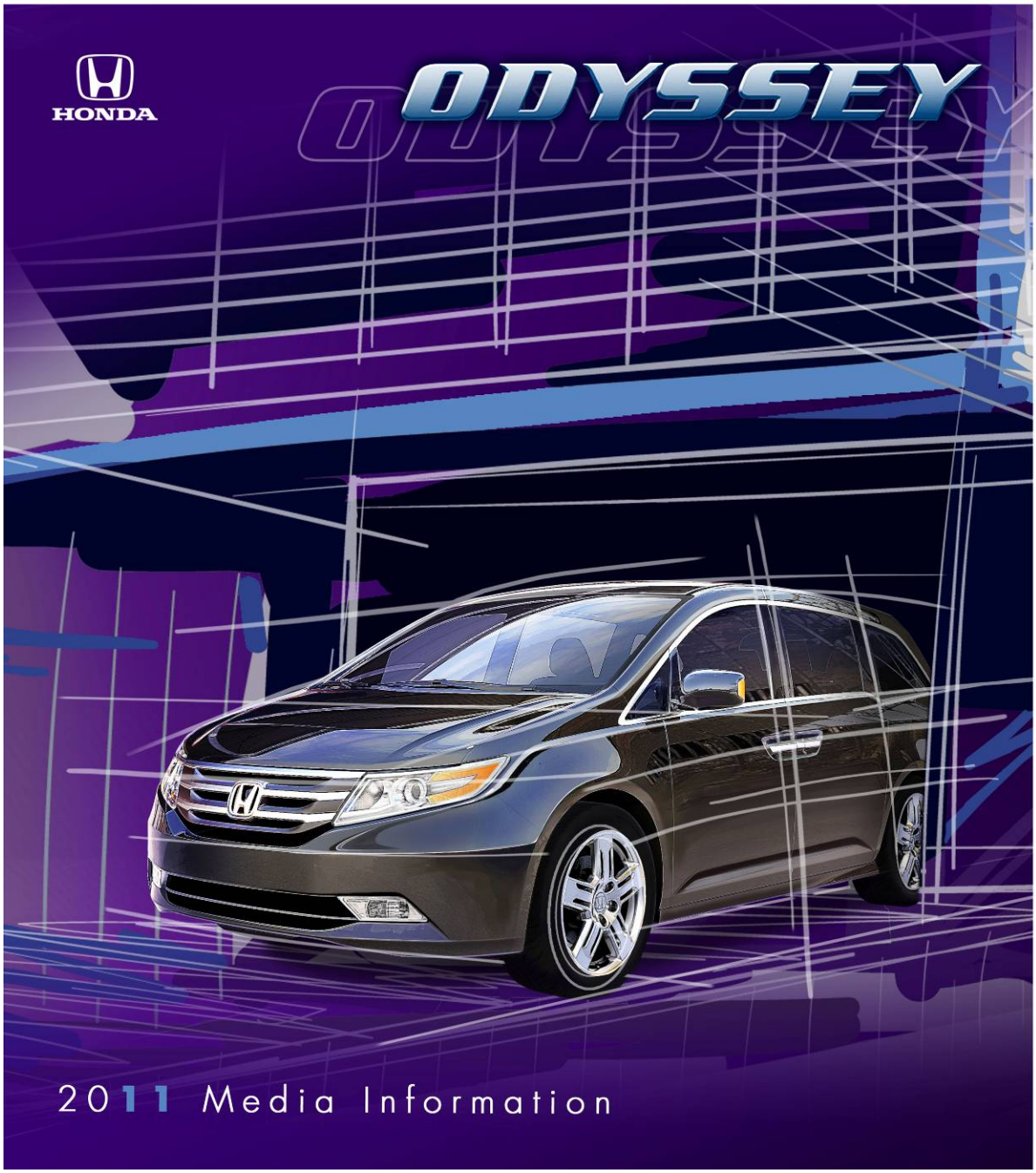

2011 Honda Odyssey
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2011 Honda Odyssey Touring Elite

Summary
The completely redesigned 2011 Honda Odyssey improves on its already award-winning, class-leading design with a more distinctive style, higher fuel economy and greater interior versatility. The Odyssey has been an established minivan segment leader for more than a decade in terms of packaging innovation, handling, passenger accommodation, safety, quality, long-term value and overall refinement. Improvements to the fourth-generation Odyssey represent a new Honda vision for the "ultimate in family transportation."

The 2011 Odyssey's enhanced aerodynamic shape with a lower roofline contributes to class-leading highway fuel economy, while the improved interior packaging maintains similar vertical functionality as the previous model. A wider stance creates a more accommodating interior while accenting the exterior's dynamic appearance. Significant improvements for convenience include a new "3-mode" second-row seat design that expands laterally, along with a simpler-to-operate, one-motion, 60/40 split 3rd-row Magic Seat®. The "3-mode" second row can better accommodate three passengers with improved comfort for all, and the new "wide mode" supports third-row pass-through access from the side with as many as two child seats in place in the second row. The third row provides improved legroom, along with better sight lines out of the side windows – a functional improvement resulting from the exterior's signature "lightning-bolt" belt line.

Odyssey Highlights:

- Eight-passenger minivan (seven passengers Odyssey LX)
- Distinctive exterior styling with rear-tapered monovolume shape and "lightning-bolt" belt line for improved outward visibility from the third row
- Functional seating improvements include second-row wide mode and simplified operation of 60/40 split 3rd-Row Magic Seat
- A class-leading five LATCH positions for child restraint seats (four positions LX)
- 3.5-liter i-VTEC V-6 engine with 248 horsepower (+4) and 250 lb-ft. of torque (+5/+10*)
- Six-speed automatic transmission (Honda first) standard on Odyssey Touring
- EPA city/highway fuel economy[1] of 19/28 mpg (Odyssey Touring, +2/+3) and 18/27 mpg (Odyssey LX and EX, +2/+4)
- Standard safety: Front, front-side and side-curtain airbags, Vehicle Stability Assist™ (VSA®), ABS, Advanced Compatibility Engineering (ACE) body structure and more

[1] Based on 2011 EPA mileage estimates. Use for comparison purposes only. Do not compare to models before 2008. Your actual mileage will vary depending on how you drive and maintain your vehicle. *2010 VTEC (non-VCM) engine on LX and EX.

New technology available on certain models includes a rear entertainment system with a 16.2-inch ultrawide split-screen display and an auxiliary High-Definition Multimedia Interface (HDMI) video input, an "intelligent" Multi-Information Display (i-MID) with customizable wallpaper, integration of FM traffic data on navigation models and much more. Across all available models – the Odyssey LX, EX, EX-L, Touring and now, Touring Elite – more than 50 new standard and available features have been added for 2011 to enhance comfort, convenience, efficiency and travel fun. The Odyssey Touring Elite model debuts as the most-luxurious Honda minivan ever.

The 2011 Odyssey is truly an American-made[2] vehicle, designed, engineered and assembled in the United States, and it represents the vast and ever-growing capabilities of Honda in North America. Virtually every aspect of the 2011 Odyssey has been envisioned, developed, tested and finalized by Honda associates throughout California, Ohio and Alabama. Made by Odyssey owners for Odyssey owners, many of its engineers and designers are also long-time Odyssey drivers themselves, bringing real-world family experience into the design of the vehicle. Thoughtful features like the front bag hook, available cool box, available flip-up trash bag ring and more were inspired by the R&D team's first-hand experience with the vehicle. Popular features like the available back-up camera and available conversation mirror continue to be offered.

Powering the Odyssey is a robust, yet efficient 3.5-liter i-VTEC V-6 engine with Variable Cylinder Management (VCM). To conserve fuel when power requirements are low, the VCM technology can allow the engine to operate using only three or four of its six cylinders as conditions permit. A six-speed automatic transmission, standard on the Odyssey Touring, helps it achieve a best-in-class city/highway EPA fuel-economy rating[1] of 19/28 mpg (+2/+3 compared to 2010 Odyssey Touring). A five-speed automatic transmission is standard on the Odyssey LX, EX and EX-L, which has a city/highway fuel economy rating of 18/27 mpg (+2/+4 compared to 2010 Odyssey LX, EX). VCM uses both an audio system-based Active Noise Cancellation™ (ANC) system and a chassis-based Active Control Engine Mount (ACM) system to cancel noise and vibration that can occur during cylinder deactivation.

The 2011 Odyssey becomes lower and wider on the outside, resulting in a more spacious and functional interior compared to the 2010 Odyssey. The 2011 Odyssey's overall exterior length of 202.9 inches is 0.8 inches longer, the width of 79.2 inches is 2.1 inches wider and the height of 68.4 inches is 0.4 inches shorter (not including the previous model's roof rails, which become a dealer-installed accessory for 2011). The 2011 Odyssey's passenger volume of 172.6 cubic feet (LX) increases by 1.2 cubic feet compared to the 2010 model (LX). Weight-saving measures result in a curb-weight reduction between 50 pounds (Odyssey LX) to 103 pounds (Odyssey Touring) compared to the 2010 models. The reduction in curb weight is a significant accomplishment for a vehicle that is wider, more rigid, better equipped and more functional overall.

[2] Of domestic and globally sourced parts.

Key Specifications

- Horsepower / torque: 248 hp @ 5,700 RPM / 250 lb-ft. @ 4,800 RPM
- EPA-estimated fuel economy (MPG) city/highway/combined: 19/28/22 Odyssey Touring (best in class), 18/27/21 Odyssey LX, EX, EX-L
- Emissions: ULEV-2 (CARB) / Tier 2, Bin 5 (Federal)
- Length x width x height (inches): 202.9 x 79.2 x 68.4
- Wheelbase x track (inches): 118.1 x 68.1 (front) / 68.2 (rear)
- MacPherson strut front suspension and multi-link rear suspension
- Passenger / cargo volume (cubic feet): 172.6 (LX) / 38.4
- Passenger capacity: 8 (7 on LX)
- Five total LATCH positions among second and third rows (EX and above)

New Comfort and Convenience Feature Highlights

- 3-mode second-row seating enhances comfort and convenience (EX and above)
- 15GB memory Hard Disk Drive (HDD)-based audio system digitally holds approximately 175 CDs, replaces 6-disc changer (EX-L Navi and Touring)
- 2GB memory CD-Library digitally holds approximately 18 CDs, replaces 6-disc changer (EX and EX-L)
- FM traffic data (EX-L Navi and Touring)
- 16.2-inch Ultrawide Rear Entertainment System (RES) and HDMI port (Touring Elite)
- Cool box maintains coolness of beverages (EX-L and above)
- Multi-view rear-view camera with parking aid lines (EX-L Navi and Touring)
- Removable front floor console (EX and above)
- Flip-up trash bag ring (EX and above)
- Blind spot information system (Touring Elite)
- Auto-leveling HID headlights (Touring Elite)

New Technology

- 6-speed automatic transmission on Odyssey Touring (Honda brand first)
- Variable displacement power steering pump (Honda first on V-6)

Market Position and Demographics

The minivan segment is expected to grow by approximately 13 percent through 2012 (per Global Insight research, 2009). With four primary models, the Odyssey offers a unique balance of competitive value and upscale features designed to appeal to entry-level minivan buyers with the Odyssey LX, and to ultimate-luxury minivan buyers with the Odyssey Touring Elite. With a more stylish body design and a class-leading array of functional and useful technologies, the 2011 Honda Odyssey attempts to move away from being a “practical” purchase decision and closer to an “emotional” one.

A cultural shift is underway with a younger generation more open to the concept and image of a minivan. Generation Y and Generation X became the first generations to experience minivans as children. To younger generations now becoming parents, a minivan can often represent and support the value of “quantity time” with family and friends, which is more frequently cited as a priority compared to the “quality time” that parents from the Baby Boomer generation often sought. Regardless of the purchase reason and what it may potentially represent, the Odyssey has been envisioned to fill either role equally, as Honda designers put it, as “the best family car in the world.” Ultimately, the designers want the Odyssey to be a vehicle that people from all age groups will want to spend a lot of time in. This required more modern styling and more intuitive features, which everyone *likes*, but Generation Y *demands*, all while keeping the legendary functionality that Odyssey has brought to the market in the past.

Exterior Styling
The 2011 Odyssey dramatically departs from conventional minivan styling with its low and wide stance, highlighted by a "lightning-bolt" belt line that further distinguishes the vehicle's profile. Compared to the previous generation, the 2011 Odyssey’s slightly lower roofline and wider stance contributes to a sleeker, stronger and more dynamic presence with improved aerodynamics. Steeply raked front and rear roof pillars, a unique side-glass profile, a chamfered roof line and a tapered rear cabin shape combine to create a dynamic and distinctive appearance from every perspective. The lightning-bolt belt line dives toward the front of the vehicle, setting the Odyssey apart from the monotony of other minivan’s traditionally straight belt line. The lightning bolt further emphasizes the 2011 Odyssey's sporty appearance while enhancing outward visibility for third-row passengers. Aggressive body-to-wheel proportions reduce the perception of vertical height common to most minivan designs. Fender flares further accent the vehicle's securely planted and stylish persona. The availability of projector beam HID headlights and form-fit fog lights further contributes to a sophisticated and upscale appearance on applicable models.

Body Construction
The Odyssey’s extensively redesigned platform becomes more lightweight and rigid for 2011, allowing for the vehicle’s high levels of safety, increased fuel economy, refined handling and a comfortable ride. The 2011 Odyssey contains 59 percent high-strength steel content by weight (between 340 MPa and 1500 MPa), the most of any Honda to date and a significant increase from 35 percent on the previous model. The extensive use of high-strength steel contributes to lower vehicle curb weight and a stronger body. Compared to the previous generation, the 2011 Odyssey improves front lateral stiffness by 6 percent and rear vertical stiffness by 22 percent. Aerodynamically, the Odyssey is more efficient with a 5.5-percent reduction in Cd (aerodynamic drag) compared to the previous model.

Interior Styling Concept
The interior of the 2011 Odyssey embraces a “cool and intuitive” theme consistent with its increased levels of technology and family versatility. The dashboard’s simple and clean lines accent the depth of the cabin for an open and spacious feeling. A key exterior design element, the lightning-bolt belt line, improves the interior sight lines from the third row. Upscale materials available on certain models consist of metallic-look trim, glossy black panels and luxuriously grained soft surfaces.

Interior color choices are beige, gray and truffle (dark gray). The Odyssey exemplifies quality from its ergonomically friendly controls and sensible human factors, such as the positioning of grab handles, bins and pockets; intuitive switches and controls; and the feel of textiles and soft-touch textured surfaces.

Interior Versatility and Functionality
To fulfill its mission as the ultimate family vehicle, the 2011 Odyssey interior focuses on providing three rows of comfortable, adult-friendly seating together with a large interior volume and plentiful storage capabilities. Overall, the interior has been widened as more convenience and functionality features have been added to all three rows. Nine fundamental seating configurations (EX and above) can accommodate between one and eight passengers (seven on LX) simply by adding, folding or removing the modular seating elements. Innovations can be found throughout the cabin, including such features as a new second-row "3-mode" seating configuration and a third row that is more comfortable for adults.

Engineered for a quiet interior, improvements to body rigidity help to enhance the effectiveness of the vehicle's sound-deadening material to better isolate road noise. The end result is a quieter cabin at highway cruising speeds with less background noise, which helps make conversations from the front of the cabin to the rear of the cabin more audible.

