

ARIZONA DRIVER

THE ENTHUSIAST'S GUIDE TO LIFE BEHIND THE WHEEL

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JULY-AUGUST 2018

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COVER: Less than \$30,000 can buy you this Nissan 370Z—a base model, but what a base model, with everything from a 332-hp V6 to Heritage Edition (Yellow) paint and trim details. The absence of nav at this level might even be considered another plus for anyone who likes to just go get lost cruising the back roads. **Photo:** Joe Sage



Paul Strauss

Ryan Douthit / NWAPA

START YOUR ENGINES : FROM THE PUBLISHER

Industry trends, driven by consumer tastes, continue to include more crossovers, SUVs and trucks—and just at a time when technology is bringing us not only the best ever of those, but also of supercars, high-performance cars and affordable sports coupes.

For utilities, we drive the new Hyundai Kona, SUVs from Buick, Lincoln and Nissan, and a 577-hp Mercedes-AMG performance utility. **Sue Mead** takes a Nissan Armada “Mountain Patrol” crossover concept for a drive in the red rocks and volcanic parks before Overland Expo WEST. And for off-roaders outside the realm of normal categorization, we revisit the Baja Peninsula with **Paul Strauss** to learn about the build of the vehicles he drove in the last issue. Trucks include the Nissan Titan XD diesel Pro-4X and the Colorado launch of the first Ford F-150 diesel, covered by **Sue Mead**. Trucks are also put to good use as **Stephanie Jarnagan** brings us the story of Ford’s annual efforts hauling water for the needy during our hot summers. For even more utilities and trucks, we have the results of one of our favorite annual comparos—Mudfest, the Outdoor Activity Vehicle of the Year Awards, held on the rainy Olympic Peninsula (with photos by **Ryan Douthit**).

On the car side, there’s a new Lexus ES lineup, brought to us by **Nicole Wakelin**; an all-new Hyundai Veloster brought to us by **BJ Killeen**; a week each in the Audi S4 quattro and Jaguar XF; and a look at outgoing and incoming Toyota Avalons. We drive coupes and supercars aplenty, from the very affordable Nissan 370Z on our cover, to the Mustang GT, to a range of competitors at the Texas Auto Roundup (with photos by **Kevin McCauley**). And for a taste of the very near future, we visit this year’s EcoCAR 3 collegiate alternative powertrain competition, as **Jan Wagner** rides along with contenders and winners.

Tyson Hugie heads to Apache Junction for a family day trip to a historic ghost town, and north for an Acura NSX road rally in Southern Nevada. We also bring you all sorts of industry news tidbits, as well as up-to-date auction and show information—and lots more.

Enjoy the ride!

Joe Sage - Publisher/ Executive Editor

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AUTOMOTIVE NEWS UPDATE



▼ The **McLaren 720S** has added to its trophy haul by winning the top Best of the Best category of the 2018 Red Dot Design Awards, one of the world's largest design contests—the second McLaren win of this international seal of outstanding design quality, following the 570S Coupé's win in 2016. The gen-two Super Series features a new interpretation of McLaren design language, with a dedication to aerodynamic principles, and was singled out by 40 international judges for “innovative symbiosis of aesthetics and function.” Criteria for the award include innovation, functionality, formal quality, ergonomics and durability. Out of 6,300 products from 59 countries vying for the ultimate Red Dot title in 2018, just one percent were chosen as Best of the Best. The McLaren 720S was also named Car of the Year at the Vehicle Dynamics International Awards 2018. Since its unveiling at the 2017 Geneva Motor Show, the McLaren 720S has had many awards and five-star reviews. In the UK, it was named *EVO* Car of the Year 2017, BBC *TopGear Magazine* Supercar of the Year 2017, BBC *TopGear Magazine* Performance Car of the Year 2017 and *CAR Magazine* Performance Car of the Year 2017. In North America, McLaren's largest global market, the 720S is *Road & Track* 2018 Performance Car of the Year, is an *Automobile Magazine* All Star, has received a *Car and Driver* Editor's choice, was *Du Pont Registry's* 2018 Car of the Year, and is also the fastest car ever tested by *Motor Trend* at their Willow Springs Raceway test facility in California.

▼ **FCA US LLC** and **Waymo**, who have been working together since May 2016—with 600 **Chrysler** Pacifica Hybrid minivans delivered to Waymo to date—are expanding their autonomous vehicle partnership (which features extensive testing and early implementation in Chandler, Arizona) with an agreement for up to 62,000 additional Pacifica Hybrid minivans to be added to Waymo's self-driving fleet. The



additional vehicle delivery is expected to begin in late 2018. | FCA US and Waymo have also begun discussions about the use of Waymo self-driving technology, potentially through a licensing agreement, in an FCA-manufactured vehicle available to retail customers. | This builds upon a previous Waymo-FCA commitment, announced in January, to deliver thousands of vehicles to the world's first self-driving transporta-

tion service, which Waymo will launch later this year, in which you can use the Waymo app to request a vehicle. | Waymo has also announced a new long-term partnership with **Jaguar Land Rover**, designing and engineering a self-driving Jaguar I-PACE to join Waymo's driverless fleet this year. The modern electric architecture of the Jaguar I-PACE is considered both eco-friendly and well-suited for their technology, as its large-capacity, fast-charge battery should let it drive all day. Waymo will add up to 20,000 I-PACEs to its fleet in the first two years of production, enough to complete about a million rides in a single day. | Waymo has self-driven over 5 million miles on public roads, 5 billion miles in simulation, and completed more than 20,000 structured tests. They are working toward having autonomous minivans, sedans, SUVs and even Class 8 semis. With Uber's program in Tempe recently shut down, Waymo is the only company with a fleet of fully self-driving cars—with no one in the driver's seat—on public roads.

▼ **Nikola Motor Company**—which designs and manufactures hydrogen-electric vehicles, electric vehicle drivetrains, vehicle components, energy storage systems and hydrogen stations—has picked Buckeye, Arizona for its hydrogen-electric semi-truck manufacturing headquarters facility. Nikola One and Nikola Two hydrogen-electric semi-truck models boast up to 1000 hp and 2000 lb-ft of torque, a 500-to-1000-

mile range and a 15-minute refill time. They have over 8,000 semi-trucks on pre-order. (Nikola is also in the powersports business, with two electric UTVs already in production and two personal watercraft



coming in late 2018 and in 2019.) The new million-square-foot zero-emission facility on 500 acres in southwest metro Phoenix will bring more than \$1 billion in capital investment to the region by 2024. Nikola selected Buckeye for many reasons, including Arizona's pro-business environment, top tier engineering schools, educated workforce and geographic location with direct access to major markets. They have immediately begun transferring their R&D and headquarters operations to Arizona, aiming for October 2018 completion. Construction planning for the new plant itself is underway, with the build beginning in 2019. The first 5000 Nikola semis will be built at Fitzgerald Gilder Kits in Crossville, Tennessee (builders of cab-chassis-axle kits for Freightliner, Kenworth, Peterbilt and Western Star) while the Arizona plant is under construction. The Buckeye site—at Sun Valley Parkway and the future Wintersburg Parkway—is at one of the entrances to Trillium at Douglas Ranch, a new master planned prototype “Smart City” community being developed by El Dorado Holdings and JDM Partners, projected to ultimately be home to more than 300,000 residents. | In May, Anheuser-Busch placed an order for up to 800 zero-emission Nikola hydrogen-electric-powered semi-trucks, which are expected to be integrated into Anheuser-Busch's dedicated fleet beginning in 2020. Anheuser-Busch aims to convert its entire long-haul fleet to renewable powered trucks by 2025. The brewer's 2025

Sustainability Goals include reducing CO2 emissions by 25 percent. The reductions gained from these 800 Nikola trucks will reduce carbon emissions from logistics by more than 18 percent, equivalent to tak-

ing more than 13 thousand passenger vehicles off the road annually. Nikola's advanced surround viewing system will also improve road safety.

▼ On May 30, **ISM Raceway** removed its 130-foot-high Race Control Tower in spectacular fashion as part of its \$178 million ISM Raceway Project Powered by DC Solar. NASCAR Vice Chairman Mike Helton donned a hard hat and led the demo-



lition by getting behind the controls of a Cat D8T dozer. Helton was joined by ISM Raceway President Bryan R. Sperber, members of the Okland Construction team and ISM Raceway fans to mark the major milestone. A brand new 6,300-square-foot Race Operations structure will top the grandstand sitting high above the new start/finish line near the famous dog leg. The new structure will have 162 linear feet of glass,

with excellent views of the track. ▼ **Bryan R. Sperber** was inducted into the 2018 class of the **West Coast Stock Car Hall of Fame** in late June. Throughout his 21 years as a track president—16 years at ISM Raceway (formerly Phoenix International Raceway)—Sperber has overseen the growth of ISM Raceway into one of the premier motorsports venues in the country. Now the host of two Monster Energy NASCAR Cup Series races and one Verizon IndyCar Series race, the track is undergoing a \$178 million modernization project to create the ultimate venue for technology and fan experience. Sperber previously served as the president of Watkins Glen International. Sperber was joined by five others in the elected Class of 2018: Larry Albedi, Joe Garone, Oren Prosser, Greg Pursley and Dick Woodland. The event, held at the Meritage Resort and Spa in Napa, California, and presented by Gateway Motorsports Park, accompanied the annual Monster Energy NASCAR Cup Series and NASCAR K&N Pro Series West weekend at nearby Sonoma Raceway.

▼ As a next-generation **Hyundai** engine will require new technologies and components as part of its assembly process, Hyundai Motor Manufacturing Alabama

LLC—which produces engines for Sonata, Elantra and Santa Fe—is investing \$388 million to construct a plant dedicated to manufacturing engine heads and enhance existing operations to support production of new Sonata and Elantra models. The capital investment will be spent on equipment for the engine head machining plant



and updating technology in an existing engine plant. It will cost about \$40 million to build a 260,000-square-foot building, due to be completed in November 2018, that will house the head machining equip-

center of gravity lowered by mounting the engine lower and 150mm farther back than in the 2015 model, with a dry sump system providing both low CG and lubrication reliability. Front and rear suspension



ment. This will free up space to expand engine assembly lines in one of HMMA's existing engine plants, where a new engine head machining facility will be operational by mid-2019. HMMA's two engine plants can produce about 700,000 engines a year to support vehicle production at both HMMA and Kia Motors Manufacturing Georgia in West Point, Georgia. HMMA, which started US vehicle production in May 2005, is the River Region's largest private manufacturer, with 2,700 full-time and 500 part-time employees. The new investment will create 50 new jobs.

▼ Nissan Motorsport International Co., Ltd. (NISMO) is releasing its 2018 model of the Nissan GT-R NISMO GT3, based on the GT-R (R35) NISMO and conforming to FIA GT3 regulations. The first GT-R NISMO GT3, launched in 2012, has been delivered to customers around the world, including in the US, Japan, Europe, China and Australia. The car's achievements include a Super GT GT300 class championship, Blancpain Endurance Series (now the Blancpain GT Series Endurance Cup) championship, and overall victory in the Bathurst 12 Hour in Australia in 2015. The 2018 model set for release applies lessons learned from accumulated actual race data since the 2015 model was released, with significant advances on top of the base GT-R (R35) NISMO. The new car aims to offer easy handling and significant reliability to both professional and recreational drivers. Weight distribution has been optimized and the

and the cross member have been redesigned for improved vehicle dynamics. The balance between stable downforce characteristics and drag has also been optimized. A new transmission offers an extended maintenance cycle, and brakes have been strengthened and also made more durable. The car also receives its own potent air conditioning system, ideal for endurance racing (or an Arizona summer). The engine will produce over 542 hp



at 6,500 rpm and over 470 lb-ft of torque at 5,000 rpm, running through a 6-speed sequential automatic. Stopping power is from 6-piston front and 4-piston rear ventilated steel discs. Suspension front and rear are independent double-wishbone. Build-to-order and delivery are to begin around January 2019. The estimated price of ¥60,000,000 currently equals about \$550,000 (excluding delivery or taxes).

▼ British Columbia-based EV designer and manufacturer **Electra Meccanica** Vehicles Corp. will provide their single-passenger SOLO all-electric commuter vehicles as customer service loaners at The Garage in Burnaby, BC. The Garage, well known in the Canadian automotive industry, will also be the first official Authorized Solo Service Center. "Ron Tremblay's grandfather opened one of the first service stations in Vancouver in 1934," says Electra Meccanica chairman and CEO Jerry Kroll, "creating a family legacy that has long had gasoline in their blood. Well, we can say they've got some electricity in there now, too." SOLO is priced at \$15,500 (US). You can place a fully-refundable \$250 deposit online at electrameccanica.com. Electra Meccanica also builds the \$50,000 Tofino, a high-performance two-seat roadster available in BC now and coming to Los Angeles this fall. Both vehicles are tuned for driving performance, while making your commute more efficient, cost-effective and environmentally friendly. Intermeccanica, a subsidiary of Electra Meccanica, has built high-end specialty cars for 59 years; now Electra Meccanica is building its new generation of affordable EVs for the masses. Publicly held Electra Meccanica began trading on the OTCQB exchange and an-

nounced its application filing for NASDAQ Capital Markets listing last October.

▼ There was a lot to see at **Overland Expo WEST**, south of Flagstaff in mid-May. One clear crowd-pleaser, if social media hits are any guide, was the Jeep Wrangler JK-based, V8-powered **AEV Conversions** Outpost II Camper. The rig's AEV 5.7L HEMI engine runs through an A580 transmis-

sion to a Dynatrac Dana 60 axle with 4.88 and ARB Locker Dynatrac Dana 44 with 4.88. Stopping power is from Dynatrac Big Brakes tucked inside AEV Borah Beadlock wheels with 37X12.50R17 BFG KM3



tires, sprung on AEV 4.5-inch high capacity suspension. Pulling power up front includes a Warn 9500-lb winch, while breathing capacity in deep fords is via an AEV snorkel with prefilter. A honeycomb-construction custom camper weighs just 750 pounds and features a custom roof rack, water heater with engine heat exchanger, gasoline air heater, stability jacks and undermount spare tire. The camper is set up for two people and a dog, with indoor and outdoor kitchen, 265-watt Enow solar panel and charge controller, dual Optima Bluetop house batteries, National Luna Dual battery isolator/controller, National Luna 50L refrigerator/freezer, a Partner Steel stove, LED lighting, 22 gallons of water capacity, and plenty of storage and closet space. The electric pop-top roof has a breathable awning. Other features include motion sensor, outdoor lighting, rear camera, a Maxtrax rear wheel holder, IPF off-road lamps and Rigid lighting in the rear. The AEV Conversions Outpost II is based on the outgoing Jeep Wrangler JK, but JL projects are up next. "The Outpost II is a showcase of what we are capable of. Some of that may pour over onto JL," they say. "We will never be first to market and we are okay with that because we know we will be producing the best products out there. It takes a lot of time to design, engineer, prototype and test all of our products to get the quality and performance we are known for." Expect AEV to have a healthy showing of new Wrangler JL parts at the SEMA Show this fall.

▼ **Ford** updates its F-150 Raptor for 2019 with electronically-controlled FOX shocks, new Trail Control and all-new Recaro sport seats—upgrades focused on trail running



and off-roading. Ford Performance worked directly with FOX to develop all-new electronically-controlled Live Valve technology (a class exclusive) for the new platform, which continuously adjusts damping in real time using sensors in the suspension and body to optimize comfort, handling and bottom-out resistance. By automatically varying compression rates, Raptor makes the most of its 13-inch front and 13.9-inch rear suspension travel. The system pairs



with Raptor's Terrain Management System to increase high-speed off-road capability as well as smooth on-road driving performance. "Not many trucks need sensors to detect when you are midair," says Hermann Salenbauch, global director of Ford Performance vehicle programs. "Raptor sets the dampers to full stiffness to help smooth shock performance as the truck lands." Low-speed performance off-road is

also improved via new Trail Control, which automatically adjusts power and braking to each individual wheel in rugged terrain, so drivers can focus on steering. This can be activated at speeds from 1 mph up to

20 mph, depending on driveline position, making things easier from driving on a simple two-track to traversing a rocky hill climb. Trail Control can automatically draw significant engine torque to conquer steep obstacles and can brake the wheels individually so the truck comes down smoothly on the far side. All-new Recaro sport seats keep drivers firmly in place at low and high speeds, with aggressive support via generous bolstering in the seat back

HISTORIC HAUNT

APACHE JUNCTION ATTRACTION IS A BIG DRAW FOR A FAMILY DAY TRIP BY TYSON HUGIE

Note to parents: Dress your 5-year-old in closed-toed shoes before taking the Mammoth Mine Tour at Goldfield Ghost Town. The last thing you want to hear when you're exiting the rickety wooden elevator and entering the mine shaft hundreds of feet underground is, "My flip-flop!"

There just so happens to be a four-inch-wide gap to step across, and, well, it tends to be a great place to lose footwear. That's what happened to my nephew Rex at the most inopportune time during our visit to the Apache Junction attraction.

Fortunately, my arm was just exactly long enough to reach into the opening and retrieve Rex's flip-flip from a ledge down below, with the assistance of a cell

phone's flashlight. Little Rex would have been waddling around half shoeless or needing to be toted around for the rest of the day, otherwise.

Like so many small Arizona mining towns, Goldfield peaked and then dried up based upon availability (or lack thereof) of its precious ores. At its high point, it was home to around 1,500 people, but that lasted only about six years between 1892 and 1898. In the decades that followed, prospectors again tried extracting more gold from the ground, but ultimately the efforts were abandoned.

Today, entrepreneurs are raking in the proceeds in Goldfield from a different type of revenue stream: tourists. Lots and lots of tourists. It took us about 45 minutes to

get to Goldfield from central Phoenix.

Even with a Thursday morning early arrival, not long after the 10:00 am start time, we still found ourselves herded around like cattle among the merchants, bakery and saloon, all set up along an 1800s-appearing "main street" of dirt, which was constructed in the 1980s to replicate what Goldfield might have looked like during its heyday about a century prior.

The 1.5-mile narrow gauge train ride around the property was our first of several attractions—packaged as part of a \$21 "combo" ticket that also includes a tour of the Mammoth Mine as well as admission to the Mystery Shack. We found the train ride to be a little slow-paced, but the con-

ductor's narration gave us some interesting education on the history of the region. The mine tour was engaging, and the kids loved it—especially the skeleton on display and the demonstration of what it must have been like to work in such a dark environment illuminated by only candlelight. Perhaps our favorite attraction at Goldfield was the Mystery Shack, a crudely-constructed wooden home built on the hillside at a 45-degree angle. Designed to test your balance and play with your senses, it serves as a life-sized optical illusion. We enjoyed being able to watch water "run uphill" and a billiards ball roll uphill, too. It takes a few minutes to get over the vertigo after the tour but it was worth it. The kids wanted some souvenirs, of course, so we paid a visit to one of the many gift shops along the main thoroughfare—partly to browse the wares, partly to

escape the heavy crowds congregating outside to watch a gunfight reenactment. We heard the gunshots from within the store, so we got our taste of Western movie action without having to be outside watching it and covering young ears. We didn't venture to try the food at Goldfield, but rather drove another 13 miles up the road to Tortilla Flat Saloon—a fun scenic destination if it weren't for heavy construction traffic on Highway 88 when we went. An hour-long wait would be too much time for three hungry kids, so we opted to make our way back to Gilbert for some of the East Valley's best Mexican at Nando's Mexican Café on Baseline at Gilbert Road.

For our family outing, the trip to Goldfield was just what we needed to entertain my brother's three young kids for the day. We'll just leave the flip-flops at home next time. ■



Purity of mission and execution

332 HORSES' WORTH OF ZIP FOR UNDER \$30,000 by Joe Sage

The sports car craze in the US following World War II comprised almost exclusively two-seat European roadsters—MG, Triumph, Austin-Healey, Jaguar, even the occasional Porsche 356 Roadster or Speedster. In Japan, there were the Datsun 1600 and then 2000 roadsters, but as righthand-drivers, those never hit our market.

