

HYBRID POWER SYSTEM		
Hybrid System Net Horsepower 280 horsepower (209 kw)		
ENGINE		
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	28/28/28	
(city/highway/combined MPG)	*2012 EPA MPG Estimates. Actual mileage will vary.	
ELECTRIC MOTOR		
Motor Generator 1 (MG1)		
-Function	Generator, engine starter, transmission ratio control	
- Type	Permanent magnet motor	
- Max. Voltage	AC 650V	
Motor Generator 2 (MG2)		
-Function	Drives front wheels, regeneration during braking	
- Type	Permanent magnet motor	
- Max. Voltage	AC 650V	
- Max. Output	167 hp (123 kw)	
- Max. Torque	247 lbft.	
Motor Generator Rear (MGR)		
-Function	Drives rear wheels, regeneration during braking	
- Type	Permanent magnet motor	
- Max. Voltage	AC 650V	
- Max. Output	68 hp (50 kw)	
- Max. Torque	96 lbft.	
HYBRID BATTERY PACK		
Туре	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	- Туре	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 Brak	e 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/Wh	neel	Full-size	



EXTERIOR DIMENSIONS	
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

INTERIOR DIMENSIONS			
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 st row seat	81.6 cu. ft.		
Behind 2 nd row seat	39.6 cu. ft.		
Behind 3 rd 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

- Projector-beam headlamps with auto on/off feature
- 17-inch seven spoke machined-finish alloy wheel with 245/65 R17 tires and full-size spare
- Color-keyed bumpers, door handles, and power heated outside mirrors with folding feature
- Color-keyed rear spoiler with LED center high-mount stop lamp
- Hybrid blue tinted headlamp and tail-lamp bezels
- In-glass antenna on rear quarter panel window
- UV reduction glass windshield and privacy glass on rear side, quarter and liftgate windows
- Washer-linked variable intermittent windshield wipers and variable rear wiper
- Rear window with electric defogger
- Multi-function remote keyless entry system
- Fog lamps
- HSD badging on right rear lift gate and front fenders
- Black roof rails
- Lift-up glass hatch

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
- Power liftgate
- Smart Entry
- Power tilt/slide moonroof with sunshade
- Limited badging on front doors



2013 Highlander Hybrid Product Information

STANDARD INTERIOR FEATURES

Highlander Hybrid Base

- 3.5-inch Multi-information Display: includes clock, outside temperature, cruiser information (average fuel economy, average speed, distance to empty, current fuel economy, and trip timer), and warning messages
- 6.1-inch Display Audio with back-up camera monitor display
- Front and rear air conditioning system with filter and vents for second and third-row seats
- Up to seven passenger seating capacity
- Easy-clean fabric-trimmed 40/20/40 2nd row seat w/armrests on outboard seats, fold flat, recline, fore and aft slide adjustment, one-touch right-hand walk-in function, plus Center Stow[™] seat, and Center Stow[™] console
- 50/50 split fabric-trimmed 3rd tow seat with fold down headrests and fold-flat-into-floor capability, two cup holders
- Height adjustable headrests (1st and 2nd row only)
- Front center console w/six cup holders, console box, and storage area for 2nd row Center Stow seat or Center Stow center console
- Optitron meters w/red graphics
- Power door locks and windows with driver's auto up/down with jam protection
- Auto door lock/unlock with shifter activation
- Cruiser control
- Dual sun visors with illuminated vanity mirrors and sliding extensions
- Overhead console with conversation mirror, map lights and sunglasses holder
- Illuminated entry system includes interior lights
- Manual tilt and telescopic urethane shift knob and steering wheel with audio, phone & Multiinformation Display and voice control buttons
- Door panels with integrated speakers, storage pocket and ten cupholders/four bottles
- Two front and one cargo area 12-volt auxiliary power outlets
- Cargo tie down hooks
- Scheduled maintenance indicator light
- Six assist grips
- Under floor storage in rear cargo area
- Color-keyed interior door handles and door grips
- Remote hood and fuel-filler door releases
- Cargo area second-row-seat one-touch fold-flat levers
- Second-row personal reading lamps