As before, a 4x8 sheet of plywood can fit inside the Odyssey's cargo bay with the second row seats removed, and 10-foot-long 2x4 studs can fit inside the vehicle with the available front console removed. Numerous storage bins for every passenger are included, starting with generously sized door bins and a thoughtful storage area for purses or other similar-sized items in the available center console. Meanwhile, the lid of the front row center console (EX and above) is sized to accept four-cup beverage holders from take-out restaurants. A convenient flip-up trash bag ring extends from behind the center console and can secure a small disposable bag, giving passengers a convenient way to keep the inside of the vehicle clean. The Odyssey provides up to 15 beverage holders depending on the model, seating and console configurations (10 on Odyssey LX). The Odyssey offers a generous 38.4 cubic feet of storage behind the third-row seat, 93.1 cubic feet of storage behind the second row, and 148.5 cubic feet of storage behind the front seats – slightly more than the previous model (+1.1 cubic feet).

First Row
Like all Honda vehicles, the Odyssey's seating, instruments and controls are designed around the driver. To help enhance driver comfort, especially on long trips, the driver's seat features 10-way power adjustable seating (8-way power adjustable on Odyssey LX). Every tactile surface, from the interior door handles to the seat controls to the instrument panel, steering wheel, shift lever and electronic controls, latches and lids, are designed and manufactured to be pleasing to the touch and easy to operate. A tilt-and-telescopic steering column helps ensure that drivers of virtually all sizes can find a comfortable seating position. Additionally, the controls and switches all operate with typical Honda precision. Meters, gauges and displays are easy to locate and read, and secondary controls for the audio system, navigation system (available) and climate control system are well within convenient reach and feature large buttons and knobs.

Second Row
A key feature of the second row is its new "3-mode" design, which provides the ability to expand the distance between the seats by up to 1.5 inches each to increase comfort and enhance third-row access when child seats are being used in the second row. The second-row middle seat (EX and above) now has the ability to move forward, which brings child seats within a more convenient reach of the first row. The third mode can transform the middle seat into a large, comfortable armrest with beverage holders and a center tray for electronic devices. Overall, the new middle seat is wider and more adaptable than the previous version, making it a more convenient feature in the vehicle. Even with two child seats in the second row (one in an outboard location and one in a center location), access to the third row is possible without removing any of the child seats.

Third Row
Honda introduced the concept of third-row fold-down seating to the industry with the 1995 Odyssey and has improved upon it for every generation since. The 2011 Odyssey's 60/40 split 3rd-row Magic Seat provides a comfortable seating area and can quickly and conveniently fold down into the floor to accommodate cargo. For 2011, third-row width increases by utilizing side wall space previously occupied by the spare tire (now located under the floor between the front seats). Third-row leg room also increases substantially by 1.1 inch. Seat operation becomes even easier for 2011 with a more simplified, one-motion fold-down operation that requires only one hand to operate. The new system uses a high-mounted strap with a built-in release for fold-down operation instead of a lower-mounted latch-style release, which offers better leverage and less need to bend forward.

Sliding Doors
The Odyssey EX models and above come standard with power sliding doors (the Odyssey LX has manual sliding rear doors). For 2011, the power sliding doors operate with improved logic for better convenience. There also is a wider opening to enhance ingress and egress into the third row.

New Technology Highlights
Honda Satellite-Linked Navigation System™ with Voice Recognition
A Honda Satellite-Linked Navigation System with Voice Recognition is available on the Odyssey EX-L and standard on the Odyssey Touring. The system features an 8-inch, high-resolution VGA color display and uses GPS technology to provide turn-by-turn guidance to a destination, in addition to other features including a *Zagat*® restaurant guide. New for 2011, the navigation system adds a wide variety of features and functionality, including a high-resolution VGA display and improved graphics, a 60GB hard drive (replaces DVD-based system), FM traffic in the U.S. (if locally available), a *National Scenic Byways and All-American Roads Guide(new for 2011)*, and the option to import a favorite photograph to use as "wallpaper." In select cities, the FM traffic displays constantly updated traffic data from certain roads on the map and indicate decreased flow rates, incidents or construction. The database includes information on more than seven million points of interest, including gasoline stations, hotels, banks, restaurants, museums and local attractions.

Honda DVD Rear Entertainment System with 16.2-inch Ultra-Wide Display
A state-of-the-art, factory-integrated Rear Entertainment System (RES) with an ultra-wide display is standard on the Odyssey Touring Elite model. At 16.2 inches, the RES screen is the largest ever offered in a Honda. It's also the most versatile, because it can simultaneously screen two different sources of programming side-by-side, such as a video game and a movie, for different passengers. The two programs being played can be easily switched from side to side, so the viewers don't have to change seats. The wireless headphones supplied with this system can be tuned to either input source as desired. The system includes a High Definition Multimedia Interface (HDMI) port for attaching high definition players and certain gaming consoles.

"intelligent" Multi-Information Display (i-MID)
The Odyssey EX-L model has an 8-inch Thin Film Transistor (TFT) Liquid Crystal Display (LCD) screen with customizable features. Called the i-MID, this screen provides the driver with a variety of information. It can keep the driver updated about such items as the audio system, *Bluetooth*® HandsFreeLink® information and general vehicle information, in addition to displaying the rearview camera image. Personalized wallpaper using a JPEG-format photo can be added via the USB Audio Interface.

Blind Spot Information System
The Odyssey Touring Elite model includes an innovative blind spot information system (BSI). BSI helps give the driver additional information about conditions around the vehicle to enhance driving confidence. Sensors at each rear corner of the vehicle can detect another vehicle that may be positioned in the driver's blind spot. A graphic indicator located on the interior garnish near the appropriate side mirror alerts the driver if another vehicle is detected in the blind-spot zone.

Safety Ratings
The safety concept for the 2011 Odyssey is to achieve the highest-possible overall safety ratings from the National Highway Traffic Safety Administration (NHTSA) and the Insurance Institute for Highway Safety (IIHS). In the substantially revised and tougher NHTSA New Car Assessment Program (NCAP) safety ratings starting with 2011 model-year vehicles, the Odyssey is targeted to achieve a 5-star overall Vehicle Safety Score (VSS), the highest possible under the new criteria set forth by the Federal government. (Actual test results were not available at the time of printing. Do not compare to results before 2011.) The new overall rating combines three ratings into one, and is comprised of a revised frontal collision test, a revised side collision test, and a rating for rollover resistance. The revised 2011 model-year NHTSA frontal- and side-collision tests utilize a wider range of parameters compared to previous tests completed through the 2010 model year. Testing procedures with crash-test dummies mandate a wider range of occupant size simulations. The side-impact crash-test rating integrates a side pole-impact test for the first time (vehicle moving sideways into a stationary pole), in addition to the previous sled impact test (sled moving into the side of a stationary vehicle). In IIHS testing, frontal-, side- and rear-impact ratings, along with a new roof-crush standard, all are projected to be GOOD (based on internal Honda crash test data), which is anticipated to earn the Odyssey a TOP SAFETY PICK award for 2011.

Standard Safety Equipment
An extensive list of safety equipment comes standard on every Odyssey. The Advanced Compatibility Engineering™ (ACE™) body structure is a Honda-exclusive body design that enhances occupant protection and crash compatibility in frontal collisions. Additional standard safety equipment includes Vehicle Stability Assist™ (VSA®), commonly referred to as electronic stability control; anti-lock brakes with electronic brake distribution (EBD) and Brake Assist; three-row side-curtain airbags with a rollover sensor; driver's and front passenger's side airbags with passenger-side Occupant Position Detection System (OPDS); dual-stage, multiple-threshold front airbags; and active front seat head restraints. Also, a pedestrian injury mitigation design in the front of the vehicle is intended to help absorb energy in the event of a collision.

Chassis
A long 118.1-inch wheelbase, wide front and rear track dimensions, advanced suspension design and features such as VSA with traction control contribute to the Odyssey's excellent overall handling. Specially tuned independent MacPherson strut front and multi-link rear suspension provide a surprisingly nimble and rewarding driving experience, which also provides dynamic safety for which all Honda vehicles are known. The Odyssey's 4-wheel disc brake system incorporates larger-diameter rotors. As before, the system incorporates ABS, Brake Assist and Electronic Brake Distribution (EBD) as standard equipment. EBD automatically optimizes braking force between the front and rear wheels depending on passenger and cargo load, reducing the distance it takes the Odyssey to stop as compared to a vehicle without EBD. Brake Assist senses emergency stopping and applies all available boost to help stop sooner. ABS is designed to assist the driver retain steering control during heavy braking. The Odyssey's hydraulic power-steering pump uses a variable-displacement design that reduces the constant load on the engine. When the vehicle is maneuvering at slower speeds, like when parking, the power steering automatically increases the power assist so less effort is needed to turn the wheel. At highway speeds, it automatically reduces the power assist so that the driver has more feedback, all while exerting less drag on the engine for improved fuel economy. Standard on the Odyssey LX, EX and EX-L are 17-inch wheels, while 18-inch wheels are standard on the Odyssey Touring. The tires on all models feature low-rolling resistance construction to aid in maximizing fuel economy.

Powertrain
An advanced 3.5-liter, 24-valve, SOHC, i-VTEC V-6 gasoline engine provides the 2011 Odyssey with a combination of satisfying acceleration performance, excellent fuel economy and ultra-low emissions. The all-aluminum engine features a dual-stage intake manifold for low- and mid-rpm performance. The engine generates 248 hp and 250 lb-ft. of torque, while still achieving a class-leading highway EPA fuel economy rating of 28 miles per gallon (Odyssey Touring). The engine's Variable Cylinder Management (VCM) feature allows the engine to make responsive power while maintaining high levels of fuel efficiency. VCM works on the principle that a vehicle only requires a fraction of its power output at cruising speeds and allows the engine to effectively run on three, four or six cylinders, based on the power requirement. A five-speed automatic transmission is standard on the Odyssey LX, EX and EX-L. A six-speed automatic transmission is standard on the Odyssey Touring.

Compared to the five-speed automatic transmission, the six-speed automatic transmission has lower gear ratios in first through fifth gears to enhance acceleration, and the sixth gear ratio is taller to enhance fuel economy. The class-leading EPA-estimated highway fuel economy for the V-6-powered Odyssey Touring is better than similarly sized 4-cylinder-powered minivans currently available from other manufacturers for the 2011 model year. The 2011 Odyssey meets the Ultra-Low Emission Vehicle (ULEV) standard in California and states that adhere to California Air Resource Board (CARB) certification standards.

Models and Trim Levels
The Odyssey comes standard with a long list of engineering, comfort, convenience and safety features. Completely new features to the Odyssey are underlined. Features new to a particular trim level for 2011 are *italicized*.

The **Odyssey LX** engineering, comfort and convenience features include: a 3.5-liter i-VTEC V-6 engine, *VCM, Active Noise Cancellation (ANC),* 5-speed automatic transmission, variable power rack-and-pinion steering, VSA, power-assisted 4-wheel disc brakes with ABS and EBD, Brake Assist, TPMS, *17-inch* steel wheels with wheel covers, 235/65R17 all-season tires, projector beam halogen headlights with auto off, Daytime Running Lights (DRL), privacy glass, information display, 229-Watt AM/FM/CD audio system with five speakers including subwoofer, MP3/auxillary input jack, one-line audio system display, Radio Data System, cruise control, remote entry system, two 12V outlets, four LATCH positions, air conditioning with manual front and rear controls, *driver's seat with eight-way power adjustment and manual lumbar support,* front center floor tray, sunglasses holder, floor mats (front and second row), one-motion 60/40 split 3rd-row Magic Seat®, dual-stage, multiple-threshold front airbags (SRS), front side airbags with passenger-side Occupant Position Detections System (OPDS), three-row side-curtain airbags with rollover sensor, driver's and front passenger's active head restraints, Advanced Compatibility Engineering (ACE) body structure, power side mirrors, two-speed/variable intermittent windshield wipers, intermittent rear wiper/washer, rear window defroster, power windows with auto-up/down driver's and front-passenger's windows, tilt and telescopic steering column, 10 beverage holders, maintenance minder system and more.

The **Odyssey EX** adds or replaces to the Odyssey LX: alloy wheels, heated power side mirrors, power sliding doors, projector beam halogen headlights with auto-on/off, 3-line audio system display, AM/FM/CD/CD-Library 2GB memory audio system with seven speakers including subwoofer, steering wheel-mounted audio and cruise control, exterior temperature indicator, compass, HomeLink® remote system, selector knob, security system, three 12V outlets (total), removable front center console with storage, flip-up trash bag ring, seatback pockets (second row), 2nd-row multi-function center seat, five LATCH positions, tri-zone automatic climate control system with humidity control and air filtration, *driver's seat with 10-way power adjustment* including power lumbar support, second-row sunshades, conversation mirror with sunglasses holder, floor mats (all rows), 15 beverage holders and more. Note that *VCM and ANC* have been added to the Odyssey EX for 2011.

The **Odyssey EX-L** adds or replaces to the Odyssey EX: leather-trimmed interior (front and outboard second row); leather-wrapped steering wheel; 8-inch color QVGA i-MID; power tailgate; rearview camera with parking guidelines; power moonroof; beverage cool box; auto-dimming rearview mirror; steering wheel-mounted phone controls; XM® Radio[3]; USB Audio Interface; Bluetooth® HandsFreeLink®; passenger's seat with four-way power adjustment; heated front seats; center stack storage with utility tray; and more.

The **Odyssey EX-L with Rear Entertainment System** adds or replaces to the Odyssey EX-L: Honda DVD Rear Entertainment System (RES) with 9-inch display and two headphone jacks; two wireless headphones; one RCA video input; and one 115V power outlet.

The **Odyssey EX-L with Navigation** adds or replaces to the Odyssey EX-L: Honda Satellite – Linked Navigation System with voice recognition; FM traffic; multi-view rearview camera; interface dial; 246-watt AM/FM/CD Hard Disc Drive (HDD)-based 15GB audio system with seven speakers including subwoofer; and steering wheel-mounted navigation system controls.

The **Odyssey Touring** adds or replaces to the Odyssey EX-L with Navigation: six-speed automatic transmission; 18-inch alloy wheels; Honda DVD RES with 9-inch display and two headphone jacks; two wireless headphones; one RCA video input; one 115V power outlet; acoustic front windshield glass; memory-linked side mirrors with reverse gear tilt-down; driver's seat with two-position memory; one-motion 60/40 split 3rd-row Magic Seat® with folding center armrest; third-row integrated sunshades; fog lights; ambient footwell lighting; and body-colored parking sensors (front and rear).

The ***Odyssey Touring Elite*** adds or replaces to the Odyssey Touring: 650-watt AM/FM/CD Hard Disk Drive-based 15GB (HDD) premium audio system with 12 speakers including subwoofer and 5.1 surround sound theater mode; Honda DVD Ultra-Wide Rear Entertainment System with 16.2-inch display and HDMI port; auto-leveling High-Intensity Discharge (HID) headlights; and blind spot information system.

Colors and Trims

Exterior Colors	*Interior Colors*			
	LX	**EX**	**EX-L**	**Touring/Touring Elite**
Taffeta White	Beige or Truffle	Beige or Truffle	Beige	Beige
Alabaster Silver Metallic	Gray or Truffle	Gray or Truffle	Gray or Truffle	Gray or Truffle
Celestial Blue Metallic (new)	Gray	Gray	Gray	Gray
Polished Metal Metallic	Gray	Gray	Gray	Gray
Crystal Black Pearl	Gray or Truffle	Gray or Truffle	Gray or Truffle	Gray or Truffle
Smoky Topaz Metallic (new)	Truffle	Truffle	Truffle	Truffle
Dark Cherry Pearl	Beige	Beige	Beige	Beige
Mocha Metallic	Beige	Beige	Beige	Beige

Specifications and Comparisons

	2011 Odyssey Touring	**2010 Odyssey Touring**	**2011 Sienna XLE V6 2WD**
Length x Width x Height (inches)	202.9 x 79.2 x 68.4	202.1 x 77.1 x 70.0*	200.2 x 78.1 x 71.3
Wheelbase (inches)	118.1	118.1	119.3
Passenger Volume (cubic feet)	170.1	168.3	164.4
Cargo Volume (cubic feet)	38.4	38.4	39.1
Engine	3.5-liter i-VTEC V-6	3.5-liter i-VTEC V-6	3.5-liter VVT-I V6
Transmission	6AT	5AT	6AT
EPA Fuel Economy, City/Highway	19/28	17/25	19/24
Horsepower	248	244	266
Torque (lb-ft)	250	245	245
Required Fuel	Regular Unleaded	Regular Unleaded	Regular Unleaded
Fuel Capacity (gallons)	21.0	21.0	20.0
Front Suspension	MacPherson Strut	MacPherson Strut	MacPherson Strut
Rear Suspension	Multi-Link	Multi-Link	Twist Beam
LATCH positions	5	3	3

*Approximately 68.8 without roof rails.