Porsche broke the mold in the early '60s with the new 911—rear-engined, air-cooled and performance-engineered within a sleek coupe-like envelope, envied by many but available to few. Before that decade was out—barely—the new Datsun 240Z hit our shores. Front-engined, water-cooled and also performance-engineered within a sleek coupe-like envelope, the Z-car was an instant hit—affordable, offering more predictable handling than the early 911 and even doing very well with a newly important factor on the scale: fuel economy.

The idea of the Z-car—all the above attributes, wrapped in a famously reliable package of Japanese engineering—changed the world. A durable

change it has been, too. Flash forward all these decades, and while many performance cars have taken on low-slung, closed-cabin, midengine supercar form—and run well into six figures—the Nissan Z-car has survived as conceived, fundamentals intact, while continually and meaningfully refined.

The 911 has kept its rear-engine coupe layout, though while becoming water-cooled, developing technology to mitigate rear-engine weight imbalance and adding thick layers of luxury, its price has climbed ever more, now running from \$91,100 to \$293,200 base before (always pricey) add-ons.

Functionality and feel, instrumentation and trim, and controls and interfaces of the 370Z are today in many ways reminiscent of Nissan's top performance car, the GT-R—and that is a heck of a family credential to evoke. Yet the 332-hp 2018 Nissan 370Z, though sharing DNA and reflecting the aura of its supercar sibling, starts at just \$29,990. For perspective, the base 370-hp 911 runs \$91,100, while \$99,900 gets you a 565-hp Nissan GT-R. You

don't even need to be good at math to do the math.

The stylish and hot little number we're driving here is indeed the base model. (The full trim range runs from \$29,990 to \$38,090, or \$45,690 for the world-of-its-own NISMO Z.) Our only add-ons were the Heritage Edition Yellow kit (mirrors, decal badging and nifty interior upgrades, also available currently in magnetic black, pearl white or deep blue pearl) for just \$790—and carpeted floor mats. That's it. That's \$31,795 with destination charge, manual-shift driver engagement and the same 332-horse fun of any trim level (except NISMO's 350 hp, 5.4 percent more power for 53 percent more cash than our base model, though it adds more than horses).

Inside and out, under the hood and beneath the skin, the Z-Car engineering and styling teams demonstrate brand understanding, consistency and expression beyond all but just a few other brands. We could fill a book with details large and small that show their devotion to concept and mission.

We've noted that this could be an absolutely golden age for the automobile, if only most vehicles could peel away many layers of fluff and intervention and just concentrate on modern effi-

cient horsepower, well-developed suspension, solid rack and pinion steering, and highly capable disc brakes. Well, here's such a car.

We were highly engaged behind the wheel of the 370Z, all the moreso with the 6-speed manual in our example (although a 7-speed automatic is available for \$1400, for those who like to exercise just two or three limbs while driving).

The cabin is very quiet, though with tangible road connection—very connected and sporty for an everyday driver, which is exactly the balance it should have. You simply hear the precision whine of one very finely tuned and powerful machine, with a smooth, tight transmission and drivetrain. As the light turns green and we effortlessly dust a BMW in the next lane, all we can think is that our winning car cost half as much. Perfection.

We embraced the simplicity of this base model. Seats are black cloth with yellow trim, comfortable and handsome, never making us covet leather (which is only in higher trims). Options beyond ours are fairly minimalist—spoilers, a few NISMO items, but an advanced nav and audio screen is also only in higher trims. Instead, in addition to a traditional glovebox and a well-positioned console bin, there's a third storage bin, top center where nav might live, one more great way to pack for a

sports car road trip, with a nice double-stitched seam down the middle of its leather-like surface. Below that are a small, simple LCD screen displaying three lines of info, with simple audio control from two knobs and a set of buttons (the knobs include a dimension of electronic control, and the system can take feed from your music device). It has a simplicity and mechanical feel, despite being basically all digital, again reminiscent of the GT-R. We're glad it emulates its big brother, always a great place for life lessons.

(This car was built before the May backup camera mandate, so we'll see how they accommodate that. Visibility in a small coupe is limited by its very nature, so a solution should not be unwelcome.)

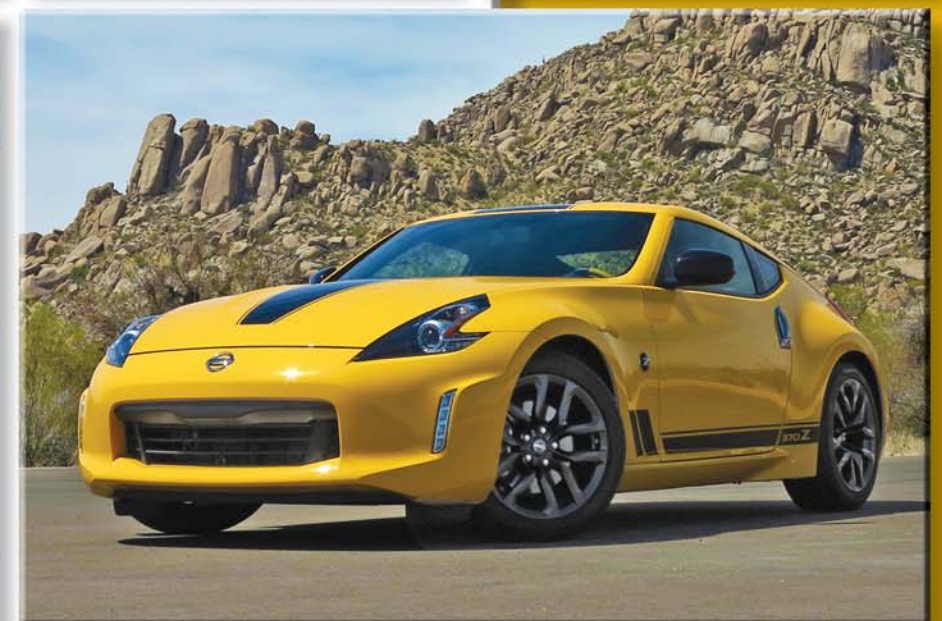
Binnacle readouts in black and orange use both LED and liquid crystal, all done with modern electronics, but reminiscent of the graphics from a video game or calculator in the '70s, also perfect for the pure feel of this car. The drivetrain, instruments, controls, even mechanical buttons are all a delicious taste of what things were like before cars started emulating self-dialing smartphones.

If you like highly tactile input into and feedback from your machine, you'll love this base model 370Z and its price point. The Z-car stays true to its roots, including the biggest one: fun! ■

SPECIFICATIONS

BUILD	.2-seat; unibody; corrosion-resistant high-strength steel; aluminum hood, doors, hatch
ENGINE	3.7L 24v longitudinal alum/alum V6
HP/TORQUE	332 hp / 270 lb-ft
EXHAUST	single muffler, Y-type dual outlets
TRANSMISSION	6-speed manual standard 7-speed auto available
DRIVESHAFT	carbon fiber composite
DRIVETRAIN	RWD
STEERING	power rack & pinion
SUSPENSION	F: double-wishbone aluminum; high vacuum diecast alum alloy subframe; twin-tube shocks; stblzr bar R: indep multi-link aluminum; steel subframe; twin-tube shocks; stblzr bar
BRAKES	F: 12.6x1.0 vent / R: 12.6x0.63 solid
WHEELS	alum alloy: F: 18x8 / R: 18x9
TIRES	Yokohama ADVAN Sport F: P225/50R18 / R: P245/45R18
LENGTH / WHEELBASE	167.4 in / 100.4 in
COEFFICIENT OF DRAG / LIFT	Cd 0.30 / Cl 0.0
TURNING CIRCLE	32.8 ft
HEADROOM / LEGROOM	38.2 / 42.9 in
CARGO VOLUME	6.9 cu.ft
WEIGHT / DISTRIB (F/R)	3333 lb / 55/45
FUEL / CAPACITY	prem unl / 19.0 gal
MPG	18/26/21 (city/hwy/comb)

BASE PRICE	\$29,990
CARPETED FLOOR MATS	130
334 HERITAGE EDITION YELLOW : black outside mirrors; gloss black decals for hood, roof, rear hatch and sides; yellow interior accents for steering wheel, stitching, console and shifter	790
DESTINATION CHARGE	885
TOTAL	\$31,795





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A WEEK WITH : 2018 HYUNDAI KONA 1.6T ULTIMATE AWD

Newest, smallest, hottest

BY JOE SAGE

We had a big adventure for the launch drive of the all-new Hyundai Kona small SUV (see our May/June issue)—we flew to the Kona Coast on the Big Island of Hawaii, grabbed a sample in lively green Lime Twist, and drove all over the island—lava fields, rain forest coast, volcanic highlands, the works.

How do we top that on our home front? It's not hard. There are surely a great many people in the islands who would give anything to drive one of these to the red rocks of Sedona (and maybe the volcanic parks northeast of Flagstaff, too, given enough time).

Our sample this time came in a conservative dark gray suit. Or maybe not so conservative—this is called Thunder Gray, evoking the wild island energy as surely as Surf Blue and Pulse Red. We pointed north and let it roar.

As Kona has redefined the Hyundai crossover lineup—and, as a “small SUV,” size categories themselves—stormy-conservative Thunder Gray quickly expanded our impression of this perky ride. (All paints are available in all trims, except Lime Twist, which is available in top trim only; also, a black roof option is only

on a few lower-trim colors; and great lime accents on black leather interior are top-trim only and with Lime Twist or Thunder Gray paint only). At \$28,700 for the (fully equipped) Ultimate top trim, perky though it still is, being a little more stately is not out of line. And the fun quotient remains every bit as high.

The engine choice is easy for most buyers—175 hp (and 195 lb-ft of torque) for the 1.6L turbo vs 147 (and 132) for the less expensive 2.0L. Lower trims have the 2-liter, while upper trims have the turbo, so it comes down to cost. The tightest jump is from \$21,150 for 2-liter SEL to \$24,700 for 1.6-turbo Limited (FWD prices), or \$3,550—just \$60/month on a five-year loan. Find a cheaper coffee shop or hope for a \$15/week raise—here's your motivation.

Stated MPG proved accurate. Combining miles of Interstate at speed with thousands of feet of climb, plus several days of stop-and-go around town, we averaged 26.7 mpg.

Comfortable, roomy and quick, unless you have a family of six or need to tow, Kona hits a size and shape that should cover your needs. Smiles are included at no extra charge. ■

SPECIFICATIONS

ENGINE	1.6L turbo D-CVVT direct inj
HP/TORQUE	175 hp / 195 lb-ft
TRANS	7-spd DCT
DRIVETRAIN	AWD (FWD avail)
SUSPENSION	F: McPherson strut w coils, gas shocks, advanced valving, stblzr bar
	R: Multi-link (AWD); gas shocks, adv valving
STEERING	motor driven rack & pinion, column mt
BRAKES	F: vented 305mm / R: solid 284mm
WHEELS/TIRES	18x7.5 alloy / 235/45R18
LENGTH / WHEELBASE	164.0 in / 102.4 in
GROUND CLEARANCE	6.7 in
TURNING CIRCLE	34.8 ft
HEADROOM (F/R)	39.6 (38.0 w sunroof) / 37.8 in
LEGROOM (F/R)	41.5 / 34.6 in
CARGO CAPACITY	19.2 / 45.8 cu.ft
WEIGHT / TOW CAPACITY	3344 lb / not recmnd
FUEL CAPACITY	13.2 gal
FUEL ECONOMY	AWD: 26/29/27 (city/hwy/comb)

BASE PRICE

ULTIMATE AWD W/LIME ACCENT INTERIOR\$28,700

INCLUDED W/ULTIMATE: Reverse park distance warning, color heads-up display (HUD), forward collision-avoidance assist w pedestrian detect, 4.2" color multi-info display, lane keep assist, 8" LCD touchscreen w embedded nav, driver attention warning, Blue Link® connected car system, high beam assist, wireless device charge, rain-sense wipers, Home-link® & compass, Infinity® 8-speaker premium audio w subwoofer & external amplifier.

CARPETED FLOOR MATS125

DESTINATION CHARGE980

TOTAL\$29,805



SPECIAL EVENTS: AUCTIONS & SHOWS

Barrett-Jackson Palm Beach

[RESULTS]: APRIL 12-15, WEST PALM BEACH, FLA

Barrett-Jackson's 16th Annual Palm Beach Auction featured entertainment and sports celebrities, rec-



ord attendance, record sales and a record number of bidders. Three collections were sold, highlighted by renowned philanthropist John Staluppi's Cars of Dreams Collection, all at No Reserve. Celebrities included Hollywood icon Burt Reynolds, who greeted fans, signed autographs and encouraged bidding on the block for three Pontiac Trans Ams. In total, 692 vehicles sold, nearly all at No Reserve, for more than \$38.3 million, 380 pieces of automobilia brought in over \$702,000, and \$450,000 was raised through the sale of charity vehicles, bringing total auction sales to over \$39.4 million. This year's auction also attracted more than 700 new bidders, a new record for Palm Beach. International vehicle consignments included Brazil and Italy. The week kicked off with a parade featuring vehicles from Staluppi's collection. During the four-day auction, 145 vehicles from the collection sold for \$13.96 million. Top 10 sales during the four-day auction totaled \$3,021,700; of these, eight were from the Staluppi collection and totaled \$2,007,500. Top seller (not from Staluppi) was a 2012 Lexus LFA Nurburgring Edition selling at \$770,000.

Several Cars of Dreams vehicles also set new auction world records, including the Superbird and '59 DeSoto in the Top 10, along with "Herbie," a 1963 Volkswagen Beetle (\$128,700) and a 1966 Ford Good Humor Truck (\$117,700).

Automobilia sales were among the best to date in Palm Beach, with restored gas pumps and porcelain neon signs highly sought-after. Top sale was a Richfield gas station island with rare A.O. Smith matching electric gas pumps for \$36,800.

A 2006 Ferrari F430 Spider previously owned by

Zac Brown Band fiddler Jimmy De Martini sold for \$250,000, with 100 percent benefiting Camp Southern Ground. The 35th Anniversary Corvette that raised \$350,000 in Scottsdale sold again for

RM Sotheby's Private Sales

[NEW DIVISION]: RM SOTHEBY'S GROUP

RM Sotheby's launched a new Private Sales division in June, with newly focused attention on ser-



\$200,000 to benefit the American Heart Association—to Jeanette and John Staluppi, who generously donated the Corvette back to be sold at a future auction.

Barrett-Jackson Northeast

[RESULTS]: JUNE 20-23, MOHEGAN SUN, CT

Barrett-Jackson's 3rd Annual Northeast event, held at the huge Mohegan Sun resort in Connecticut, featured some 450 pieces of automobilia and more than 650 vehicles. The last production 2018 Dodge Challenger SRT Demon and the last production 2017 Dodge Viper, both painted Viper Red and billed as the "Ultimate Last Chance," raised a cool \$1 million on Saturday, donated by FCA to United Way. The 10 percent buyer's fee was donated to the American Heart Association in support of Barrett-Jackson's year-long Driven Hearts charity.

A white 35th Anniversary Edition Chevrolet Corvette donated by Darrell and Charmaine Pullen of Kentucky sold for \$60,000, with funds donated also to the Driven Hearts campaign. The Pullens were inspired by the sale of an identical car for the same charity at this year's Scottsdale auction.

The Boston-to-Las Vegas GoldRush Rally visited the event on Saturday, perfectly timed to fall along its Boston-New York leg. The Rally has its penultimate stop in Scottsdale on Saturday, June 30.

In addition to the million-dollar Dodge Demon and Viper pair, top sales included a custom 1967 Chevrolet Nova, "The InNOVator," at \$275,000; a 2015 Rolls-Royce Ghost at \$203,500; a 2018 Dodge Challenger SRT Demon at \$198,000; and a 1967 Shelby GT500E Super Snake at \$192,500.

Next up is Las Vegas, September 27-29.

vice for their global clientele and a dedicated section on their website. The Private Sales division—led by veteran car specialist and global head of private sales, Shelby Myers, along with RM Sotheby's Group CFO Jarrett Rothmeier and a new addition to the team, private sales car specialist Armando Petretti—promises discreet, honest advice and transaction execution, from analysis to acquisition to sale. The new division launches with a 1998 McLaren F1 LM-Specification. The 63rd and penultimate road-specification example built, it's one of just two F1s upgraded by McLaren Special Operations with the LM-spec engine, the same engine fitted in the limited edition, stripped-down F1 LMs. This car received the Extra High Downforce Package in period, while retaining its road-specification interior with numerous upgrades including satellite navigation—making it a fully street-legal F1 with LM performance and modern driver comfort upgrades. Price has not been publicly stated.

Russo and Steele Amelia Island

[UPCOMING]: MARCH 2019, AMELIA ISLAND, FL

Arizona-based Russo and Steele Collector Automobile Auctions recalibrates its schedule and map with the addition of an Amelia Island auction next spring during the Amelia Island Concours d'Elegance. This puts Russo and Steele in the same Arizona-Amelia-Monterey three-season coast-to-coast major concours-connected auction triad that Bonhams, Gooding & Company and RM Sotheby's include in their schedules. The two-evening Russo Amelia event is expected to have over 250 ultra-premium collector cars crossing its lively and distinctive "auction in the round" style auction block.

Icons & Legends of Hollywood

[RESULTS]: JUNE 6-8, LOS ANGELES, CA

Historical memorabilia and artifact auction house Profiles in History held an *Icons & Legends of Hollywood* sale in June. Results were led by the sale of a 1991 Harley-Davidson Fat Boy motorcycle used by Arnold Schwarzenegger in *Terminator 2: Judgment Day*, at \$480,000. Also on two wheels, a chariot used by Oscar winner Charlton Heston in the film



classic *Ben-Hur* brought \$144,000. Jumping up to six wheels, the famous gravity-defying #2525 GM bus driven by Keanu Reeves and Sandra Bullock in *Speed* sold for \$96,000. Sci-fi movie memorabilia also had high sales, from *Barbarella's* futuristic rifle (\$264,000), to a Death Star from *Star Wars: Episode VI: Return of the Jedi* (\$240,000), Sigourney Weaver's suit from *Alien* (\$192,000) and her flamethrower from *Aliens* (\$102,000). Obi-Wan Kenobi's lightsaber chest used in the first *Star Wars* movie (*Episode IV: A New Hope*) brought \$132,000. The sale grossed over six million dollars total.

Concours in the Hills sets records

[RESULTS]: FEB 10, FOUNTAIN HILLS, AZ

Concours in the Hills, Scuderia Southwest's



largest high performance, exotic and collector car event of the year, raised a record of more than \$117,000 for Phoenix Children's Hospital during its February 10 fifth annual show. Attendance, vehicle and sponsorship records were also set. Fountain Park was filled with 749 classic and historic vehicles from American muscle to European sports,

and everything in between, such as a US Marine Corps Viper helicopter surrounded by Dodge Vipers and an Army Aviation Heritage Foundation Cobra helicopter, surrounded by about 30 Cobra sports cars. The show was opened by famous names in racing, including Bob Bondurant, Lyn St James and Paul Tracy. The event, free to spectators, required a minimum \$60 donation to Phoenix Children's Hospital to register a vehicle, with many happily



giving more. More than 20,000 spectators attended 2018's Concours in the Hills, versus 15,000 in 2017. Scuderia Southwest also garnered 78 sponsors for the event. The sixth annual Concours in the Hills event will be held Saturday, February 9, 2019. For more information about Concours in the Hills, visit concoursinthehills.org.

