

ARIZONA DRIVER

THE ENTHUSIAST'S GUIDE TO LIFE BEHIND THE WHEEL

VOLUME 20 NUMBER 2
MARCH-APRIL 2021



1964 Shelby Cobra Daytona Coupe
Continuation Edition
at RM Sotheby's Arizona 2021

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COVER: Not the most expensive car during Arizona Auction Week, but a great eye-catcher was this 1964 Shelby Cobra Daytona Coupe Continuation (Chassis No. CSX 2616) at RM Sotheby's live-and-online Arizona event. Estimated at \$600,000 to 800,000, the car bid to \$525,000, not meeting its reserve. The top seller at RM Sotheby's was a 1955 Jaguar D-Type with in-period competition history, with the winning bidder participating by phone, sold for \$6,000,000. **Photo:** courtesy RM Sotheby's.



Have you noticed how these pandemic days, weeks and months have dragged on and on, with none of the usual things to do or places to go, while simultaneously passing at the speed of light with not enough hours in the day? We've noticed it here!

Normally, this cycle would be full of tales of 2022-and-beyond models from the LA and Detroit auto shows, the full complement of events from Arizona Auction Week with its thousands of cars and tens of thousands of visitors, a key motorsports event or two, many local and regional club rallies and shows, and the plans and activities of various hometown superstars. It's tempting to say, "this year, not so much." But our feet have barely touched the ground.

There were no trips to big shows, and Auction Week offered just a glimpse of normal times. But we have been running through a magnificent array of hardware and driving it where we can. The cafés aren't all open these days—but the scenery is always on!

Last October or so, a number of entities (manufacturers, press associations, special events, club rallies and more) perceived an easing of restrictions and stuck their toes in the water for several events. (We still haven't been on a plane in over a year as of this writing, but we did take a beautiful 2500-mile road trip to Texas and back for a socially distanced version of one of the nation's highest-profile truck and utility comparos.)

Also as of this writing, the same thing seems to be happening again, come April and May or so. We have a couple of new vehicle launch drives on the calendar, as well as a few press association comparo events, and auctions coming up immediately include a couple of live events here in Arizona with what sounds like fewer restrictions than in January (based on eventors' own perceptions of things as much as on any regulations).

But who knows. We'll see you on social media every day, and we'll meet you back in these pages in two months—and we'll see what we've learned!

Enjoy the ride!

Joe Sage - Publisher/ Executive Editor



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DECK PARK TUNNEL TURNED 30 IN 2020, GETS NEW LIGHTING IN 2021

If you're like us, you likely hear "Deck Park Tunnel" in the voice of Detour Dan Beach, longtime intrepid chopper pilot and traffic reporter for KTAR.

And if the Interstate 10 Deck Park Tunnel near downtown Phoenix is part of your driving routine, you have likely noticed work underway on the lights used to illuminate the 30-year-old project. The Arizona Department of Transportation (ADOT) in January began a \$1.4 million project to add a modern LED lighting system in the I-10 tunnel, which extends approximately three-quarters of a mile between Third Street and Third Avenue. The LED lights are replacing a high-pressure sodium lighting system that has been in use since the Deck Park Tunnel first opened. In all, crews are scheduled to change out more than 3,200 individual lights inside the tunnel during overnight closures over the next few months.

As with the current system, the improved LED tunnel lights will be set at appropriate transitioning levels during daylight and nighttime hours to allow a driver's vision to adapt according to outside lighting levels—for example, running fewer lights at night because of lower ambient nighttime light levels outside the tunnel.

In addition to enhancing safety, the use of LED lights in the tunnel is anticipated to produce more than \$175,000 in annual energy savings.

Closures for lighting installation are currently

scheduled overnight from Fridays at 9pm to Saturdays at 9am. The tunnel lighting project is being paid for with ADOT maintenance funds.

Happy Birthday, Deck Park Tunnel

One of the many things easily missed during pandemic lockdowns in 2020 was the anniversary of the I-10 Deck Park Tunnel, which opened in August 1990. Before the project officially opened to traffic on August 10, the public was allowed to walk, ride and tour the tunnel. The tunnel had prominent status as the final segment that connected Interstate 10 from coast to coast—a 2,500-mile interstate from Santa Monica, California to Jacksonville, Florida that took more than 30 years to complete. Just in Arizona, I-10 is nearly 400 miles long.

ADOT points out that the Deck Park Tunnel isn't actually a tunnel, but a set of 19 side-by-side bridges. On top of all of those is Margaret T Hance Park, a 32-acre city park that is more than just a green space—it's home to Arizona Humanities, Burton Barr Central Library, Cutler Plotkin Jewish Heritage Center, Irish Cultural Center, Japanese Friendship Garden and Phoenix Center for the Arts.

Also known as the Papago Freeway Tunnel, it is the brief home to 290,000 vehicles daily. Besides those 3,200-plus lightbulbs, the tunnel is also home to four large ventilation fans and one hidden lane—a single lane between the east- and west-

bound tubes, originally meant to be an express bus lane but not in use and closed to the public. The tunnel is also home to a control room, the original ADOT Traffic Operations Center. Today, ADOT employees specific to managing the tunnel and its operations work in that control room.

RENEW YOUR LICENSE ONLINE

ADOT's online motor vehicle services, in our experience, are second to none—convenient, quick, accurate and cost-efficient. And good news: you can now renew your driver's license online, a new service spurred by the push for contactless options during the pandemic.

As an Executive Order from the governor deferring standard driver's license expirations ended on February 28, the ADOT Motor Vehicle Division introduced the ability to renew your license online, a process that used to require an office visit.

An in-office visit will still be required if your photo of record was taken more than 12 years prior, but most Arizonans will be able to renew their license without visiting an MVD office. Just log in at AZMVDNow.gov to check eligibility.

To renew a CDL online, your address must be the same, a valid primary document needs to be on file with MVD, and your current credential must be in good standing. Those with a hazmat endorsement will not be able to renew their license online.

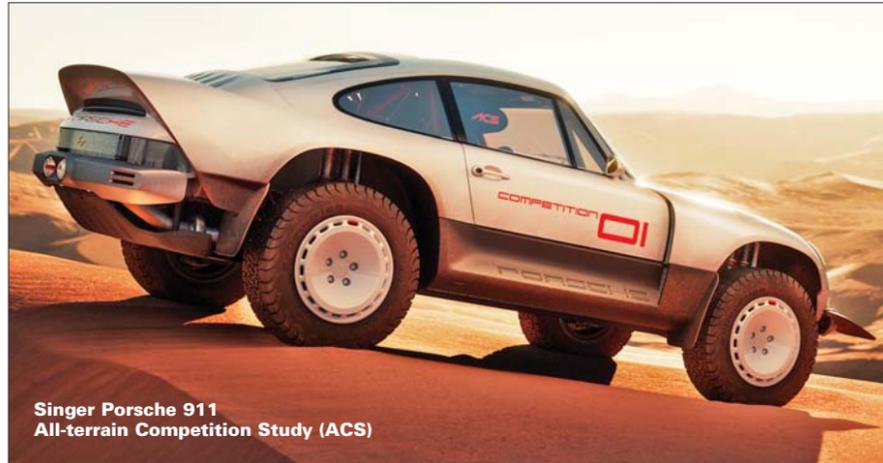
This new, streamlined renewal option was made possible in large part when MVD implemented a state-of-the-art computer operating system last spring. ■



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Singer Vehicle Design

Singer Porsche 911 All-terrain Competition Study (ACS)

▼ **Singer** has referred to a golden era of **Porsche** rallying, the 1980s, and to automotive heroes including the 911 SC/RS and 959, to reimagine a longtime client's air-cooled 911s as World Rally Championship-inspired, all-terrain competition machines. The All-terrain Competition Study was undertaken by Singer in partnership with renowned 911 rally specialist Richard Tuthill, in response to the request from a client for modifications to his air-cooled Porsche 911s to compete in off-road racing, with extensive all-terrain exploration capabilities. UK-based Tuthill-prepped 911s have dominated rally events for decades, from deep expertise in WRC competition to events such as the Paris-Dakar, and recently winning the 2019 East African Safari Classic—a remarkable fourth win in the grueling 5000-km event across Kenya and Tanzania. To highlight the broad range of the Study, the client has commissioned two machines: a 1990 Porsche 911 Type 964 in Singer's Parallax White, focused on high-speed desert rallying; and a second, in Corsica Red, to be configured for high-speed, high-grip tarmac events and disciplines. Modifications for the first—with off-road competition capability for events such as the Baja 1000 and Dakar Rally in mind (but suitable for a range of surfaces)—include: specialized long-travel suspension with twin 5-way adjustable dampers per corner for dramatically increased ride height, suspension travel and strength; carbon fiber body panels suited to quick replacement and easy underbody access;

permanent AWD; a twin-turbocharged, air-cooled 3.6L flat-six with tunable power starting at 450 hp; a sequential racing transmission with front, center and rear limited-slip differentials; and many more upgrades, many of which can be tuned for the demands of a particular event.