Legacy of Innovation and Long-Term Value
Since 1995 the Odyssey has built a loyal following for its useful blend of versatility, functionality and quality. The first-generation Odyssey was based on the Accord platform and used conventional-opening rear doors. Its third-row of seating introduced the concept of the "hide-away" third row to the minivan segment and every significant competitor has added it since. The larger, second-generation 1999 model was based on a new global light truck platform (unrelated to the Accord) and truly set a new benchmark in the minivan segment. It featured power rear sliding doors (available) and innovations unimaginable for a minivan at the time. Additionally, the second-generation Odyssey with its fully independent suspension and surprisingly good handling went on to defy the prevailing wisdom that minivans lacked driving sophistication. A combination of new features and unexpected refinement catapulted the Odyssey into being one of the most sought-after vehicles in the entire automotive industry for much of the last decade. The Odyssey earned a reputation for being perpetually in demand and holding its value better than most other vehicles on the market, minivan or otherwise. The third-generation 2005 Odyssey introduced significant new innovations including the ACE body structure, Variable Cylinder Management and even more sophistication and luxury. The fourth-generation 2011 Odyssey promises to carry on the Odyssey's tradition of excellence with even greater efficiency, a new element of style, high-tech features and improved ease-of-use.

Manufacturing
The Odyssey is produced exclusively at Honda Manufacturing of Alabama (HMA) using domestic and globally sourced parts. The Lincoln, Alabama, plant conducts synchronous production of vehicles and engines and is the exclusive global producer of Odyssey minivans, Pilot sport utility vehicles and Ridgeline pickup trucks. In a further demonstration of Honda's manufacturing flexibility, the plant began production of Accord V-6 Sedans in July 2009, enabling the Marysville Auto Plant in Ohio to become the sole source for production of 4-cylinder Accords (Sedan and Coupe) sold in North America. The HMA plant was also the first automobile plant in North America to operate as a zero-waste-to-landfill facility, leading the way for reduced waste from vehicle production activities at all of Honda's plants in North America. The plant started production with the Odyssey minivan in 2001, adding a second production line and assembly of Pilot SUVs in 2004. Production of Ridgeline trucks was added in February 2009, followed by the addition of Accord V-6 Sedan production in July 2009.

Research and Development
All development and design activity for both the concept and production vehicles of the 2011 Odyssey occurred at Honda R&D Americas in Torrance, California, and Raymond, Ohio. Initially established as Honda Research California in 1975 to conduct market research in the U.S., Honda R&D Americas, Inc. has steadily expanded the size and scope of its operations and responsibilities. Today, Honda R&D Americas conducts complete product creation in the U.S. to research, design and develop products that meet the needs of customers in the Americas and to support local parts sourcing efforts. Like Honda R&D Co., Ltd., in Japan, Honda R&D Americas is a company separate from Honda's North American manufacturing and sales and marketing companies, with the flexibility to pursue its design and development goals. Honda currently operates 14 R&D facilities in North America.

Los Angeles Center
The Los Angeles Center has played a primary role in the design of the new 2011 Honda Odyssey and many current products including the Honda Civic Coupe and Si, Honda Pilot, Honda Element, Honda Ridgeline, Acura ZDX, Acura TL and Acura MDX — each produced exclusively in North America. In 2006, Honda R&D completed construction on a new Acura Design Studio, adjacent to its existing Torrance, California, facility, focused solely on the Acura automotive brand. The 2010 Acura ZDX is the first product designed wholly within the confines of the new facility. In early 2007, R&D began operations at a new Advanced Design Studio, in Pasadena, California, responsible for the development of future design concepts for Honda and Acura. The studio is responsible for the development of the FC Sport fuel cell concept (2008) and the P-NUT urban commuter concept (2009).

Ohio Center
The Ohio Center is located close to the Marysville, Ohio, and East Liberty, Ohio, auto plants. The development work on the 2011 Honda Odyssey as well as the current 2006 Civic Coupe and Si, 2003 and 2009 Pilot, 2003 Element, 2006 Ridgeline, 2004 and 2009 Acura TL, 2001 and 2007 Acura MDX and 2010 Acura ZDX took place at the Ohio Center. The Automotive Safety Research Facility at the Ohio Center houses the world's most sophisticated high resolution crash-test barrier block, the world's first pitching crash test simulator, along with other advanced safety research and testing labs.

Awards, Accolades and Ratings
America's best-selling minivan since 2008[4], the Odyssey has won numerous awards and critical acclaim. Recent accolades include an Edmunds.com 2010 "Top Recommended" minivan award, U.S. News and World Report 2010 "Best Minivan for the Money" award, Automotive Lease Guide 2010 "Best Minivan for the Money," the Kelley Blue Book award as one of the ten "Best New Family Vehicles of 2009" and "2009 Best Resale Value Award" in the van category, which recognizes vehicles that are expected to have segment-leading resale value after five years of ownership. Below is a partial list of awards that the third-generation Odyssey has won.

2005
Automobile Magazine – Editor's All-Star Award
Automotive Lease Guide (ALG) – Highest Residual Value for a Minivan
Car and Driver – 5Best Trucks
Consumer Guide – Best Buy: Minivan
IntelliChoice – Minivan Class Under $24,000 and Minivan Class Over $25,000
Kiplinger's Personal Finance –Best-in-Class, Best New Minivan, First for Safety, Best Resale Value and Most Fuel Efficient
Money – 2005 Best Minivan
Automobile Journalists Association of Canada – Minivan of the Year (CCOTY)
IntelliChoice –Best Van Value Over $25,000 (BOVY)
IntelliChoice – Best Van Value Under $25,000 (BOVY)
J.D. Power & Associates –APEAL Customer Satisfaction Awards: Midsize Van Segment Leader

[4] Based on Odyssey calendar-year sales of 135,493 for 2008 and 100,133 for 2009

2006
Money Magazine/CNNMoney.com – Best Cars of 2006: Best Minivan
AutoPacific – Vehicle Satisfaction Awards: Minivan
AutoPacific – Ideal Vehicle Awards: Minivan
AutoPacific – Motorist Choice Awards: Minivan
Automobile Journalists Association of Canada (AJAC) – Best New Minivan and overall 'Canadian Truck of the Year'

2007
AAA/Parents Magazine – Best Car for Families
Car and Driver – 5Best Trucks
Automobile Magazine – All-Star Award
IntelliChoice.com / Auto Pacific – 2007 Motorist Choice Awards: Minivan
Vincentric – Best Value in America™: Minivan under under $27,000 + Minivan over $27,000
Edmunds.com – Editors' Most-Wanted Vehicle Awards: Minivan
Cars.com –Lifestyle Awards: Top Family Car, Best Car for Big Families

2008
Kelley Blue Book – 2008 Best Resale Value: Van/Minivan
The Car Book – 2008 Best Bet
Autobytel's MyRide.com –Most Requested New Minivan

2009
Consumer Guide – Best Buy
IIHS – 2009 Top Safety Pick rating
Kelley Blue Book – Best Resale Value: Van
Kelley Blue Book – Best New Family Vehicles
NADAguides.com – Best Car Buys Top Vans under $27,000
The Car Book 2009 – Best Bet
AutoPacific – Ideal Vehicle Award (IVA)
AutoPacific – Motorist Choice Award

2010
Automotive Lease Guide – Best Minivan
Edmunds.com – Top Recommended
U.S. News & World Report – Best Minivan for the Money
Kelley Blue Book – Top 10 Family Car
AutoPacific – 2010 Vehicle Satisfaction Award
NADAGuides.com – Best Car Buys: Top Vans

New-for-2011 Standard and Available Features

Description	Trim Level
Brighter interior lighting	All
Chassis: variable displacement power steering assist	All
Engine: Cold Air Intake System	All
Engine: Low-friction engine design	All
Engine: Two-stage intake manifold	All
Front IP bag hook	All
IP center tray with device storage and convertible beverage holders	All
Larger brake rotors	All
Magic Seat new strap for easy stowage	All
Radio Data System (RDS)	All
Remote entry key design	All
Second-row lateral seat slide	All
Front and rear shock absorbers with blow-off valve	All
LATCH positions (five total, up from three, LX has four)	EX and above
New front-row removable floor console with 4 beverage holders	EX and above
New multi-mode second-row center seat with armrest	EX and above
Power lumbar in driver's seat	EX and above
Power sliding door operation logic	EX and above
Power sliding door switch on B-pillar	EX and above
Second row center seat with comfort slide and armrest	EX and above
Trash bag ring	EX and above
CD-Library 2GB	EX, EX-L, EX-L RES
Cool box	EX-L and above
Song-By-Voice	EX-L Navi and Touring
USB and iPod pocket	EX-L and above
USB Audio Interface	EX-L and above
i-MID	EX-L and EX-L RES
Digital wallpaper	EX-L and Touring
Bluetooth additional methods of placing a call	EX-L and above
Bluetooth audio streaming	EX-L and above
Bluetooth pairing simplified with phone book transfer	EX-L and above
FM traffic	EX-L Navi and Touring
Fuzzy logic voice recognition	EX-L Navi and Touring
HDD-based audio storage 15GB	EX-L Navi and Touring
Interface dial	EX-L Navi and Touring
iPod album artwork import functionality	EX-L and above
Maps of Canada, Puerto Rico, Alaska and Hawaii	EX-L Navi and Touring
National Scenic Byways and All-American Roads Guide	EX-L Navi and Touring
New restaurant POI categries (11)	EX-L Navi and Touring
Rear-view camera with multi-view	EX-L Navi and Touring
VGA navi display	EX-L Navi and Touring
150-watt power outlet (upgraded power rating)	EX-L RES Touring
Acoustic windshield glass	Touring
Park Aid System	Touring
Six-speed automatic transmission	Touring
Third-row center armrest	Touring

Third-row large storage pocket in port side wall	All
Third-row sunshades	Touring
12-Speaker 5.1 Surround Theater Audio	Touring Elite
Auto-leveling HID headlights	Touring Elite
Blind spot information system	Touring Elite
HDMI video input	Touring Elite
Ultrawide 16.2-inch Rear Entertainment System	Touring Elite

2011 Odyssey: Interior

2011 Odyssey Touring Elite Interior

Summary
The Odyssey has built a loyal following for its useful blend of versatility, functionality and quality. The 2011 Odyssey advances that mission with an even greater range of comfort and convenience features – along with contemporary design elements all its own. The new Odyssey offers generous space inside, with up to 172.6 cubic feet of total passenger volume (Odyssey LX) and 148.5 cubic feet of cargo volume behind the front seats. With comfortable and flexible seating configurations, numerous storage bins and pockets, up to 15 beverage holders, available leather seating surfaces, and a host of useful and enjoyable electronic features, the Odyssey interior quickly adds up to more than the sum of its parts.

The One-Motion 60/40 Split 3rd-Row Magic Seat® allows the Odyssey to quickly and easily adapt between passenger and cargo duties. The 3rd-Row Magic Seat can accommodate up to three passengers and still provide 38.4 cubic-feet of cargo volume behind the seats, or fold completely flat into the floor to create 93.1 cubic-feet of cargo volume while still maintaining room for five passengers (four passengers on LX). With the second-row seats removed, total cargo volume expands to 148.5 cubic-feet. Total interior volume measures 210.0 cubic feet for passenger and cargo volume combined (Odyssey LX). The wide-mode adjustable 2nd-row seats with armrests and walk-in feature allow for the seats to move sideways for improved comfort and convenience. Additionally, the new-for-2011 multi-function 2nd-row seat on the Odyssey EX and above offers better comfort compared to the PlusOne seat it replaces on the previous generation, while also integrating a Lower Anchors and Tethers for CHildren (LATCH) attachment point.

Interior Highlights

- Spacious eight-passenger seating (seven on Odyssey LX)
- One-Motion 60/40 Split 3rd-Row Magic Seat® (more comfortable and convenient)
- Available 3-Mode second-row seat
- Available premium features include leather, navigation and *Bluetooth*® HandsFreeLink®
- Passenger volume of 172.6 cubic feet (Odyssey LX), cargo volume of 38.4 cubic feet (maximum cargo volume of 148.5 cubic feet behind first row)

New Technology

- Front-row removable center console (Odyssey EX and above)
- Second-row 3-mode seating with multi-function center seat / armrest (Odyssey EX and above)
- Cool box
- Dedicated mobile device storage areas
- *Bluetooth*® audio streaming (Odyssey EX-L and above)

Styling and Ergonomics
Like all Honda vehicles, the Odyssey's seating, instruments and controls are all designed around the driver. To help alleviate fatigue, especially on long trips, the driver's seat features power adjustable lumbar support (EX and above) as well as height adjustment. Every tactile surface, from the interior door handles to the seat controls to the instrument panel, steering wheel, shift lever and electronic controls, latches and lids, are designed and manufactured to be pleasing to the touch and easy to operate. A tilt and telescopic steering column helps ensure that drivers of virtually all sizes can find a comfortable seating position.

2011 Odyssey interior illustration

Interior Packaging Concept
The Odyssey interior aims to provide a large space for both people and cargo with three rows of adult-sized seating comfort. For 2011, several fundamental changes have made the interior dimensions feel more spacious. The ceiling's AC outlet ductwork moves outboard to the sides, freeing up space to maintain similar amounts of headroom compared to the previous generation – despite having a slightly lower roofline. Additionally, the ceiling's aesthetics take on a much cleaner appearance with flatter sculpting across its entire plane smoother overall shapes, and first- and second-row hidden seat belt rings in the pillars. Additional storage has been added to the third row by moving the spare tire in the driver's side rear sidewall to the area underneath the front seats.

Instrument Panel
The Odyssey's bright, crisp instrument panel includes an electronic analog tachometer and analog speedometer as the primary gauges, along with an engine-coolant temperature gauge and a fuel gauge for the large 21-gallon fuel tank. The readouts are designed and positioned to provide important information to the driver at a glance. The controls and switches all operate with typical Honda precision. Meters, gauges and displays are easy to locate and read, and secondary controls for the audio system, navigation system (if so equipped) and climate-control system are all within easy reach and feature large, easy-to-operate buttons and knobs.

2011 Odyssey interior illustration

Information Display (LX, EX, EX-L) and Multi-Information Display (Touring)
Positioned across the upper portion of the driver's meter cluster, the Odyssey's information display incorporates a wide variety of general vehicle information and many of the warning functions usually displayed around the instrument panel. The information display shows information for odometer, vehicle range, trip and average fuel economy, Maintenance Minder™, and Odyssey EX and above models have an outside temperature readout. Additionally, warnings such as door ajar, parking brake and low tire pressure are shown. The programmable Multi-Information Display (MID) on the Odyssey Touring has higher resolution with finer graphics for a more upscale appearance, and allows for on-screen custom programming of interior lighting operation, auto-locking door setup and more.

i-MID (Odyssey EX-L only)
The Odyssey EX-L model has an 8-inch LCD TFT display screen with customizable features. Called the "intelligent" Multi-Information Display, or i-MID, this screen provides the driver with a variety of information. It can keep the driver informed about such items as the audio system, *Bluetooth* HandsFreeLink information and general vehicle information, in addition to displaying the rearview camera image. Personalized wallpaper using a JPEG- or BMP- (bitmap) formatted photo can be added via the USB Audio Interface. Up to five pictures can be stored, each with a maximum resolution of 1024x768.

