

## Toyota powertrain mastery by Joe Sage

Highlander is one of eight Toyota crossovers and SUVs—or two of eleven, if you break out hybrids and plug-in hybrids separately, as they often do. It's also one of fully fourteen "electrified" Toyotas—cars, trucks, SUVs/crossovers and a mini-van—of which all are hybrids (in a couple of cases plug-in hybrids) except for one full battery-electric and one fuel cell electric.

Other than 4Runner and Sequoia (which are Tacoma- and Tundra-based body-on-frame builds), all the SUVs, like the crossovers, are unibodies. Highlander was launched as a 2001 model, visually an SUV just as the crossover term was entering the lexicon. And it was Toyota's top-selling SUV for years, until a market shift to smaller sizes passed that crown to RAV4. Highlander shares its highly

adaptable front-drive-based transverse-engine platform with a wide range of Toyota and Lexus sedans, crossovers and the Sienna minivan.

Unless you need the maximum rock-crawling or trailering that body-on-frame is known for, you will likely never notice. And if you do notice, it will be because for more general use, the unibody is admittedly better suited to comfort cruising, while retaining highly capable overall.

The gen-four Highlander is in its fourth year—revealed in 2019 as a 2020—and with the strange pace of these pandemic years, it remains still basically totally new. We had an in-depth look and brief drive in Tempe in February 2020, just before lockdowns, but this was our first full week behind the wheel. Highlander is available as a hybrid or

not, FWD or AWD, in six trim levels (minus the base L trim as a hybrid and with a Bronze Special Edition instead of XSE midlevel). This all adds up to 22 variants, of which our sample is the top.

Non-hybrids replace their V6 with a four-cylinder turbo this year, with a horsepower dip from 295 to 265, while torque bumps up by 17 percent, from 263 to 310 lb-ft—a powertrain rated at 25 MPG combined and boasting 5,000-lb tow capacity, while reducing emissions some 50 percent.

The hybrid's combined output of 243 hp now almost matches the gasoline-only engine, drops trailering to 3,500 pounds, but shoots fuel efficiency for this high-head-count utility into the mid-30s, all for just \$1400 more than the full gasoline model.

The screen interface is well thought out. Drive modes (sport-normal-eco) are via a toggle on the console, easy to change with the flick of a finger,

with eyes on the road. Trail, EV and hill-holding buttons sit next to this. Cupholders, shifter, storage and charge ports are all well separated. Rear legroom is generous, almost as big as the front, and cargo volume is ample in any seat configuration.

Lucky us, we had ours during one of the biggest recent winter storms, so we headed to the fresh snows of Lake Mary Road, north of Payson.

The climbs and curves of the Beeline Highway included pouring rain and frozen mix, with air temperature about 33 degrees, more treacherous than fully frozen conditions. Roads north of the Mogollon Rim were largely unplowed, or plowed but ready for another pass. Though our 20-inch wheels were equipped with all-season tires, our drive was secure the entire time. Despite wild conditions, we never gave a thought to modes and had left driver assistance features on, which, despite a lack of lane markings, were unusually cooperative and effective when appropriate—all providing traction and control beyond the norm, right out of the box.



Through it all—climbs, descents, slick surfaces, high altitude, a bit of totally unplowed forest road, all without snow tires—our very real world fuel mileage remained between 31.3 and 31.9 MPG the entire time. It's impressive hybrid performance and impressive general performance. We're sold. ■



### SPECIFICATIONS

ASSEMBLY	Princeton, Indiana
ROWS / SEATS	three / seven
ENGINE	2.5L 4-cyl hybrid DOHC 16v D-4S inject Atkinson Cycle engine w Dual VVT-iE (electric intake)
HP/TORQUE	engine 186 hp / 175 lb-ft combined 243 net hp
COMPRESSION RATIO	14.0:1
TRANSMISSION	elec CVT w shift mode
DRIVETRAIN	electronic on-demand AWD
SUSPENSION	F: Indep MacPherson strut w stblzr bar; R: multi-link w stblzr bar
STEERING	elec pwr-asst rack & pinion
BRAKES	F: 13.3 vented; R: 13.3 solid w ECB and integrated regenerative braking
WHEELS	20-in painted alum alloy
TIRES	P235/55 R20
LENGTH / WHEELBASE	194.9 / 112.2 in
GROUND CLEARANCE	8.0 in
APPROACH / DEPARTURE	18.1 / 22.7°
TURNING CIRCLE	37.4 ft
HEADROOM (F/2/3)	(w pano moonroof) 38.4 / 37.1 / 36.1 in
LEGROOM (F/2/3)	40.4 / 41.0 / 27.7 in
CARGO CAPACITY	16.0 / 48.4 / 84.3 cu.ft
WEIGHT	4595 lb
PAYLOAD / GVWR	1405 / 6000 lb
TOW CAPACITY	3500 lb
FUEL / CAPACITY	87 oct reg / 17.1 gal
MPG	35/34/35 (city/hwy/comb)
BASE PRICE	\$52,425
DESTINATION CHARGE	1335
TOTAL	\$53,760

### 2023 TOYOTA HIGHLANDER LINEUP

GASOLINE 4-CYL TURBO	FWD	AWD
L	\$36,420	38,020
LE	38,820	40,420
XSE	43,415	45,365
XLE	41,820	43,420
LTD	46,075	48,025
Platinum	49,075	51,025
HYBRID 4-CYL		
LE Hybrid	40,220	41,820
XLE Hybrid	43,220	44,820
Hybrid Bronze Sp.Ed.	45,780	47,380
LTD Hybrid	47,475	49,425
Platinum Hybrid	50,475	52,425