Prescott Corvette Show 2018

[COMING UP]: SEPTEMBER 22, PRESCOTT, AZ

Lamb Chevrolet and the City of Prescott are sponsors of the 12th Annual Historic Prescott Corvette Car Show hosted by the Prescott Vette Sette, to be held on Saturday, September 22, at Yavapai County Courthouse Plaza downtown, as the town closes the streets on three sides of the plaza (or



Randall Bohi

about five city blocks). Limited to 250 registrants, the show attracts clubs and individual entrants from throughout Arizona, Southern California and Nevada, and generally has all seven generations of Corvette represented. Complete information and participant registration can be found at prescottvettesette.org.

Monterey & Pebble Beach 2018

[COMING UP]: AUGUST 21-26, MONTEREY, CA

This busy week includes a couple of dozen spinoff events, as well as the Pebble Beach Concours d'Elegance itself, which started the whole thing. The Concours itself is on Sunday, but related events including Carmel-by-the-Sea Concours on the Avenue, Classic Motorsports Monterey Cruise-in, Carmel Mission Classic, Pebble Beach Motoring

Classic, Automobilia Monterey, The Little Car Show, the Prancing Ponies Car Show, McCall's Motorworks Reunion, Exotics on Cannery Row, Barnyard Ferrari Event and many more run from Tuesday through Sunday. For Concours and related details, visit pebblebeachconcours.net.

Here are major race, show and auction dates, by category and/or general sequence:

Tu	W	Th	F	Sa	Su
21	22	23	24	25	26

RACES: WeatherTech Raceway, Laguna Seca
Rolex Monterey Motorsports Reunion
THUFRISATSUN.....Aug 23-26

AUCTIONS: Most events also have preview days open to the public prior to sale dates shown.

Worldwide Auctioneers, Pacific Grove
 |.....THUFRISATSUN.....Aug 23

Mecum Auctions, Del Monte Golf Course
 |.....THUFRISATSUN.....Aug 23-25

Russo & Steele, Monterey Waterfront
 |.....THUFRISATSUN.....Aug 23-25

Bonhams, The Quail Lodge, Carmel
 |.....THUFRISATSUN.....Aug 24

Gooding & Company, Pebble Beach
 |.....THUFRISATSUN.....Aug 24-25

RM Sotheby's, Monterey Conference Center
 |.....THUFRISATSUN.....Aug 24-25

CONCOURS & SHOWS:

The Quail, A Motorsports Gathering
 |.....THUFRISATSUN.....Aug 24

Concorso Italiano, Black Horse Golf Course
 |.....THUFRISATSUN.....Aug 25

Concours D'LeMons, Seaside
 |.....THUFRISATSUN.....Aug 25

Pebble Beach Concours d'Elegance
 |.....THUFRISATSUN.....Aug 26

Doublecheck all dates and details before planning travel. www.pebblebeachconcours.net ■

New Lexus ES beautifully walks the fine line between luxury and performance

BY NICOLE WAKELIN

The all-new 2019 Lexus ES sedan gets a much-needed update this year with a new look, a choice of two powertrains, and the addition of an F SPORT trim. In a time when crossovers rule the road, it's a challenge to draw in sedan customers, but the ES is poised to do just that with this slate of improvements.

Let's start with the design and that polarizing Lexus spindle grille. You either love it or hate it, but you better get used to it because it's not going anywhere. It dominates the front of the ES, yet it works better than before thanks to subtle design changes elsewhere.

This ES is 2.6 inches longer, 0.2 inches lower, and 1.8 inches wider than its predecessor. Lexus also pushed the wheels further out to the corners of the car. These sound like minor changes, but it's what they do together that makes the design better. They give the ES a sportier stance with an aggressive demeanor that draws your attention.

Lexus backs up this sporty new look with a 3.5-liter V6 engine with 302 horsepower and 267 lb-ft of torque, paired to an all-new 8-speed automatic transmission. A luxury car like the ES walks a fine line when it comes to performance. The typical luxury customer wants a responsive engine, but doesn't want a rough, aggressive drive that makes driving a chore.

The ES walks that line beautifully, with strong throttle response and a quiet engine. It makes merging into highway traffic effortless and is remarkably quiet. The 8-speed transmission delivers power smoothly without attracting unwanted attention or causing a fuss.

New to the ES range is the F SPORT, which is already found on other models in the Lexus lineup. This is the sportiest trim of the lot, both in looks and performance. It gets its own special grille, dual-spoke 19-inch wheels, a trunk lid spoiler and dark exterior accents. As for performance, it's all about handling, with an adaptive vari-

able suspension system that offers 650 levels of adjustment.

Can you feel the difference between this and the standard suspension system? Yes. It's a subtle difference that's most noticeable when driving conditions are challenging. Think tight corners, winding country roads, and rough road surfaces. The suspension system in the F SPORT makes short work of these challenges and keeps the driver relaxed.

Although the best seat in the ES is the one behind the wheel, with its 10-way adjustability and optional heating and ventilation, we'd be remiss if we didn't praise the lounge-worthy rear seats. This is a luxury car, and it feels every bit the part when you sit back and simply enjoy the ride.

Your second powertrain choice is a fourth-generation hybrid engine that features a 2.5-liter 4-cylinder along with an electric motor for a combined 215 total system horsepower with 163 lb-ft of torque. Lexus engineers strove to get rid of

the rubber band feeling common to hybrid powertrains and their efforts paid off.

It creates an experience like driving a gas engine, but with the added bonus of excellent fuel economy. EPA estimates are forthcoming, but Lexus expects 44 mpg in the city, 45 mpg on the highway, and 44 mpg combined. That's a pleasant jump from the 22/33/26 of the gas engine.

The ES takes a leap forward in the technology department, becoming the first Lexus with Apple CarPlay. Unfortunately, Android Auto is not part of this brave new world, although the ES is Amazon-Alexa enabled. Smartphone integration is increasingly important in today's cars, and this is something of a halfway solution, one that is hopefully resolved in the future.

Audiophiles will appreciate the available Mark Levinson sound system. It's not simply a standard system added to any Lexus. Instead, it's designed specifically for this

vehicle to produce the best possible sound with 1,800 watts and 17 speakers. It sounds simply fantastic.

The ES also has a solid suite of safety features through Lexus Safety System + 2.0, which is standard across the lineup. It includes a pre-collision system, high-speed dynamic radar cruise control with road sign assist, lane tracing assist, intelligent high beams, intelligent high beams, lane departure alert, parking support and Lexus Enform Safety Connect. Available options include blind spot monitor, park assist sonar, park assist sonar with pedestrian detection and panoramic view monitor.

If you're wondering what it'll cost you to get behind the wheel of the new Lexus ES, you'll have to wait a few months. Pricing won't be available until closer to the on-sale date later this year. With great styling, a comfortable interior, and luxury features, the 2019 Lexus ES is worth the wait. ■

The tail of the new ES (below upper left) includes a spoiler on both ES 350 F SPORT and ES 300h hybrid models. The Lexus spindle grille has multiple adaptations on the ES. At left, the ES 350 F SPORT has an aggressive jet black mesh grille of interlocking "L"s with dark trim, while the others (below top right) have an elegant vertical pattern and satin plated trim. Interiors vary accordingly; shown are (below left) the F SPORT's cockpit in Flare Red Hadori and (below center right) the ES 350 in Topaz Shimamoku Brown Ultra Luxury trim. Apple CarPlay (lower right) is a welcome addition to the new ES lineup; we hope Android Auto may lie in the future.



SPECIFICATIONS

ES 350 : ENGINE.....3.5L DOHC 24v V6
 HP/TORQUE 302 hp / 267 lb-ft
 TRANSMISSION ..8-speed Direct Shift auto
 WHEELS17x7.5; optional 18x8, 19x8
 TIRES215/55R17; 235/45R18, 235/40R19
 DRAG COEFFICIENT(Cd)0.29 (0.26 F Sport)
 WEIGHT / DISTRIB (F/R)3649 lb / 61/39
 0-TO-60 / TOP SPEED6.6 sec / 131 mph
 FUEL / CAPACITYregular / 15.9 gal
 MPG350: 22/33/26 (city/hwy/comb)
350 F Sport: 22/31/25 (city/hwy/comb)

ES 300h : ENGINE.....2.5L DOHC 16v I-4
 GASOLINE HP/TORQUE 176 hp / 163 lb-ft
 ELECTRIC.....244.8V 29.1kW Ni-MH / 39 hp
 TOTAL HORSEPOWER 215 hp
 TRANSMISSIONelectronic-control CVT
 WHEELS17x7.5; optional 18x8
 TIRES215/55R17; opt 235/45R18
 DRAG COEFFICIENT(Cd)0.26
 WEIGHT / DISTRIB (F/R)3704 lb / 59/41
 0-TO-60 / TOP SPEED8.1 sec / 112 mph
 FUEL / CAPACITYregular / 13.2 gal
 MPG(mfg est): 44/45/44 (city/hwy/comb)

DRIVETRAINFWD
 STEERINGrack mounted elec rack & pinion
 SUSPENSION: MacPherson strut-type indep;
 R: trailing arm multilink independent
 BRAKESF: 12.0 vented / R: 11.1 solid
 LENGTH / WHEELBASE195.9 in / 113.0 in
 TURNING CIRCLE 38.0 ft (38.8 w 18-19" wheels)
 HEADROOM (F/R)37.5 / 37.4 in
 LEGROOM (F/R)42.4 / 39.2 in
 CARGO VOLUME16.7 cu.ft
 BASE PRICETBD

The 2019 Lexus ES 350 F SPORT Package (below) has the same powertrain as the ES 350, but includes all Premium trim features and adds Hadori aluminum interior trim, 19-inch split spoke wheels, F SPORT front seats, F SPORT pedals, active noise control, front and rear performance dampers, rear spoiler, an 8-inch TFT instrument panel display, F SPORT gauges with movable display ring, an F SPORT grille with dark surround, an F SPORT analog clock, and an F SPORT shift lever and knob.



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A number of small, relatively affordable German roadsters reached our shores roughly two decades ago: the Audi TT, BMW Z3, Porsche Boxster and Mercedes-Benz SLK (now renamed SLC). They were all about simple top-down fun and style, with horsepower originally kept consciously short of their higher-performance stablemates. Enter the 2018 Mercedes-AMG SLC43, and you can readily see that the speed limits have been lifted.

The number portion of an AMG model's alphanumeric was once directly related to its displacement, but now uses standardized numbers to indicate relative position. A range of AMG 43 models have a 3.0-liter biturbo V6. (Three 43 models were renamed 53 earlier this year, as they changed over to an inline-six, so keep an eye on the next SLC).

The 2018 Mercedes-AMG SLC43 Roadster we're driving here has 50 percent more horsepower than a non-AMG Mercedes-Benz SLC 300, at just 27 percent higher cost. This seems a clear winning proposition, and you can stop right there. Other AMG bits beyond the engine and enhanced transmission in our visually grabbing sample turn out to be op-

tions, about \$15,000 worth (see sidebar).

Many of the AMG upgrades are cosmetic (although spoilers front and rear combine function and style). Red style cues are a big part of this, and plenty of 'em, from front and rear lips, to red brake calipers, red-flanged wheels and a few other little touches (enough to start to tip the scales beyond subtle and a bit toward Batmobile).

Mercedes has always had a retractable hardtop on the SLC, as on the bigger SL. The hardtop adds weight, but horsepower in the upper threes makes for a plenty quick and highly precise luxo-rocket. Top operation is one-button simple and fast, as long as you first make sure the trunk is clear.

An AMG version always indicates a significantly more performance-oriented build, and while the earlier Euro roadsters were kept a bit shy of their bigger siblings' specs, as sales of smaller cars have become hotter, power and fitment have both grown (as has their size itself). If not seen side by side, you could easily take your Mercedes-AMG SLC43 experience for the bigger SL (to a point), but at just 30 to 40 percent the price. ■

SPECIFICATIONS

ENGINE	AMG-enhanced 3.0L alum alloy biturbo V6
HP/TORQUE	362 hp / 384 lb-ft
TRANS / DRIVETRAIN	9G-Tronic 9-spd auto / RWD
0-TO-60 / TOP SPEED	4.6 sec / 155 mph (elec lim)
SUSPENSION	F: indep spring strut & wishbone w coils, double-tube shocks, tubular stblzr; R: indep multi-link w coils, single-tube shocks, tubular torsion bar
STEERING	speed-dep electro-hydr rack-and-pinion
BRAKES	F: 14.2 / R: 13.0
WHEELS/TIRES	F: 8x18 235/40R18 / R: 9x18 255/35R18
LENGTH/WHEELBASE	163.1 / 95.7 in
TURNING CIRCLE / GROUND CLEARANCE	34.5 ft / 4.1 in
CARGO VOLUME	(top up/down) 10.1 / 6.4 cu.ft
WEIGHT	3541 lb
FUEL CAPACITY	18.5 gal
MPG	20/29/23 (city/hwy/comb)
BASE PRICE	\$61,350
BLACK ROOF W HEADLINER	250
PREMIUM 3 PKG	Comand w nav, 3 yrs maps, DVD, voice control, active LED heads, adaptive high beams, dual zone climate, analog clock, Apple/Android, multicolor ambient lighting, Distronic, lane keep assist, Parktronic...6650
AMG HANDLING PKG	AMG Ride Control, sport suspension, limited slip diff, red calipers, AMG Nappa/Dinamica performance steering wheel, IWC design analog clock...3700
AMG PERFORMANCE STUDIO REDART	Red front splitter, flics, fins on fenders, rear diffuser insert; 18" AMG black 10-spoke wheels w red rim flange; red brake calipers; leather sport steering wheel w carbon fiber effect; AMG shift lever w crest; AMG floor mats w red edging...3500
DESTINATION CHARGE	995
TOTAL	\$76,445



BAJA BONES

OFF-ROAD RACERS ARE BUILT BY HAND AND READY FOR ANYTHING

STORY AND PHOTOS BY PAUL STRAUSS
THEAWESOMER.COM / 95OCTANE.COM

If you've ever dreamed of racing in the Baja 1000, the guys at Wide Open Baja can make that dream come true. The Ensenada-based off-road company offers several different ways to get your feet wet (and helmet dirty) in a real Baja challenge car.

I recently spent three days driving across the Baja peninsula (see our May/June 2018 issue), learning about the cars they build, and the amaz-

ing experiences they offer for amateur drivers.

Wide Open Baja creates each of its purpose-built endurance Baja race cars by hand, and each one is loaded with all of the gear necessary to take on some of the most challenging terrain in the world. The cars feature an open body design with a chassis constructed from chromoly steel, which provides strength and safety for its occupants.

The two-seat racers are designed for a driver and co-driver, and are equipped with items which are essential for endurance racing. For instance, each car packs an easy-access spare tire out back, padded/suspended racing seats with 5-point harnesses, and a fresh air helmet ventilation system so you can actually breathe with all that dust outside.

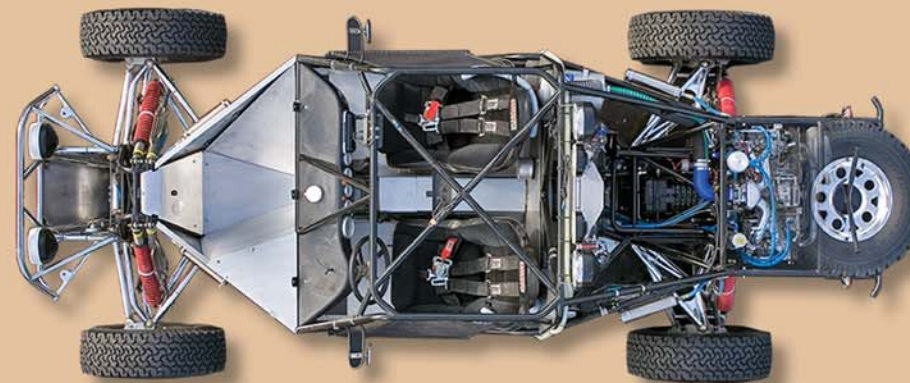
There's also a GPS for waypoint navigation, and a radio system for communicating with other cars or your crew. For our drive into the desert, we had a professional driver about a mile ahead in a lead car who would radio back alerting us to any obstacles, turns or other hazards in the road ahead. And believe me, hazards are frequent along the way. The Baja 1000 is infamous for its killer twists, turns and

steep drop-offs along some pretty sketchy trails.

Each vehicle rocks an incredible 18 inches of wheel travel courtesy of either Fox or King shocks, along with rugged Eibach springs. I was truly impressed by the ability of these cars to negotiate everything from deep ruts to climbing over boulders, and everything in between. Zooming up and down hills becomes second nature, and huge rocks that would destroy most production off-road-ers pass right under the middle like it's nothing.

But these cars aren't just built for rock-crawling prowess, they're built for speed. There's nothing quite like the sensation of cruising along over rough and rugged desert trails at speeds up to 90 mph, leaving a massive cloud of dust in your wake. Of course, you don't want to be the vehicle left in that wake, so it's important to keep your distance from cars in front of you.

The rear-wheel-drive buggies are powered by a 2.0-liter Subaru FA20 Boxer engine, similar to the one found in the BRZ and Forester, but highly tuned for off-road racing, and beefed up for durability. Power is rated at about 175 hp—which doesn't



sound like a whole lot, but it's more than enough when running on rough off-road trails. The gearbox is a Weddle 4-speed manual racing transmission.

But capability aside, what's most impressive is that basically anyone who can drive a manual transmission can drive one of these vehicles, and on some of the same exact routes that the Baja 1000 races on. Wide Open Baja offers multiple adventure packages out of both their Ensenada and Cabo San Lucas locations, ranging from half-day rides to 4-day immersive rides which will give you a serious taste of Baja 1000 life. The overnight packages include accommodations and some deli-

icious authentic Mexican cuisine, along with a celebratory evening beer at the end of each day's run.

For those of you serious about off-roading, you can even race one of their cars in the actual Baja 1000. Wide Open Baja can provide a full crew, logistics, safety gear and everything an amateur racer needs to participate with the big dogs. When I stopped by their shop, they were running full-bore to build and prep 15 cars for the race.

Whether you're interested in an adrenaline junkie's dream vacation, or seriously considering a run in the Baja 1000, stop by the Wide Open Baja website, www.wideopenbaja.com, for more information on everything they have to offer. ■



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— Cheers! Michelle

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A WEEK WITH : 2018 BUICK ENCLAVE PREMIUM AWD 1SN

Gracefully supersized

BY JOE SAGE

Buick product and positioning efforts continue their big push, including this all-new gen-two Enclave SUV, with trim levels up to their new top-luxe Avenir (our Premium is one level shy of that).

We're still getting used to Buick's new grille, which replaces the previous bold waterfall with an Opel-esque badge-and-bars backed by a subtle waterfall, enough to tag it as a Buick on second glance, if not first. And the classic portholes have been reduced to an item on the front fender flanks that's just the lightest nod to that ancient heritage.

Until fairly recently, Buick had to clarify its spot between Chevrolet and Cadillac against corporate cousins Pontiac, Oldsmobile, Saturn, even Saab, and for utilities also against GMC. It's all simpler now, with just Buick (and more truck-rooted GMC) falling between Chevy and Cadillac—at least with GM, though the new grille may distinguish them less against another many dozen brands.

Related to Chevy Traverse and Cadillac XT5, Enclave fits neatly between those in price and luxury level. While Cadillac, Chevy and GMC go one size bigger (Escalade, Tahoe-Suburban and Yukon), Enclave is Buick's biggest. Its sleek exterior belies its

size—three rows, seven seats, though third-row legroom makes it a better fit for a growing family, leaving GM's bigger boats for executive teams.

The craft is quite maneuverable. With streamlined form, short overhangs front and rear, and its transverse V6 tucked under a tidy hood, Enclave is well planted and capable of surprisingly tight moves. Its engine placement also gives this vehicle one of the smoother auto start-stop functions.