Steering Wheel
The 4-spoke steering wheel incorporates a tilting and telescoping steering column to enhance comfort for a wide array of driver sizes. The Odyssey EX-L and Touring feature a leather-wrapped steering wheel intended to create a sporty feeling. Steering wheel mounted audio and cruise-control buttons include Mode, Volume and Channel, plus Cruise, Cancel, Set/Decelerate and Resume/Accelerate. Odyssey EX-L and above models add buttons for the *Bluetooth* HandsFreeLink telephone interface. In models equipped with the navigation system, the steering wheel also features buttons for navigation voice-control activation.

Front-Row Seating
The two front bucket-style captain's chairs are designed to offer supportive comfort combined with secure lateral support that can be appreciated during cornering. The front seats use padding tuned for ride comfort and isolation from road vibration and feature in-board fold-down armrests. The Odyssey LX driver's seat provides supportive eight-way power assist. The Odyssey EX and above driver's seat provides 10-way power assist with a power adjustable lumbar support. The Odyssey EX-L front seats add leather seating surfaces and seat heaters with low and high settings. The driver's side has heating elements in the base cushion and the seatback; the passenger seat has a heated base cushion. The passenger seat on the Odyssey EX-L and above provides four-way power adjustment. The Odyssey Touring adds a two-position memory feature for the driver's seat that also controls the side mirrors. The Odyssey Touring driver's seat power-adjustment settings (except power-adjustable lumbar support) can be stored in a pair of user profiles – one for each of the two key fobs that come standard with the Odyssey. An 8-way adjustable power-actuated front passenger seat is standard and includes height and seat-cushion tilt adjustments for excellent comfort. Active head restraints are standard for the front seats (see Safety section for more information).

Removable Front Center Console with Storage and Flip-Up Trash Bag Ring
A new feature for 2011, a removable center console on the Odyssey EX and above adds more storage and better accommodation for handheld electronics, as compared to the retractable center tray table it replaces on the previous generation Odyssey. Underneath the console is an additional tray for times when the console is removed from the vehicle. Research by Honda has shown that the retractable center tray with center pass-through was predominantly used by customers in either the up position or the down position throughout the ownership of the vehicle. Those that desired center pass-through capability typically left the retractable tray in the down position. Those that desired a tray always left it up and may not have fully utilized the space underneath.

The new center console, with its removable capability, better addresses the needs of each fundamental group by adding more capability to each mode. The pass-through loyalists can remove the console and receive a wider space to go through along with a dedicated floor tray (includes beverage holders on LX). The tray-up loyalists receive a more-robust storage zone with additional space for handheld electronics, take-out food trays and similar items. As before, a large purse can fit between the two front seats, but now it can be placed inside the console. Four beverage holders can be accessed by the front- and second-row passengers. A rear-mounted and top-hinged, flip-up trash bag ring, a new feature for 2011, discreetly folds flush against the back of the console when not in use. When activated in trash mode, the trash bag ring perimeter is specifically designed to accommodate ordinary plastic grocery bags or conventional "small-size" trash bags purchased over the counter.

Wide-Mode Adjustable 2nd-Row Seats with Armrests and Walk-in Feature
Honda engineers closely studied the patterns of how people use the second-row seating of a minivan. They made three primary findings. First, the second row is primarily used for two people and comfort is a top priority. Second, they discovered that the ability to place a child seat in any second-row position would greatly enhance load-in flexibility for people with younger children. Finally, the middle-seat functionality and comfort – which is very important when desired – could be greatly enhanced by making the seat wider and adding slide capability.

The 2011 Odyssey's second row uses two full-size captain's chairs, and Odyssey EX and above models are equipped with a more-comfortable and versatile Multi-functional 2nd-row seat that replaces the available 2nd-Row PlusOne Seat™ from the previous generation Odyssey. The multi-functional 2nd-row center seat is 3.9-inches wider than the previous model's available center seat and can slide forward by up to 5.5 inches – a new feature for 2011. All second-row seats are removable, and each outboard chair on the Odyssey EX and above model has a folding outboard armrest. When not in use by a passenger, the center multi-functional 2nd-row seat's seatback can fold down to create a large center armrest with three beverage holders and a tray. Odyssey LX models, which are not equipped with a second row center seat, include seat-mounted inboard armrests for the second-row passengers.

A new feature for 2011, the second-row wide-mode configuration can be formed by moving one or both of the outboard seats laterally by 1.5 inches (each). Primary benefits to the wide-mode configuration include the ability to install up to three child seats side-by-side in the second row, or it can be used to maintain ingress/egress pass-through from the second row into the third row when one or two child seats are installed (utilizing the center seat and one of the outboard seats). Additionally, the center seat's new ability to move forward allows for a child seat to be closer to the front-row occupants.

Up to nine combinations of cargo and passenger configurations can be accommodated by removing some or all of the second-row seats and/or folding down all or part of the 60/40 split 3rd-Row Magic Seat. The anchors for the second-row seats double as tie-down points when the Odyssey is being used to carry cargo with the second-row seats removed. An improved walk-in feature eases ingress and egress for the third row. The slide range is now greater compared to the previous model, and the walk-in levers are also lower, larger and easier to find and use.

60/40 Split 3rd-Row Magic Seat® with One-Touch Fold Down
The Honda Magic Seat® set the standard for third-row functionality in the minivan world. Honda introduced the concept of third-row fold-down seating to the industry with the 1995 Odyssey and has improved upon it for every generation since. The third row features a 60/40 split and offers top levels of convenience for operation thanks to its one-motion operation that makes access to the cargo area simple and fast. The 2011 Odyssey's 60/40 split 3rd-row Magic Seat provides a more comfortable seating area and can more conveniently fold down into the floor to accommodate cargo. Compared to the previous generation, third-row legroom also increases substantially by 1.1 inch to 42.4 inches, giving the Odyssey adult-sized levels of comfort in all three rows. The seating area also becomes more luxurious, with Odyssey Touring models adding a built-in folding armrest in the seatback.

Seat operation becomes even easier for 2011. Significantly updated with a new pull-down operation, the 60/40 Split 3rd-Row Magic Seat can be folded down into the floor by pulling a single strap on each side. The new system replaces a lower-mounted latch-style release on the previous generation. To put the seat down, the user simply pulls on the strap for that seat side to let the seat retract down into its in-floor storage area – in one smooth motion – creating a flat-floor cargo area. The system is spring-loaded and the headrests can remain in the seats. The hinges for the seat are designed to lie flat making it easier to stack items like plywood panels.

Honda Satellite-Linked Navigation System with Voice Recognition and FM Traffic
The available Honda Satellite-Linked Navigation System uses GPS technology and a new 60GB hard-drive-based operating system to provide drivers with turn-by-turn voice guidance to their chosen destination. The system adds FM traffic data for 2011 and now provides coverage in many large metropolitan areas within the U.S. The system uses an 8-inch, full-VGA, high-resolution color display, as well as an interface dial for user commands and a microphone for receiving voice commands.

For voice commands, the system provides a "fuzzy logic" searching capability to simplify entering destinations on screen. The new technology allows the voice-activation system to respond to more casual command phrases that require less familiarization, in addition to the previous capability of being able to understand spoken city and street names. For example, a voice request for "Radio 98.3 FM" can now be spoken in approximately a dozen different ways ranging from "change the radio station to 98.3" to "98.3 FM." This logic applies to all areas of the navigation system that can be controlled by voice and the conventional navigation commands like, "Find nearest Chinese restaurant" or "find nearest ATM."

The audio system is automatically muted when the "Talk" button is pressed. The voice-recognition technology allows the driver to simply speak city and street names aloud, and the system responds by displaying matches available in the database. Points of interest on the map (such as restaurants or grocery stores) can be displayed with brand logo icons or you can have the system provide turn-by-turn navigation – all by voice command. The massive point-of-interest (POI) database includes telephone numbers, which can be dialed by using the *Bluetooth* HandsFreeLink system when the driver's cellular telephone is connected to the system.

New for 2011, the Odyssey's navigation system provides constantly updated traffic incident data for select cities that lets drivers choose faster, less congested routes to get to their destinations sooner.

A digital version of the Zagat Survey® restaurant guide provides detailed information and reviews on select restaurants in the database. The reviews can be read on-screen or spoken over the audio system by a synthesized voice. The navigation system can suggest scenic routes based on the *National Scenic Byways and All-American Roads* guide. The National Scenic Byways Program is part of the U.S. Department of Transportation, Federal Highway Administration. The program is a grass-roots collaborative effort established to help recognize, preserve and enhance selected roads throughout the United States. Since 1992, the National Scenic Byways Program has funded 2,832 projects for state and nationally designated byway routes in 50 states, Puerto Rico and the District of Columbia. The U.S. Secretary of Transportation recognizes certain roads as All-American Roads or National Scenic Byways based on one or more archeological, cultural, historic, natural, recreational and scenic qualities. Scenic-route information for 126 routes can be accessed from inside the "Information" menu and is displayed on the map as a green-and-red segmented line.

Rearview Camera (Odyssey EX-L non-navigation)
The Odyssey EX-L is equipped with a rearview camera to provide the driver with additional confidence when backing up. When the Odyssey is placed in reverse gear, the rearview image is displayed on the i-MID. To make it easier for the driver to judge distance and clearance, solid yellow on-screen guidelines indicate the vehicle's width, as well as distances of 3.3, 6.6 and 9.8 feet from the rear of the Odyssey. A dotted yellow line is positioned at a distance of 1.6 feet, indicating the clearance needed to operate the tailgate.

Rearview Camera with Multi-View (Odyssey EX-L with Navigation and Odyssey Touring)
Adding to the features of the standard rearview camera on the Odyssey EX-L without navigation, the Odyssey EX-L with Navigation and both Odyssey Touring models are equipped with rearview cameras that offer multiple perspectives from behind the vehicle. When in reverse, the driver can select from among three views by using the interface dial. The primary view is "Normal View," which delivers 130-degrees of rearward visibility. For special conditions, there is the "Wide View," which delivers 175-degrees of rearward visibility. Finally, the "Top Down View" generates a straight-down look at the trailer hitch area or parking area, thus greatly easing alignment of the trailer and the available towing hitch or helping when maneuvering in tight parking spaces.

***Bluetooth* HandsFreeLink (EX-L and above)**
The *Bluetooth* HandsFreeLink hands-free phone interface is designed to work with many Bluetooth-enabled mobile phones. The system uses radio frequencies to connect the driver's cell phone to the vehicle's audio system. This allows the driver to make or answer cell-phone calls without taking his or her hands from the steering wheel. The system is compatible with *Bluetooth*-enabled cell phones that have the Hands Free Profile (HFP).

New for the 2011 Odyssey, the *Bluetooth* system allows for wireless streaming of audio from any smart phone device that supports the Advanced Audio Distribution Profile (A2DP) through the vehicle audio system. In addition, the Odyssey can show metadata for artist, album and track name on the vehicle display (navigation display or i-MID display) with mobile phones that support the AVPCP 1.3 protocol. The vehicle's audio controls for "skip forward" and "skip backward" allow for navigation from track to track.

Bluetooth HandsFreeLink is designed for easy use. After the driver completes a one-time "pairing" process to link the cell phone with the vehicle, *Bluetooth* HandsFreeLink can communicate wirelessly and securely with the driver's cell phone when the phone is within about 30 feet of the vehicle. Once the driver enters the vehicle, he or she simply stores the phone in a pocket, briefcase, purse or a storage bin inside the vehicle's cabin and the call transfers through the wireless telephone interface. Certain compatible cell phones can also transfer the cellular phonebook into the vehicle through the *Bluetooth* HandsFreeLink system. After the cellular phonebook is transferred, calls can be made by making selections from the registered phonebook on the information screen in the navigation system or i-MID.

Operational features include:

- Phone numbers of incoming calls are displayed on the navi display or i-MID
- Pressing the steering wheel-mounted "Pick up" button answers the call and mutes the audio system
- Caller is heard through the audio-system speakers
- Two overhead microphones pick up the driver's voice clearly while minimizing background noise and echoing
- To make a call hands free, the driver first activates the system using the steering wheel-mounted fingertip controls, then "dials" the number by voice
- Numbers with voice tags may be stored in the system's memory
- Up to six different compatible mobile phones can be paired with the *Bluetooth* HandsFreeLink system at one time
- Using the interface dial, direct phone-number input is possible

Dual-Zone Manual Air Conditioning System with Air Filtration (Odyssey LX)
The Odyssey LX is equipped with air conditioning that features air filtration as standard equipment. Manual controls allow for different temperatures and fan speeds to be selected for the front and rear rows. The air-filtration system is capable of filtering nearly 100 percent of particulates over eight microns in size (the size of most pollen), as well as about 40 percent of the particulates down to 0.3 microns (about the size of diesel emissions).

Tri-Zone Automatic Climate Control System with Humidity Control and Air Filtration
Tri-zone automatic climate control is standard for the Odyssey EX and above models. The tri-zone automatic climate-control system lets the driver, front passenger and rear passengers adjust temperature and air distribution to automatically meet their needs. Both front and rear systems are controllable by the driver. With the press of a button, the rear system can be independently adjusted using the control panel in the second row.

On models equipped with navigation, the system uses data from the onboard global positioning system receiver to automatically adjust fan speed to compensate for heating from direct sunlight. Tri-zone automatic climate control includes humidity control designed to automatically prevent the windows from fogging. For greater efficiency, the system will partially recirculate some cabin air to reduce cooling in relation to the outside temperature. For example, when in AUTO mode, up to 60 percent of the cabin air is recirculated when the outside temperature is 86 degrees Fahrenheit. Comparatively, as little as 24 percent of the cabin air is recirculated when the outside temperature is 75-degrees Fahrenheit.

Cool Box

A new feature for 2011, Odyssey EX-L and above models include a cool box in the lower area of the instrument panel's center stack. The cool box is designed to minimize the warming of already-cold drinks, and is spacious enough to accommodate up to four 20-ounce bottles or six 12-ounce cans. An on/off switch near the box opening allows the cooling feature to be activated. A direct link to the vehicle's air conditioning system lets cold air circulate into the box regardless of the temperature settings on the vehicle's climate control system. A push button opens the box automatically. The bottom-hinged box uses a speed-sensitive damper to provide a consistent opening velocity whether the box is full or empty.

Interior Lighting

Significant engineering went into the Odyssey's interior lighting to provide clear visibility, the right ambience and optimized illumination levels regardless of outside lighting. The analog instruments are backlit, with high-contrast markings. Illuminated pointers provide clarity and a high-end look. The illumination level of all the lighting in the instrument panel is adjustable to one of five different levels by turning the odometer-reset push button.

The Odyssey has a progressive self-illuminating gauge cluster. When the door is first opened, the instrument lighting comes to life, and then brightens progressively when the ignition is switched on. When the ignition key is switched off, the instrument lighting dims progressively. For easy location in the dark, all of the Odyssey's steering-wheel controls and window switches are illuminated, including those on all four doors. The front doors have courtesy lights that are illuminated when the doors are open.

Low-level blue LED ambient lighting in the ceiling illuminates the front center console. Odyssey Touring models include low-level blue LED ambient lighting in the driver's and front passenger's foot wells. Map lights are provided for all three rows of seats. A cargo light is provided behind the third-row seats.