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

- Perforated leather-trimmed eight-way power adjustable driver seat with power lumbar support and adjustable thigh support; four-way power adjustable passenger seat, adjustable headrests and seatback pockets
- Multi-stage heated front seats
- Perforated leather-trimmed 40/20/40 second-row seat with fore/aft slide adjustment, recline adjustment, right-hand walk-in feature, plus Center Stow console
- Leatherette 50/50 split third-row seat with fold-flat capability and folding headrests
- Three-zone automatic climate control system with air filter, rear multi-function display, rear vents for second-and-third-row seats
- Smart Key System with push button start and remote illuminated entry
- Wood-grain-style interior trim with chrome interior door handles
- Leather-trimmed steering wheel with audio, climate, phone and voice control buttons



STANDARD INTERIOR FEATURES CONT.

- Leather-trimmed shift knob with wood-grain-style inlay
- HomeLink® universal transceiver
- Auto-dimming rearview mirror

STANDARD AUDIO SYSTEM

Base

Display Audio with Navigation and Entune – 6.1-inch Touch Screen with Integrated Backup Camera Display, AM/FM CD Player with MP3/WMA Playback Capability, six speakers, SiriusXM Satellite Radio capability (includes three-month trial subscription to XM Select Package), HD Radio with iTunes® Tagging, Auxiliary Audio Jack, USB Port with iPod® Connectivity and Control, and Hands-Free Phone Capability, Phone Book Access, Advanced Voice Recognition, and Music Streaming via Bluetooth® Wireless Technology

Limited

Display Audio with Navigation, Entune and JBL® - includes 6.1-inch touch-screen with integrated backup camera display, AM/FM CD player with MP3/WMA playback capability, nine JBL speakers, SiriusXM Satellite Radio capability (includes three-month trial subscription to XM Select Package), HD Radio TM with iTunes® Tagging, auxiliary audio jack, USB port with iPod connectivity and control, and hands-free phone capability, phone book access, advanced voice recognition, 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 Brakeforce Distribution (EBD) and Brake Assist
- Three-point seatbelts for all seating positions; Driver-side Emergency Locking Retractors (ELR) and Automatic/Emergency Locking Retractors (ALR/ELR) on all passenger seatbelts; three-point front seatbelts with adjustable shoulder anchors
- Driver and front passenger active head rests
- Driver and front passenger Advanced Airbag System
- Driver's knee airbag
- Driver and front passenger seat-mounted side airbags
- Three-row roll-sensing side curtain airbags (RSCA)
- Front and rear energy-absorbing crumple zones and energy-dissipating interior trim
- LATCH (Lower Anchors and Tethers for Children) includes lower anchors and tethers on outboard second-row seats
- Daytime Running Lights (DRL) with on/off feature
- Adjustable driver and front passenger shoulder belt anchors
- Driver and front passenger seatbelt Pretensioners with force limiters
- Child-protector rear door locks
- Collapsible steering column
- Direct-type Tire Pressure Monitor System (TPMS)
- Hill-start Assist Control
- Side impact door beams
- Engine immobilizer (Highlander Hybrid Grade)
- Anti-theft alarm with engine immobilizer (Limited)



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

- Leather Premium Package: Includes Leather-trimmed front and second-row seats, Multi-Stage heated front seats, leatherette-trimmed third-row seat, leather-trimmed tilt/telescopic steering wheel with audio, Multi-information Display, Bluetooth Hands-Free phone and voice command controls, leather-trimmed chrome-acented shift lever with metallic inlay, metallic interior trim, HomeLink Universal Transceiver, power tilt/slide moonroof with sunshade, auto-dimming rearview mirror, and Anti-Theft System with alarm and Engine Immobilizer
- Rear-seat DVD entertainment system with nine-inch display, rear-seat audio and two wireless headphones

Highlander Hybrid Limited 4WD-i

Rear-seat DVD entertainment system with nine-inch display, rear-seat audio and two wireless headphones

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