The premium cockpit gets above average marks overall—functions and preferences are well considered—but a mixed grade for connectivity (wireless charging is a plus, while plug-in options and placements are debatable), as well as a list of small nits, such as a punishing set of seat memory controls, a parking brake control that you set or release exactly the same way, auto-down front windows on both sides but auto-up on the left side only, and several other things noted in our logbook. Ours had separate moonroofs front and rear, a plus in our hot, sunny climate, where people can have different preferences inside.

With Enclave already completely new for 2018, changes for 2019 will be minimal—the previously eponymous base Enclave becomes Preferred (and remains front-drive-only); an automatic heated steering wheel is standard on Premium and Avenir top trims; and Avenir will offer an ebony interior. And the base price for 2019 rises by just 20 bucks.

Buick Enclave looks and feels big but not too

SPECIFICATIONS

SEATING	.....three rows / seven seats
ENGINE	.....3.6L DOHC direct inj V6, cast alum block-head
DRIVETRAIN	.....AWD (FWD available)
HP/TORQUE	.....310 hp / 266 lb-ft
TRANSMISSION	.....Hydra-Matic 9T65 9-spd auto
SUSPENSION	.....F: MacPherson indep w hydraulic control arm ride bushing, hollow stblzr bar; R: 5-link indep, aux spring aids, hollow stblzr bar. AVAILABLE (AVENIR TOP TRIM): contin variable real-time damping
STEERING	.....elec var-effort pwr w active return asst
BRAKES	.....4-whl disc, var w power assist, Duralife rotors, low-drag calipers, no further details or specs
WHEELS/TIRES	.....18" P225/65R18 / opt 20" P255/55R20
LENGTH/WHEELBASE	.....204.3 / 120.9 in
TURNING CIRCLE	.....39.0 ft
LEGROOM (F/2/3)	.....41.2 / 38.9 / 33.5 in
CARGO VOL	.....23.6 / 58.0 / 97.6 + 3.1 underfloor cu.ft
WEIGHT	.....base 4358 lb
TOW CAPACITY	.....w pkg 5000 lb
FUEL CAPACITY	.....(AWD) 21.7 gal
MPG	.....(AWD) 17/25/20 (city/hwy/comb)

BASE PRICE	.....\$50,315
SATIN STEEL METALLIC PAINT	.....395
DUAL MOONROOF: Power front, fixed rear	.....1400
WHEELS: 20" aluminum	.....1400
REAR CAMERA: Rear camera inside mirror, surround vision, birds-eye, front-side-rear cameras	.....825
TRAILERING: Heavy duty cooling system	.....650
NAVIGATION	.....495
DESTINATION CHARGE	.....975

TOTAL\$56,455

big. Its layout is neat and tidy outside, but capacious and capable inside. Its premium fitment level is both executive- and family-ready. Styling is tasteful and a tiny bit tough. Enclave hits quite a few best-of-both nails squarely on the head. ■



MAKING ITS MARK

Big Lincoln shows the brand is finally hitting its stride *BY JOE SAGE*

Lincoln has worked hard to prove itself to still be, well, the Cadillac of Fords. But for the past couple of decades, it has seemed less Cadillac-ish and more reskinned, badge-engineered Ford-ish.

This is now well on the way to being corrected. Various style treatments have come and gone, most recently the waterfall grille (still on about half the lineup), which worked well for elegance and brand distinction, but less so for images of power and strength. Enter a new unification effort.

As the lineup itself has evolved, so has its nomenclature. For the past dozen years or more, the group has borne a set of painfully indistinguishable letter codes: MKC, MKS, MKT, MKX, MKZ—presumably evoking the classic Lincoln Continental Mark series, but not the kind of brand names that embed themselves top-of-mind when it's time to go vehicle shopping. Fortunately, Lincoln seems to have finally gotten the memo on this.

The new-in-2017 Continental full-size luxury sedan departed from this (goodbye, MKS) and also introduced a new grille and overall style. For 2018,

the MKC, MKT and MKX linger with their old names and the waterfall grille (a sure sign that more change is coming), while the MKZ kept its old triple-alpha name but received the new grille.

For 2019, a new Nautilus will officially replace the MKX, and the Aviator badge will return, effectively (though so far not officially) replacing the MKT. That leaves MKC and MKZ. The MKC has already been shown for 2019, with the new grille treatment but the old name. Perhaps MKZ—not yet shown—will get its short-lived past Zephyr name back along with the new grille next year?

Yes, take a deep breath—that's exactly how difficult these names have been to follow. But the big Navigator flagship utility—the bold new version of which we are driving here—was never pushed into that MK-whatever naming scheme. All it needed was the new styling, now tied in with the Continental flagship sedan. The new Lincoln grille does convey heft, style, luxury and a healthy degree of dominance—but not arrogance, as the big Navigator's most obvious competitor is famous for

in your rear view mirror. It's maybe not a hundred percent proprietary to the brand (it's a bit reminiscent of one-time cousin Jaguar), but it is about a hundred percent fit to the brand.

The roughly hundred-thousand-dollar price tag on our Black Label example here is also a good fit for a full-size, three-row luxury SUV with seating for eight or over 100 cubic feet of cargo volume behind the front seats—and, in fact, you can get into the Navigator game for just \$72,555 for a rear-driver or \$75,210 for a 4x4. (There is also a long wheelbase—the Navigator Extended Length, or Navigator L for short—with full cargo volume of over 120 cubic feet, starting at \$79,255 and running to \$96,905 for a long-wheelbase Black Label.)

Luxury land yachts decades ago used to mimic the home living room, with perhaps a plush button-upholstered suede sofa for a front seat. Those days are long gone in both vehicles and homes. The interior of the new Navigator features extremely comfortable seats—which neatly avoid the current trend toward quilting, while also conquering the need for perforated leather for cooling, by creating a pattern with those perforations. The seat shells are firm and thick, while the cushions are thin and form-fitting. Well done. Add a luxuri-

ously and usefully wide wood-face console deck, and we realize this may still match a living room, but now the most stylish and modern kind.

All three rows are nicely accommodated in this big Lincoln—not only with 40-plus legroom for all eight occupants, but with a big double sunroof that can be variously controlled, front and rear, tilted open for fresh air or shielded from the sun.

The interface team has worked hard on this vehicle, with generally superior results, though in some cases the quest for elegance or tech-trickery overrides functionality. One instance is the shift interface, a subset of a horizontal chrome trim bar (see below) functioning as a pushbutton shifter. There are ribs on two key bars (R, D), but you still have to look, as they are in line with your finger's path, so you don't really feel the ribs.

When you change audio volume or climate temperature, a huge circle zoom-animates to fill the entire screen with superfluous (volume by number, which is of no value, or one huge temp, which wipes out the more useful left/right temps otherwise displayed). This could be shown with a one-inch inset, if it were even needed at all. If you also want to change the station, forget it—anything else is impossible till it finally fades away again.

Power folding rear seats are easily operated via a matrix of buttons in the left rear, although it is set up at 90 degrees to the seats' actual orien-

tation, another detail that could so easily be fixed.

There are fully six or seven drive modes, not only bearing names that depart from the common normal-eco-sport settings, but also each with a descriptive slogan. Normal is "effortless and balanced"; Conserve is "for efficient driving"; Excite is "for responsive and engaged driving"; and so on. Settings for slippery, deep and climbing conditions have even longer descriptors.

Acceleration and handling are not quite Euro-precise, but for a three-ton American craft they're more than up to the task. Even its 40.8-foot turning circle feels trim for this big eight-seater. And torque is prodigious: a huge bonus from its shared Ford Expedition DNA is tow capacity of more than 8000 pounds (8300 for 4x4, 8700 for 4x2).

Lincoln Navigator is making notable inroads in the marketplace against not only Cadillac but also luxury Europeans such as Mercedes-Benz and Land Rover—with sales up by triple digits (more than double) year-over-year so far, while buyer profiles have broadened to include younger, tech-savvy clients who appreciate such inclusions as WAZE, Alexa, Android and Apple integration.

Bold but not arrogant, powerful yet refined, and with a name you can remember, the Lincoln Navigator—marking 20 years this year and now in its fourth generation—is clearly more than ready to claim its turf in the luxury big SUV market. ■

SPECIFICATIONS

BUILD/SEATS	unitized welded steel body / 8
ENGINE	3.5L twin-turbocharged V6
HP/TORQUE	450 hp / 510 lb-ft
TRANSMISSION	10-spd auto w SelectShift
DRIVETRAIN	4x4 (4x2 RWD avail)
SUSPENSION	F: indep short & long-arm, (SLA), coil-over shocks, stblzr bar
	R: independent multi-link, coil-over shocks, stblzr bar
STEERING	adaptive
BRAKES	F: 13.8 vent 2-piston / R: 13.8 solid
WHEELS / TIRES	22" / P285/45HR22
LENGTH / WHEELBASE	210.0 / 122.5 in
TURNING CIRCLE	40.8 ft
LEGROOM (F/2/3)	43.9 / 41.1 / 42.3 in
CARGO CAPACITY	19.3 / 57.5 / 103.3 cu.ft
TOW CAPACITY	4X4: 8300 lb (4X2: 8700 lb)
WEIGHT	5855 lb
FUEL / FUEL CAPACITY	prem recmd / 23.0 gal
FUEL ECONOMY	16/21/18 (city/hwy/comb)
BASE PRICE	\$93,705
BLACK LABEL INCLUDES:	Chalet theme Venetian leather interior w Lincoln Star perforated seats, panoramic vista roof, 22" ebony black painted 21-spoke wheels, SYNC3, Revel Ultimate 20-speaker audio, AM-FM-SiriusXM-HD radio, voice activated nav with SiriusXM traffic and travel link, front console CD player, 40-passthrough-40 heated 2nd row seats, technology package, illuminated power running boards, heavy-duty tow package.
CHROMA MOLTEN GOLD PAINT	1750
30-WAY FRONT SEATS w massage.....	1250
REAR SEAT ENT w wireless headphones.....	1995
CARGO PACKAGE	420
DESTINATION CHARGE	1195
TOTAL	\$100,315

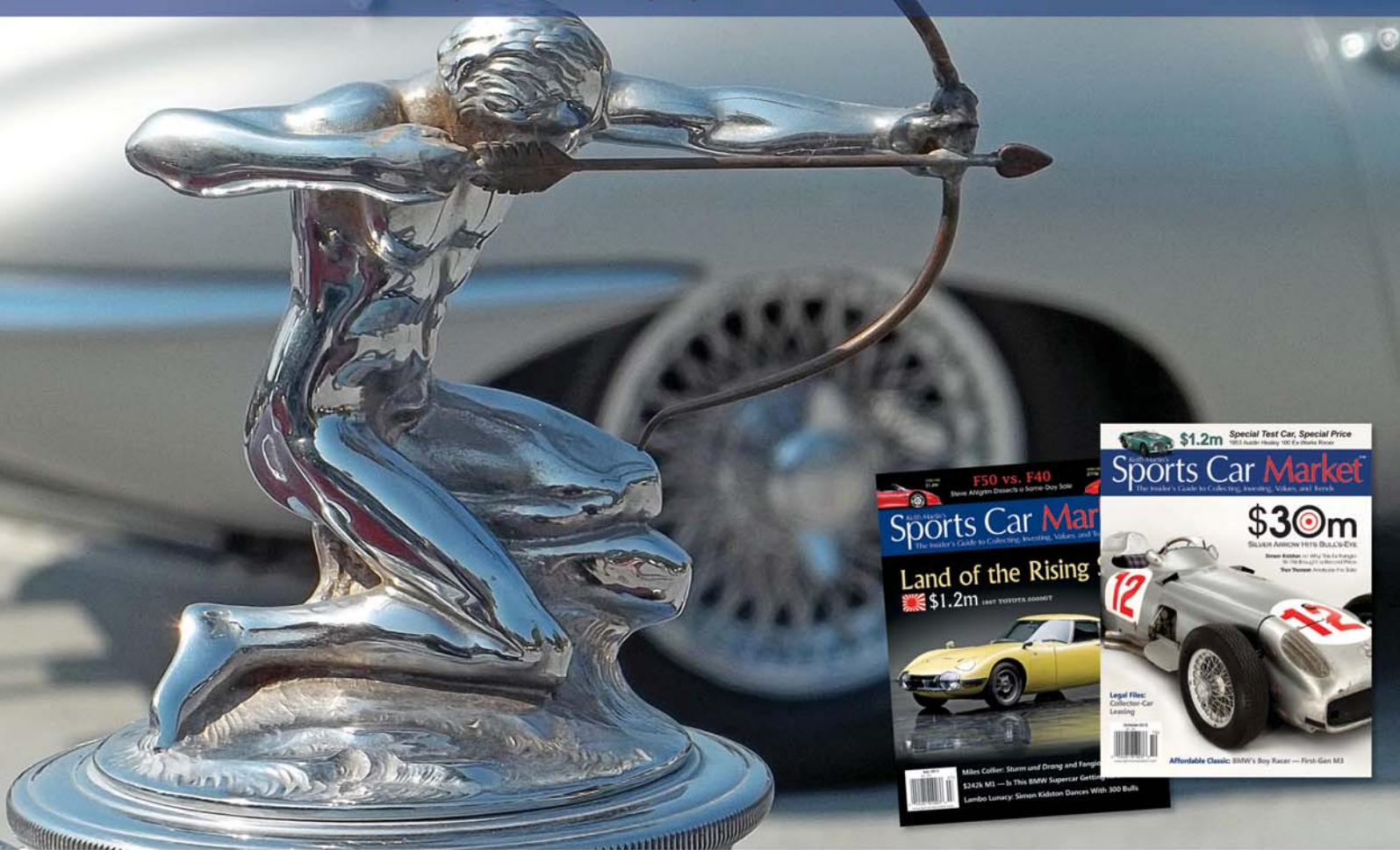


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NEW VEHICLE LAUNCH DRIVE : 2018 FORD F-150 POWER STROKE V6 DIESEL

FIRST-EVER F-150 DIESEL BY SUE MEAD

Pickups are more popular than ever, with more models and new special edition versions to select from every year. Trucks suit the needs of many buyers for work, and now laden with creature comforts and every modern-day technology and safety feature that today's buyers expect in a vehicle, many people purchase pickups for their lifestyle—driving to the office during the week, carrying goods from Home Depot on the weekend and heading to the hills for getaways. And some buy them just because they're cool.

Two key selling points for diesel are towing and the payback over a gasoline engine. Full-size truck customers looking for high fuel economy while towing and hauling are going to be thrilled with a new option from Ford. The all-new diesel-powered 2018 F-150 is now the sixth engine choice in Ford's best-selling light-duty half-ton pickup line; its 3.0-liter Power Stroke V6 diesel engine boasts 250 horsepower and 440 lb-ft of torque, 11,400 pounds of towing capacity, and 2,020 pounds of payload capacity—while promising 30 mpg on the highway, making it the most fuel-efficient full-size pickup currently on the market, says Ford.

One of the development team's top goals was to make sure it had a refined sound, and it is ultra-quiet, as we discovered when testing it recently on a drive in Colorado.

Another goal was to increase the torque capability. Peak torque arrives at just 1,750 rpm, for maximum acceleration, with strong delivery continuing throughout the rpm range, ideal for towing or hauling heavy loads over long distances. The engine achieves maximum horsepower at 3,250 rpm and is paired with a SelectShift 10-speed automatic transmission that's calibrated specifically for this engine and application. Standard auto start-stop technology also improves fuel efficiency and reduces emissions in city driving.

For greater responsiveness and reduced turbo lag, the Ford truck team chose a high-efficiency variable-geometry turbocharger. A common-rail fuel injection system precisely optimizes performance and fuel efficiency, while high-pressure 29,000-pounds-per-square-inch injection calibration enables smoother, quieter operation with reduced emissions. The diesel engine also features an advanced cooling system (see sidebar).

Ford's new V6 diesel is manufactured using the same compacted-graphite iron block material construction and forged-steel crank found in the 2.7-liter EcoBoost engine, for added strength and durability along with reduced weight. This combines with the high-strength, military-grade aluminum-alloy body introduced in 2015, reducing vehicle weight by up to 700 pounds. ■

F-150 POWER STROKE MODELS

The all-new 3.0-liter V6 Power Stroke diesel engine is available for both 4x2 and 4x4 drivetrains in Lariat, King Ranch and Platinum editions—in SuperCrew trucks with either a 5.5-foot or 6.5-foot bed and SuperCab trucks with a 6.5-foot bed. // The engine is a \$4,000 option (over the standard 2.7-liter EcoBoost) for the Lariat (starting at \$41,515), and a \$3,000 upcharge for the King Ranch (starting at \$51,930), and Platinum (\$54,485) models. // Fleet buyers can find it in XL and XLT work-focused trims; it will also be available in F-150s with the FX4 off-road package. // Ford truck marketing manager Todd Eckert says he expects the diesel engine to comprise about five percent of overall F-150 retail sales.

COOLING: ARIZONA-TESTED

The F-150 with 3.0L V6 Power Stroke diesel features a premium mechanical engine-driven fan and dual radiator shutters for improved high-temperature, high-altitude performance. Ford claims this is a key advantage over electric cooling fans used by competitors. // In testing along the legendary Davis Dam in Arizona, F-150 with the new 3.0-liter Power Stroke V6 diesel climbed 13 miles at a 6 percent grade in temperatures above 100 degrees, maintaining consistent power output throughout.

FUEL MILEAGE

MPG4X2: 22/30/25 (city/hwy/comb)
.....4X4: 20/25/22 (city/hwy/comb)



F-150 V6 Power Stroke diesel's only direct (half-ton) competitor is the Ram 1500 EcoDiesel, at least until General Motors introduces its new light-duty diesel for the Chevrolet Silverado and its GMC Sierra. The Nissan Titan XD with Cummins V8 diesel is in a heavier category, between half-ton and three-quarter-ton.

GETTING IN TUNE

NEW VELOSTER HAS A GOOD BEAT THAT YOU CAN EASILY DANCE TO

BY BJ KILLEEN

Austin, Texas, may be the fastest growing music scene in the US. With an influx of trendy, young professionals seeking the best food, best music and a great nightlife, it was inevitable that great music followed. Which is exactly why Hyundai chose Austin to be the city where the redesigned Veloster was launched to the press. The all new 2019 Veloster fits the profile of the Austin city dweller almost perfectly. It's fun to drive, looks sharp, is unique in its segment and is aiming at single professionals who want to stand apart from the crowd.

We spent a few days in Austin as guests of Hyundai, where we had a chance to flog the Veloster around town, out on the open road and even through some of Texas' Hill Country area. The takeaway is that the new Veloster is even more fun and more refined than ever before.

Besides being all new in its design, the Veloster now offers five trim levels versus the previous

four. There are two models called the 2.0L and 2.0L Premium that feature a 2.0-liter Atkinson cycle engine matched with either a 6-speed manual transmission or 6-speed automatic, and then three trims—Turbo R-Spec, Turbo, and Turbo Ultimate—that come with a 1.6-liter inline turbocharged four-cylinder powerplant mated with either the 6-speed manual or 7-speed dual-clutch transmission. Prices range from a reasonable \$18,500 for the entry model up to \$28,150 base for the Ultimate. Destination charges are \$885. Hyundai brought only two models for us to drive: the R-Spec manual trans and the Turbo Ultimate with the automatic transmission.

Because of its three-door configuration, the Veloster really has no direct competitor, but if you're looking to buy in the compact sporty market, you would consider the Mini Cooper, Fiat 500, Honda Civic Coupe and rumored soon-to-be-vanquished Volkswagen Beetle as the Veloster's competition.

Even though cars, especially small ones, are dropping in sales and popularity, Hyundai says the compact sporty car segment is somewhat stable. Young people still want good-looking, sporty, affordable vehicles, and the Veloster delivers on that request list.