Audio System (Odyssey LX, EX, EX-L, EX-L Navi, Touring)

Odyssey audio systems provide a wide variety of features and choices for each trim level. The 2011 Odyssey LX features a 229-watt AM/FM system with CD player and five speakers including a subwoofer with an 8.4-liter enclosure, a Radio Data System (RDS), MP3/WMA[5]/AAC CD data disc playback, an auxiliary audio input jack for connecting a personal digital music player and Speed-sensitive Volume Control (SVC). Odyssey EX models add two more speakers (tweeters) and a 2GB, flash memory-based CD-library (new for 2011).

[5] Windows Media® Audio

The Odyssey EX-L model adds XM® Radio and a USB Audio Interface (new for 2011) for connecting an iPod or other compatible storage device, along with *Bluetooth* audio streaming when paired with a compatible device. The Odyssey EX-L with Navigation and the Odyssey Touring model add a more powerful 246-watt audio system with 15GB of hard disk-drive (HDD)-based music storage (replacing the 2GB CD-Library). (See Odyssey Touring Elite section for details on that model's audio system.)

The USB Audio Interface located in the glove compartment of the Odyssey EX-L and above models can read flash drives and compatible digital music devices, such as iPods, that contain MP3, AAC or WMA music files. The iPod or Flash drive can then be controlled using the steering wheel- or radio-mounted controls. Information such as song title, artist and other information will appear on the Odyssey's LCD screen. The system will also charge the iPod while it is connected.

Standard Features on All Models
The RDS shows song titles, artists' names and other information that FM radio stations may choose to broadcast. RDS will also search for music by specific genres, such as rock, country and other categories. Every system can play CD-Rs with MP3, WMA, and AAC file types, and it will display the track information on the screen if included in the file metadata. The SVC feature automatically raises or lowers the volume to compensate for exterior road noise as vehicle speed changes. The auxiliary input jack (aux-in) allows the easy connection of personal audio players to the audio system. The aux-in jack is conveniently located in the center stack of the instrument panel. Plugging a portable audio device into the aux-in jack automatically sets the volume at a preset level. When the device is unplugged, the volume resets to its previous level.

2GB CD-Library (Odyssey EX and EX-L)
Systems featuring the 2GB CD-Library can copy music tracks from pre-recorded CDs, enabling customers to store up to 18 CDs worth of music on board for easy access. The system will not copy music from burned CDs or from USB flash drives (EX-L). The system records music at a variable rate between 4X to 8X of the original music track time.

The audio system can display information about the music tracks, such as artist names and song titles using the Gracenote® database in the system software. This database can be periodically updated to reflect newly released music. Gracenote updates can be downloaded by Odyssey owners at automobiles.honda.com in the Ownerlink section (up to four updates per year maximum). The updates can then be loaded onto a CD-R or onto a USB thumb drive (for models with a USB audio interface) which, in turn, can be used to update the Odyssey's audio system. Even without a Gracenote update, newly released audio tracks will play on the sound system, but will play without accompanying text information on genre, artist, album name and track name.

Hard Disk Drive (HDD) Audio (Odyssey EX-L Navi and Odyssey Touring)
Systems featuring the 15GB HDD-based memory are programmed from the factory to copy music tracks from pre-recorded CDs, enabling customers to store many CD's worth of music on-board for easy access. The system will not copy music from burned CDs or from USB flash drives. Based on music files measuring an average size of 4.2MB per song at a 128kbps bitrate, approximately 3,500 songs can be loaded into the 15GB system (approximately 175 CDs).

The HDD-based system records music at a variable rate between 4X to 8X of the original music track time. The automatic-recording default setting can be changed to manual if desired.

The audio system can display information about the music tracks, such as artist names and song titles using the Gracenote® database in the system software. This database can be periodically updated to reflect newly released music. Gracenote updates can be downloaded by Odyssey owners at automobiles.honda.com in the Ownerlink section (up to four updates per year maximum). The updates can then be loaded onto a CD-R or onto a USB thumb drive which, in turn, can be used to update the Odyssey's audio system. Even without a Gracenote update, newly released audio tracks will play on the sound system, but will play without accompanying text information on genre, artist, album name and track name.

Song By Voice
Navigation-equipped Odysseys offer the Song by Voice® feature. From most navigation screens, the driver can simply press the TALK button on the steering wheel and say “iPod search” or “HDD search.” With so much audio content potentially available on the HDD or from an iPod, Honda engineers set out to make it easy to find content. So drivers can simply give a voice command, such as “Play song ‘Danny Boy,’” and the system will automatically begin playback. Song by Voice also lets the driver choose music by artist, album, track name, genre, playlist and even composer.

XM Radio
The Odyssey EX-L and Touring audio systems include XM Radio, which provides more than 170 channels of digital program material and near-CD quality sound. Informational text on the programming appears on the audio system display. XM Radio offers virtually uninterrupted coverage of the 48 contiguous states and coast-to-coast signal coverage to certain densely populated regions of Canada; service for Alaska and Hawaii is not available at this time. Three months of complimentary XM Radio service is provided starting on the purchase date of a new vehicle. After the complimentary period, XM Radio requires a monthly subscription. The XM Radio display indicates the artist’s name, song, channel and category of music.

Premium Audio System (Odyssey Touring Elite)
Adding to the features and functionality of the Odyssey Touring audio system, the Odyssey Touring Elite provides a 12-speaker, 650-watt, premium 5.1 Surround Sound audio system for an extraordinary listening experience. The audio system includes four premium door-mounted speakers, two tweeters in the instrument panel, one center-channel speaker in the middle of the instrument panel, two roof-mounted speakers above the second row, two speakers mounted in the D-pillar, and one subwoofer mounted in the side wall of the third row (larger, 8.4-liter enclosure). Fading the audio to the rearmost position creates a genuine mobile theater audio experience for the rear passengers, with 5.1 Surround Sound being delivered through the seven speakers in the second and third rows.

Honda DVD Rear Entertainment System (RES) (Odyssey EX-L with RES, Touring)
Available on Odyssey EX-L and standard on Odyssey Touring models, a factory-installed Honda DVD Rear Entertainment System (RES) for rear passengers is a multi-faceted system that features a 9-inch wide-screen LCD display that flips down from the ceiling for easy viewing. The QVGA display natively provides 480 pixels horizontally and 234 pixels vertically. User-selectable aspect ratios include normal, wide and zoom. The extended capabilities of the system allow for either DVD, CD, radio, available XM Radio and auxiliary accessories (such as certain video game consoles, DVD players or cameras) to be played in the rear seating areas through headphones while the front passengers listen to a different audio source.

The DVD player can be conveniently controlled from three sources – the front audio-system controls, the integrated wireless remote control (that stores near the LCD screen), or through voice activation on models equipped with the Honda Satellite-Linked Navigation System. For 2011, the DVD disc will begin to auto-play when the disc is loaded. Additional audio and video input jacks allow for a wide variety of additional equipment to be attached to the system. The system comes complete with two infrared (IR) wireless headphones and a wireless remote control as standard equipment. For convenient night use, the remote control is illuminated.

Two wireless headphones are included. Each includes a volume knob. A safety feature on the wireless headphone system prevents front-row passengers from using the headphones. The wireless headphones are automatically activated when the ear pieces are turned approximately 90 degrees (to be put on) and deactivated when the headphones are turned 90 degrees (when taken off). The automatic on/off system reduces the possibility that the AAA battery-powered headphones could be accidentally left on. A 115-volt power outlet rated for devices up to 150 watts is included in the third row of models with RES.

Honda DVD Ultrawide Rear Entertainment System (RES) with HDMI Port (Odyssey Touring Elite)
Adding to the features of the Odyssey Touring, a state-of-the-art, factory-integrated Rear Entertainment System (RES) with an ultrawide display is standard on the Odyssey Touring Elite model. At 16.2 inches wide, the RES screen is the largest ever offered in a Honda. The WVGA display natively provides 1,600 pixels horizontally and 480 pixels vertically (approximately 6.8 times the resolution of the standard display on the Odyssey Touring). User-selectable aspect ratios include normal (640x480), full (850x480), super full (1,300x480), ultra full (1,600x480), super zoom (1,300x640) and ultra zoom (1600x640). It is also the most versatile, because it can simultaneously show two different sources of programming side-by-side, such as a video game and a movie, for different passengers. The two programs being played can be easily switched from side to side using a button near the screen, so the viewers don't have to change seats. The Odyssey Touring Elite has an exclusive 12-speaker, 650-watt audio system provides 5.1 channel surround sound capability (see Premium Audio System for more information). The dual-source wireless headphones supplied with this system can be tuned to either input source as desired using a button on each set of headphones. The system includes a High Definition Multimedia Interface (HDMI) port (located in the third row) for attaching high definition players and certain gaming consoles, along with standard composite and audio inputs.

Active Noise Cancellation (ANC)
The audio system integrates with the vehicle's Active Noise Cancellation™ (ANC) system to minimize certain frequencies associated with cylinder deactivation on all 2011 Odyssey models. ANC significantly reduces certain low-frequency sounds in the interior. Dual microphones – one located in the headliner near the overhead console and the other near the rear overhead light module – pick up low-end drivetrain frequency noise entering the cabin. This audio signal is sent to the ANC electronic processor, which creates and sends a precisely timed "reverse phase" audio signal to a special amplifier. In turn, the amplifier drives the subwoofer and door speakers to cancel the original noise signal.

HomeLink Remote System
The Odyssey EX and above models feature a HomeLink® universal remote system, built into the overhead map-light module. The system can be programmed with the codes of up to three devices, such as a garage-door opener, home security system, etc.

Integrated Sunshades
Integrated second-row sunshades are standard on Odyssey EX and above models. The retractable shades are integrated into the lower portion of the power sliding doors and can be easily pulled up and secured via a hook on the upper portion of the window sash. The shades cover the majority of the glass and do not affect power window operation. Third-row sunshades are included on the Odyssey Touring models.

UV-Resistant Privacy Glass
All Odyssey models come equipped with UV-resistant privacy glass with dark tinting on the windows in the second and third rows. The Odyssey's glass filters ultraviolet (UV) light resulting in less interior fade over time, lower cabin temperatures on hot days and more efficient interior cooling.

Remote Entry
Remote entry is standard equipment on all Odyssey models. Odyssey LX models feature keys with built-in transmitters that have lock, unlock and panic buttons. Odyssey EX models add to the LX features with a key fob that provides additional buttons for opening and closing the power sliding doors remotely. For quickly ventilating the interior in hot weather, the key fob can also open the windows and moonroof by holding down the unlock button. The key can also perform the same function in the door lock cylinder, and close the windows and moonroof, too, by turning to lock or unlock positions accordingly and holding. On Odyssey EX-L and above models, the key fob transmitter has an additional button that can raise and lower the power tailgate.

Automatic-Dimming Rearview Mirror
An automatic-dimming rearview mirror is standard on Odyssey EX models and above. The rearview mirror automatically dims to an anti-glare setting when bright headlights are detected behind the vehicle.

12V DC and 115V Power Outlets

The Odyssey EX and above models have three 12V DC power outlets – two in the front and one near the third row. The Odyssey EX-L RES and Touring models are equipped with a 115-volt power inverter (150 watts) in the third row for operating a wide range of equipment including certain game consoles, mobile phone chargers or similar items. The power outlet features a rotating protective cover (similar to those used in a home for child-proofing) to enhance safety.

2011 Odyssey: Body

Summary
The 2011 Honda Odyssey's body provides far more than just dramatic and attractive styling. Its strong unit-body structure is key to its high fuel economy and targeted safety ratings. It even contributes to a smooth, quiet ride.

Body Highlights

- Sporty, upscale and distinctive design
- Highly efficient, highly rigid and lightweight unit-body construction with Advanced Compatibility Engineering™ (ACE™) body structure
- Aerodynamic Cd improves by 5.5 percent
- Improved power sliding door operation and larger opening
- Quieter cabin with reduced NVH

Exterior Styling and Design

The styling conveys that the Odyssey is a dynamic and luxurious vehicle first, and a minivan second. With its windswept A-pillars, rakish D-pillars and dramatic lightning-bolt belt line detail, the Odyssey is unmistakable for any other vehicle on the road. It also redefines minivan styling while opening up the minivan ranks to customers who might not have previously considered one.

2011 Honda Odyssey styling image

Designers focused on making the Odyssey more visually spontaneous, progressive and athletic. The look begins with a lower and more dynamic design, with the A-pillars pulled forward and laid back to cheat the wind and improve interior noise levels. A commanding belt line dives down toward the front of the vehicle to convey motion and help make the Odyssey instantly recognizable at a glance – even from 100 yards away.

2011 Honda Odyssey exterior design illustration

Up front is a characteristically modern Honda grille, with three horizontal bars, a large Honda emblem and chrome accents, flanked by aerodynamically shaped headlights. The front fenders feature strongly flared arches filled by 17-inch wheels on LX, EX and EX-L models (18-inch on Touring), a 1-inch increase respectively for each model compared to the 2010 model year. The larger proportions of the fender and wheel designs help make the Odyssey appear visually low in overall height and surprisingly car-like. The door handles for the front doors and sliding doors form a singular design element and on Odyssey EX and above models are highlighted by chrome accents for an upscale, precision-crafted look.

2011 Honda Odyssey exterior design illustration

A black finish for the B- and C-pillars and the side mirrors emphasizes the body's silhouette by disguising those design elements to the side glass. The flowing roofline then intersects rakish D-pillar (rear pillar) to continue the dynamic appearance. In back, the rear body quarter panels feature crisp style lines and flared fender arches that give the Odyssey a decisive and muscular look, helping it stand apart from other minivans. The large, red brake lights with clear backup lenses create a contrasting visual statement for a sophisticated appearance.

Aerodynamic Enhancements
The Odyssey was carefully tuned to achieve high levels of aerodynamic efficiency in some obvious and not-so-obvious parts of the vehicle. Overall, the new Odyssey has a 5.5 percent reduction in the coefficient of aerodynamic drag (Cd) compared to the previous model, which directly contributes to greater fuel economy, reduced emissions and a quieter cabin at cruising speeds.

A low air opening pulls cooling air from the lower portion of the front fascia while carefully crafted strakes sweep the airflow around the front tires and underneath the powertrain for maximum efficiency. The inner front fender wells are sculpted rearward to improve engine room air flow. The tailgate spoiler smoothes air over the rear of the vehicle to reduce turbulence behind the vehicle. The Odyssey Touring benefits from a more aerodynamic mirror shape and exclusive lower rocker panels that are shaped to push airflow around the rear tires to reduce drag.

Body Construction
The Odyssey's extensively redesigned platform becomes more lightweight and rigid for 2011, allowing for the vehicle's high levels of safety, increased fuel economy, refined handling and a comfortable ride. The 2011 Odyssey contains 59 percent high-strength steel content by weight (between 340 MPa and 1500 MPa), the most of any Honda vehicle to date. The extensive use of high-strength steel contributes to lower vehicle curb weight.

The Odyssey's body is reinforced by a series of hoops formed by the underfloor cross members, the A, B, C and D pillars, and the cross members in the ceiling. The four ring shell encircles the passenger compartment and is designed to remain intact in the event of a serious side impact or rollover. It works in conjunction with the Advanced Compatibility Engineering (ACE) body structure at the front of the vehicle and deformable architecture at the sides and rear. (See the Safety section for more information on the ACE body structure.) In back, a rigid tailgate opening also contributes to overall structural rigidity, interior quietness, ride quality and durability.

Further reinforcement against side impacts is provided by the A, B, C and D pillars. These pillars feature internal plates and gussets that greatly strengthen them against buckling. To better protect the Odyssey against rear impact, the main-frame members extend all the way to the rear of the body and are tied together with cross-members under the floor.