▼ Long referred to as the “World’s Fastest **Corvette**,” a highly modified 1984 C4 Corvette joining the collection at National



NCM “World’s Fastest Corvette”

Corvette Museum (NCM) in Bowling Green KY is a Land Speed race car that has competed and held records in several Bonneville Salt Flats speed trial classes, reaching over 270 miles per hour. Juris Mindenbergs of Redmond WA acquired the car stock in 1986, modifying it for Bonneville racing with the assistance of Mike Dorgan, Don Schellberg, Art Morrison and Larry Kalsch, who brought his expertise and a

dyno facility to the effort. At a USFRA Bonneville meet on October 1, 1988, Mindenbergs achieved a top speed of 271.04 mph, with his two-way average of 266.45 mph setting a record in the AA-GT class and breaking Mickey Thompson's long-standing mark. *Hot Rod Magazine's* December 1989 issue called this naturally aspirated Corvette, running on gasoline, one of the ten most awesome race cars of the 1980s. Later, owner Bobby Moore of Tulsa OK achieved many Bonneville class records, including eclipsing Mindenbergs' 1988 AA-GT class mark in 2004, highlighted on the vehicle's rear window. Mindenbergs reacquired the vehicle in 2016, donating it to an unidentified museum in the Pacific Northwest in 2019, from which it has now made its way into the National Corvette Museum's permanent collection.

▼ Supercar maker **McLaren** has joined the membership of Walpole, a British luxury representative body, taking its place alongside leading British brands such as Burberry, Fortnum & Mason and Claridge's. Joining Walpole, whose mission is to pro-

mote the British luxury sector across the world, will reinforce the McLaren luxury brand position based on pioneering technology, innovative design, powerful performance and a luxurious ownership experience. As a member, McLaren can link into Walpole's extensive global luxury network including the European Cultural and Creative Industries Alliance (ECCIA), a high-end luxury industries association of which Wal-

pole was a founding member. ECCIA comprises six European high-end cultural and creative industries organizations from Italy, Spain, France, Sweden, Germany and the UK, who among them represent over



Ecurie Ecosse C-Type

600 high-end and luxury brands and luxury groups. Walpole also runs regular trade missions to the US, a key market for McLaren and the wider British luxury sector, in collaboration with the UK government. The high-end luxury automotive industry niche accounts for over 65 percent of the overall value of sales in the luxury sector, according to Walpole's 2019 economic impact study.

▼ In 1952, a young Ian Stewart, pioneer driver for **Ecurie Ecosse**, visited Jaguar Cars in Coventry to collect his brand new C-type. He drove the car to its first race, on Jersey, to confront stiff competition from Aston Martin and Frazer Nash. The race was won at a gallop, and in doing so he opened the first chapter in Ecurie Ecosse's international motor racing career. Considerable success on the racetrack ensued for Ecurie Ecosse, their trophy cabinet bursting at the seams with 59 podium places secured across the seven C-type chassis raced by the team. Through clever tuning by legendary team manager “Wilkie” Wilkinson and meticulous planning by founder David Murray, they proved how capable the Jaguar C-type could be on the international stage and began a legacy that would take the Scottish national team to countless wins, including their crowning glory at La Sarthe. The Jaguar C-type was a technological masterpiece: the first race car honed in the wind tunnel, first to use fuel “bag” tanks (a technology borrowed from the aviation world) and the test

bed for Dunlop's revolutionary disc brakes. A steel spaceframe chassis formed the rigid backbone of these cars, clad in a lightweight, thin-gauge, streamlined aluminum body designed by Malcolm Sayer, and pow-

ered by a silky smooth Jaguar overhead cam straight-six. Stirling Moss once said, “I always really rated the C-type—for me it was a far better car than the D.” Ecurie Ecosse have created a new car to pay homage to their past success. Current Ecurie Ecosse patron Alasdair McCaig said of their new car, “How better to celebrate the historic success of the Ecurie Ecosse C-types than to manufacture a batch of cars in their honor? The seven priceless



Audi Q5 Sportback (European spec)

chassis raced in period still exist today, coveted by their lucky owners, occasionally seeing the light of day for race or concours events. We are paying homage to these cars by creating a numbered sister car to each one—meticulous in their detail, like their forebears, hand-built in Coventry and tuned by Ecurie Ecosse technicians.” Ecurie Ecosse have retained all the key elements that contributed to the roar-

ing success of the 1950s Jaguar racer, while—in the true spirit of co-founder Wilkinson—making considerable improvements. The aerodynamic shape remains, still crafted from thin-gauge aluminum alloy and mounted to a steel spaceframe chassis, but it's wider and stiffer than before and laser-cut for accuracy. The sonorous Jaguar straight-six XK engine remains too, although capacity has been increased to 4.2 liters and fuel injection fitted to bring power up to 300 bhp. Suspension and disc brakes have been upgraded to cope with the additional performance and a five-speed gearbox added to maximize acceleration and top speed. The detail of the car is breathtaking. Hand-crafted aluminum bucket seats re clothed in supple blue leather by Crest. Hand-air-brushed Ecurie Ecosse shields adorn the car's flanks, with Tag Heuer Master Time stopwatches on the dashboard. The first car is complete and (if not yet sold) available for viewing and test drive at their Henley-on-Thames dealership, Hofmann's.

▼ **Audi** is adding two Sportback models to its recently refreshed best-selling Q5 lineup: a Q5 Sportback and SQ5 Sportback, with coupe-like sloped-roof design similar to their other A5, A7 and fully electric e-tron Sportback models. Further dif-

ferentiating the Sportback from the SUV, standard equipment includes 19-inch 5-double-arm wheels, deletion of roof rails, S-line exterior trim, a panoramic sunroof, sport front seats and standard LED headlights with distinctive DRLs or available Matrix-design LED headlights. Interiors are also upgraded and provide 24.7 cubic

KEEP RIGHT >>

feet of cargo capacity with seats up or 51.9 cubic feet with seats folded. The Q5 Sportback has a 261-hp 2.0L TFSI engine, seven-speed S tronic DCT and quattro AWD, for a zero-to-60 time of 5.7 seconds.



Honda Ridgeline

The SQ5 Sportback has a 349-hp 3.0L TFSI V6 turbo, eight-speed Tiptronic and quattro, for a zero-to-60 time of 4.7 seconds. The SQ5 Sportback also has standard adaptive dampers and available air suspension, as well as available dynamic steering. Q5 Sportback base prices range from \$47,800 to \$56,500, SQ5 from \$56,100 to \$64,700.