The Veloster is important to Hyundai because it brings buyers into the brand and helps keep them there for the duration of their car-buying life. Some interesting statistics, according to Hyundai: Veloster buyers never considered a Hyundai before their

purchase, and 70 percent replaced another vehicle brand with that Hyundai purchase. In addition, almost half of Veloster owners did move up to another Hyundai vehicle. Veloster buyers are younger and have more household income than regular Hyundai buyers, so when it came time for Hyundai to decide what to do with Veloster, the answer was a no-brainer.

Because buyers in this segment insist on a vehicle that looks great and is fun to drive, Hyundai focused on those priorities. Hyundai designers made sure the Veloster still looked like a Veloster, but raised the styling bar in every way. At the front, the design is more aggressive: an inset honeycomb grille, aerodynamic headlamps, functional air inlets and a lower sloping hood really give the little sportster a personality. Front and rear fenders have been reshaped and look more integrated and athletic. Plus, the roofline has been lowered for better aerodynamics and a more proportional stance. The styling has grown up and projects the same maturity as the driving dynamics, which will have returning Veloster buyers singing praises.

The unique three-door design, a big part of the Veloster's identity, has been retained, thankfully. As the driver approaches the Veloster, his one-door side really delivers on the coupe design. The passengers coming in from the right see two welcoming doors, with the rear door's handle neatly hidden up high to retain the coupe styling. Since the Veloster is designed to appeal to single buy-

ers, the occasional driver-side rear seat passenger won't mind climbing in from the passenger side.

From the rear, the Veloster remains instantly recognizable, but you can tell it's been pumping iron. There are dual center exhaust returns, along with a more defined lower diffuser and available LED taillamps. Now 17-inch wheels and tires come standard, with 18s standard on the 2.0-liter Premium and above.

Overall dimensions for the Veloster changed only slightly. Overall length is up about an inch. It's also less than a half-inch wider, and height and wheelbase remain unchanged. Interior dimensions are almost the same as well, with the exception of rear-seat head room, which gained a half inch. When you think how little the exterior dimensions have changed, this is quite an accomplishment. Hyundai achieved this by repositioning the hinges on the rear hatch, as well as with unique density seat foam for the rear passengers.

Inside, the Veloster's focus is driver-oriented. While the front passenger isn't left out, you can see from the photo that the driver is way more important. Interior comfort is better than we expected: in the R-Spec, the cloth seats are comfortable, and we had plenty of head room, al-

though we aren't as tall as some of the other journalists. Even those well over six feet tall reportedly felt no discomfort. The Veloster feels quite roomy inside, which is tough to do in a compact car. Contrasting accent colors inside are bright and definitely add to the sportiness of the vehicle without being overdone.

There is a nice list of standard features on the entry-level 2.0-liter model, including a 7-inch touchscreen display, Android Auto and Apple CarPlay, Bluetooth, cruise control, LED DRLs, automatic on/off headlamps and forward collision avoidance assist. The 2.0-liter Premium adds 18-inch wheels and tires, blind spot warning with cross traffic warning, pushbutton start with proximity key, a larger display and an Infinity audio system, wireless charge pad, heated front seats and leather/cloth seating surfaces.

The R-Spec model we drove featured a B&M Racing sport shifter, alloy pedals, a 4.2-inch color TFT instrument cluster and Michelin Pilot Sport 4 225/40R18 summer tires. The Turbo model adds a sunroof, power lumbar, and automatic temperature control. Because weight savings was important for the R-Spec model, the seats went back to

KEEP RIGHT >>



SPECIFICATIONS

VELOSTER 2.0

ENGINENu 2.0 MPI Atkinson cycle 4-cyl
 HP/TORQUE147 hp / 132 lb-ft
 COMPRESSION RATIO12.5:1
 TRANSMISSION6-spd manual / 6-spd auto
 BRAKESF: 11x.09 vented; R: 10.3x0.4 solid
 WHEELS/TIRES2.0: 17x7.0 alloy / 215/45R17
2.0 PREMIUM: 18x7.5 alloy / 225/40R18
 MPGMANUAL: 25/33/28 (city/hwy/comb)
AUTO: 27/34/30 (city/hwy/comb)

VELOSTER TURBO, R-SPEC

ENGINEGamma 1.6L turbo GDI 4-cyl
 HP/TORQUE201 hp / 195 lb-ft
 COMPRESSION RATIO10.0:1
 TRANSMISSION6-spd manual / 7-spd DCT
R-Spec 6-spd manual only
 BRAKESF: 12x1.0 vented; R: 10.3x0.4 solid
 WHEELS/TIRES18x7.5 alloy / 225/40R18
 MPGMANUAL: 26/33/29 (city/hwy/comb)
DCT: 28/34/30 (city/hwy/comb)

DRIVETRAINFWD
 STEERINGmotor driv rack & pinion, col mt
 SUSPENSIONF: McPherson strut w coils, twin-tube hydraulic gas shocks, stblzr bar
 R: Multi-link, twin-tube hydr gas shocks
 LENGTH / WHEELBASE166.9 in / 104.3 in
 LEGROOM (F/R)42.6 / 34.1 in
 PASSENGER CAPACITY89.9 cu.ft
 CARGO CAPACITY19.9 cu.ft
 FUEL CAPACITY13.2 gal
 WEIGHTMANUAL: 2701-2921 lb
AUTO: 2734-2855 lb
DCT: 2899-2987 lb



cloth, but the combined leather/cloth seating returns in the Turbo model. Ultimate trim adds a two-tone roof, 8-inch display with navigation added, full leather seats, and adaptive cruise control with the DCT model only.

We had a lot of nice things to say about the R-Spec's interior: the sporty instrument cluster, the overall clean layout, and the speedo and tach that had the zero sitting at bottom of the gauge. Ergonomics were good: all switches and controls were easy to reach and operate. The steering wheel leather was soft, and the thickness was perfect in our hands. The 6-speed manual's shifter had a natural hand position, and, as we own a Kia, all the steering wheel controls in the Hyundai are similar to those found in our Sedona, which makes using them second nature. Material quality and fit and finish were also impressive, but Hyundai has done a good job making sure the quality is high in all its vehicles. We also liked the 8-speaker Infinity audio system with center channel and subwoofer.

Another feature we semi-liked was the HUD, or heads-up display. We love that you can raise and lower it, so if you don't like it, it doesn't need to be in your sight line all the time. It's a large 8-inch screen, and displays information like safety, navigation and audio. You also can see the tach, speedo and gear when the Veloster is in Sport mode. We aren't big fans of HUD, but at least this one you can see even if you're wearing Polarized lenses.

We had a few nitpicks, as well. First, the shoulder seatbelt height adjuster is a fixed ring, so it can't be adjusted to the passenger's height. Normally that wouldn't be a problem if the passenger seat could be raised, which it can't. A manual seat height adjuster is only on the driver's side. We would love to have one for the passenger, since the

Veloster sits fairly low. My driving partner complained about windshield glare off the dash top, but since we wear polarized sunglasses, we never noticed it.

Although the Veloster looks like a two-door, it seats four and is also a hatchback, which means there's plenty of cargo room. At just shy of 20 cubic feet behind the second row, loading up won't be a problem. Drop the standard 60/40 split-fold second-row seats and there's even more space. The Veloster's cargo capacity beats not only its direct competitors, but also those larger in size, like the Toyota C-HR, Chevrolet Trax, Jeep Renegade and the MINI Clubman. The Fiat 500, at 7.0 cubic feet of cargo room, is a joke next to Veloster.

When it comes to power to move that cargo, the Veloster is highly capable. There are two engines offered, as we mentioned previously. The 2.0-liter I4 is standard in the base and Premium trims, and produces 147 horsepower and 132 lb-ft of torque. Both numbers are slightly higher than the previous model. The 1.6-liter GTDI four cylinder makes 201 horsepower and 195 lb-ft of torque, with the majority of that torque at a low 1,500 rpm. Fuel economy numbers are good: the 2.0-liter gets EPA estimates of 25/33/28 city/highway/combined for the manual transmission, and 27/34/30 for the automatic. For the 1.6-liter turbo, it's 26/33/29 for the manual, and 28/34/30 for the DCT 7-speed. On our drive, we noted a 29.3 mpg number in the Ultimate model with the 7-speed.

What good is power if you don't use it? So we did. There are three drive modes offered: Normal, Sport and Smart. Each mode changes the throttle response, steering feel and shift logic. Smart mode basically learns your shift logic, so the Veloster caters to your specific driving habits.

Both engines get drive modes, but only the automatic transmissions get the Smart mode. As you can probably assume, we spent most of our drive time in Sport mode.

The Veloster is fairly light, at 2,700 to 3,000 pounds depending on trim, so the turbocharged engine was really responsive. Because we drove mostly in Sport mode with quicker throttle response, the Veloster jumped brightly off the line. In the GMT, the turbos spooled quickly and we felt no hesitation. Speaking of shifting, we liked the B&M shifter in the R-Spec. The throws were short and precise, and our only nitpick was that because the shifts were so close, sometimes we didn't know what gear we were in by feel. When we get a chance to spend more time with the shifter, and grow more familiar with it, that feeling should disappear. Shifting this transmission brings out all the reasons why a sporty car should always offer one. Paddle shifters are fine, but really living only comes through sliding a gearshift lever.

We also appreciated the Veloster's active engine sound feature on models with the GTDI engine. It enhances intake and exhaust powertrain sounds inside the cabin to add more fun to the drive. In normal mode, you hear a pleasant exhaust sound coming in the cabin. In Sport mode, that note is throatier with a touch more rumble. You can adjust the sound settings to provide even more enhancement if desired. The system is fun to play with, and fun to listen to while on the road.

Adding even more to the fun quotient is the suspension system, which has been changed drastically from the previous generation. The Veloster now comes standard with a multilink rear suspension, replacing the previous torsion beam. This is a huge difference when it comes to driving dynam-

ics. The Veloster's ride now is more compliant, planted, controllable, and responsive than ever before. In addition to the new IRS, front suspension modifications also were made: the Veloster now uses an aluminum front knuckle that saved almost six pounds of weight, and lower control arm geometry was improved. Where the previous model's suspension was a little too unforgiving for everyday driving, the new setup means you won't be punished if this is your commuter car.

Steering inputs also are a win. There is great feedback, and the weight is nearly perfect (especially in Sport mode). Steering enhancements for the gen-two model included moving the steering gearbox more than an inch closer to the centerline to enhance overall feel and braking stability. Speaking of braking, we never gave it a second thought, mostly because the brakes are strong and linear. They aren't grabby or over boosted, and just did their job, which allowed us to do ours: namely, having tons of fun driving.

Other driving impressions from the Veloster: we noticed a bit of tire noise (expected) from the summer tires and some wind noise at speeds above 80, but nothing that was unexpected. This is a sporty car, which means there should be some

noise that reminds you what you're driving.

If it's safety you care about, Hyundai has that covered in the Veloster as well. There are plenty of standard and available safety and driver-assist features like forward collision-avoidance assist and lane-keep assist, driver attention warning, and the blind spot and cross traffic alerts we mentioned previously.

Connectivity also is big for buyers in the segment, and the Veloster delivers with Apple CarPlay and Android Auto, available BlueLink (now with a 3-year complimentary service that includes remote care, remote access, guidance by voice), and more. BlueLink also allows owners to remote start their car via Google Home, Amazon Alexa and smart watches as well.

To sum it up musically, the Veloster has a good beat that you can easily dance to. It's great to look at, fun to drive, and at the lower end, affordable for a single person who needs a dependable, reliable vehicle that won't suck the life out of them. If this isn't enough to keep you happy, wait until fall. Hyundai will be introducing an N version of the Veloster, with more of everything that makes this little three-door so much fun. As they say on the radio, stay tuned! ■



TRIMS AND PRICING

2.0	
6-SPD MANUAL	\$18,500
6-SPD AUTOMATIC	19,500
2.0 PREMIUM	
6-SPD AUTOMATIC	\$22,750
TURBO R-SPEC	
6-SPD MANUAL	\$22,900
TURBO	
7-SPD DUAL-CLUTCH TRANS	\$25,400
TURBO ULTIMATE	
6-SPD MANUAL	\$26,650
7-SPD DUAL-CLUTCH TRANS	28,150

COLORS / INTERIORS / EXHAUST

PAINTS	
Ultra Black, Chalk White, Sonic Silver, Thunder Gray, Sunset Orange, Racing Red, Space Gray	
HIGH-CONTRAST ROOF	
Full darkened roof treatment available	
INTERIORS	
2.0	cloth
2.0 PREMIUM	cloth/leather combo
TURBO R-SPEC	cloth
TURBO	cloth/leather combo
TURBO ULTIMATE	all-leather
EXHAUST	
2.0	single outlet
TURBO / R-SPEC	dual outlet

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Refined to be not too refined

BY JOE SAGE

It's been (surprisingly) almost three years since a Ford Mustang has graced our fleet, though this is still the gen-six model, with a number of revisions and enhancements for 2018. Fundamentals remain largely the same: there are 310-hp 2.3L EcoBoost 4-cylinder models and 460-hp 5.0L V8 GT models. Already living on borrowed time for several years, the V6 is no longer available.

Ours here is the GT, the 5-liter V8, bearing the notable addition of Drag Strip mode, which makes this the fastest Mustang ever, capable of hitting 60 mph in under four seconds (which Ford proudly notes is faster than a base Porsche 911). This capability comes from a number of underlying factors: the engine has been recalibrated for more power and torque; the automatic is a quick-shifting 10-speed (as on our sample); and the Performance Package (also on our sample) includes Michelin Pilot Sport 4S tires for increased traction. If you prefer to pit your own wits against the driveline, there is still a 6-speed manual available.

One of the biggest changes when this generation arrived in 2015 was the departure of the long-standing live rear axle (which could give it squirrelly tail end hop considered unwelcome by some, or

essential to the Mustang's soul by others), with fully independent suspension now at all four corners of all Mustangs (perhaps blasphemous to loose-tail traditionalists). For 2018, there are new shocks, stabilizer bars and rear cross-axis joint, all aimed at delivering Mustang's traditionally lively performance with a higher level of control. We had driven the new Mustang GT on track just a week prior (see Texas Auto Roundup in this issue), where we found it so lively we actually backed off from Sport Plus mode to Normal to keep it tamer. If you want a wild ride, you can certainly still dial it in.

The 10-speed auto has a notably firm feel, with solid engagement as you run through the gears (as also through the PNDs lever positions). Shifts are smooth, well spaced and nicely defined—as you work your way quickly through the first several gears, even the most committed manual driver may admit to themselves that they'd never make that many shifts that smoothly with a manual.

The car corners well, but we noted a surprisingly large turning circle. We also noted that while hot cars always bring out the boy racers, rather than a competitive set our GT largely inspired challenges from a "me too" set of other Mustangs.

The V8 delivers glorious sound effects, making this one of those cars you will drive with the windows down in any weather, just to hear that rumble and roar reflect off the concrete. ■

SPECIFICATIONS

ENGINE / DRIVETRAIN	5.0L Ti-VCT V8 / RWD
HP/TORQUE	(93-oct) 460 hp / 420 lb-ft
TRANSMISSION	10-spd auto (6-spd man available)
0-TO-60 MPH	Drag Strip mode: under 4 sec
STEERING	selectable-effort electronic power
SUSPENSION	F: double-ball-joint MacPherson strut, new shocks, stblzr bar; R: integral-link indep, hi-perf mod-tune, alum rear knuckles, cross-axis rear joint, stblzr bar. Avail MagneRide damping systems
BRAKES	four-wheel disc / ABS
WHEELS/TIRES	19" black alum / F 255 R 275/40R19
LENGTH / WHEELBASE	188.5 in / 107.1 in
TURNING CIRCLE	37.8 ft
HEADRM/LEGRM (F/R)	H 37.6/34.8 L 45.1/29.0 in
CARGO / FUEL TANK / WEIGHT	13.5 cf / 17 gal / 3705 lb
FUEL / MPG	(auto-reg) 16/25/19 (city/hwy/comb) (man-prem) 14/21/16 (city/hwy/comb)

BASE PRICE	\$39,190
10-SPD AUTO TRANS	1595
401A PACKAGE	12" LCD MyColor cluster, premier trim w color accents, heated wheel, voice-activ touchscreen nav...2200
SAFE & SMART PKG	Adaptive cruise, blind spot info, cross-traffic alert, fwd collision warning & brake support 1495
ENH SECURITY PKG	Active anti-theft, wheel lock kit...395
ACTIVE VALVE PERFORMANCE EXHAUST	895
SHAKER PRO AUDIO SYSTEM	premium 12-sprk...895
GT PERFORMANCE PKG	19x9 fr 19x9.5 rear ebony black-painted alum wheels, 25/40R19 fr 275/40R19 rear summer-only tires; Brembo six-piston front calipers w larger rotors; heavy-duty front springs; upsized rear sway bar; K-brace; silver-painted strut tower brace; Torsen differential w 3.55 rear axle (auto); special chassis tune; special EPAS, ABS and stability control tune; larger radiator; engine-spun alum instrument panel; oil pressure & vacuum gauge pack; performance rear wing...3995
MAGNERIDE DAMPING SYSTEM	1695
DESTINATION CHARGE	900
TOTAL	\$53,255



THE SPICE OF LIFE

ACURA NSX CLUB OF AMERICA
"WESTFEST 2018" ROAD TRIP by Tyson Hugie

Ketchup and mustard add flavor and life to meals that might otherwise be a little bland. So when the day-to-day office grind started losing its savor, my friend Josh and I knew exactly what we needed: a weekend trip in a sports car. And it just so happens that Josh's 2000 Acura NSX, in Spa Yellow, and my 1992 Acura NSX, in Formula Red, are as complimentary as those famous BBQ condiments we've come to know and love. And in Las Vegas, Nevada recently, we got a real taste of

exactly how delicious a carefree few days of cars, sunshine and great company can be for curing a case of the Mondays.

Las Vegas played host for its second consecutive year to a gathering of about 50 members of the NSX Club of America (NSXCA), an organization dating back about 20 years that is dedicated to Acura's halo sports car that became an iconic nameplate in the 1990s.

That same model is going through a renaissance of late, with Acura's latest iteration



launching for the 2017 model year and setting an ever-higher standard of performance, handling and technology.

The meet-up, dubbed "WestFest," came about under the creative direction and steadfast efforts of Les Rowe, the NSXCA's southwest region leader. Despite operating with a planning team located far outside the Las Vegas geographic area, he pulled together a

"Let's talk trade!" The collection of vehicles in the not-quite-ghost town of Nelson, Nevada (left and below; see also our March/April 2018 issue) is as compelling in its own way as an Acura NSX fleet, classic and new, shined and ready to show—and to drive.

successful multi-day program that attracted participants from multiple states.

Friday's events centered around a reception hosted by the Findlay Acura dealership of Henderson, followed by go-karting at Gene Woods Racing. On Saturday, activities kicked off bright and early with a visit to SpeedVegas, south of town, which hosts a weekly "cars & coffee" get-together. Knowing that the whole point of owning a sports car is getting to drive and enjoy it, the group then got to experience a 180-mile drive loop through some of southern Nevada's backroads, including an 1880s mining town called Nelson, near the banks of the Colorado River.

Primm Valley Resort along Interstate 15 at the California-Nevada state line was the destination for a buffet lunch, followed by shopping at the outlet mall. That evening capped off with a formal banquet dinner at the Gold Coast Casino, complete with thousands of dollars in raffle prizes from event sponsors, available for the winning. All of this took place amidst Las Vegas' already-endless entertainment.

It's always a treat to break free from the urban grid and spend a few days rubbing shoulders with fellow automotive enthusiasts. And as Josh and I quickly learned, ketchup and mustard pair exceptionally well at bringing maximum flavor out of a few days in Sin City and beyond. ■



Verification

BY JOE SAGE PHOTOS: JOE SAGE AND KEVIN MCCAULEY / TAWA

TAWA, the Texas Auto Writers Association, hosts two high-profile comparo events each year. We drive and judge in both. In the fall is the Texas Truck Rodeo, with heavy off-pavement emphasis; each spring is the Texas Auto Roundup, where pavement emphasis is an understatement.

