



# 2011 Highlander Hybrid Product Information

<b>HYBRID POWER SYSTEM</b>	
Hybrid System Net Horsepower	280 horsepower (209 kw)
<b>ENGINE</b>	
Type, Materials	V6 aluminum block and heads DOHC 24-valve with VVT-i
Valvetrain	DOHC, 4-valve/cylinder
Displacement	3.5-liter
Bore x Stroke	3.70 x 3.27
Compression Ratio	12.5:1
Horsepower (SAE Net)	231 hp (172 kW) @ 5,800 rpm
Torque	215 lb-ft @ 4,800 rpm
Fuel System	Multi-Point Injection (MPI)
Recommended Fuel	87-octane unleaded (or higher)
Emission Certification	SULEV (California) Tier 2 – Bin 3 (all other states)
Evaporative Emission Certification	TBD
EPA Estimated Fuel Economy (city/highway/combined MPG)	28/28/28
<b>ELECTRIC MOTOR</b>	
<b>Motor Generator 1 (MG1)</b>	
-Function	Generator, engine starter, transmission ratio control
- Type	Permanent magnet motor
- Max. Voltage	AC 650V
<b>Motor Generator 2 (MG2)</b>	
-Function	Drives front wheels, regeneration during braking
- Type	Permanent magnet motor
- Max. Voltage	AC 650V
- Max. Output	167 hp (123 kw)
- Max. Torque	247 lb.-ft.
<b>Motor Generator Rear (MGR)</b>	
-Function	Drives rear wheels, regeneration during braking
- Type	Permanent magnet motor
- Max. Voltage	AC 650V
- Max. Output	68 hp (50 kw)
- Max. Torque	96 lb.-ft.
<b>HYBRID BATTERY PACK</b>	
Type	Sealed nickel metal hydride (Ni-MH)

**HYBRID POWER SYSTEM – CONT.**

Nominal Voltage	288V
Maximum Power Output	45 kW

**DRIVETRAIN**

Layout	4WD-i models equipped with front and rear electric drive motors
Transmission Type	Electronically controlled continuously variable transmission with planetary gear unit for gear reduction and power splitting; electronic all-wheel drive control system
Designation (Front/)	P313
Differential Ratio (Front)	3.542

**CHASSIS AND BODY**

Body/Frame	Unitized steel
Suspension - Front	MacPherson strut, coil springs
- Rear	Dual-link MacPherson strut, coil springs
Steering - Type	Electronic Power Steering (EPS): Rack and pinion with electronic power assist
- Overall Ratio	17:1
- Turns, Lock to Lock	3.1 turns
- Turning Circle Diameter (curb to curb)	38.7 ft.
Brakes - Type	Electronically Controlled Brake system (ECB) with regenerative control and incorporating Anti-Lock Brakes (ABS), Electronic Brake force Distribution (EBD), Brake Assist and Vehicle Dynamics Integrated Management system (VDIM)
- Front Type/Diameter	Ventilated Disc/ 12.9 in.
- Rear Type/Diameter	Solid Disc / 12.2 in.
Anti-lock Brake System (ABS)	4 channel, 4 sensor
Wheel Size	7.5 X 17 inches (Base) 7.5 x 19 inches (Limited)
Wheel Type and Material	Aluminum Alloy
Tire Size	P245/65 R17 (Base) P245/55 R19 (Limited)
Tire Type	All-season steel-belted radial
Spare Tire/Wheel	Full-size



<b>EXTERIOR DIMENSIONS</b>	
Wheelbase	109.8 in.
Overall Length	188.4 in.
Overall Width	75.2 in.
Overall Height	68.1 in. (without std. roof rails) 69.3 in. (with std. roof rails)
Tread Width (Front/Rear)	64.0/64.0 in.
Ground Clearance	8.0 in.
Coefficient of Drag	0.34
Angle of Approach/Departure	22/23 degrees

<b>INTERIOR DIMENSIONS</b>		
Seating Capacity	7	
Headroom	w/out moonroof	with moonroof
- First Row	40.6 in.	39.7 in.
- Second Row	39.8 in.	39.8 in.
- Third Row	36.3 in.	36.3 in.
Legroom		
- First Row	43.2 in.	
- Second Row	38.4 in.	
- Third Row	29.9 in.	
Shoulder Room		
- First Row	59.7 in.	
- Second Row	59.5 in.	
- Third Row	55.0 in.	
Hip Room		
- First Row	56.7 in.	
- Second Row	56.3 in.	
- Third Row	42.3 in.	
EPA Interior Volume	155.7 cu. ft.	
EPA Passenger Volume	145.4 cu. ft.	
EPA Cargo Volume		
Behind 1 <sup>st</sup> row seat	94.1 cu. ft.	
Behind 2 <sup>nd</sup> row seat	42.3 cu. ft.	
Behind 3 <sup>rd</sup> row seat	10.3 cu. ft.	
EPA Class	Mid-size SUV	