▼ Bearing a fully boxed truss-style floor frame, dual-action tailgate, in-bed trunk and more rugged styling from the A-pillar forward, the new 2021 **Honda Ridgeline** exudes a more trucklike persona, while still sharing its unibody layout with the Passport SUV. With V6 power, standard torque-vectoring i-VTM4 all-wheel drive and fully independent suspension, this different flavor of pickup offers a more carlike interior experience, with a degree of toughness and capability that suits most weekend explorers, if not Rubicon crawlers (although we've taken its prior model through some fairly tough truck comparo courses). Versatility comes from the segment's largest interior for passengers and gear, along with features such as its In-Bed Trunk lockable storage compartment, while claiming best-in-class payload capacity for a standard AWD model. All-new sheet metal up front includes a new hood with a pronounced power bulge, a new squared off nose and upright grille, new front fenders and a body-color front bumper. Flanking the grille are new, brighter LED headlights bisected by the grille's top crossbar—gloss

black on Sport trims and Black Edition, or chrome on RTL and RTL-E. A prominent skid plate and broad side vents create air curtains to route air around the front tires and wheels to improve aerodynamics. A

new rear bumper frames aggressive twin exhaust tips, and all trims have gnarlier 18-inch wheels and an additional 20 mm of track, for a broader and more planted stance. New tires have a more aggressive sidewall and shoulder design. The new Ridgeline lineup starts at \$36,490.

▼ The **Aston Martin Bulldog**, styled by William Towns, is a one-off concept created in 1980 to demonstrate that this was



Aston Martin Bulldog

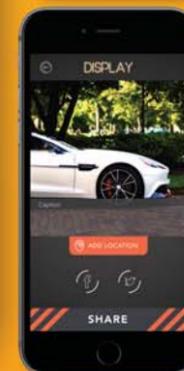
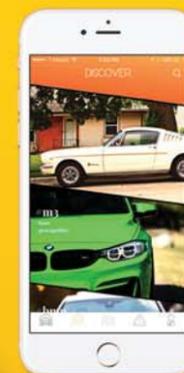
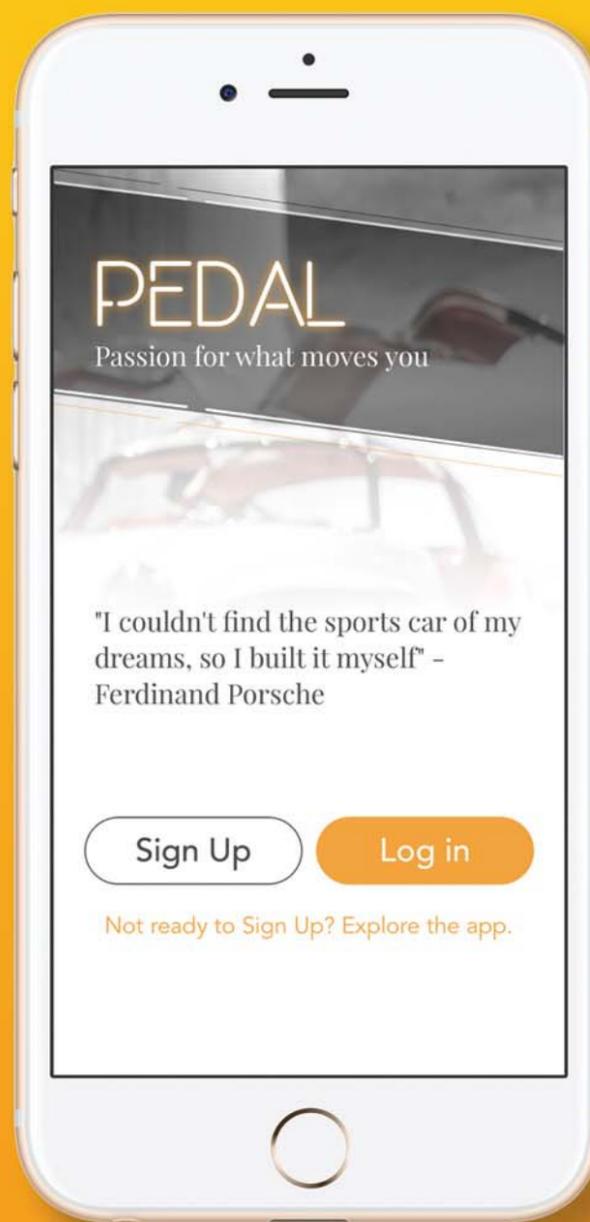
not only a small company of renowned motoring artisans, but that its engineering prowess was also world class. Aston Martin hoped that the car would be capable of running over 200 miles per hour, making it the fastest production car of its time, but testing and development were curtailed, with the car having come tantalizingly close to its design performance, hitting 191 miles per hour in testing at MIRA

when Victor Gauntlett became chairman of Aston Martin Lagonda in 1981. Last year, the famous car was given to Classic Motor Cars (CMC) in Bridgnorth, Shropshire, to carry out an 18-month nuts-and-bolts restoration, after which the owner plans to have Aston Martin factory driver Darren Turner run the car at over 200 mph and then take it on a World tour—forty years after it was first tried. Overseeing restoration is Victor Gauntlett's son Richard, who grew up with the car and his father's ambition for it to become the fastest production car ever developed. "The car is well on the way to being restored," says Richard, "and CMC will have it running by the end of the year. We will then attempt the record that never was. A critical part of this was finding the right driver for the job and someone that could get involved in overseeing the final elements of the project, in terms of set up and testing. I am delighted that Darren Turner, who has been an Aston Martin works and high-performance development driver for more than 15 years, has agreed to join the team." Turner says, "I had heard of the legend of Bulldog from within Aston Martin, and when news started to filter out about the car being restored to go for the 200 mph target, I thought that was such a cool thing to do. I was following the story and thinking that

it would be great to be involved in. When I was asked to drive it, I didn't need to be asked twice!" CMC managing director Nigel Woodward adds, "It's great that Darren has agreed to drive the car. Having such an accomplished driver on board and one that will become involved in the final set up and testing is fantastic, and of course, given Darren's own historic connections with Aston Martin, very fitting, too." ■



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There are no words

BY JOE SAGE

There are lots of words to describe the Dodge Charger SRT Hellcat Redeye Widebody. As its model name grows to six words, each one adds something to the formula, expanding upon what precedes it. Its numbers explain plenty, too.

The Dodge Charger lineup has always impressed us for the tremendous variety it offers, how masterfully they start at just \$29,995, offer so many models, with pricing tightly and carefully stairstepped, yet each maintaining value and relative affordability for what's received. Each model successively offers something all its own, and each carries the full Charger persona. A Scat Pack at \$41,095 with a 485-hp 392 HEMI® V8 (the most horsepower per dollar of any sedan) is going to prove itself to be at an irresistible balance point for a lot of people, while every other combination is at a perfect balance point for someone else.

Through that lineup, among other variables, are six different engines and five different transmissions. As you move up through SRT, then Hellcat, then Redeye (with Widebody now standard on both Hellcats), you arrive at the most stratospheric

model, with the highest-performance V8 (unique to hellcat Redeye) and most powerful transmission (shared with the 717-hp non-Redeye Hellcat).

Specifications at right give you a good idea of the exponentially high level of every detail as the car enters the Redeye zone. Take a look at the intercooler specs as a good example: you're not only buying the top dog model here, you're buying one tailor made for an owner who knows the capability they are putting in their hands and why.

The Hellcat Redeye has power and presence you will enjoy every day in every situation, while also possessing special tricks you can use at the track or drag strip (many as introduced in the earlier Dodge Demon), including Launch Assist, Launch Control and Line Lock, all accessible through SRT Performance Pages in the screen interface.

Our week with the Redeye was more along the lines of everyday driving, though we've used the full range of Launch Control and other SRT Performance Pages features on the dragstrip at the Stellantis (formerly FCA) proving grounds outside Chelsea, Michigan, where the combination of accuracy

and thrills proved itself magnificently. Sooner or later, even the tamest owner (all things being relative) will want to find an opportunity for this.

With its extra wide performance tires, the Hellcat Redeye has largest turning circle in the Charger family—39.0 feet, compared to 37.7 for most models or 38.7 for AWD models. We love tight turning circles, but frankly didn't even notice this factor, as its electric power steering keeps things tight, light and easy at low speed or while parking, while—again through SRT Performance Pages—offering a wide range of feel and function for any situation and/or personal preference.

We seek out sport mode quickly in most vehicles, to juice up their standard performance. But in the Hellcat Redeye, you can drive forever without giving it a thought—there are no deficiencies to compensate for. Nonetheless, it does have sport and track modes, working with SRT-tuned Bilstein adaptive damping suspension (ADS) to vary handling and ride firmness to your taste and situation.