Floating Front and Rear Subframes
A welded-steel subframe secured to the unit body's longitudinal rails supports the engine, transaxle, steering gear box and front suspension. The front subframe assembly's closed-box construction has been optimized for maximum stiffness with minimal weight penalties and uses four tuned rubber mounts to isolate the subframe from the main body structure. A stiffener

located under each subframe-attachment fastener helps stabilize the assembly, thereby sharpening handling and braking performance. The subframe houses two Active Control Engine Mount System (ACM) units that counteract the inherent vibration created by the Variable Cylinder Management™ (VCM®) system, plus one urethane transmission mount. (See the Powertrain section for more details on ACM). The mounts are strategically positioned to counteract noise and vibration while reducing the transfer of engine noise and vibration to the passenger compartment.

Road noise, vibration and harshness are dramatically reduced through the use of a floating rear subframe that carries the lower-rear suspension links. The subframe is isolated from the body by specially tuned bushings, and has an optimized closed box structure for rigidity and a direct reduction of NVH in the passenger cabin.

Noise, Vibration and Harshness (NVH) Reduction
The 2011 Odyssey utilizes a wide variety of technology, construction and advanced materials to reduce road noise. As a result, the 2011 Odyssey is noticeably quieter at cruising speeds compared to the 2010 model, with improvements to body rigidity and body seals. The Odyssey has floating front and rear subframes, advanced sound-absorbing material, an Active Noise Cancellation™ system, and an ACM system for the engine.

New for 2011, improvements to the connection efficiency at key body component intersections in the front and rear of the vehicle help to improve rigidity. One such improvement are newly developed “butterfly braces” within the frame structure at the rear subframe mounting points. Each brace allows for more efficient support of the subframe mount point, which improves subframe attachment point rigidity by 59 percent. Improved rigidity allows for softer bushings to be used where the rear suspension connects to the body and subframes. Softer bushings transmit less road noise from the suspension into the cabin. As a result, the rear subframe bushings are 38 percent softer, and the damper upper bushing is 73 percent softer compared to the 2010 Odyssey.

The insulation materials and construction for the 2011 Odyssey build on the foundation of the previous model. The carpet and dashboard insulators continue to use lightweight materials, with upgrades that reflect the latest construction techniques and improved coverage. Likewise, the melt sheet package has been optimized using the latest laser vibrometer techniques to calculate the most-effective density and thickness for each part. Additionally, the amount of air that can escape from a fully closed cabin when pressurized (a test often referred to as “body leak”) has been improved by 30 percent. The premise is that if air cannot escape, then sound cannot get into the cabin. All of these improvements result in a noticeably quieter cabin at highway speeds compared to the previous model.

Active Control Engine Mount System
(Please see the Powertrain section.)

Visibility and Glass
Excellent outward visibility is a hallmark of Honda design and a key feature for the 2011 Honda Odyssey. The Odyssey provides excellent sight lines for the driver including a commanding eye point level and a short forward invisible length. Forward invisible length is the distance a driver needs to look to see the ground in front of the vehicle. All Odyssey models come equipped with UV-resistant privacy glass with dark tinting on the windows in the second and third rows. The Odyssey's glass filters UV light that results in less interior fade over time, lower cabin temperatures on hot days and more efficient interior cooling.

Acoustic Windshield Glass (Odyssey Touring)
Special acoustic windshield glass is used on the Odyssey Touring to help reduce wind noise. Tuned specifically to attenuate wind-noise frequencies, the windshield uses two layers of 2 mm safety glass with an in-between layer of a transparent elastic acoustic membrane for a total thickness of 4.5 mm. The windshield, like all the glass in the vehicle, is UV-resistant.

Front Driver's and Passenger's Doors Construction
The Odyssey's front doors use triple-stage stopper construction for ease of ingress/egress in tight parking situations. The doors use a special construction that provides a solid feel and sound when closing. The doors feature side impact-protection beams.

Automatic Locking and Unlocking
The automatic door locking/unlocking system is customizable by driver preference. Automatic locking can be linked to vehicle speed reaching 10 miles per hour (15 km/h), or the gear shift lever shifting from park, or it can be deactivated entirely. The factory default for locking is linked to vehicle speed.

Automatic unlocking, configurable to the driver's door or all doors, can be linked to the ignition switch being turned to the off position, or the gear shift lever being positioned in the park position, or it can be turned off entirely. The factory default for unlocking is linked to the gear shift lever and unlock activation for the driver's door only.

Dual Sliding Doors with Power Windows and Integrated Sunshades
The Odyssey LX is equipped with manual sliding doors. The Odyssey EX, EX-L and Touring models are equipped with dual power sliding doors and include integrated sunshades as standard equipment. For 2011, reshaped door openings allow for improved access to the third row than the previous generation by 1.3 inches in the bottom half of the door and 2.3 inches in the top half. Power sliding side doors can add convenience, for example, while carrying bulky objects when approaching or departing the vehicle.

New operation logic and controls for 2011 allows the power sliding doors to be opened in a greater variety of situations. With the ignition on, the doors can be opened using the inner handle, outer handle, dash switch or B-pillar switch (new) while in Park. The power sliding doors can also open when the gear selector is in any position (new feature) and the brake pedal or parking brake is applied and the vehicle is stopped. Previously, the gear selector had to be in Park for the doors to operate with the ignition on, or in Neutral with the brake pedal (or parking brake) applied and the vehicle stopped.

New for 2011, when using the remote entry button to open the power sliding doors (one button for each side), each door will automatically unlock itself and unlock the front door on that side of the vehicle. The new functionality eliminates the need to press the unlock button twice on the remote entry key fob prior to pressing one of the power sliding doors' open/close buttons (in situations where the doors are initially locked). If desired, a lockout switch on the instrument panel can disable the door's power operation all together, reverting to traditional manual operation.

Significant safety features have been built into the Odyssey's power door system. If the door should encounter any resistance while closing, it will immediately reverse direction. A direct detection system uses sensors built into the rubber seal on the leading edge of the door that detects when an object is in the path of the door. The sensors use four closely spaced wires inside the doors' rubber seals that can touch if contact is made to the outer edge of the seal. When the wires touch, that sends a signal to the doors operating system to reverse direction. The system is extremely sensitive and relatively gentle (reduced load for pinch detection). The doors will not completely retract to the fully open position if the rear windows are down. This is a safety feature to prevent a person's head or other body part (sticking out of the window) from getting pinched between the front of the sliding door and the door frame during power operation.

The Odyssey is equipped with power windows in the second-row dual sliding doors. New for 2011, the windows roll farther down, leaving just 3.4 inches of window exposed (previously 5.9 inches). The second-row window switches use the recessed push-down/pull-up design that further helps to reduce the risk of the window pinching an occupant. As a safety feature, the dual sliding doors on all models each have a side impact-protection beams.

Integrated sunshades are standard on EX and above models. The retractable shades are integrated into the lower portion of the windowsills and can be easily pulled up and secured via hooks at the top edge of the window sash. The shades cover the vast majority of the glass and do not interfere with power-window operation. New for 2011, retractable shades are also included in the third-row side windows on the Odyssey Touring.

Power Tailgate

Odyssey EX-L and Touring models feature a power tailgate that can be conveniently controlled from four sources: the remote entry, the exterior handle (for manual opening), a switch mounted on the underside of the tailgate (for closing), and from a switch on the instrument panel. The tailgate can be manually closed at any time during open or close operation. As a safety feature, the tailgate has an auto-detection system (similar to the power sliding door direct-detection system) that will reverse direction in the event that something prevents it from closing or opening. For 2011, new logic in the keyless remote allows for the tailgate to be opened without pressing the unlock button first (if vehicle is already locked).

Projector-Beam Headlights
The Odyssey headlight design uses aggressive-looking dual projector-beam-style halogen lights that resemble the design of the headlamps shown on the Odyssey Concept at the 2010 Chicago Auto Show. The light assemblies feature a clear outer lens that wraps around the vehicle's front corners, and the running lights and amber turn signals are housed inside. The round inboard lamps are for high-beam illumination and the round outboard lamps are for normal driving. The halogen high-beams serve double duty as the Daytime Running Lights (DRL) by operating at a lower voltage. All models provide an auto-off feature. Odyssey EX and above models provide both an auto-off and auto-on feature that turns the headlights on automatically. Odyssey Touring models provide a user-configurable option for auto-off of the headlights, set through the Multi Information Display.

High-Intensity Discharge (HID) Projector-Beam Headlights
The 2011 Odyssey Touring Elite model includes Xenon high-intensity discharge (HID) low beam headlights with halogen high beams as standard equipment. The advantages of HID headlamps include greater lighting power, daylight-color light balance and reduced power consumption. In addition, the cut lines of HID headlights are extremely precise, providing maximum nighttime visibility without distracting other drivers. An auto-leveling feature keeps the headlights level regardless of how the vehicle is loaded with passengers and/or cargo.

Daytime Running Lamps (DRL)
All 2011 Odyssey models feature Daytime Running Lights (DRL), which automatically turn on when the ignition is on and the parking brake is off.

Taillights
The taillights feature a reflective inner-cube design as the background for the four lights and a reflector. The lenses are solid red for brake and running lights, and clear for the turn signals that have amber illumination. A large, rectangular back-up-light reflector provides extra illumination when backing up.

Fog Lights
Trapezoid-shaped fog lights that form-fit to openings within the front bumper are standard on Touring models and accessories on all other trim levels.

Side Mirrors
The Odyssey's power side mirrors are aerodynamically optimized to prevent wind noise and minimize turbulence. The side mirrors can be folded in for greater convenience in tight parking situations. When the driver puts the transmission in reverse on the Odyssey Touring model, the driver or passenger-side mirror can tilt down (depending on left/right/off mirror switch position) to reveal curbs and ground-level obstacles. The Odyssey Touring model includes mirror-position memory linked to the driver's seating profile (activated with the key fob or the controls near the driver's door release).

Odyssey EX and above models include heated side mirrors as standard equipment. Odyssey Touring models add side mirror-integrated turn signal indicators. All Odyssey side mirrors are black to blend in with the dark accents around the glass, which helps to accent the design of the profile. The Odyssey EX and above side mirrors have black painted housings, and the Odyssey Touring side mirror housing along with the supporting base structure is painted black..

One-Touch Power Moonroof with Tilt Feature
To tilt or slide the moonroof, the driver or front passenger needs only to fully press the ceiling-mounted switch once (instead of pressing and holding it for several seconds). The moonroof fully opens or closes automatically. However, if the operator wishes to only partially open or close the moonroof (such as to achieve partial ventilation), a lighter touch yields fully manual control. The moonroof can also tilt to provide ventilation. An auto-reverse feature is built in, helping to ensure that the moonroof will not forcefully close if someone's hand or arm is positioned in the path of the moonroof. If an obstruction is detected, the moonroof mechanism will reopen the moonroof.

Park Aid (Odyssey Touring)
Included in the Odyssey Touring models, the front and rear parking sensors help the driver detect objects close to the vehicle when parking. The driver can choose to turn off the rear sensors, which is advisable when towing.

Blind Spot Information System (Odyssey Touring Elite)
The Odyssey Touring Elite model is equipped with a blind spot information system (BSI) designed to detect vehicles in specified alert zones adjacent to the vehicle, particularly in harder to see areas commonly known as “blind spots” just behind the driver. When BSI detects a vehicle in an alert zone, a BSI alert indicator comes on near the corresponding side mirror. While the system is on, BSI is active whenever the shift lever is in the D position. When the vehicle is moving forward at a speed above 6 mph (10 km/h), the BSI alert indicator comes on under either of the following conditions: 1) A vehicle overtaking you is detected, entering the alert zone at a speed that differs from your vehicle’s speed by no more than 31 mph (50 km/h). 2) You pass a vehicle at a speed that differs from that vehicle’s speed by at least 6 mph (10 km/h). The indicator comes on approximately 2 seconds after the vehicle is first detected entering the alert zone. The system will not alert you to all vehicles in blind spot zones (such as vehicles you have just passed which you should already be aware of) unless it remains detected in the alert zone for approximately two or more seconds. The indicators will also blink when the turn signal is applied.

2011 Odyssey: Chassis

Summary

The Odyssey's fully independent suspension design uses a combination of MacPherson front struts and a precise multi-link rear suspension for an engaging and comfortable driving experience. As before, Honda engineers tuned the Odyssey's suspension for secure, nimble and enjoyable handling, and for 2011 it is better equipped to insulate passengers from road noise. The 2011 Odyssey has stiffer rear-suspension mounting points that reduce ride harshness over rough roads, and a "blow-off" valve design in all shock absorbers. The blow-off valve helps reduce harshness when the vehicle encounters severe jolts such as pot holes, along with minimizing the noise from small bumps such as expansion joints on concrete roadways. The braking system uses disc brakes at each corner with larger diameter rotors compared to the previous generation. Safety systems standard to all models include Vehicle Stability Assist™ (VSA®), an Anti-lock Braking System (ABS), Electronic Brake Distribution (EBD) and Brake Assist. A new variable-displacement power steering pump contributes to efficiency.

Chassis Highlights

- Wheelbase unchanged from previous generation (118.1 inches)
- 1.4-inch wider front and rear track (68.1 inches front, 68.2 inches rear)
- 4-wheel independent suspension with a full-floating subframe isolates road vibrations
- Vehicle Stability Assist (VSA) with Traction Control enhances control during hard cornering and poor road conditions
- 17-inch wheels and 235/65 R17 tires, 18-inch wheels and 235/60 R18 tires (Touring)
- 12.6-inch ventilated front disc brakes and 13.1-inch rear disc brakes

MacPherson Strut Front Suspension

The Odyssey's independent front suspension is a MacPherson-strut type, with a large, forged-steel lower control arm that helps to feed suspension loads into the frame over a wide area. The control arm provides separate load paths to the unit body from the coil spring and the shock absorber. This, in turn, helps to minimize the transmission of road noise and vibration to the unit body, and it also adds greater strength to the system. The springs are a low-rate, long-travel type that are designed to soak up bumps and road disturbances. The result is quick linear steering response and straight-line braking stability. A solid 24 mm (0.9-inch) anti-roll bar is linked directly to the strut via ball-joint connections to reduce body roll during cornering.

Multi-Link Rear Suspension

The rear subframe, which supports most of the rear suspension, is made of high-strength steel for high stiffness and minimal weight. The shape of the rear subframe is equally important – it must accommodate the multi-link rear suspension, and still allow for the versatility of the third-row seat and flat cargo floor. For excellent ride and handling characteristics, the subframe attaches to the unit body at four widely spaced, rubber-isolated, mounting points. Rear-suspension components, especially the springs and shock absorbers, are as compact as possible to facilitate a wide and flat load floor.

Dual-Stage Shock Absorbers
The Odyssey has dual-stage hydraulic, gas-filled shock absorbers at all four corners that allow for a comfortable ride and good handling performance. New for 2011, integrated bypass valves better filter out road imperfections and support shock tuning for flatter, sharper-feeling handling. The purpose of the bypass valve is to reduce the impact harshness during medium- and high-velocity rebound shock movements, like when driving over a pot hole. The addition of a bypass valve, in turn, allows the shock absorbers to be tuned with much firmer low-speed damping properties that minimize body roll when cornering. The shock absorbers are firmer when performance counts, and softer when comfort is desired.

Rack-and-Pinion Steering System with Variable-Displacement Steering Pump
The Odyssey uses a rack-and-pinion steering system with a variable displacement steering pump. The variable displacement design reduces the constant load on the engine. When the Odyssey is moving at slower speeds, such as when parking, the power steering automatically increases the power assist so less effort is needed to turn the wheel. At highway speeds, it automatically reduces the power assist so that the driver has more feedback, all while exerting less drag on the engine for improved fuel economy. The steering pump uses heat-resistant rubber mount bushings, high-pressure die cast aluminum gear housings, and a damper valve to reduce steering wheel vibration. The rack guide uses a low-friction material for good on-center feel. The 2011 Odyssey has a tight turning diameter of 36.7 feet.