As Texas means trucks (home to several manufacturers' assembly plants, test facilities and regional or national offices), the Texas Truck Rodeo's awards have national and even global significance (almost sure to generate Super Bowl ads). The Texas Auto Roundup basks in the same halo.

This year's was our fourth Texas Auto Roundup. In prior years, it was held at Texas Motor Speedway near Fort Worth, a NASCAR and IndyCar facility

with a road course in the infield, then Circuit of the Americas (COTA) southeast of Austin, home to FIA Formula One, American Le Mans Series, IMSA and other events. This year, the event moved to Eagles Canyon Raceway, outside Decatur, Texas, an hour north-northwest of DFW Airport—a 2.55-mile club track with eleven turns and six straightaways up to 2000 feet in length. Set in the Texas countryside, Eagles Canyon follows natural terrain.

Almost 50 members of the media drove almost 50 vehicles at this year's event. We use the track much as we might use Texas two-lane farm and ranch roads (if only we could, this aggressively). "We're not racing," TAWA president Michael Marrs reminded the eager group before we

started, encouraging us to think of the track as "a public road simulator facility." Those were words to temper the savage beast, but each vehicle was given a strong launch—one car at a time, at intervals—full acceleration, a succession of tight turns and grade changes, various cones and chicanes, and a spot for braking from speed. In most cases, manufacturer representatives are also on hand to ride along, answer questions and point out special features, capabilities and changes in new models.

Just a few years ago, traditionally domestic brands had a reputation for dominating the wins in Texas, but now it's anybody's game. (This is without even getting into the complexities of "foreign" brands based and/or built in America.) Out of 11 category trophies, a grand total of one first place win went to the domestics; add in runners-up, and you add three more. The lion's share went to the Germans, Italians, Japanese and Koreans. The overall Car of Texas and Family Car of Texas title trophies went to one domestic and one import.

There is no predetermined vehicle driving sequence, so each driver grabs whatever he or she can, in whatever order (subject to ongoing availability of some of the hottest rides). Scoring is entered online during midday break and at the end of the day, with efficient and accurate electronic tabulation (some other events are still done by hand.)

There's a certain amount of glory in running at the big tracks—Texas Motor Speedway and COTA—but Eagles Canyon Raceway was perfect for the event, with handy staging adjacent to the course and just the right length to get everything done.

Categories are determined by the event group, and entries are chosen and placed in categories by the manufacturers, with a certain amount of flex by both parties at times. Among eleven vehicle categories, six had just two vehicles each. The most crowded segment was Activity Vehicle, with eight contenders. Any number of vehicles could have been in different classes, and some were in more than one. Ultimately, each manufacturer wants us to experience and evaluate each vehicle in its own best and most appropriate light.

KEEP RIGHT >>

Eagles Canyon Raceway instructors offered right-seat orientation runs in the club's midengine Porsche Cayman coupes (left). Sponsors included the Steel Market Development Institute (SMDI), Polaris Slingshot (who despite not competing gave us each all the track time we wanted, center right), and Dallas communication firm Wieck. For dinner, we headed to restaurants, coffee and ice cream surrounding the downtown Denton County Courthouse-on-the-Square (at right)—the original hometown center of this rapidly growing college town (home to University of North Texas, Texas Woman's University and others).



GETTING AROUND IN TEXAS

2018 TOYOTA AVALON TOURING

We got to Texas just as the future did, too. Our Denton-addressed hotel was so new (we were among the very first guests) that it was not in the nav system. In fact, the whole area is so new, we were not on any roads at all, on screen, for that flying car feeling. (Nobody else's nav showed it, either.)

The future also got ahead of itself with our wheels. We had a nice new 2018 Toyota Avalon to drive from DFW to our hotel and to the track outside Decatur. But within a week, Toyota introduced an all-new 2019 Avalon.

Longer, lower and wider, with shorter overhangs and its cabin extended by seven inches, the gen-five 2019 Avalon features more power and improved fuel economy from new V6 and hybrid powertrains, new multi-link rear and available adaptive variable suspensions, standard Entune 3.0 and connectivity via wifi, Toyota Remote, smartwatch, Amazon Alexa and Apple CarPlay.

While the 2018 Avalon—a near-Lexus experience at Toyota prices—suited our purposes very nicely, the main thing we got out of our drive time may have been perspective. The all-new 2019 Avalon (starting at \$35,500), noticeably restyled and updated in every way, would, in fact, turn out to be one of the vehicles we drove at the Texas Auto Roundup, where it won its category, Full-Size Car. Already a great car, the award for the 2019 is enough to tell you it is only getting better. ■



Best Compact Car



Best Midsize Car



Best Full-Size Car



Best Full-Size Luxury Car



Best Minivan



Best Green Vehicle



Following are category winners and runners-up, with other entrants in alphabetical order. Most were 2018 models, with five 2019s as noted.

COMPACT CAR

WINNER.....**Toyota Corolla Hatchback (2019)**
RUNNERUP..Volkswagen Golf R
ALSOMazda3
.....Volkswagen Golf GTI
.....Volkswagen Jetta

MIDSIZE CAR

WINNER.....**Toyota Camry**
RUNNERUP..Volkswagen Passat

FULL-SIZE CAR

WINNER.....**Toyota Avalon (2019)**
RUNNERUP..Honda Accord

FULL-SIZE LUXURY CAR

WINNER.....**Lexus LS 500**
RUNNERUP..Infiniti QX50 (2019)

ANALYSIS: In Compacts, Volkswagen showed up in force, which may have diluted their vote. Mazda3 is a perennial favorite, but the 2019 Corolla marks a big change to hatchback form and took home the trophy. Three out of four of the "Car" categories had just two entrants, which makes votes seem very clear, but who knows how more would have affected things. Infiniti's entry of a crossover (not their biggest) as a Full-Size Luxury Car is a bit different (it also entered as Performance Utility). Toyota and Lexus took all four Car titles—did their recent headquarters relocation from LA to Plano, Texas, give home field advantage? There is nothing like that in scoring, of course, but they did have the easiest job bringing their trophies home to the office display case.

MINIVAN

WINNER.....**Chrysler Pacifica Hybrid**

ANALYSIS: Pacifica Hybrid wins this category so often, it had it to itself this year—and won.

GREEN VEHICLE

WINNER.....**Chrysler Pacifica Hybrid**
RUNNERUP..Honda Clarity
ALSOKia Niro PHEV
.....Nissan Leaf
.....Toyota Camry Hybrid

ANALYSIS: Many could enter this is "self-defined" category, as once "alternative" powertrains become mainstream. Despite many all-new vehicles, the win went to one that has been bagging trophies since it was born, the Pacifica Hybrid.

ACTIVITY VEHICLE

WINNER.....**Infiniti QX80**
RUNNERUP..Jeep Wrangler
ALSOFord EcoSport
.....Hyundai Kona
.....Kia Sorento (2019)
.....Mazda CX-5
.....Nissan Rogue Sport
.....Toyota C-HR

ANALYSIS: This may be the most self-defined of all, broader and even subjective. Buzz in the marketplace right now is on the smallest crossovers, here from Ford, Hyundai and Toyota, and Nissan (though their smaller Kicks would be launched just weeks later). There's little debate about Jeep Wrangler being a highly active vehicle, and it's all new this year, yet the trophy went to a big luxury family hauler that has been around for years, the Infiniti QX80 (formerly QX56).

PERFORMANCE COMPACT

WINNER.....**Honda Civic Type R**
RUNNERUP..Mazda MX-5 Miata

ANALYSIS: Newest and shiniest often takes the trophy in any category at such events, but that was a mixed bag among the Performance categories. In the two-car Compact class, Mazda MX-5 Miata has been a crowd- and judge-pleasing perennial for literally decades, but the Civic Type R—which has been pretty universally acclaimed and coveted since its launch over the prior year or so—won the gold.

PERFORMANCE COUPE

WINNER.....**Lexus LC 500**
RUNNERUP..Dodge Challenger SRT Hellcat Widebody
ALSOFord Mustang GT 5.0L
.....Lexus RC F

ANALYSIS: Performance Coupes were an interesting mix, two lightweighted Detroit irons and two luxury Japanese. Despite Lexus competing with themselves, they took another top prize here, perhaps surprisingly, as the most expensive of the foursome. (The LC 500h hybrid won this slot last year.)

PERFORMANCE SEDAN

WINNER.....**Alfa Romeo Giulia Quadrifoglio**
RUNNERUP..Kia Stinger

ANALYSIS: Whereas the Kia Stinger is all new, has created quite a stir and has won many other accolades, the new-last-year 505-hp Alfa Giulia was a repeat win from last year, despite its having at least three times the price tag.

PERFORMANCE UTILITY

WINNER.....**Alfa Romeo Stelvio Quadrifoglio**
RUNNERUP..Dodge Durango SRT
ALSOInfiniti QX50 (2019)
.....Toyota Sequoia

ANALYSIS: Italian and American cousins, two from Japan, one luxury, one not, with a more-than-twofold price range, plenty of power in at least three, though applied very differently—and just about anything could happen. In the final analysis, it's another Performance win for Alfa.

SUPERCAR

WINNER.....**Mercedes-AMG GT R Coupe**
RUNNERUP..Jeep Grand Cherokee Trackhawk

ANALYSIS: With 707 hp (same as a Hellcat), this very special Grand Cherokee is pricey, but still about half the price of the AMG, and it carries exponentially more goods and people. The AMG's Green Hell Magno may have tipped the scales, as well as its more traditional supercar form and presence.

Value is part of the vote, but there are several instances where the most expensive vehicle won, which seems to perhaps underscore the fact that the judges do not have to actually write a check.

Manufacturers could also enter their vehicles in the following two categories—the first with considerable variety, and the second of which could be a very tough call in an era of highly advanced interiors, though only a handful entered.

BEST TECHNOLOGY FEATURE

WINNER.....**Infiniti QX50 (2019): world's first production-ready variable compression ratio engine**
ALSOFord Mustang: 12" digital instrument cluster
.....Infiniti QX80: smart rear view mirror
.....Toyota Avalon: Amazon Alexa

BEST NEW INTERIOR

WINNER.....**Toyota Avalon Touring (2019)**
ALSOInfiniti QX50 (2019)
.....Volkswagen Jetta

Finally, a clean-slate vote determines two big winners from among the entire set of entries, the big dawg trophies of the entire event. Category votes are not part of this separate tally, though each winner had indeed also won its category.

TITLE AWARDS

CAR OF TEXAS: Lexus LC 500
FAMILY CAR OF TEXAS: Chrysler Pacifica Hybrid

Next up is the TAWA Texas Truck Rodeo, in October. We've already booked our flights. ■

Best Activity Vehicle



Best Performance Coupe



Best Performance Utility



Car of Texas ★



Best Performance Compact



Best Performance Sedan



Best Supercar




Family Car of Texas ★





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6th annual Ford 'Fill an F-150' water drive surpasses half million mark

By Stephanie Jarnagan
Photo courtesy Rodeo Ford



More than **150,000 bottles** collected in 2018 for The Salvation Army

Six years ago, Ford Motor Company launched the "Fill an F-150" bottled water drive, with the goal of helping The Salvation Army keep those in need hydrated throughout the hot summer months. Since its launch, nearly 600,000 bottles of water have been collected. This year, in partnership with Valley-based Famous Dave's restaurants and Wet 'n' Wild Phoenix, more than 150,000 bottles were collected in support of The Salvation Army Red Shield Survival Squad.

country that experience hurricanes, tornadoes and floods," said Maj. Nancy Dihle, program coordinator for The Salvation Army Metro Phoenix. "Many people need our help to survive the heat, so we are grateful for this partnership with Ford, Wet 'N' Wild and Famous Dave's, which continues to provide vital hydration to those in need."

The Red Shield Survival Squad was launched to provide hydration, respite and safety information to those in need at heat relief stations in Metro Phoenix on days with excessive heat warnings. According to the Arizona Department of Health Services, approximately 1,300 weather-related deaths from exposure to heat occurred in Arizona between 2005-2015.

In addition to collecting water, Ford Motor Company Fund provided a \$15,000 grant in support of the water drive and other vital Salvation Army programs courtesy of Ford's Operation Better World Phoenix program.

All 13 Metro Phoenix-area Ford dealerships and four Valley Famous Dave's restaurants collected cases of water during a two-week drive in May. Wet 'n' Wild Phoenix provided a half-off any day general admission coupon (good for up to four admissions) to each person who donated at least one case of water. In addition, Valley Famous Dave's provided a coupon for one free brisket sandwich to any individual who donated a case of water.

"This is our 6th annual water drive in partnership with The Salvation Army, which is very much in line with Ford's mission to serve the communities where we do business and help those in need," said Brad Jones, Phoenix regional manager for Ford Motor Company.

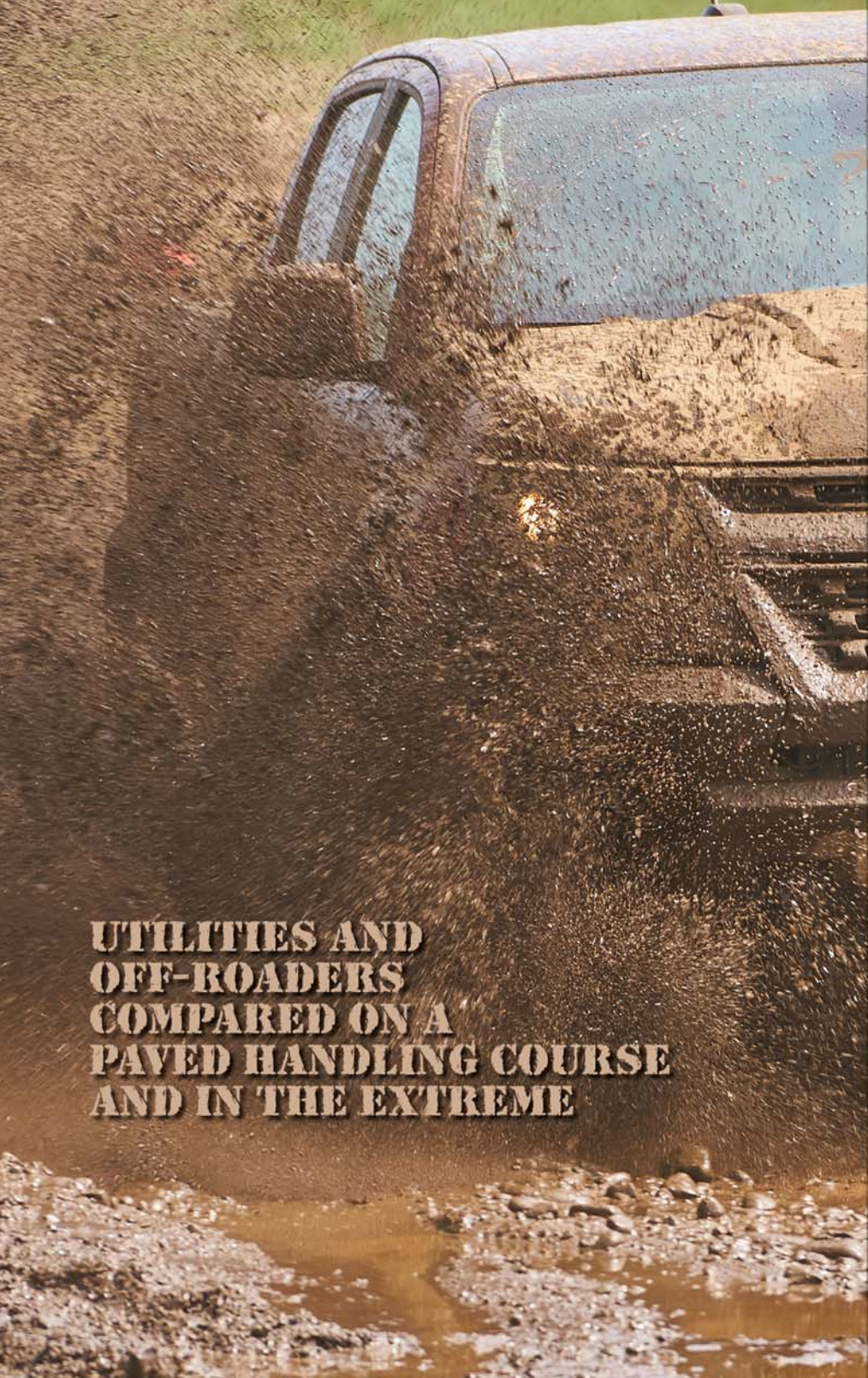
"We appreciate the Ford customers—who and those new to Ford—who stopped by a dealership with their water donation and, in turn, received a little fun out of their good deed."

"In the scorching Valley heat, the human toll can be just as devastating as in parts of the

Once again, Sanderson Ford topped collection efforts with more than 63,000 bottles of water. This year, Rodeo Ford produced the most creative water drive display earning a team BBQ catered by Famous Dave's. For more information on the Salvation Army's Red Shield Survival Squad, visit salvationarmyphoenix.org/extreme-heat-relief. ■

MUDFEST!

By Joe Sage / Photos: Ryan Douthit / NWAPA



UTILITIES AND OFF-ROADERS COMPARED ON A PAVED HANDLING COURSE AND IN THE EXTREME

Each spring, the Northwest Automotive Press Association (NWAPA) hosts the Northwest Outdoor Activity Vehicle of the Year awards—a vehicle comparo event popularly known as Mudfest, now in its 24th year. The event's parameters and results are of broad interest in the rugged Southwest, too, which is why we've been participating since 2013.

This year's event was held for the third time at The Ridge Motorsports Park (the third locale during our years with the event), northwest of Shelton, Washington on the Olympic Peninsula. Overnights were along Hood Canal (a natural body of water) near Union, Washington.

The 170-acre facility features a 2.47-mile, 16-turn track with 300-foot elevation changes (which we don't use); a one-sixth-scale version of that as a kart track (which we do use); and motocross courses and other acreage that are modified or specially built for our four-wheel off-roading.

There is always a better than average chance of rain in the Pacific Northwest, with almost perfect odds of mud. The Olympic Peninsula averages more than three times the annual rainfall of Seattle, and more than twice that of Snoqualmie Pass, where the event was run for some years. If it doesn't rain, we make our own mud.

Driving takes place over two days, with the first day devoted to pavement (the kart track allows for meaningful acceleration, braking, steering and handling evaluation) and the second to dirt, mud, logs, hill ascent and descent and generally serious off-roading. The pavement day has grown in scope over the past several years, using opportunities our newest venue offers and in response to the increasing use of utility vehicles and pickups as daily drivers. The algorithms used in vote tabulation were also reengineered last year to give more weight to the pavement day than in prior years, though the off-roading day still surely defines the personality of Mudfest overall.

The paved day's events start with a coned handling course and a grid to test backup and proximity systems. Next is the kart track, with a zoom-then-stop straightaway, followed by a succession of challenging turns, all within 50-foot elevation

changes. Every vehicle entered in the event is run through this course, where increasingly sleek and aerodynamic models with lower ground clearance may see an advantage, while some big pickups and SUVs can feel almost just as nimble.

Day two is what makes Mudfest Mudfest—the off-road portion, with climb, descent, rough surface, side slope, obstacle and mud elements. One course is used by all vehicles, with Extreme Capability offshoots available for some (see below).

Vehicles are designated by their manufacturers to compete in any of five categories—four for utilities, one for pickups. A sixth category, Extreme Capability, was done a little differently this year (see more info below). The same classes apply for both the on-road and off-road days.

An Outdoor Activity Vehicle of the Year winner is also chosen from the overall slate of entries, independently of individual category results.