We love the rumble and roar of a fine naturally aspirated V8, and this offers an authentic and satisfying flavor of exactly that, while either Hellcat's supercharged whine adds a strong and well balanced undercurrent to the acoustics during accel-

eration and cornering that just suits it to a T.

We generally don't log fuel mileage, as we like to drive when, where and as the spirit moves us, with no attempts at hypermiling unless we're in a vehicle specifically aimed at that purpose (and this is not that). We drove the Charger Redeye a lot—out to the Beeline Highway and back, a glorious rip-roaring run up I-17 well into Northern Arizona, and of course all over town. Anecdotally, we covered a lot of miles. And anecdotally, the fuel tank dropped far less than we might have expected—in line with Dodge's increasingly wide array of fuel-sipping intelligent powertrain features.

If you're a law enforcement officer, you have to be ready to stay behind the wheel all day and all night, never get tired of being there, always ready for anything and everything. Dodge Charger is a high-profile expression of the police cruiser. The SRT Hellcat Redeye Widebody is, in turn, the highest performance expression of the Charger, yet its generous full-size cabin still lets you drive it all day and all night, alert and ready for anything.

Are you still thinking, but a \$90,000 Charger? If they didn't build this super performer for you at the factory (with perfectly coordinated engineering), you could try to build such a beast yourself. You could probably spend a quarter mil' trying (and your engineering may vary). As with the under-30 base Charger, the Hellcat Redeye is a bargain. ■



PRICE AS DRIVEN

BASE PRICE / SRT HELLCAT	\$69,995
CUSTOMER PREFERRED PKG 2BZ: "Redeye" instrument panel badge, 220-mph primary speedometer, satin black "Dodge" tail lamp badge, "Redeye" decklid badge, satin black "Charger" decklid badge, "Redeye" fender badges, "Redeye" grille badge, SRT Power Chiller	8600
SUBTOTAL / SRT HELLCAT REDEYE	\$78,595
CARBON/SUEDE INTERIOR PKG: suede headliner, real carbon fiber interior accents	1595
NAVIGATION & TRAVEL GROUP: GPS nav, SiriusXM Travel Link (w 5-yr subscrip), SiriusXM Travel Plus (w 5-yr subscrip), Uconnect® 4C Nav w 8.4" display, 5-yr SiriusXM Traffic service, 5-yr SiriusXM Travel Link service	995
HARMAN KARDON AUDIO: 19 Harmon Kardon GreenEdge speakers, GreenEdge amp, surround sound	1995
POWER SUNROOF	1995
WHEELS / TIRES .....20x11.0 carbon black aluminum wheels w optional 305/35ZR20 front & rear 3-season tires	695
ORANGE BRAKE CALIPERS	595
GAS GUZZLER TAX	2100
DESTINATION CHARGE	1495
TOTAL	\$90,060

SPECIFICATIONS

ASSEMBLY	Brampton, Ontario, Canada
ENGINE .....6.2L HEMI® Hellcat High Output V8 deep-skirt cast iron block w cross-bolt main bearing caps, alum alloy heads w hemispherical combustion chambers, 16v pushrod OHV, sodium-filled exhausts, hollow stem intakes, 16 hydraulic roller lifters, sequential multiport electronic returnless fuel injection	
INDUCTION SYSTEM	performance hood w functional air induction, mail slot grille opening & air box opening near wheel liner, combined airflow 1130 cu.ft per minute (CFM)
INTERCOOLER	separate low-temp cooling system w dual water-to-air intercoolers & high-flow variable-speed water pump; selectable SRT Power Chiller™ liquid-to-air intercooler chiller system to redirect AC refrigerant to chill intercooler coolant; selectable Race Cooldown feature directing radiator fan & intercooler water pump to intercooler coolant
HP / TORQUE	797 hp / 707 lb-ft
COMPRESSION RATIO	9.5:1
TRANS	Torqueflite 8HP90 8-spd auto w adaptive electronic control, w full manual control via gear selector or paddle shifters, w three SRT-unique modes: Street, Sport & Track w performance shifting & gear-holding feature
DRIVETRAIN	RWD
FINAL DRIVE	2.62 asymmetric limited-slip performance tuned
SUSPENSION	Widebody Competition Suspension, SRT-tuned adaptive damping suspension (ADS); F: indep short- & long-arm (SLA) w high upper A arm, lateral & diagonal links, coils over gas monotube shocks, Bilstein ADS, 34mm hollow stblzr bar; R: five-link indep w coils, link-type 22mm hollow stblzr bar, gas monotube shocks, gas Bilstein ADS shocks
STEERING	elec power, multi-mode assist
BRAKES	SRT/Brembo Ultra High Performance package: F: 15.7 x 1.34 two-piece alum hat, directional vane vented/slotted, 1.42 Brembo 6-piston fixed monoblock alum; R: 13.8 x 1.10 vented, 1.26 Brembo 4-piston fixed w alum housing
WHEELS	20x11 lightweight carbon black (other finishes avail, same size)
TIRES	305/35ZR20 Pirelli P Zero all-season standard, 3-season available
LENGTH / WHEELBASE	201.0 / 120.0 in
TURNING CIRCLE	39.0 ft
GROUND CLEARANCE	4.5 in
HEADROOM (F/R)	w snrf 36.0 / 36.6 in
LEGROOM (F/R)	41.8 / 40.1 in
CARGO CAPACITY	16.5 cu.ft
WEIGHT / DISTRIB	4610 lb (57/43)
FUEL .....	.91 octane premium req'd
FUEL CAPACITY	18.5 gal
MPG	12/21/15 (city/hwy/comb)





Bonhams
10th Annual Scottsdale Auction
Thursday, January 21, 2021

IN-TOWN LIMITED LIVE & ONLINE:

Westin Kierland Resort & Spa, 6902 E Greenway Pkwy, Scottsdale AZ 85254

BONHAMS had the distinction of not only running their event in (or from) Arizona during the normal January timeframe (a distinction shared with RM Sotheby's), but from their normal location at the Westin Kierland Resort & Spa (a distinction all their own, though Barrett-Jackson will do the same in March).

At a glance, it looked like the familiar event, though at second glance, there were no big display and bidding tents, just one small administrative one. An interested bidder could arrange a video-feed visit with a specialist, for a condition report and one-to-one walkaround for a vehicle of particular interest (with preview days prior to the sale day). Actual auction action was online (and, as always, by phone).

The event's promotional cover car, a **1959 BMW 507 Series II Roadster**, emerged as top seller, at \$1,809,000 after a tense bidding battle. Designed by the noted Count Graf von Goertz and aimed at the American market, the 507 was BMW's flagship sports car of the 1950s—and its most expensive, with just 253 cars sold to the likes of Elvis Presley and the Aga Khan. This example's previous owners include the grandson of RKO studios founder Shane O'Neil. It was sold following 30 years in the possession of a prominent private collector.

Other top sellers at Bonhams included another desirable continental convertible of the 1950s, a 1956 Mercedes-Benz 300 Sc Roadster, one of just 53 Roadsters produced, selling at \$698,000; from another era, a 2018 Aston Martin Vanquish Zagato Volante—the very first of the 99 Zagato Volantes—sold for \$538,500.

Other highlights included an Alfa Romeo-based 6C 2300 Monza Replica—a recreation of the 1930s racing legend four years in the making, at \$406,500; a one-off Rünge RS010, a one-off aircraft-inspired aluminum mid-engined sports racer, at \$240,800; and a low-mileage 1992 Lancia Delta HF Integrale Evoluzione 1, a recognized modern classic, with desirable Martini 6 livery, at \$182,000.