4-Wheel Disc Brakes with Anti-Lock Braking System (ABS)
The 2011 Odyssey's 4-wheel disc brake system incorporates larger-capacity braking components than the 2010 model for improved brake-pedal feel. The ventilated front brake rotors measure 12.6 inches in diameter, up from 11.7 inches, with a rotor thickness of approximately 1.1 inches. The solid rear discs measure 13.1 inches in diameter, up from 12.4 inches, with a rotor thickness of approximately 0.43 inches. Dual-piston cast iron brake calipers are used in the front and single-piston cast iron calipers are used in the rear. A single-stage vacuum booster consists of one 10.5-inch diameter booster chamber. The parking brake is applied and released by stepping on the pedal located on the left side of the driver's foot well.

The four-channel anti-lock braking system is tuned to feel particularly stable, firm and linear. For optimum performance with widely varying loads, the Odyssey has Electronic Brake Distribution system (EBD) technology. EBD automatically optimizes braking force between the front and rear wheels depending on passenger and cargo load, reducing the distance it takes the Odyssey to stop as compared to a vehicle without EBD.

Wheels and Tires
The tire and wheel sizes for all 2011 Odyssey models have grown by one inch compared to their 2010 model counterparts. The Odyssey LX is equipped with 17x7-inch steel wheels (includes wheel covers) and 235/65R17 103T M+S tires. Odyssey EX and EX-L models feature cast alloy 17x7-inch painted wheels with a pewter-gray machined look and 235/65R17 103T M+S tires. The Odyssey Touring is equipped with 18x7-inch blade silver-painted cast alloy wheels and 235/60R18 102T tires. The compact spare is carried under the load floor between the front seats. This arrangement guarantees the security of the spare. Room is provided to stow a flat tire in the third-row magic seat well.

Fuel System
The 21-gallon fuel tank is molded of high-density polyethylene for low weight, corrosion elimination and impact resistance. It is positioned immediately ahead of the rear wheels to help guard against collision damage. Corners of the tank are rounded and the inside of the tank is baffled to diminish the likelihood of sloshing-fuel noise. A high-efficiency fuel pump is housed inside the fuel tank. The fuel-filter is a lifetime design that never needs replacement. The Odyssey complies with all evaporative emissions, on-board diagnostics, and refueling vapor recovery requirements. The fuel vapor canister and filter are protected against rock and debris damage by a deflection shield. The Odyssey's minimum fuel grade requirement is regular unleaded.

Towing
When equipped with a Honda dealer-installed accessory towing package, the new 2011 Odyssey can tow up to 3,500 pounds. The available towing package includes a Class II hitch, towing kit, ATF cooler and wiring harness. Improving simplicity and installation, the towing package no longer needs a power steering cooler as with the previous generation.

Vehicle Stability Assist (VSA)
(See safety section)

Tire Pressure Monitoring System (TPMS)
(See safety section)

2011 Odyssey: Powertrain

Summary

The 2011 Honda Odyssey comes standard with a 248-horsepower V-6 engine, a 5-speed automatic transmission on Odyssey LX, EX and EX-L, and a new 6-speed automatic transmission on the Odyssey Touring. The 3.5-liter, 24-valve SOHC i-VTEC® powerplant with Variable Cylinder Management™ (VCM®) builds on technologies that have been developed and refined on previous Honda vehicles. With its 60-degree V-angle, the Odyssey's V-6 engine is inherently very smooth and has compact overall dimensions that allow for efficient packaging within the vehicle.

Compared to the 2010 model, the 2011 Odyssey engine gains VCM on the Odyssey LX and EX models, and all models gain refinements to increase power (such as a two-stage intake manifold), and to reduce internal friction (engine block honing and lightweight oil). The 2011 Odyssey engine develops four additional horsepower and five additional lb-ft. of torque (10 additional lb-ft. of torque relative to the previous-generation Odyssey LX and EX).

Powertrain Highlights

- 3.5-liter i-VTEC V-6 engine with VCM
- 248-horsepower @ 5700 RPM, 250 lb-ft. of torque at 4800 RPM
- Available 6-speed automatic transmission
- EPA City/highway fuel economy of up to19/28 miles per gallon (Odyssey Touring)
- Emissions: ULEV-2 (CARB) / Tier 2, Bin 5 (Federal)

New Features

- 6-speed automatic transmission (available)
- 2-stage intake manifold
- Cold air intake system

Engine Architecture

The engine is an advanced 3.5-liter, SOHC, 24-valve, 60-degree, V-6, aluminum-block-and-head design that is compact, lightweight and powerful. The i-VTEC valvetrain and high-efficiency intake manifold optimize cylinder-filling efficiency across a wide range of engine speeds. Low-restriction intake and exhaust systems, a 10.5:1 compression ratio and roller-type rocker arms further aid efficiency and power delivery across a broad RPM range.

The Odyssey's V-6 has a die-cast lightweight aluminum-alloy block with cast-in-place iron cylinder liners. Made with a centrifugal spin casting process, the thin-wall liners are high in strength and low in porosity. The block incorporates a deep-skirt design with four bolts per bearing cap for rigid crankshaft support and minimized noise and vibration. The block is heat-treated for greater strength. The bearing caps are sintered. A forged-steel crankshaft is used for maximum strength, rigidity and durability with minimum weight. Instead of heavier nuts and bolts, connecting rod caps are secured in place with smaller, high-tensile-strength fasteners that screw directly into the connecting rod. Short-skirt, cast-aluminum, flat-top pistons are notched for valve clearance and fitted with full-floating piston pins.

New for 2011, the piston skirt features a patterned coating process that improves oil retention to further reduce friction. Other friction-reduction measures include such important details as more elaborate, high-precision surfacing of the cylinder walls (plateau honing).

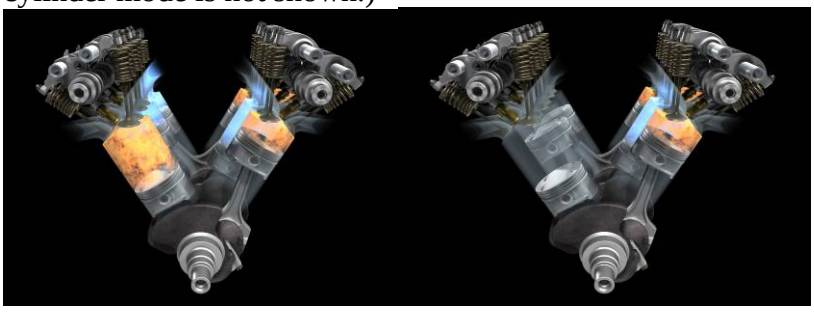
i-VTEC with Variable Cylinder Management (VCM)
To help improve the fuel efficiency of the engine, it incorporates the latest generation of Honda's Variable Cylinder Management (VCM). The Odyssey's VCM system can operate on three, four or all six cylinders, and is standard on all models.

During startup, acceleration or when climbing hills – any time high power output is required - the engine operates on all six cylinders. During moderate-speed cruising and at low engine loads, the system operates just one bank of three cylinders. For moderate acceleration, higher-speed cruising and mild hills, the engine operates on four cylinders.

With three operating modes, the VCM system can finely tailor the working displacement of the engine to match the driving requirements from moment to moment. Since the system automatically closes both the intake and exhaust valves of the cylinders that are not used, pumping losses associated with intake and exhaust are eliminated and fuel efficiency increases. The VCM system combines maximum performance and maximum fuel efficiency – two characteristics that do not typically coexist in conventional engines.

VCM deactivates specific cylinders by using the VTEC® (Variable Valve Timing and Lift Electronic Control) system to close the intake and exhaust valves while simultaneously the Powertrain Control Module cuts fuel to those cylinders. When operating on three cylinders, the rear cylinder bank is shut down. When running on four cylinders, the left and center cylinders of the front bank operate, and the right and center cylinders of the rear bank operate.

Variable Cylinder Management (VCM)
VCM deactivates cylinders when not needed. Shown is 6-cylinder mode (left) and 3-cylinder mode (right). (Four-cylinder mode is not shown.)



The spark plugs continue to fire in inactive cylinders to minimize plug temperature loss and prevent fouling induced from incomplete combustion during cylinder re-activation. The system is electronically controlled, and uses special integrated spool valves that do double duty as rocker-shaft holders in the cylinder heads. Based on commands from the system's electronic control unit, the spool valves selectively direct oil pressure to the rocker arms for specific cylinders. This oil pressure in turn drives synchronizing pistons that connect and disconnect the rocker arms.

The VCM system monitors throttle position, vehicle speed, engine speed, automatic-transmission gear selection and other factors to determine the correct cylinder activation scheme for the operating conditions. In addition, the system determines whether engine oil pressure is suitable for VCM switching and whether catalytic-converter temperature will remain in the proper range. To smooth the transition between activating or deactivating cylinders, the system adjusts ignition timing, drive-by-wire throttle position and turns the torque converter lock-up on and off. As a result, the transition between three-, four-, and six-cylinder operation is virtually unnoticeable to the driver.

Dual-Stage Intake Manifold
The 2011 Odyssey engine's intake uses a dual-stage magnesium intake manifold that is designed to deliver excellent airflow to the cylinders across the full range of engine operating speeds. The induction system significantly boosts torque across the engine's full operating range. Internal passages and two butterfly valves within the intake manifold are operated by the powertrain control module to provide two distinct modes of operation by changing plenum volume and intake airflow routing.

At lower rpm these valves are closed to reduce the volume of the plenum and effectively increase the length of inlet passages for maximum resonance effect and to amplify pressure waves within each half of the intake manifold at lower rpm ranges. The amplified pressure waves significantly increase cylinder filling and torque production throughout the lower part of the engine's rpm band.

As the benefits of the resonance effect lessen with rising engine speed, the butterfly valves open at 4300 RPM to interconnect the two halves of the plenum, increasing its overall volume. An electric motor, commanded by the powertrain control module, controls the butterfly valves. The inertia of the mass of air rushing down each intake passage helps draw in more charge than each cylinder would normally ingest. The inertia effect greatly enhances cylinder filling and the torque produced by the engine at higher rpm.

High-Mounted Fresh Air Intake
The Odyssey has a high-mounted fresh air intake system that reduces air intake temperatures to help improve low-end torque.

Overrunning Alternator Decoupler (OAD)
The accessory belt that drives the alternator, power steering pump and A/C compressor uses a self-tensioning mechanism designed to dampen acceleration and deceleration loads. The Overrunning Alternator Decoupler (OAD) helps absorb dynamic variations in belt tension, contributing to a more stable operation. Nominal belt tension can thus be reduced by approximately 50 percent, helping reduce engine friction losses for improved fuel efficiency.

High-Flow Exhaust System
A low-restriction, high-flow exhaust system is crucial to efficient power and torque production. The Odyssey features a high efficiency system that incorporates several key elements that work in concert with the engine's uniquely designed cylinder heads to help boost performance, reduce tailpipe emissions and trim weight.

Major system components include two close-coupled catalytic converters, a secondary underfloor catalytic converter, a centrally positioned, high-flow resonator and a silencer. The close-coupled catalytic converters mount directly to the cylinder head to reduce light-off time, thereby allowing the catalyst to begin cleansing the exhaust as soon possible. The catalysts, muffling element, and piping are all sized for high flow and low restriction. High-chromium stainless steel is used throughout the exhaust system for excellent durability.

Linear air-fuel and oxygen sensors installed in each of the close-coupled catalytic converters make possible precise control of the air-fuel ratio. These sensors and the precisely controlled high-atomizing multi-hole fuel injectors help achieve almost complete combustion, for cleaner emissions. The result is compliance with the California Air Resource Board's ULEV standards as well as Federal Tier 2-Bin 5 emission requirements.

Active Control Engine Mount (ACM) and Active Noise Cancellation (ANC)
The ACM system is used to minimize the effects of engine vibration as the VCM system switches cylinders on and off. Sensors alert the Powertrain Control Module (PCM) to direct two ACM actuators – one positioned at the front and on at the rear of the engine – to move to cancel engine vibration. Inside the interior of the Odyssey, the ANC system works in cooperation with the ACM system to further reduce any sound relating to the function of the VCM system. (Please see the Interior tab for more information.)

Powertrain Control Unit (PCU)
The PCU contains two processors which communicate together to control the vehicle's powertrain. A 32-bit, 96MHz processor controls the Programmed Fuel Injection (PGM-FI) and the i-VTEC valvetrain, plus a 32-bit 80MHz processor which controls the transmission.

Programmed Fuel Injection (PGM-FI)
The PCU calculates injection timing and duration after assessing an array of sensor signals: crankshaft and camshaft position, throttle position, coolant temperature, intake manifold pressure and temperature, atmospheric pressure and exhaust gas oxygen content.

Drive-by-Wire™ (DBW) Throttle System
The drive-by-wire throttle system uses smart electronics instead of a conventional cable system to connect the throttle pedal to the throttle butterfly in the intake tract. Besides allowing engineers to program the relationship between throttle pedal movement and engine response, the system optimizes engine response to suit driving conditions. The system monitors throttle and brake pedal positions, throttle butterfly position, vehicle speed, engine speed and engine vacuum. This information is used to define the throttle control sensitivity.

Direct Ignition
The Powertrain Control Unit (PCU) monitors engine functions to determine the best spark timing. An engine-block mounted acoustic detonation/knock sensor "listens" to the engine, and based on this input, the PCU retards the ignition timing to prevent potentially damaging detonation. An ignition coil unit for each cylinder is positioned above each spark plug's access bore.

Regular Unleaded Fuel
To keep operating costs at a minimum, all Odyssey models are designed to use relatively less-expensive regular unleaded fuel, thanks to compact 4-valve combustion chambers and precise fuel injection and spark control.

Maintenance Minder System and Tune-Up Intervals
The Odyssey's Maintenance Minder system calculates the engine's tune-up schedule based on driving conditions (tracked by the PCM). When determining proper maintenance intervals, the system minimizes owner guesswork about whether the vehicle is being operated in standard or severe conditions. The Odyssey's Maintenance Minder information appears in the odometer display, and indicates when to change the oil, oil filter (every other oil change), air cleaner, transmission fluid, spark plugs, coolant and when to rotate the tires. A tune-up is not required until about 100,000 miles. (100K+/- Miles No Scheduled Tune-ups may vary with driving conditions. Does not apply to fluid and filter changes. Exact mileage is determined by actual driving conditions. The owner's manual contains full details.) Long-life fluids have been used for reduced maintenance costs and environmental impact (fluid disposal). As a result, engine coolant changes are needed about every 10 years or approximately 120,000 miles, and engine oil changes are required around 7,500 miles under normal driving conditions, or annually if fewer miles are driven per year. The maintenance minder system calculates the exact miles between service intervals.

Battery Management System (BMS)
The 2011 Odyssey has a Battery Management System (BMS) that is designed to increase the overall service life of the battery, reduce the chance of a dead battery and help deliver improved fuel economy. Should an Odyssey owner accidentally leave the headlights on or not close a door causing an interior light to remain on, after a set period of time the BMS will automatically terminate power delivery to prevent the battery from going dead. Moreover, the BMS continually monitors battery condition and will provide a warning message while automatically turning off the interior lights when battery condition or cranking capability drops too low. As a result of the discharge protection afforded by the BMS, the battery should always have enough reserve capacity left to start the engine.

The 3.5-liter V-6 engine in the Odyssey makes use of a powerful 130-amp alternator that charges in two different ranges— a low 12-volt range and a high 14-volt range. By closely controlling the alternator charge voltage, BMS works to keep the battery in a specific charge range which can extend the service life of the battery by more than 25 percent. With BMS keeping the battery in a specific charge range, the alternator can run more often in the low range which generates less drag on the engine resulting in improved fuel economy.

Should a battery or charging system issue occur, the information display on the Odyssey LX, EX and EX-L, or the Multi Information Display (MID) on the Odyssey Touring, will alert the driver with a text prompt such as, "BATTERY CHARGE LOW."