Driving/judging media seek to learn all they can about each vehicle's features, capabilities and performance, especially within parameters of the event's outdoor activity theme, which they can pass along to readers who seek guidance in what they might buy. The manufacturers' goal is to put their best foot forward in each category. We all benefit from gauging the relativities of it all, not soley the final crowned winners.

Fourteen manufacturers entered 26 vehicles—seven from Detroit, seven from Europe, ten from Japan and two from Korea. Most were 2018 models, along with a few 2019 releases and one 2017.

Twenty-six media members drove and voted. Brand specialists were on hand to point out features and answer questions, and a team of hard-working press fleet representatives ran the event.

Scoring considers vehicle design and build specifics (powertrain, brakes, exterior styling, interior comfort, function and technology); ride and handling on-pavement; and handling and capability off-pavement. Factors are added for fuel economy and for value, both of interest in both absolute and relative terms. Despite this event being rooted in the dirt, on-road and off-road attributes now carry equal weight, reflecting real world use.

Each vehicle's numbers are added up to deter-





mine first, second and third place finishes in five of the six categories, sometimes confirming a gut favorite, other times delivering a surprise. Though it's hard to buy a bad vehicle these days, challenging competition is a great way for differences large and small to make themselves clear.

Results can be tight, with casual favorites not always statistical winners or vice versa.

Entrants and results are as follows. We include the range of price, power and highway fuel mileage for each category overall, to help you gauge where the winners fall. We've added torque this year, as buyers become increasingly aware of its importance and as horsepower and torque numbers diverge more than they used to.

All are 2018 models unless noted otherwise.

SUBCOMPACT UTILITY

Ford EcoSport Titanium FWD
Hyundai Kona Ultimate AWD
Mitsubishi Eclipse Cross SEL S-AWC

PRICE RANGE\$23,985 Ford > \$32,310 Mitsubishi
POWER RANGE...HP....123 HP Ford > 175 HP Hyundai
.....TORQUE.....125 LBFT Ford > 195 LBFT Hyundai

HWY MPG RANGE26 MPG Mitsu > 29 MPG Ford/Hyundai
ANALYSIS: When there's a completely new and shiny vehicle in the set, it often has an edge. This category, however, had nothing but. All three were also in top trims. Hyundai Kona's price was 24 percent above the EcoSport's (and just 8 percent below Mitsubishi's), but the EcoSport was a front-driver (a daring entry in an off-road-centric event), putting Kona nicely in the middle on value. Fuel mileage was similar on all, but Hyundai wins the horsepower wars here.

WINNER: 2018 Hyundai Kona Ultimate AWD
175 HP, 195 LBFT, 29 MPG hwy, \$29,805 as tested

COMPACT/MIDSIZE UTILITY

Jeep Cherokee Trailhawk Elite 4x4 (2019)
Jeep Wrangler Unlimited Rubicon 4x4
Mazda CX-5 Grand Touring AWD
Mitsubishi Outlander PHEV GT S-AWC
Subaru Outback 2.5i Touring
Toyota RAV4 Adventure AWD
Volkswagen Tiguan 2.0t SE 4Motion
Volkswagen Golf Alltrack TSI SE 4Motion

PRICE RANGE\$30,615 VW Golf > \$53,200 Wrangler
POWER RANGE...HP....170 HP VW Golf > 285 HP Wrangler
.....TORQUE.....172 LBFT Toyota > 295 LBFT Cherokee

HWY MPG RANGE23 MPG Wrangler > 32 MPG Subaru*
*Note: Mitsubishi PHEV is rated 75 MPGe in electric mode
ANALYSIS: With eight entries, this was the biggest category by count, not surprising as it combined Compact and Midsize this year (vehicle size categories are in such a state of flux—and subjectivity—that this is not inappropriate). Horsepower varied widely. Fuel mileage looks wide, but most hung within a couple of points of 30 mpg highway. All together in this case, the numbers didn't seem to decide the race, which was won by the most expensive vehicle, with the lowest fuel mileage, but with durable and enviable utility credentials.

WINNER: Jeep Wrangler Unlimited Rubicon 4x4
285 HP, 260 LBFT, 23 MPG hwy, \$53,200 as tested

FAMILY UTILITY

Ford Expedition XLT FX4 Off-Road 4x4
Kia Sorento SXL AWD (2019)
Mercedes-Benz Sprinter 2500 Crew Van 4x4 (2017)
Nissan Armada Platinum 4WD
Volkswagen Atlas V6 SEL 4Motion

PRICE RANGE\$41,495 MB Sprinter > \$66,695 Nissan
POWER RANGE...HP....188 HP MB Sprinter > 390 HP Nissan
.....TORQUE.....252 LBFT Kia > 470 LBFT Ford
HWY MPG RANGE18 MPG Nissan > 24 MPG Kia

ANALYSIS: The prices alone here are enough to teach anyone not to generalize, with Mercedes-Benz the cheapest and Nissan the most expensive. The Volkswagen Atlas, toward the low end on pricing, higher end on fuel mileage, in the middle on horsepower yet the low end on torque, is not mathematically in the Goldilocks spot. Instead, Atlas (which has done well in a number of comparos this year) seems to have prevailed through an equation of tradeoffs overall.

WINNER: 2018 Volkswagen Atlas V6 SEL 4Motion
276 HP, 266 LBFT, 23 MPG hwy, \$45,235 as tested

PREMIUM UTILITY

BMW X2 xDrive28i
BMW X3 xDrive30i
Lexus LX570 2-Row
Mercedes-Benz G550

PRICE RANGE\$50,920 BMW X2 > \$141,995 M-Benz
POWER RANGE...HP....228 HP BMW X2 > 416 HP M-Benz
.....TORQUE.....258 LBFT BMW X2/X3 > 450 LBFT M-Benz
HWY MPG RANGE14 MPG M-Benz > 31 MPG BMW X2

ANALYSIS: Prices in this category of just four vehicles range almost three-fold, horsepower and torque close to double, and fuel mileage more than double, seeming to confirm that there is more just one answer to "What's the best vehicle?" Well, for what? And for whom? With two lower-power and two higher-power vehicles, the decision may likely have come down to spending money (both purchase price and on-going fuel) versus saving it, and the little BMW X2 snagged enough votes from the more frugal among the judges.

WINNER: 2018 BMW X2 xDrive28i
228 HP, 258 LBFT, 31 MPG hwy, \$50,920 as tested

PICKUPS

Chevrolet Colorado 4WD ZR2 Crew Short Box Diesel
Ford F-150 4x4 SuperCrew Diesel
Honda Ridgeline AWD RTL-E (2019)
Nissan Titan Pro-4X 4x4
Ram 1500 Rebel (2019)
Toyota Tacoma TRD Off-Road 4x4 Dbl Cab Long Bed

PRICE RANGE\$42,672 Toyota > \$68,530 Ford
POWER RANGE...HP....181 HP Chevrolet > 395 HP Ram Rebel
.....TORQUE.....262 LBFT Honda > 440 LBFT Ford
HWY MPG RANGE20 MPG Nissan > 25 MPG Honda

ANALYSIS: Chevy's 181 horses look low, and they are, but for torque, which matters a lot in pickups, Chevy is at 369 lb-ft, up with the big dogs from Ford, Nissan and Ram. Fuel mileage is fairly close among all. Four prices range within about eight grand. Chevy, Nissan, Ram and Toyota came in trims especially built for off-roading. The winning Ram Rebel was second most expensive and had the lowest highway fuel mileage (by a point), but has torque second only to the diesel (not by much), top horsepower (not by much), solid chops in the mud and dirt, and thus charmed the judges overall.

WINNER: 2019 Ram 1500 Rebel
395 HP, 410 LBFT, 21 MPG hwy, \$60,050 as tested

EXTREME CAPABILITY

ANALYSIS: This category is different from the previous five, in that a certain slate of vehicles was not designated as entries. Instead, it was up to the manufacturers whether they wanted to allow a vehicle on the extreme course, itself a set of more challenging side routes in lieu of portions of the primary course. Then it was up to each driver whether they chose to take those legs or not. The number of times any vehicle might be driven on the extreme course could vary considerably. For voting, rather than tabulating specific attributes as in other categories, judges simply voted for first, second and third from among those they themselves had driven that way (though specifics from voting in other categories surely provided insights). There's no list of which ran these legs. Some (perhaps with extremely high or low price, power or fuel economy) may have been driven by only one or two, while others may have been driven by almost everybody, either of which could skew perceptions if it were done as in the others. The winner through this process turned out to be the same as in the Compact/Midsize Utility category.
WINNER: Jeep Wrangler Unlimited Rubicon 4x4
285 HP, 260 LBFT, 23 MPG hwy, \$53,200 as tested

OVERALL WINNER

NWAPA Outdoor Activity Vehicle of the Year

ANALYSIS: Five categories are judged by a matrix of criteria, one subjectively, and there are ways all that data could just be combined and averaged for an overall winner, but there are many ways that could prove to be unrepresentative or skewed. In the five categories with numerical evaluation by a set of criteria, each judge calculates a first, second and third in each category. Then all judges' results are tabulated with an algorithm to determine each category's winner. The exception by category was Extreme Capability this year, in which first, second and third were just a judgment call, no matrix. The overall winner—the Outdoor Activity Vehicle of the Year—is similarly determined by subjective first, second and third votes by each judge, also run through the algorithm, but every vehicle is in play (as opposed to the subset in Extreme Capability). The overall winner does not need to have even won an individual category, but it's always likely—this year's overall winner was also winner of both the Extreme Capability and Compact/Midsize Utility categories. But there are no foregone conclusions, with the algorithms now adjusted to give more weight to the type of driving even the most aggressive off-roader might subject the majority of these vehicles to on a daily basis. Ultimately, though, a highly capable off-roader has still won the big prize, both last year (Land Rover Discovery) and this.

WINNER: Jeep Wrangler Unlimited Rubicon 4x4
285 HP, 260 LBFT, 23 MPG hwy, \$53,200 as tested

Last year's overall champion brand, Land Rover, did not enter this year. This year's overall champ, winner of three trophies out of seven overall—the completely new Jeep Wrangler JL—had not won any trophies last year with its JK model, though two other Jeep models had. We've often tried to deduce which category might define the event's spiritual core, year to year. Wrangler certainly did well this year, and it fits the Outdoor Activity title well. But the variety among category winners overall reflects the market itself—tremendous variety among the ever-growing stable of vehicles falling under the utility umbrella. ■

Best Subcompact Utility



Best Compact/Midsize Utility



Best Family Utility



Best Premium Utility



Best Pickup



Best Extreme Capability



Best Overall : Outdoor Activity Vehicle of the Year



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A WEEK WITH : 2018 MERCEDES-AMG GLS63

Worth every penny

This potent luxury utility's price point spurs a study in relativity. BY JOE SAGE

We've noted before that there's a fair degree of commonality between the Mercedes-Benz GLS and Dodge Durango, going back to the days of the DaimlerChrysler marriage. There's little information on what they share from mutual origins, but neither is likely to infringe upon sales of the other. Dodge's closest model to this AMG GLS63 is the Durango SRT, at just about exactly half the price. Both have high horsepower (577 AMG, 475 SRT), similar capacities and functions, AWD and decent tow capacity (8700 lb SRT, 7500 lb AMG).

But walk around the Mercedes-AMG GLS once, hop in and look around, turn the key, and you'll find a thousand ways it's quite something else. It may share some DNA, but it has had a whole different upbringing. Despite our fascination with those commonalities, there is so much that is so different.

So luxuriously and technically outfitted is the GLS63, a comparative shopper might instead think of SUVs with much higher starting prices, such as

the Bentley Bentayga (\$230,000), Lamborghini Urus (\$220,000) or the new Rolls-Royce Cullinan (\$325,000). And those are base models, not even including huge differences in option pricing, while this AMG GLS63 is top-of-the line. Even our sample's few add-ons—also distinctly premium items (see sidebar)—are very reasonably priced.

Plus you can show up in this just about anywhere without starting a revolution or having your executive compensation package questioned.

Enough shopping—let's drive. Accelerating up a freeway ramp, it's clear this potent utility can take on and conquer anything. Under its skin, it is a beast, but from the driver's seat, it's as smooth and powerful a vehicle as you could imagine—and this while moving almost three tons.

The GLS is good-looking in a top-dollar suit kind of way. The AMG version is good-looking in a top-dollar racing suit way (the kind a superhero could peel away to reveal an executive suit beneath).

For anyone with the GLS63's price of entry, the comparison with less expensive SUVs is not even the question. Compared with more expensive ones, it knocks 'em dead. ■

SPECIFICATIONS

SEATING CAPACITY	seven
ENGINE	AMG handcrafted alum alloy 5.5L biturbo V8
HP/TORQUE	577 hp / 561 lb-ft
TRANS	AMG Speedshift Plus 7G-Tronic 7-spd auto
DRIVETRAIN	AMG Performance 4MATIC AWD (40:60)
0-TO-60 / TOP SPEED	4.5 sec / 168 mph (elec lim)
SUSPENSION	F/R: indep multi-link w air spring, single-tube shocks w continuous adjust damping; + F: torsion bar; R: tubular torsion bar
STEERING	speed-dependent electro-mech rack & pinion
BRAKES	F: 15.4x1.4 / R: 14.2x1.0 in
WHEELS/TIRES	10x21 cast / 295/40ZR21
LENGTH / WHEELBASE	203.2 / 121.1 in
GROUND CLEARANCE	(w max load) 7.8 in
APPRCH/BRKVR/DEPRT	22 / 15 / 21 degrees
TURNING CIRCLE	40.7 ft
LEGROOM (F/2/3)	40.3 / 38.5 / 35.0 in
CARGO CAPACITY	16.0 / 49.4 / 93.8 cu.ft
WEIGHT / TOW CAPACITY	5754 lb / 7500 lb
FUEL	26.4 gal
FUEL ECONOMY	13/18/15 (city/hwy/comb)
BASE PRICE	\$125,300
OPTIONS:	Air ionization w filter (280), AMG Performance steering wheel (500), heated/cooled cupholders (180), trailer hitch (575), power easy-entry system (400), rear seat entertainment pre-wire (170), Bang & Olufsen BeoSound audio (5400), 22" AMG black multi-spoke wheels (1750).
AMG NIGHT STYLING PKG:	Black A-wing & front apron insert, black side mirrors, black roof rails, black twin tailpipes, black belt line and window strip.....300
DESTINATION CHARGE	995
TOTAL	\$137,960



Multipurpose backcountry funmobile

By Sue Mead

Wendy Orthman is bullish on the Nissan Armada. "One of the things that stands out about the Armada is it fits well in suburban life and on pavement," enthused Orthman, as we motored across a picturesque off-road trail in the high country of northern Arizona. We were riding in a special-project version of the 2018 Nissan Armada dubbed the "Mountain Patrol," that has been upfitted as an example of how to expand this eight-passenger SUV's horizons from an everyday soccer-mom-mobile to a family camper.

"When Nissan chose the Patrol name, we were celebrating the heartbeat of this brand, with its longstanding global heritage, that now brings something of value to the US consumer," pointed out the senior manager of Trucks, Outdoor and Brand Communications

for Nissan. "I'm a soccer mom who drives an Armada in my everyday life, so I love to surprise people as I showcase its capabilities beyond pavement."

Nissan calls the Armada Mountain Patrol "the ultimate overlanding family adventure full-sized SUV." The eye-appealing multi-purpose model could be used as an around-town family hauler in the city, an errand-runner for supplies and weekend work duty, or as a summer getaway-mobile to explore the beauty of the backcountry and parklands.

The uniquely-modified Mountain Patrol follows on the heels of Nissan's Titan pickup-based Project Basecamp—created last year as a special-project vehicle built on a stock truck platform—with a collection of add-ons that include a custom exterior body wrap, functional exterior accessories, and a full complement of essential camping necessities. "We've had a lot of success showing our design imagination with show vehicles, like Project Basecamp and Mountain Patrol," said Orthman. Both vehicles were introduced at Overland Expo WEST, held annually at Fort

Tuthill County Park south of Flagstaff.

Stylish and roomy, all Armadas have excellent performance on tap, a refined interior, and advanced technology that includes a suite of available smart safety and security features such as intelligent forward collision warning, intelligent backup intervention, and intelligent around-view monitor. Completely revised for its second generation in 2017, the 2018 version comes in a range of high-content grade levels—SV (starting at \$46,090), SL (\$50,850), Platinum (\$59,190), and Platinum Reserve (\$62,190)—in both rear- and four-wheel-drive configurations (4WD versions add authentic off-road capability for \$2,900).

Inside, Armada combines a premium level of materials with a special emphasis on quietness and quick cooling and heating for passenger comfort. The roomy interior has 40.0 inches of second-row headroom and 41.0 inches of second-row legroom, allowing riders ample stowage and accommodations for gear.

Under the hood is a 5.6-liter V8 engine with a laudable 390 horsepower at 5,200 rpm and 394 lb-ft of torque at 4,000 rpm. It's paired with

a seven-speed automatic transmission with adaptive shift control and downshift rev matching. Towing capacity is rated at 8,500 lbs.

"One thing true off-road enthusiasts understand about the Armada Mountain Patrol is its authentic adventure heritage—the inspiration from over five decades of off-roading credibility," said Brandon White, director, chief marketing manager of Nissan North America, Inc. "For that reason, only minimal modifications were made to the factory Armada drivetrain."

Designed for exploring and camping, the Armada Mountain Patrol has a long list of custom accessories that enhance comfort, convenience, storage and capability. Outside, it wears a unique body wrap, roof-mounted LED light bar, bumper-mounted fog lights and wheel well lighting, while underneath, it features heavy-duty coil-over suspension and extended A-arms that fit 17-inch Icon Bronze Rebound wheels wrapped in 35/12.25/17 Nitto Ridge Grappler tires. Body protection comes from rock sliders, a spare tire swing-away, and custom-fabricated heavy-duty steel bumpers front and rear. Performance modifications for the one-off model include a cat-back exhaust system, to help with extra air to help

cool the engine, and auxiliary fuel storage.

Of note is the four-person Mt Shasta rooftop tent from Cascadia Vehicle Tents that keeps occupants safely above the ground and a little closer to the stars; a Rhino-Rack Batwing awning; and Alps Mountaineering pop-up tent, sleeping bags, and chairs. Katzkin leather seat covers provide a comfortable and plush ride for passengers, while an ARB refrigerator helps keep food cold and fresh.

Other specialized gear includes a Lowrance navigation system, Rugged Radios off-road radio system, Rhino-Rack aluminum BackBone Pioneer tray, ARB pull-out drawer system, Pelican gear cases, Dometic refrigerator/freezer, Otterbox Venture coolers, 12,000-pound Warn Platinum Series winch, rack-mounted MaxTrax vehicle recovery boards, Hi-lift vehicle jack and Rhino-Rack shovels.

"We want to thank everyone who provided input on the design and equipment for this special Armada Mountain Patrol build," added White. "We couldn't be more pleased with the outcome." As a special demonstration model, the Armada Mountain Patrol project vehicle is not for sale, but will tour the road less traveled to various media and outdoor events through the year. ■

KEY FEATURES

- Nitto Trail Grappler Tires : 35 12.50 R17
- Icon Bronze Rebound Wheels
- Rhino Rack Backbone System with Pioneer Tray
- Rhino Rack Shovel
- Hi-Lift Jack
- Baja Designs XL80 Lights
- Baja Designs LP9 Lights
- Baja Designs Light Bar
- Calmini Bumpers
- Calmini Rock Sliders
- Calmini Dropbracket 6-inch Lift
- Icon Coilovers
- Warn Zeon Platinum 12S Winch
- Factor55 Closeloop Winch
- ARB Fridge
- ARG Drawers
- ARB Twin Screw Air Compressor
- CVT Tent
- Rhino-Rack Batwing Awning
- IF Signs Custom Wrap
- Katzkin Seat Covers
- Pelican Professional 1650 Cases
- League Navigation
- Alps Mountaineering pop-up tent, sleeping bags, and chairs

The Mountain Patrol's name is a nod to the rugged Nissan Patrol sold just about everywhere else in the world since 1951.