Bonhams introduced their Live and Online format globally in 2020 in response to the pandemic. Jakob Greisen, VP Bonhams US Motoring, says, "We're very happy to have got our year off to such a good start in Arizona. We had a lot of interest before and during the sale, reflected in a very satisfactory sell-through rate." Its Scottsdale sell-through rate was 78 percent. ▼ www.bonhams.com

RM Sotheby's
22nd Annual Automobiles of Arizona
Friday, January 22, 2021

IN-TOWN LIMITED LIVE & ONLINE:

OTTO Car Club & Storage, 15550 N 78th St, Scottsdale AZ 85260

RM SOTHEBY'S did run their event in Arizona and in January, but moved to a private location this year—OTTO Car Club & Storage in the Scottsdale Airpark—for a one-night sale as previously planned, but open only to registered bidders (who could attend in person within pandemic guidelines, by appointment only, or via phone or online). More than 80 blue chip collectible vehicles crossed the auction block; sales exceeded \$35 million, with a 90 percent sell-through rate. The one-day auction had bidders from 35 countries, present in the room or by phone and internet; over 50 percent of bidder participation was conducted online.

Top seller at RM Sotheby's was a **1955 Jaguar D-Type** with in-period competition history, sold by phone at \$6,000,000. Red over red, the car was one of a very small number of D-Types so finished when new. Purchased new from Bernie Ecclestone by British racer Peter Blond and retaining many of its original components, this is a worthy candidate for vintage competition at the most prestigious levels.

Second highest sale was an elegant and extremely rare 1937 Bugatti Type 57SC Tourer by Corsica, one of eight examples bodied by the coachbuilder of which just two were the four-seater, which brought \$4,735,000. Its known ownership history includes time in the esteemed collections of Judge North and General Lyon. Other pre-war classics included a CCA Full Classic 1932 Cadillac V-16 Convertible Coupe by Fisher, one of 14 built (only four survive today), surpassing its estimate at \$1,022,500; and a multi-award-winning CCA Full Classic 1933 Packard Twelve Individual Custom Convertible, Sedans by Dietrich, one of two existing, all numbers-matching, at \$819,000.

Modern supercars included a 2020 McLaren Speedtail, the first to sell at public auction, at \$3,277,500; a highly optioned 2019 McLaren Senna at \$1,044,000; a special option 2019 Ford GT 'Lightweight' at \$967,500; a 1993 Cizeta V16T, one of just nine, ordered new by the Royal Family of Brunei, at \$665,000; and much more.

"It was tremendous to start the year off on such a positive note given that we were the sole remaining auction company to host a live event for the annual Arizona weekend. In working with the local authorities and the capable team at OTTO, we were able to safely welcome clients back to the live auction format," said Gord Duff, Global Head of Auctions, RM Sotheby's. ▼ www.rmsothebys.com

Gooding & Company
14th Annual Scottsdale Auction
Monday-Friday, January 18-22, 2021

OUT-OF-TOWN ONLINE:

Southern California facility

GOODING & COMPANY ran this year's event, bearing the Scottsdale name, from their Southern California facility, on their All Geared Online platform, with all lots available for viewing and inspection, by appointment only and subject to pandemic guidelines and directives, and offered variously with and without reserve.

Gooding realized \$7,092,031 from 39 of 49 lots, an 80 percent sell-through rate, at an average price of \$181,846 per lot sold, with new world record set for a Bugatti Type 37 and for a Meyers Manx.

Top seller was a well-preserved **1966 Ferrari 275 GTB Long Nose**, at \$1,936,000. A closely watched 1954 Aston Martin DB2/4 Drophead Coupe sold for \$968,000. One new auction world record was set by a 1926 Bugatti Type 37 Grand Prix at \$935,000. A 1967 Ferrari 330 GTC sold for \$517,000; and a 1965 Shelby GT350 rounded out the top five at \$385,000 in a major bidding war.

Also of note, a distinctive record-breaking 1972 Citroen SM Land Speed Racer sold above estimate at \$203,500; and a 1968 Meyers Manx at more than double its low estimate brought \$101,200, a new auction world record for that model, as well.

"Although we miss interacting with our clients one-on-one and commanding the auction stage at our annual Scottsdale event," says Gooding president and founder David Gooding, "it is exciting to see such incredible engagement on our Geared Online platform." ▼ www.goodingco.com

Worldwide Auctioneers
5th Annual Scottsdale Auction
Saturday, January 23, 2021

OUT-OF-TOWN LIMITED LIVE & ONLINE:

Worldwide Headquarters, Auburn, Indiana

WORLDWIDE moved their event, also still bearing the Scottsdale name, to their headquarters—Krusse Plaza in Auburn, Indiana (home of the Auburn-Cord-Duesenberg Museum). The auction event moved from Wednesday evening to Saturday January 23 daytime, with three days of televised leadup (web, FB, YT) with such luminaries as Keith Martin, Rod Egan, John Kruse and more, prior to the sale. Auction lots were available for scheduled private preview, and bidding was available online, with phone and absentee bidding also available to qualified pre-registered bidders.

Worldwide had 71 vehicles cross the block, with a 93 percent sell-through rate.

Top sale was a 1934 Packard Twelve 1107 Phaeton that once carried President Franklin D Roosevelt in a Chicago parade. One of just five produced and with only 20,700 miles, the classic set a record at \$571,500.

Records were also set by a 1947 Mercury Series 79M Marmon-Herrington 4x4 Station Wagon, one of 20 woodie wagons sold from the Steelewood Collection, at \$346,000; and a like-new 1996 Dodge Viper GTS (with only 22 miles) sold for \$122,080.

A 1979 Chevrolet "A-Team" Van, one of six officially licensed by Universal Studios to promote the action-packed '80s TV series, sold for \$84,000 with proceeds benefiting the J Kruse Education Center, a nonprofit organization providing career pathway development to students and transitioning veterans.

▼ www.worldwideauctioneers.com

Arizona Auction Week 2021 at halftime

Known worldwide, Arizona Auction Week has/had grown to eight operations: (alphabetically) Barrett-Jackson, Bonhams, Gooding & Company, Leake, MAG (formerly Silver), RM Sotheby's, Russo and Steele, and Worldwide Auctioneers.

In the long, evolving history of the week, most things were consistent and taken for granted: they are all held here; all are named either Arizona or Scottsdale; all are held in basically the same week; and of course all are live events for tens of thousands of sellers, bidders and fans. Usually.

This year, so much is different, as 2021 brought us the week that was—and wasn't. The pandemic continues to impact events worldwide, and these are no exception.

Schedules and details shifted many times, ultimately bringing a week comprising four auctions—also still named Scottsdale and/or Arizona, though with two held here (one at its normal location, but basically without people, the other in a different location, basically with people); and two held at their companies' facilities elsewhere.

Depending what you count, two had active bidders on site, in limited numbers and tightly controlled circumstances. All had some form of virtual inspection. All were televised or online one way or another (online and phone bidding had become commonplace and significant, anyway, so this was not as earthshaking a change as it sounds, just less festive than in person).

All kept the hobby-slash-industry alive and relatively thriving.