Five-Speed Automatic Transmission with Grade Logic Control
The five-speed automatic transmission on the Odyssey LX, EX and EX-L has several features engineered specifically to match its performance requirements, including extra-wide gear ratios for good low-end response and comfortable highway cruising; a computer-controlled lock-up torque converter; a rigid alloy case; and a four-shaft design. Honda Grade Logic Control technology is designed to hold the vehicle in a lower gear when climbing or descending a steep grade for improved performance.

The transmission features an expanded complement of smart logic controls. A computer-controlled lock-up torque converter is provided to maximize fuel economy. Torque-converter lock-up and shift timing are both managed by a CPU working in cooperation with the engine's central processing unit. An over-running clutch is provided for first gear to smooth upshift quality. A direct-control strategy is used to provide real-time pressure management of the transmission's clutches. Various control strategies are utilized to allow for smooth coordination of engine and transmission operations. For example, the driveline shock that often accompanies gear changes is minimized by momentarily reducing engine torque during shifting.

To reduce gear "hunting" and unnecessary shifting, Grade Logic Control is integrated into the shift programming of the transmission. Grade Logic Control alters the five-speed automatic's shift schedule, reducing shift frequency while traveling uphill or downhill. Using inputs monitoring throttle position, vehicle speed and acceleration/deceleration, Grade Logic compares the operating parameters with a digital map stored in the transmission computer. When the system determines the Odyssey is on a hill, the shift schedule is adjusted to automatically hold the transmission in a lower gear for better climbing power or increased downhill engine braking.

Six-Speed Automatic Transmission with Grade Logic Control
To maximize driver control, acceleration and fuel economy, the Odyssey Touring models are equipped with a six-speed automatic transmission. Though comparable in size and weight to the existing five-speed automatic transmission, careful engineering of the layout and power flow minimizes size, parts count and overall weight.

The new six-speed automatic advances launch-feel, acceleration performance and fuel economy. Compared to the 5-speed transmissions, the new six-speed transmission has lower gear ratios (higher numerically) in first through fifth gears and in reverse. The lower gear ratios improve acceleration and pulling power. The sixth gear ratio is taller (lower numerically) than the top gear in the five-speed transmission. The taller final gear allows for a relaxed cruising rpm and enhanced highway fuel economy.

The six-speed automatic transmission also includes engineering enhancements aimed at improved performance and economy. Expanded multi-disc lock-up control improves the efficiency of power delivery and works with the new gear ratios to provide an improvement in fuel economy, as compared to a conventional design. In addition to Grade Logic Control, all of the transmission logic systems work together to automatically alter shift timing based on driving conditions.

Odyssey Gear Ratio Comparison Table

Gear	2011 6AT Ratio	2011 5AT Ratio	2010 5AT Ratio (i-VTEC)
1st	3.359	2.697	2.697
2nd	2.094	1.606	1.606
3rd	1.484	1.071	1.071
4th	1.065	0.765	0.765
5th	0.754	0.612	0.580
6th	0.555	--	--
Reverse	2.269	1.888	1.888
Final Drive	4.25	4.31	4.31

Multi-Clutch Lock-Up Torque Converter

The all-new six-speed automatic transmission teams with a brand new torque converter that has a unique converter lock-up assembly. The lock-up assembly uses multiple lock-up disks that generate nearly double the facing area of a typical torque converter. The new lock-up assembly not only reduces heat build-up during operation, but also features improved overall lubrication that generates better cooling. The new torque converter allows for lock-up activation during a much wider range of driving conditions for improved fuel economy.

2011 Odyssey: Safety

Summary

Honda has consistently challenged itself to pursue vehicle safety as part of its core business strategy. The company seeks to provide a high level of occupant protection and pedestrian injury mitigation in all of its cars and trucks through a comprehensive and evolving approach to vehicle safety. This process benefits all new Honda vehicles, regardless of size or price.

The 2011 Odyssey exemplifies the Honda approach to safety. Every Odyssey incorporates Vehicle Stability Assist™ (VSA®), side-curtain airbags and dual-chamber, front-side airbags with a passenger-side Occupant Position Detection System (OPDS); and active front-seat head restraints that are designed to help reduce the severity of neck injury in the event of a rear collision. An Advanced Compatibility Engineering™ (ACE™) body structure in the front of the vehicle, now in its second generation on the Odyssey since debuting on the 2005 model, makes the vehicle highly effective at absorbing the energy of a frontal crash. Like all 2011 Honda vehicles, an Anti-lock Braking System (ABS) with Brake Assist is standard equipment.

Additional standard safety features include dual-stage, multiple-threshold front airbags, front seatbelts with automatic-tensioning systems and load limiters, and a pedestrian injury mitigation design in the front of the vehicle. Driver- and front-passenger seatbelt reminders and daytime running lights (DRL) are also standard equipment. A class-leading total of five Lower Anchors and Tethers for CHildren (LATCH) positions (four in the Odyssey LX) provide rigid attachment points for child seats.

Standard active safety systems

- Vehicle Stability Assist (VSA) with traction control
- 4-wheel disc ABS, Electronic Brake Distribution (EBD) and Brake Assist
- Tire Pressure Monitoring System (TPMS)

Standard passive safety systems

- Advanced Compatibility Engineering (ACE) body structure
- 3-point seatbelts at all positions
- Front seatbelt load limiters and automatic tensioners
- Dual-stage, multiple-threshold front airbags
- Front-seat side airbags
- Side curtain airbags with rollover sensor
- Active front-seat head restraints
- Lower Anchors and Tethers for CHildren (LATCH) system in second- and third-row seats (five total)

Advanced Compatibility Engineering (ACE) Body Structure

At the heart of the Odyssey is an exceptionally strong foundation based on the latest version of Honda's Advanced Compatibility Engineering (ACE) body structure technology that enhances occupant protection and crash compatibility in frontal collisions. The ACE design utilizes a network of connected structural elements to distribute crash energy more evenly throughout the front of the vehicle.

This enhanced frontal crash energy management helps to reduce the forces transferred to the passenger compartment and can help to more evenly disperse the forces transferred to other vehicles in a crash. Additionally, ACE helps minimize the potential for under-ride or over-ride situations that can happen during head-on or offset frontal impacts with a significantly larger or smaller vehicle.

Unlike most conventional designs that direct frontal crash energy only to the lower load-bearing structures in the front end, the ACE system actively channels frontal crash energy to both upper and lower structural elements, including the floor frame rails, side sills and A-pillars. By creating specifically engineered "pathways" that help distribute these frontal impact forces through a greater percentage of the vehicle's total structure, the ACE system can more effectively route them around and away from the passenger compartment to help limit cabin deformation and further improve occupant protection. Integral to the ACE concept is its unique front polygonal main design structure.

Pedestrian Injury Mitigation Design
Structures in the front of the 2011 Odyssey are designed to help absorb energy in the event of a collision with a pedestrian. Research by Honda shows that the following features can dramatically improve a pedestrian's chance of survival if struck by a moving vehicle.

Specific pedestrian injury mitigation features are:
- Hood is designed to deform if contact is made with either an adult or a child pedestrian
- Sufficient clearance exists between the hood and hard engine parts
- Windshield base has a unique section structure for efficient impact energy absorption
- Energy-absorbing fender mounts and supports
- Deformable windshield wiper pivots
- Deformable hood hinges

Vehicle Stability Assist (VSA) with Traction Control
Vehicle Stability Assist (VSA) is an Electronic Stability Control system that works in conjunction with the Odyssey's drive-by-wire throttle and its 4-channel ABS systems to enhance control capability while the vehicle is accelerating, braking, cornering or when the driver makes a sudden maneuver. VSA functions by applying brake force to one or more wheels independently while also managing the throttle, ignition and fuel systems to help the vehicle maintain the driver's intended path of travel.

The VSA system constantly analyzes data from seven sensors that monitor wheel and vehicle speed, steering input, lateral G forces and yaw rate. It compares the driver's control inputs with the vehicle's actual response. Whenever the actual response falls outside of a predetermined acceptable range, VSA intervenes with a corrective action.

For instance, if VSA detects an oversteer condition, the system may apply braking force to the outside front and rear wheels to counteract the unintended yawing effect. In the event of understeer, VSA may apply braking to the inside rear wheel while reducing engine power to help return the car to its intended course.

VSA also provides a limited-slip differential effect for the front wheels by applying braking force to a slipping wheel, thereby redirecting driving force to the wheel with more traction. VSA is calibrated to function in a near-transparent manner, and in many cases a driver will not even be aware of its operation. However, anytime the system is enhancing vehicle stability, an indicator light flashes in the instrument cluster. While the driver can deactivate the VSA stability enhancement and traction-control functions via a switch on the instrument panel, ABS remains fully operational at all times.

Brake Assist
A function of the VSA system, the Brake Assist feature recognizes emergency braking situations and almost instantly applies added braking force. This Brake Assist feature is controlled by a special logic in the system that evaluates the pedal application rate and force to recognize a panic stop situation. At that point, the VSA modulator pump increases braking pressure while the pedal is still being pressed to ensure maximum stopping force, an action that helps shorten braking distance as much as possible.

Advanced 4-Channel ABS with Electronic Brake Distribution
The Odyssey is fitted with 4-wheel disc brakes that have vented front rotors and solid rear rotors. (Please see Chassis section for more information.) The ABS system also incorporates Electronic Brake Distribution (EBD) circuitry that automatically proportions force based on the vehicle's weight distribution.

Dual-Stage, Multiple-Threshold Front Airbags
Both the driver and front passenger are protected by advanced front airbags (SRS) that incorporate dual-stage and multiple-threshold activation technology. One or both of these airbags will be deployed only in the event of a sufficient frontal impact. If deployed, these airbags are capable of being inflated at different rates depending on crash severity, seatbelt usage and/or other factors. Like other Honda vehicles, the driver's front airbag is located in the steering wheel while the passenger airbag is located on the top of the dash. When deployed, the passenger airbag inflates upward and then rearward to maximize its protective potential while reducing the likelihood of injuries being caused by the activation process itself.

Driver and Front Passenger Side Airbags with Front Passenger Occupant Position Detection System (OPDS)
Driver’s and front passenger’s dual-chamber side airbags mounted in the outboard area of each front seatback are designed to provide pelvis and thorax protection in the event of a severe side impact. In addition, the front passenger's seat is equipped with the Occupant Position Detection System (OPDS), an innovative system designed to deactivate the side airbag if a child (or small-stature adult) leans into the side airbag deployment path. When the passenger returns to an upright seating position, the side airbag reactivates so it can deploy to help protect the occupant in a side impact. This unique system utilizes weight sensors and sensors in the passenger seatback to determine the height and position of the occupant, and determine if it is safe to deploy the side airbag.

Three-Row Side Curtain Airbags with Rollover Sensors
All three rows of outboard occupants are protected by a dual-inflator, three-row side curtain airbag with rollover sensor system, which is standard equipment. The side curtain airbags deploy from modules in the roof in the event of a sufficient side impact, providing a significant level of head protection in the window area. In the unlikely event of a rollover, a roll-rate sensor, located in the floor, along with multiple G sensors determine the rate of roll and deploy the side curtain airbags accordingly. Like the other airbag systems in the vehicle, the side curtain system utilizes sensors to determine the most appropriate timing and rate of deployment of the airbags.

To provide the optimal level of protection for occupants, testing was performed to determine the most appropriate timing and rate of deployment in the unlikely event of a rollover. The system uses algorithms to continually evaluate the situation and determines whether a rollover is imminent. The roll-rate sensor and multiple G sensors determine the "scenario" and calculate the angle of roll and the speed of the vehicle in order to deploy the airbags at the correct stage for optimum protection. In the case of a rollover, the side curtain airbags on both sides of the vehicle will deploy. However, in the event of a sufficient side impact that does not result in a rollover, only the airbags on the impacted side of the vehicle will deploy. The airbag maintains full inflation for approximately three seconds after inflation to allow for the increased duration of a rollover accident.

Seat Belts
Three-point seatbelts are standard in all seating positions. The front seatbelts are equipped with automatic tensioners and load limiters to help minimize injury potential in a frontal collision. When an impact occurs, the automatic tensioner tightens the seatbelt (shoulder and lap) to help hold the seat occupant firmly in position. Each front seatbelt retractor incorporates a load limiter that works in conjunction with the automatic tensioner. The load limiter functions by permitting a small amount of controlled seatbelt slack shortly after the automatic tensioner is activated to limit the peak restraining forces, reducing the potential of serious injury. The front seatbelts also feature adjustable shoulder anchors. To help increase seat-belt usage, a reminder for the driver and front passenger has been incorporated into the instrument cluster. After starting the vehicle, a weight sensor detects whether the passenger seat is occupied. If the driver or passenger has not already fastened the seat belt, an icon in the cluster illuminates and a chime sounds as a reminder to do so.

Active Front-Seat Head Restraints
Both of the front seats are fitted with an innovative active head restraint designed to help reduce the likelihood of neck injuries in the event of a rear impact. The head restraint is mechanically connected to a lumbar plate located inside of the seatback via special links. If a rear impact takes place, the seat is accelerated against the occupant's body. That action causes the head restraint to move forward and upward in a carefully prescribed arc. The effect of this motion helps keep the head and neck in line with the torso during a rear collision, thereby reducing the likelihood of whiplash injuries.

Adjustable Head Restraints for All Seating Positions
The first-, second- and third-row seats feature individually adjustable head restraints for all passenger seating positions. All second- and third-row head restraints comply with the new Federal Motor Vehicle Safety Standards for rear passenger head restraints that take effect for any all-new 2011-model-year-and-later vehicle. The new rules more closely specify the size, position and operation of the rear-seat head restraints.

Lower Anchors and Tethers for CHildren (LATCH)
Lower Anchors and Tethers for CHildren (LATCH) provide a simple and convenient method to install compatible child safety seats in a vehicle. The 2011 Odyssey is equipped with a total of five LATCH attachment points (four in the LX), the most of any vehicle currently available on the market as of 2011 (the previous-generation Odyssey had three total). All three of the second-row seating positions (two in the LX, three in the EX and above) and both of the third-row outboard seating positions are fitted with dedicated LATCH attachment points. To accommodate three child seats in the second row, the new “3-mode” feature allows the distance between the seats to be increased by up to 1.5 inches. The additional space is enough room to accommodate up three conventionally sized child seats. The LATCH system features built-in, ready-to-use anchors and tethers allowing compatible child safety seats to be installed without using the vehicle's seat belt system. While most people may not have the need for five LATCH positions simultaneously, the ability to pick and choose which location works best for accommodating people or cargo can help families more conveniently maximize interior space.

Tire Pressure Monitoring System (TPMS)
The Odyssey is fitted with a Tire Pressure Monitoring System (TPMS) that alerts a driver whenever the air pressure in one or more of the vehicle’s tires decreases significantly below the recommended level. Using four sensors (one in each tire) TPMS monitors and transmits information on tire air pressure to the ECU. When the pressure in one or more tires drops to a potentially critical level, it causes a low tire-pressure indicator (located in the instrument cluster) to illuminate.

Safety R&D Facilities
Honda operates two of the world's most sophisticated crash test laboratories for the development of improved safety designs and technologies. The Tochigi facility in Japan is the world's first indoor multi-directional car-to-car crash testing facility and plays a critical role in the development of enhanced designs for occupant and pedestrian safety and vehicle-to-vehicle compatibility. Honda R&D America's Raymond, Ohio development center performs advanced testing on all North American-developed models. The facility features the world's first pitching test sled, which aids efficiency by enabling economical and speedy crash-test simulations with certain interior safety components, such as seats and seatbelts, prior to conducting a crash test with an actual vehicle. It also features one of the world's highest-resolution impact barriers, which enables precise measurement of the distribution of impact load forces on a vehicle.