TRAVEL SITES TO BE SEEN



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S: sweet spot or a bit short? By Joe Sage

The 3.0L V6 turbo Audi S4 sedan puts out 354hp—exactly the same as their 4.2L naturally aspirated V8 ten years ago (though the smaller turbo has more torque, 369 lb-ft to the V8's 325)—but is rated 30 mpg hwy (to the V8's 21 manual or 22 automatic). The current S4 is only available with an 8-speed Tiptronic automatic (while, somewhat ironically to the sports-minded, a regular A4 can be had with a manual).

The S4's \$50,900 base price (for Premium Plus, the lower of two available trims) is reasonable enough, but our sample was \$65,625 out the door.

The first contemporary S-car was the S4 (which was Audi 100-200- or later A6-sized, with the "4" redundantly referring to its quattro system), hitting the US in 1993. Audi S-cars were the top model for awhile, combining potent powertrains, sport suspension and brakes, top premium fitments and various technologies that usually didn't enter the broader model range until a few years later.

Then came two things to muddy the waters: (a) the RS models; and (b) "S-Line" add-ons for the A-cars. (Similarly to [b], the other Germans now offer M or AMG add-ons on non-M and non-AMG models.) To us, the S-Line add-ons dilute real S-cars, making a non-performance model mimic the real thing, sort of an S-car wannabe, begging a clarification by S-car owners. And the RS cars, more

powerful but at the same time in some ways more spartan—with track days as their prime mission—are priced just enough higher to force the S-cars to leave some headroom in their pricing. (There is no current RS4, but a current RS5 starts at \$69,900 against an S5 at \$54,600.) Features and build are also given headroom from S to RS; for example, RS has a nicely integrated rear deck spoiler, while the S4's is a bolt-on or glue-on.

This somewhat awkwardly forced price walk seems to be the reason our S4 here is not nearly as complete as an earlier S-car—still needing thousands of dollars of add-ons to have what we would consider S essentials, such as sport suspension, steering, differential, as well as formerly S-typical bits such as carbon atlas inlays (they used to have pure carbon fiber, included), a variety of tech features, and even larger wheels. The 19-inch wheels are a good look, appropriate to the S4 great for dry-road performance, but now they cost extra, and there's even a more expensive set available. (Plus it's a quattro, which granted is great for dry-road performance, but the 18-inchers might be better when heading north for a ski weekend.)

We can't help but think there's something to be said for skipping all the options. Maybe spring for the suspension and rear diff. Maybe even the 19-inch wheels, although 18-inchers are better suited

SPECIFICATIONS

ENGINE	.....3.0L turbocharged/TFSI V6
DRIVETRAIN	.....quattro AWD
HP/TORQUE	.....354 hp / 369 lb-ft
TRANSMISSION	.....8-spd Tiptronic automatic
0-TO-60 / TOP SPEED	.....4.4 sec / 155 mph
SUSPENSION	.....F&R: five-link independent steel spring; S sport suspension minus 23mm ride height from A4
STEERING	.....electromechanical speed-sensitive power
BRAKES	.....vented discs: F 13.8 / R 13.0
WHEELS/TIRES	.....8.5x18 / 245/5R19 93Y (19 avail)
LENGTH / WHEELBASE	.....186.8 / 111.2 in
TURNING CIRCLE	.....38.1 ft
LEGROOM (F/R)	.....41.3 / 35.7 in
CARGO CAPACITY	.....13.0 cu.ft
WEIGHT	.....3858 lb
FUEL / FUEL CAPACITY	..... premium unleaded / 15.3 gal
MPG	.....21/30/24 (city/hwy/comb)

BASE PRICE	.....\$50,900
PRESTIGE PKG:	acoustic glass upgrade, heads-up display, interior LED lighting plus pkg, top view camera, MMI nav plus w touch, Audi connect Prime & Plus trial, virtual cockpit, side assist and pre-sense rear
S SPORT PKG:	red calipers, sport adaptive damp suspension, sport rear differential
DRIVER ASSISTANCE PKG:	Adaptive cruise, active lane assist, high beam assist, traffic sign recognition
FINE NAPPA LEATHER INTERIOR	.....1250
DYNAMIC STEERING	.....800
19" WHEEL PKG:	5-spoke V-design, contrast grey
CARBON ATLAS INLAYS	.....500
COLD WEATHER PKG:	htd rear seats, htd wheel
REAR SIDE AIRBAGS	.....350
DESTINATION CHARGE	.....975
TOTAL	.....\$65,625

to snow duty. But maybe just get the 354-hp powertrain for \$50,900 base price. Punto. ■



College students reinvent the Camaro

Improving fuel economy and reducing emissions, while maintaining safety and performance

By Jan Wagner

For the past 30 years, the US Department of Energy (DOE) Advanced Vehicle Technology Competitions have exemplified co-operation among the auto industry, academia and government to provide real-world, hands-on skills specifically applicable to the auto industry. EcoCAR 3, co-sponsored by the DOE and General Motors, was the

most recent of these premier collegiate automotive engineering competitions in North America. Over four years, and managed by Argonne National Laboratory, EcoCAR 3 challenged 16 universities to take a 2016 Chevrolet Camaro and re-engineer it into a hybrid-electric vehicle in order to further improve fuel economy and reduce emissions, all while maintaining the safety and performance expected from this iconic American car.

All the Camaros were required to be hybrids, with plug-in hybrids being an option that 15 of the 16 teams chose. Innovation is a key component of the competition.

Team members are typically chosen from a variety of educational disciplines, including mechanical and electrical engineering, computer science, communications and business. Some teams were considerably larger than others. Beyond the funding provided to each team, they may reach out to their individual communities for additional support to further fund their project. Each team had a faculty advisor from their university, a GM mentor and

access to many sponsors for expert advice.

The process included determining a target market, proposals, concepts and designs—subject to approval and with the understanding that some aspects of their Camaros may not be changed (Year One); taking delivery of the cars, swapping out engines and figuring out their battery configurations (Year Two); full hardware and software integration, and testing (Year Three); and refinement (Year Four). This mirrors General Motors' development process, so students who emerge from this program are better prepared to enter the workforce than are many of their peers. This is about building capabilities that will evolve American engineering. EcoCAR 3 accelerates the development and demonstration of emerging automotive technologies.

Year Four finals began with a week of rigorous safety, technical, drive quality and emissions testing at General Motors' Desert Proving Ground in Yuma, Arizona. For the second leg of competition, teams headed to Southern California for track

(Facing page) Ohio State University's first-place entry in the EcoCAR 3 Camaro competition.

(At right, top to bottom) The EcoCAR 3 Camaro from McMaster University, Ontario, Canada. // The University of Waterloo Camaro's Weber 850cc engine. // The University of West Virginia's second-place entry.

events, including autocross, acceleration and consumer appeal at Auto Club Speedway in Fontana. Teams also spent several days presenting to judges and proving how they have developed into the next generation of engineers and business leaders who are prepared to enter the auto industry and related careers. Industry and government officials judged the presentations.

The teams met in the parking lot of The Magic Castle in Hollywood, California, at the end of their four-year journey, where we joined them and went for rides.

No two Camaros were alike. Since the teams were not compelled to retain their Camaros' existing internal combustion engines, one team chose to swap theirs out for a snowmobile engine. Yet another upgraded to a 5.3 L V8. Several Camaros were outfitted with only one electric motor, whereas others had a pair and two Camaros had three. Likewise, transmission choices varied.

The University of Alabama's team incorporated two electric motors in their Camaro. One was belted to the front of the car's internal combustion engine (known as the P1 location). The second was located between the transmission and the differential (P3). Two other potential locations for the electric motors were in between the internal combustion engine and the transmission (P2) and after the differential—one for each wheel (P4).

Students say that participation in this competition can and does lead to employment with auto manufacturers, related companies and government. The University of Alabama's team says that GM has hired nine of their past tech leads.

While all of the participating students emerged from this competition with valuable experience that will serve them well throughout their careers, the first place overall trophy and an extra \$10,000 to further support their university's advanced vehicle technology program went to Ohio State University. Second place overall went to West Virginia University, followed by the University of Alabama in third place.

Awards were also presented for competition vehicle events, technical presentations, communications, project management and pre-competition technical deliverables. Additionally there were organizer and sponsored awards. ■

For full competition results and much more information visit www.EcoCAR3.org and AVTCSeries.org. // For more photos, visit www.drivetribe.com. search for "AutoMatters & More" and click on TRIBES.



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Character.

BY
JOE
SAGE

XF basics with new smaller engines

For 2018, Jaguar XF adds a new 247-hp 2.0-liter engine option (the 25t, as we are driving here) and an uptuned 296-hp 2.0-liter (the 30t), along with a 180-hp 2.0d diesel (with 318 lb-ft of torque), and an S model (replacing the former 35t), with a 380-hp supercharged 3.0L V6. All come in the same basic five-seat midsize sedan package bearing the style, grace and character of its British heritage.

R-Sport is top among four trim levels of the 25t (it sounds like a performance model, but is a trim level). Options are fairly pricey, running the price up almost another 20 percent, but mostly needed for the content you'd expect in a top-trim Jaguar.

This bottom-rung 247-hp four-cylinder was previously (and still is) available in the smaller Jaguar XE, but the XF weighs 254 pounds more. The 25t XE did not offer all-wheel drive last year, but for 2018 both the XE and XF do. (The 380-hp V6 is also available on the smaller, lighter XE, a potent mix.)

Add the weight of an XF to a four-cylinder XE. Or subtract 35 percent of the V6's horsepower from an XF. And you have a car that's smooth and adequately powered in motion, but slow on the uptake when the light turns green, especially when coupled with a right turn into traffic—we wished for

the V6 all week. But there are purchase price and fuel mileage advantages for the four-cylinder, no?

The price difference from our 247-hp Jaguar XF 25t in top R-Sport trim to a 380-hp supercharged V6 XF S is \$5,740, just over \$3 a day over five years' ownership. Combined fuel mileage for the small engine is 27 mpg, versus 23 mpg for the V6. Driving 75,000 miles at 15k per year for five years, that's a difference of 483 gallons—at three bucks a gallon, \$1450 or so, less than a dollar a day to feed it, or \$4 a day total over those same five years.

At the end of a week with the 2.0L XF, we averaged just 16.5 mpg against that 27 mpg combined rating. (If the V6 is like that, too, its 23 mpg rating might only be 14. But if the six delivers closer to its EPA spec, it could even be 40 percent more efficient than the four. Real world results are likely somewhere between those two scenarios; but 16.5 mpg didn't do much to sell us on the four-cylinder.)

We suspect the buyer of a Jaguar sedan—already choosing a \$51,000-71,000 sedan over, say, a \$24,000 Kia Optima—would not be pained by the extra hundred bucks or so per month the supercharged V6 would cost, all the moreso in our highly badge- and performance-conscious market. They would likely be aware of the lower power of the little two-liter much more often. (If they seek frugality, they might like the XE 25t at \$12,800 less.)

Also of note for 2018 is the hot new Jaguar XF

SPECIFICATIONS

ENGINE	2.0L turbo inline-4
HP/TORQUE	247 hp / 296 lb-ft
TRANS	ZF 8-spd automatic
DRIVETRAIN	AWD (FWD available)
0-TO-60 / TOP SPEED	(AWD) 6.2 sec / 121 mph
SUSPENSION	F: dbl wishbone; R: integral link w coils
STEERING	electronic power assist rack & pinion
BRAKES	F: 12.8 / R: 12.8 in
WHEELS/TIRES	19-in standard
LENGTH / WHEELBASE	195.0 / 116.5 in
TURNING CIRCLE	38.1 ft
LEGROOM/HEADROOM (F/R)	41.5 / 37.2 in
HEADROOM (F/R)	39.0 / 38.2 in
CARGO CAPACITY	19.1 cu.ft (31.3 w rear seats down)
WEIGHT	(AWD) 3715 lb
FUEL CAPACITY	19.5 gal
FUEL ECONOMY	23/33/27 (city/hwy/comb)

BASE PRICE	\$61,125
LOIRE BLUE METALLIC PAINT	565
ASH BURL VENEER INTERIOR	310
HEATED WINDSHIELD	385
ADAPTIVE DYNAMICS	1020
TECHNOLOGY PACKAGE: 10" Touch Pro system w Nav Pro, Pro Services, wifi hotspot, interactive driver display, CD/DVD player, Meridian™ 825w Surround Sound	3265
COMFORT & CONVENIENCE PACKAGE: Heated/cooled front seats, heated rear seats, power gesture trunk lid (open/close), soft door close	2235
20-INCH WHEELS W/ CONTRAST DT FINISH	2550
DESTINATION CHARGE	995

TOTAL \$72,450

Sportbrake, a streamlined low-profile wagon (bearing British nomenclature)—not only a highly capable and sporty alternative to taller crossovers, but available among the XF lineup as a 380-hp V6 S model only. That tells us something right there. ■



THE INSIDE TRACK: BRIEFS & RUMORS



▼ Cumulative production for **Mazda** Motor Corporation in Japan reached 50 million units this spring, marked by a commemorative ceremony at its Hofu Plant in Yamaguchi prefecture, with top executives and union representatives in attendance. The milestone was reached 86 years and seven months after Mazda produced its first three-wheeled truck in October 1931. “Mazda began making cars 86 years ago, and now we’ve reached 50 million units of production in Japan. Even making 1 million cars a year, it would take 50 years to reach this milestone, showing just how long Mazda’s history is,” said Representative Director, President and CEO Masami Kogai at the ceremony. Mazda evolved from its 1931 three-wheeled truck origins in Hiroshima to production its first passenger car, the R360 Coupe micro-mini, in 1960, adding its Hofu Plant in Yamaguchi in 1982, with domestic production duties shared between Hofu and Hiroshima since then. Production techniques and flexible production systems developed at these plants have helped Mazda to grow its business. Mixed production lines capable of producing different models on a single line enable manufacture of multiple models at low volumes, a breakthrough in the traditional tradeoff between product variety, competitiveness and volume efficiency. Domestic plants take the lead with Mazda’s global car-making, with production techniques and technologies established in Japan then rolled out to overseas facilities. Mazda aims to sell 1,660,000

cars this fiscal year, the final year of its Structural Reform Stage 2 medium-term business plan, and plans to establish a global production framework capable of manufacturing two million units annually by fiscal year ending March 2024.

▼ **Weego**, known for compact, safe and reliable portable jump starters, has released an upgraded 12V lithium-ion Weego 66 Jump Starting Power Pack, designed to de-



liver the power needed to get cars, trucks, motorcycles, ATVs, boats and light-duty equipment moving again. Weighing just 2.5 pounds, and designed to handle 12V gas and diesel engine systems on land or water, the four-in-one Weego 66 jump starts with 2500 peak amps and 600 cranking amps. It can also bring phones, tablets, laptops or other mobile devices back to life via 5V USB and 19V outputs; can

power 12V portable accessories like air compressors and camping equipment; and provides ultra-bright lighting functionality with a 600-lumen dual LED flashlight, complete with emergency strobe and SOS functions. Patented Smarty Clamps incorporate lights and sounds to guide users through the jumping process and feature built-in safety protections including: anti-spark, reverse polarity, overheat and power surge protections. The ergonomically designed clamps open extra wide and are powered on both sides to ensure good connections. The unit boasts its power-to-weight ratio: 90 percent lighter and 80 percent smaller than comparably-powered, traditional lead-acid jump boxes. It also claims to recharge 85 percent faster and holds its charge three times longer. The Weego 66, designed and engineered in the US, is priced at \$199.99. For more information, visit myweego.com.

▼ The Arizona Department of Environmental Quality (**ADEQ**) provides vehicle owners with hundreds of dollars towards repairs after failed emissions tests through the

Voluntary Vehicle Repair Program (VVRP). To mitigate the financial strain that can come with having to repair a vehicle due to a failed emissions test, vehicle owners are now able to use VVRP to get back on the road faster, saving money and reducing emissions. ADEQ figures that with cleaner burning engines, the public and environment both benefit with better air quality. If a vehicle fails to pass testing at

an ADEQ Vehicle Emissions Inspection (VEI) Station, owners are immediately provided information about VVRP. Vehicles meeting program requirements and copying the first \$150 toward repairs can



receive up to \$550 for gasoline vehicles and up to \$1000 for heavy duty diesel vehicles to pass the test and get back on the road. If your vehicle qualifies for VVRP, you can go from “failed it” to “nailed it” by simply asking a manager at the VEI Station to get the process started. Once accepted into the program, you take your vehicle to a VVRP Approved Repair Facility (these have been identified to successfully repair vehicles to pass an emissions re-test at least 90 percent of the time). All costs for repairs, beyond the \$150 copay, are billed directly back to ADEQ.

▼ Would you prefer to stay home and do the dishes while your vehicle has all the fun without you? Didn’t think so. But if so, **Jaguar Land Rover** is developing autonomous vehicles capable of all-terrain, off-road driving in any weather condition. The CORTEX project, said to be a world first (although the Department of Defense has been working on this for years), aims to ensure that self-driving vehicles are fully capable in any weather condition: dirt, rain, ice, snow or fog, as they develop a “5D” technique combining acoustic, video, radar, light detection and distance sensing (LiDAR) data live in real-time. Machine-learning aims to improve awareness of a self-driving vehicle’s surroundings, enabling it handle any weather condition on any terrain in an increasingly sophisticated way. This project is part of the company’s plan to make self-driving cars viable in the widest range of real-life, on- and off-

road driving environments and weather. They will develop the technology through algorithm development, sensor optimization and physical testing off-road in the UK. The University of Birmingham and

Myrtle AI, a machine learning group, are also involved in the project. CORTEX was announced as part of Innovate UK’s third round of Connected and Autonomous Vehicle Funding in March 2018.

▼ The **Indianapolis Motor Speedway Museum** announced its participation in the ninth annual Blue Star Museums, offering free admission to active duty military personnel and their families through



Labor Day. The program is a collaboration of the National Endowment for the Arts (NEA), Blue Star Families, the Department of Defense and more than 2,000 museums across America. This year’s participating Blue Star Museums represent fine art, science and history museums; zoos and nature centers; and children’s museums. The free admission program is available for those currently serving in the US Army,

Navy, Air Force, Marine Corps and Coast Guard, as well as Active Duty and Reservists, National Guardsman (regardless of status), US Public Health Commissioned Corps, NOAA Commissioned Corps, and up to five family members. Museums can sign up for Blue Star Museums throughout the summer by emailing bluestarmuseums@arts.gov. For a list of participating museums, visit arts.gov/bluestarmuseums.

▼ **LEGO** and **Bugatti** have revealed a new 1:8 scale LEGO Technic™ version of the Bugatti Chiron supercar, itself unveiled two years ago. The new kit went on sale June 1 at LEGO stores and shop.LEGO.com and hits all retailers August 1. The model—over 22 inches long, 9 inches wide and 5 inches high—has 3,599 pieces and includes aerodynamic bodywork with an active rear wing (a key switches it from handling to top speed position), a detailed W16 engine with moving pistons, spoked rims with low-profile tires, a detailed cockpit with 8-speed gearbox and moving paddle shifters on its Bugatti-badged steering wheel, and a Bugatti overnight bag in the trunk. A serial number under the hood unlocks special content online. The model is in the brand’s classic duo-tone blue, with stickers for additional detailing. The set comes enclosed in an exclusive box with a

UPCOMING FEATURES

2019 Hyundai Santa Fe launch drive, Utah



Toyota 86 GT Black



FCA Michigan Proving Grounds: What's New 2019



Lexus RC 350 F



Valerie Thompson Sturgis Hall of Fame induction



Lyn St James Talladega 30th Anniversary



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