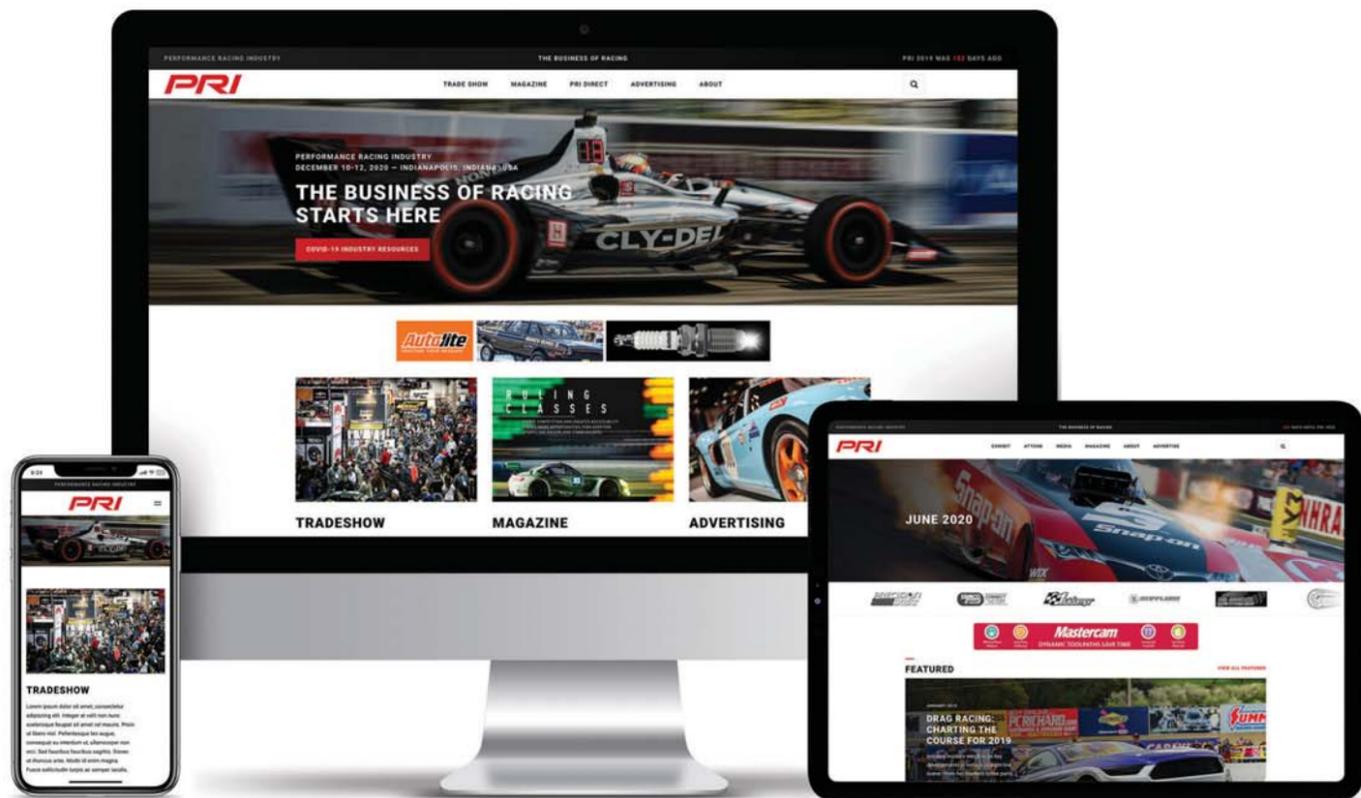
(For updates on the rest of the auctions, see our following page.)





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SPECIAL EVENTS : ARIZONA AUCTIONS / PART TWO



Barrett-Jackson 50th Annual Collector Car Auction Rescheduled to March 20-27, 2021

IN-TOWN LIMITED LIVE & ONLINE:

WestWorld of Scottsdale, Loop 101 & FLWright Blvd, Scottsdale AZ 85260

BARRETT-JACKSON held a Scottsdale event last October, not usually on the calendar, but a chance to consider, adapt and apply new methods to the pandemic era (and to catch up a bit from events postponed in other parts of the country). Everything was scaled down considerably, from car count to booth and vendor space, and live attendance was restricted to bidders, sellers and a few VIPs, in a socially distanced seat plan, or participating online or by phone. All went very well, making this a model for many, moving forward.

Barrett-Jackson's 50th year event was set to follow this format on its original schedule in January. Instead, for a little more headroom in this evolving situation, it was moved to March, though the fact it's their 50th does not seem to be getting played up much. The event will reintroduce many more of its familiar activities in this timeframe. As always, there will be hundreds of classic, hot rod and performance cars and trucks, over 1,000 pieces of automobilia, and a significant offering of vendor booths and even performance car ridealongs.

And always, they will auction a wide range of first-production vehicles (the VIN001 Ford Bronco, VIN001 Ram 1500 TRX and VIN001 GMC Hummer EV shown here, and many more). Classics and collectibles include everything from Edsel B Ford's personal '58 Edsel wagon and '47 Ford Woodie Wagon, to Carroll Shelby's personal Cobra 427 Super Snake, to the Larry Winkler Collection, the Raser Collection, a private selection from the Petersen Museum Collection, even a Fender 1969 Ford Mustang Resto-Mod with matching custom '69 Stratocaster guitar and Tone Master Deluxe Reverb amp.

As always, Barrett-Jackson will donate significant proceeds to charity.

Health and safety measures this time have been expanded to include Varigard disinfectant spray delivered by Draganfly's Vital Intelligence Technology drones.

▼ www.barrett-jackson.com



Arizona Auction Week 2021: the rest

The four Arizona Auction Week events that did not run in January have rescheduled or rolled forward one way or another—some have basically moved their January events later, some had spring things already planned, some adapt in other ways, and a couple of others now fall into this new timeframe, as well. Here are current plans, chronologically:

Mecum Auctions

MARCH 18-20: (In-town limited live/online): Though not from January, Mecum will be at State Farm Stadium (Cardinals) in Glendale, forecasting 1,200 vehicles crossing the block.

▼ www.mecum.com

Barrett-Jackson

MARCH 20-27: See complete info at left.

Worldwide

APRIL 23-24: (Out-of-town limited live/online): Echoing January, Worldwide Auctioneers is running another Enthusiast Auction (from their Auburn Indiana HQ) in this new cycle.

▼ worldwideauctioneers.com

MAG Auctions

APRIL 30 - MAY 1: (In-town live/online): MAG evolves from Silver Auctions with their multiple events, so this blends the delayed January event with a spring event already planned, back in action at We-Ko-Pa Resort.

▼ www.motorsportsauctiongroup.com

Gooding & Co.

MAY 3-7: (Out-of-town limited live/online): Gooding also ran an event in January, but is running a Geared Online event (from SoCal HQ) in May, also putting it into this spring event cycle.

▼ goodingco.com

Leake Auction Co.

ONGOING ONLINE: Leake ran their first Scottsdale auction last year, a well-executed affair you'd think had been around forever. Live events are on pause for now, but they have fleshed out an Online Marketplace.

▼ www.leakecar.com

Russo and Steele

INTO THE FUTURE: Russo and Steele almost kept their January plan, toyed with rescheduling to March, but have decided to focus on Monterey in August, then back to Scottsdale in January 2022 (followed by Amelia Island).

▼ www.russoandsteele.com

Inevitable comparisons

BY JOE SAGE

There are two ways to count generations, due to origins as a Celica Supra before becoming a freestanding model. Everyone seems to have a favorite generation Toyota Supra. For us, it's generation two (from 1981-85), partly for personal reasons of discovery, though its appeal has endured.

And we like the new gen-five. It suits itself just fine as a two-seater. It's purpose-built, lightweight and strong. With so much cookie cutter uniformity on the road, its styling stands out from any angle.

We've caught up with the Toyota GR Supra 3.0 many times—at its reveal at Barrett-Jackson last year, driving it in comparo events, on track at Wild Horse Pass, then for another week, and now another. And we've kept track of its news and evolutions.

About a year ago, Toyota announced they would expand the GR Supra line, with new models above and below the 3.0. Despite an initial commitment to an inline-six (from decades of Supra tradition), there would be a GR Supra 2.0 with 255-hp turbo-four. And there would be a straight-to-racetrack 430-hp GR Supra GT4. They would also bump the existing GR Supra 3.0 from 335 up to 382 hp, not only for a better Supra 3.0 in its own right, but creating a balanced staircase among all three Supras.

Recall also the Toyota 86 (formerly Scion FR-S), a 200- or 205-hp (auto or manual) entry-priced sports

coupe. This now gives a whole class of shoppers a wide set of four sports coupes from Toyota. (Might the future hold a rebadging of the Toyota 86 as a Supra 86, formalizing a four-Supra family identity for what we think we already see? We could easily make a branding and marketing case for that.)

We had figured the Supra coming up on our calendar might be the new 2.0 turbo-four, this year's big news. But no, we would have the GR Supra 3.0 again. That is not to be dismissive—this car is always worth another visit, and its 14 percent horsepower boost would be worth checking out.

Coming straight from a higher-powered luxury roadster briefly impacted our feel for the Supra, but at a fraction of the prior car's weight, Supra 3.0's power-to-weight ratio is notably higher—it was a quick adjustment. Give it a good punch, and it's a rocket, with a smooth, transparent 8-speed shift sequence in that range (though around town we noted early torque-dropping shifts at lower speed). There is no manual transmission available.