**WEIGHTS AND CAPACITIES**

Curb Weight	4,641 lbs. (Base) 4,762 lbs. (Limited)
GVWR	6,150 lbs. (Base) 6,150 lbs. (Limited)
Payload	1,509 lbs. (Base) 1,388 lbs. (Limited)
Maximum Towing Weight	3,500 lbs.
Maximum Tongue Weight	350 lbs.
Fuel Capacity	17.2 gal.

**STANDARD EXTERIOR FEATURES**
**Highlander Hybrid Base**

- 17-inch seven spoke alloy wheels with 245/65 R17 tires with full-size spare
- Color-keyed bumpers, and foldable power remote outside mirrors
- Color keyed outside door handles
- Silver painted front grille w/ intergrated Toyota emblem
- Hybrid blue tinted headlight and taillight bezels
- Projector beam headlamps with auto on/off feature
- Fog lamps
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- Black rear step bumper cover
- Chrome surround and light silver painted rear license plate garnish
- In-glass antenna on rear quarter panel window
- HSD badging on right rear lift gate and front fenders
- Rear spoiler with LED stop lamp
- Rear window with electric defogger and intermittent wiper
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- UV reduction glass windshield
- Privacy glass on rear side, quarter and tailgate windows
- Washer-linked variable intermittent windshield wipers

**Highlander Hybrid Limited** (In addition to or replaces standard features on Highlander Hybrid Base model)

- 19-inch ten spoke alloy wheels with silver painted finish, 245/55 R19 tires, and full-size spare
- Color-keyed power, heated outside mirrors with folding feature and puddle lamps
- Chrome outside door handles
- Chrome roof rails with black end caps
- Windshield wiper de-icer grid
- Power liftgate
- Smart Entry

**STANDARD INTERIOR FEATURES**

**Highlander Hybrid Base**

- Easy clean fabric interior
- Fabric-trimmed 50:50 split third-row seat with fold-flat capability and folding headrests
- Fabric-trimmed eight-way power adjustable driver's seat, four-way adjustable passenger seat with adjustable headrests and seatback pockets
- Fabric-trimmed 40/20/40 second-row seats with fore/aft slide adjustment, recline adjustment, right-hand walk-in feature plus Center Stow™ seat and Center Stow™ console
- Front and rear air conditioning system with filter and vents for second and third-row seats
- 3.5-inch Multi-Information Display with back-up camera monitor, clock, outside temperature, cruise information (avg. fuel economy, avg. speed, distance to empty, current fuel economy, and trip timer), and tire pressure display
- Center console with six cup holders, covered storage compartment, and three 12V auxiliary power outlets
- Power windows, door locks and remote keyless entry
- Dual sun visors with illuminated vanity mirrors and sliding extensions
- Overhead console with map lights and conversation mirror
- Second-row personal reading lamps
- Cargo area second-row-seat one-touch fold-flat levers
- Cruise control

**Highlander Hybrid Limited** (In addition to or replaces standard features on Highlander Hybrid Base model)

- Three-zone automatic climate control system with air filter, rear multi-function display, rear vents for second- and third-row seats
- Multi-stage heated front seats
- Vinyl 50:50 split third-row seat with fold-flat capability and folding headrests
- Perforated leather-trimmed 10-way power adjustable driver's seat with power lumbar support and adjustable thigh support system; four-way power adjustable passenger seat, adjustable headrests and seatback pockets
- Perforated leather-trimmed 40/20/40 second-row seat with armrests on outboard seats, fore/aft slide adjustment, recline adjustment, right-hand walk-in feature, plus Center Stow™ seat and Center Stow™ console
- Wood-grain-style interior trim with chrome interior door handles
- Leather-trimmed steering wheel with audio, climate, Multi-Information Display and Bluetooth® hands-free telephone controls
- Leather-trimmed shift knob with wood-grain-style inlay
- HomeLink® universal transceiver
- Auto-dimming rearview mirror with compass
- Power tilt/slide moonroof with sunshade

**STANDARD AUDIO SYSTEM**

- AM/FM CD player with MP3/WMA playback capability, six speakers, XM Radio (includes 90-day trial subscription), USB port with iPod® connectivity, auto sound leveling, hands-free phone capability and music streaming via Bluetooth® wireless technology

