaces and B-pillar-less, wide-opening side doors
2003 Honda Pilot	First eight-passenger crossover vehicle and five-time winner of <i>Car and Driver magazine's</i> "5Best Truck" award
2002 Acura TL	Introduction of high-performance TL "Type-S" model

2001 Civic Coupe	First small car and first coupe to earn NHTSA five-star safety rating (pre MY2011 testing requirements) in frontal and side impact (NCAP) crash test ratings
2001 Acura MDX	First luxury SUV with standard 3 rd -row seating and 2001 <i>Motor Trend</i> SUV of the Year and North American Truck of the Year
2001 Acura 3.2CL	HRA's third all-new Acura model and first to apply new 6-speed manual transmission for V6 engines
1999 Acura 3.2TL	Second all-new Acura model developed by HRA
1998 Accord Coupe	First Accord Coupe with exclusive exterior styling
1997 Acura 1.6EL	New Acura model developed exclusively for Canadian market.
1997 Acura CL 3.0 (Coupe)	First Honda or Acura vehicle to receive all-new, high-output V6 engine
1997 Acura CL 2.2 (Coupe)	First U.S.-developed Acura, first all-new vehicle development by HRA, and the first development led by an American engineer
1994 Accord Wagon	First HRA "derivative model" developed simultaneously with its base car, the 1994 Accord Sedan
1993 Civic Coupe	First Civic Coupe - a "derivative" model based on the 1992 Civic hatchback.
1991 Accord Wagon	First HRA developed "derivative model". Based on the 1990 Accord Sedan for North America and exported to Japan and Europe
1989 Honda Accord SEi	First American-led U.S. SED developed model, coordinating U.S. Sales, and Manufacturing and R&D

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