Sport mode is accessible via one prominent flat panel console switch. While there is appeal in customizable and other modes, having just one option provides great immediacy—one choice, one tap. A console dial for the screen menu provides clean and immediate control via a four-way slide-

and-twist dial and additional flat switches, all set in a carbon fiber field (see inset photo). The screen is small, dictated by the size of the car itself; if we changed one thing it would be to add contrast where some key lettering is now grey-on-grey.

In our experience, auto start-stop also shut off HVAC, unacceptable in Arizona in the summer even for a moment. We'll look into this further. We turn this off, anyway, and its switch is just above Sport, for a convenient one-two punch at every startup.

Performance suspension and steering describe in straightforward terms, and prove quick, accurate and true—accelerating through tight S-curves, seeking advantage in tight freeway lanes, or hitting the canyons on open mountain highways.

Door openings are low—tight for entry-egress if you're tall. We learned to push our own head down with our own hand, like someone being put in the back of a squad car on a TV police show. Inescapably part of the styling, try this on for size.

At the GR Supra 3.0's reveal, Toyota identified target competitors, in one example noting that it should not be compared with a Nissan 370Z (starting at \$30k) but more accurately with the NISMO Z (at closer to \$50k). Comparisons with Germans



were along similar lines.

While GR Supra 3.0's carefully determined price point has generated wide opinions, the arrival of both less and more expensive versions will have several impacts. Supra purists may lament the 2.0 model not having an inline-six, but if that costs Toyota a few mighta-boughts, it will surely be offset by notable numbers of now-I-can-buys. In the broader comparison, Supra is no longer just one car at one price; there's much more to compare.

Conversations around town included a twist: if the Supra 3.0 costs about twice what the Toyota

86 costs, would you rather have two 86s or one Supra, and how about in a household with two drivers? A few people suggested \$120k comparisons to the Supra, so we added an uphill version of that same two-fer riddle. Discussions vary, but the Supra 3.0's value for price became clear in all.

Against the competition or within the Toyota sport stable, the more you reflect upon the Supra, the better its position is defined. Supra's appeal lies within itself, and this is where having a family of three—or four, with the Toyota 86—can keep the comparisons under one dealer's roof. ■

SPECIFICATIONS

ASSEMBLY PLANT	.....Graz, Austria
SEATING CAPACITY	.....two
ENGINE	.....3.0L inline-6 w twin-scroll turbo 24v DOHC, chain drive, VVT
HP/TORQUE	.....382 hp / 368 lb-ft
COMPRESSION RATIO	.....10.2:1
DRIVETRAIN	.....RWD
TRANSMISSION	.....8-spd automatic
SUSPENSION	.....F: double-joint type MacPherson strut; R: multi-link 5 arm
STEERING	.....electric power steering
BRAKES	.....F: 13.7" vented disc w Brembo four-piston floating caliper; R: 13.6 or 13.0" vented disc w single piston floating caliper
WHEELS	.....forged alum F: 19x9.0; R: 19x10.0
TIRES	.....Michelin Pilot Super Sport F: 255/35 ZR19; R: 275/35 ZR19 In case of flat: puncture repair kit
LENGTH / WHEELBASE	.....172.5 / 97.2 in
TURNING CIRCLE	.....34.1 ft
HEADROOM	.....38.2 in
LEGROOM	.....42.2 in
CARGO CAPACITY	.....10.2 cu.ft
GROUND CLEARANCE	.....4.5 in
WEIGHT	.....3400 lb
FUEL / CAPACITY	.....premium / 13.7 gal
MPG	.....22/30/25 (city/hwy/comb)

BASE PRICE	.....\$54,490
NITRO YELLOW PAINT	.....425
DRIVER ASSIST PKG:	dynamic radar cruise control (full speed), blind spot monitor, rear cross traffic alert, parking sensors w emergency brake function.....1195
CARPET CARGO MAT	.....80
DESTINATION CHARGE	.....995
TOTAL	.....\$57,185

(At right) Do you like driving modes? GR Supra 3.0 has Sport when you need it. And only Sport. So you don't need to look away to make the change, nor to confirm it in your binnacle. Conveniently enough, the switch to defeat ever-annoying auto start-stop is just above it. Easy to do and good to go.



**It's not just a car.
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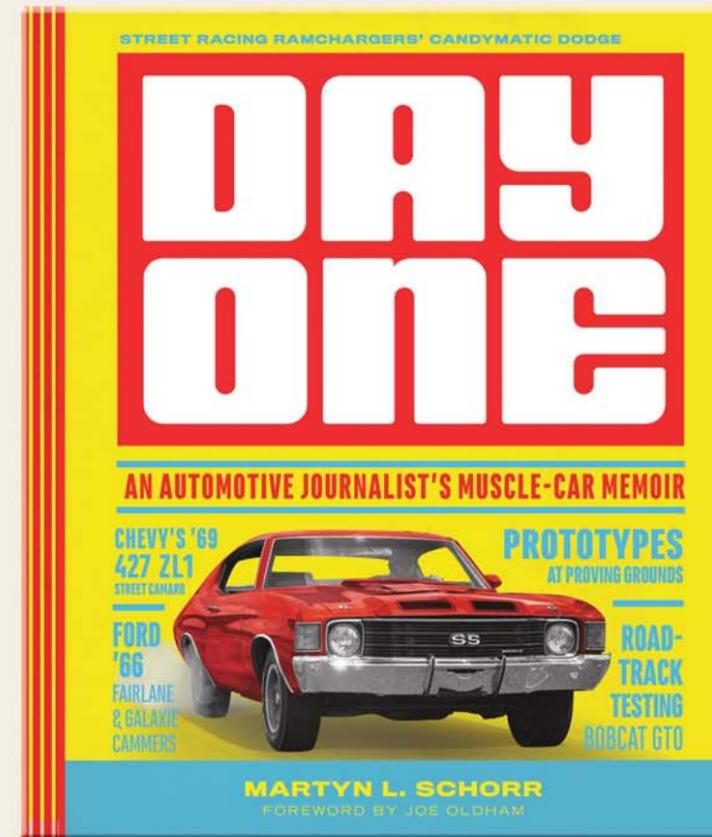
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Day One
An Automotive Journalist's Muscle-Car Memoir
MARTYN L SCHORR