**STANDARD SAFETY AND SECURITY**

- STAR Safety System™ with Vehicle Dynamics Integrated Management (VDIM) - - includes Vehicle Stability Control (VSC), Traction Control (TRAC), Anti-lock Brake System (ABS) with Electronic Brake-force Distribution (EBD) and Brake Assist
- Driver and front passenger Advanced Airbag System
- Driver and front passenger seat-mounted side airbags
- Three-row roll-sensing side curtain airbags (RSCA)
- Driver's knee airbag
- Driver and front passenger active head rests
- Side impact door beams
- Front and rear energy-absorbing crumple zones and energy-dissipating interior trim
- Three-point seatbelts for all seating positions; Driver-side Emergency Locking Retractors (ELR) and Automatic/Emergency Locking Retractors (ALR/ELR) on all passenger belts
- Adjustable driver and front passenger shoulder belt anchors
- Driver and front passenger seatbelt Pretensioners with force limiters
- LATCH (Lower Anchors and Tethers for Children) includes lower anchors and tethers on outboard second-row seats
- Child-protector rear door locks
- Collapsible steering column
- Engine immobilizer (Highlander Hybrid Grade)
- Anti-theft alarm with engine immobilizer (Limited)
- Daytime Running Lights (DRL) with on/off feature
- Hill-start Assist Control
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- Tire Pressure Monitor System

**STANDARD MECHANICAL FEATURES**

- Hybrid engine: 3,5-liter double overhead cam (DOHC), 24-valve V6 with Variable Valve Timing with Intelligence (VVT-i)
- Electronically Controlled Continuously Variable Transmission (ECVT) with ECON mode and EV mode
- Electronic On-Demand 4WD with intelligence (4WD-i)
- Four-wheel independent MacPherson strut suspension with front and rear stabilizer bars
- Electric Power Steering (EPS); power-assisted rack-and-pinion
- Electronically Controlled Braking System (ECB) with regenerative braking, power-assisted ventilated 12.9 in. front and solid 12.2 in. rear discs

**FACTORY OPTIONS**

**Highlander Hybrid Base**

- 19-inch 10-spoke alloy wheels with P245/55R19 tires and full-size spare tire on alloy wheel
- Leather Package includes: smooth leather seating surfaces (includes multi-stage heated front seats, vinyl third row seat, Leather-wrapped steering wheel with audio, Multi-Information Display and Bluetooth® controls, Leather-wrapped shift knob with metallic inlay, metallic interior trim, power tilt/slide moonroof with sunshade, Auto-dimming rearview mirror with compass, HomeLink® universal transceiver, Anti-theft alarm with engine immobilizer
- Power liftgate
- JBL® AM/FM 6-disc CD changer with MP3/WMA playback capability, nine speakers, XM Radio (includes 90-day trial subscription), USB port with iPod® connectivity, CD-text display, auto sound leveling, hands-free phone capability and music streaming via Bluetooth® wireless technology
- Voice-activated touch-screen DVD navigation system, JBL® AM/FM 4-disc CD changer, with MP3/WMA playback capability, nine speakers including subwoofer, XM Radio with NavTraffic (includes 90-day trial subscription), USB port with iPod® connectivity, CD-text display function, auto sound leveling, hands-free phone capability and music streaming via Bluetooth® wireless technology
- Rear-seat DVD entertainment system with 9-inch display, rear-seat audio and two wireless headphones
- Cold Weather Package includes: windshield wiper de-icer grid and heated outside mirrors

**Highlander Hybrid Limited 4WD-i**

- JBL AM/FM six-disc CD changer with MP3/WMA playback capability, nine speakers, XM Radio (includes 90-day trial subscription) USB port with iPod® connectivity, CD-text display, auto sound leveling, hands-free phone capability and music streaming via Bluetooth® wireless technology
- Voice-activated touch-screen DVD navigation system, JBL® AM/FM 4-disc CD changer, with MP3/WMA playback capability, nine speakers including subwoofer, XM Radio with NavTraffic (includes 90-day trial subscription), USB port with iPod® connectivity, CD-text display function, auto sound leveling, hands-free phone capability and music streaming via Bluetooth® wireless technology
- Rear-seat DVD entertainment system with nine-inch display, rear-seat audio and two wireless headphones (includes 120V AC power outlet and RCA jacks)

**AVAILABLE EXTERIOR COLORS**

- Predawn Gray Mica
- Sizzling Crimson Mica
- Shoreline Blue Pearl
- Classic Silver Metallic
- Blizzard Pearl
- Black

**BASIC LIMITED WARRANTY COVERAGE**

- 3-year/36,000-mile Comprehensive
- 5-year/60,000-mile Powertrain
- 5-year/unlimited-mileage Corrosion Perforation
- 8-year/100,000-mile Hybrid-related Component Coverage