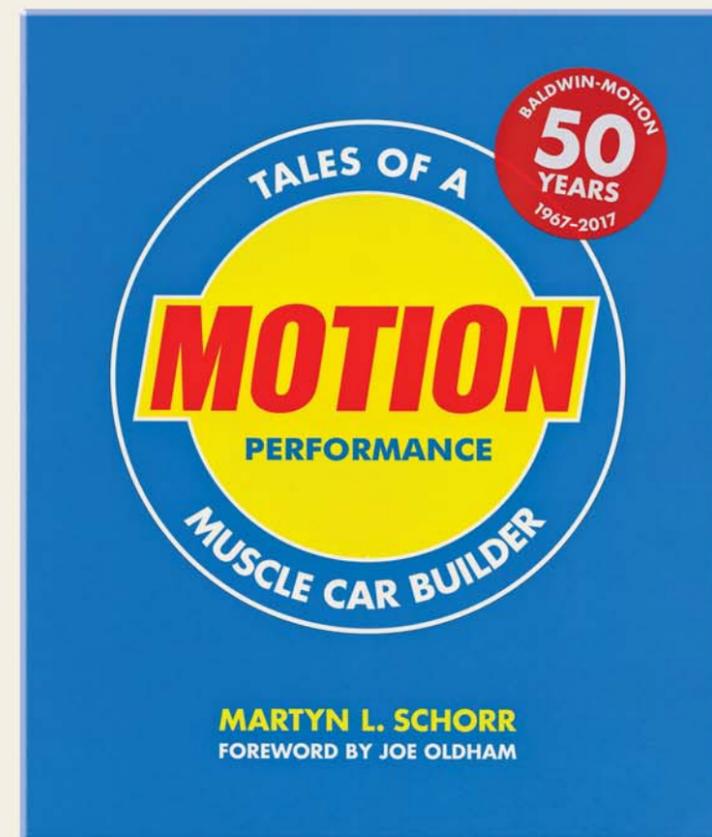
FOREWORD BY JOE OLDHAM - Most muscle-car books celebrate beautifully-restored vehicles surrounded by hard facts. *Day One* tells the real story from the point of view of one of the period's most respected automotive journalists, Marty Schorr. For the first time in print, you'll get a unique perspective on what it was like to actually drive, race and otherwise thrash what are now some of today's most valuable collector cars. *CARS*, the iconic magazine Marty wrote and edited, didn't rely on industry advertising for revenue—instead making money the old-fashioned way, from newsstand sales—leaving it able to be honest and frank in its coverage of high-performance street cars. *CARS* magazine reported on both Day stock and modified cars—cars the traditional magazines wouldn't touch—like the ultra-high-performance vehicles from companies like Baldwin-Motion, Yenko Chevrolet, Nickey Chevrolet, Royal Pontiac, and Tasca Ford. *Day One* covers the most important cars of a given year, including: Pontiac's 1962-1963 lightweight Super-Duty 421 street and Swiss Cheese models; Chevrolet's 1963 big-block 427 Mystery Motor and ZL-1 Impala; Ford 1963½ 427/425 Galaxie fastback; the 1964 Ramchargers; the first 426 Street Hemi; Cotton-Owens prepared Hemi Coronet; a 1966 Olds Twin-Engined (850 cubic inches) Grant Toronado currently owned by Jay Leno; a prototype 1966 Plymouth 426 Street Hemi Satellite; one of two 427 SOHC Galaxies prototypes; a '67 Royal Bobcat GTO; Plymouth's original '68 Hemi Road Runner; and Hurst-built Plymouth and Dodge 1968 Hemi-Darts and Hemi-Cudas.

Publisher: Motorbooks
9.25 x 10.87 in - 208 pp - 100 color & 175 bw photos
\$29.95 - hardback - ISBN 978-0760352366
Published : November 21, 2017
Available via Amazon

Motion Performance
Tales of a Muscle Car Builder

MARTYN L SCHORR
FOREWORD BY JOE OLDHAM - This is the inside story of how American muscle cars came to dominate every element of the open road and of the '60s shop that turned off-the-assembly-line muscle cars into fire-breathing performance monsters. Brilliantly illustrated with period pictures and modern color photos, the book takes you along for the ride as Cobras, Chevrolets, Oldsmobiles and even Volkswagen Beetles roll into the shop to get torn down and rebuilt into cars unbeatable on the streets and drag strips. Marty Schorr gives a first-hand account of seven years of high-performance life—and of how it all came to a screeching halt at the hands of the US Department of Transportation and the EPA. A once-in-a-lifetime tale of power and speed, told by one of the principals who put that performance within reach, *Motion Performance* makes the story of a briefly and thrillingly lived dream accessible to everyone.

Publisher: Motorbooks
8.5 x 10.0 in - 176 pp - extensive photos
\$24.99-35 (varies) - hardcover or softback - ISBN 978-0760355602
Reprint Edition: September 5, 2017 ■



Martyn L. Schorr has a history with high-performance cars that dates back to the beginning of Ford's Total Performance era over fifty years ago. He rode with Carroll Shelby and was at the press conference in New York for the debut of the Lola-built Ford GT that became the GT40. Schorr drove the GT40 on streets of New York City and went with Mickey Thompson in 1969 to Bonneville to set a book full of records. He personally knew all the key players from Ford's racing program from his years as a magazine editor.

Elegant performance battle tank

By Joe Sage

It surprised us to realize what a recent arrival the LC 500 is to the Lexus lineup. It feels as though we've driven many versions of it for many years. The fact is, however, that the Lexus LC was introduced just four years ago, in spring 2017 as a 2018 model. Thus it is not as surprising as it felt to us at first, to realize there has not been a convertible till now—introduced a year and a half ago as a 2021 model, the car we are driving here.

What already had felt like a deep, broad lineup had in fact been accomplished with just two cars, both coupes: a 471-hp 5.0L V8 Lexus LC 500, and a 354-hp LC 500h multistage hybrid with a 3.5L V6 and two electric motors for degrees of electric assist based on speed and other performance factors. Both are visually the same, both are four-seaters (with tight back seats) and both are heavyweights, the V8 coupe weighing in at 4280 lb and the hybrid with its batteries totaling 4435 lb.

The LC 500 V8 coupe has a 10-speed Sport Direct Shift automatic, while the more complex LC 500h hybrid has a multistage hybrid transmission

system comprising both a planetary-type CVT (continuously variable unit) and a four-speed automatic unique to that build.

These specs are vital when adding a convertible variant, as an open top always add weight—though small itself, a closed vehicle's roof exponentially adds strength and rigidity. Convertibles make up for this with added frame and body strength, adding weight. Thus, this convertible weighs in at 4540 lb, almost two and a half tons. (There is no hybrid convertible—at least not yet.)

All its horses and its well executed 10-speed transmission keep the convertible's weight transparent and its power on full display. The weight in fact probably provides a sense of strength and ability in ways a lightweight convertible may not.

To combine the best of its luxury interior and the great outdoors, the convertible modifies the glorious curves of the LC 500 coupe from the beltline up, but adds an irresistible trick on a beautiful day.

The top is soft, but the mechanism is as crafty, clever and complex as any retractable hardtop. And despite its complexity, it's quick. You can pause the operation, say to adjust your luggage. The windows are one-touch down (but not up).

We timed raising and lowering the top, with or without windows included. Timing is tough with pandemic distancing, done by one person with a phone as stopwatch in one hand and the convertible top controls in the other. And times are rough, but we did measure more than once.

Lowering is quick—about 15 seconds, our performance benchmark for even a simple top, highly impressive for a system with such complexity. Time to raise it is closer to 17 seconds. Either can be done at speeds up to 31 mph (50 km/h). The windows are so fast, we could barely time them, just over two seconds.

There are always notes and beefs with any vehicle, often with user interfaces, and this has a few (as always, centered around the touchpad-and-screen interface).

But when back home sitting there with the key in your pocket, only one emotion remains: you're ready to get back out there and give it another run.

Most of what can be said, this glorious cruiser says for itself. The Lexus LC 500 is always a head-turner to the world as it passes by, while delivering its owner a free spirited executive daily driver or grand touring experience second to none. ■

In line with the power, strength and speed of the LC 500 Convertible itself is its highly technical retractable top—an affair that, despite its complexity, matches or beats most of the simplest ones, at about 15 seconds to lower (at up to 31 mph).

SPECIFICATIONS

FACTORY	.....Aichi, Japan
BUILD	.....unitized steel body w steel front & rear subframes
SEATING CAPACITY	.....four
ENGINE	.....5.0L alum block/heads V8 32v DOHC dual VVT-i
HP/TORQUE	.....471 hp / 398 lb-ft
COMPRESSION RATIO	.....12.3:1
DRIVETRAIN	.....RWD, Torsen rear diff
TRANSMISSION	.....10-spd sport direct shift automatic w paddles / manual mode
0-TO-60 / TOP SPEED	.....4.6 sec / 168 mph
SUSPENSION	.....F: double-joint multi-link; R: multi-link
STEERING	.....EPS speed-sensing coaxial rack & pinion, power assist
BRAKES	.....F: 15.7" vented w 6-piston opposed alum calipers, high-friction brake pads; R: 14.1" vented w 4-piston opposed alum calipers, high-friction brake pads
WHEELS	.....(opt) 21" forged alloy (20 std)
TIRES	.....F/R: 245/40RF21 / 275/35RF21
LENGTH / WHEELBASE	.....187.4 / 113.0 in
GROUND CLEARANCE	.....5.2 in
TURNING CIRCLE	.....35.4 ft
	<i>(w available active rear steering) 34.8 ft</i>
HEADROOM (F/R)	.....36.72 / 32.07 in
LEGROOM (F/R)	.....42.57 / 28.04 in
CARGO CAPACITY	.....3.4 cu.ft
WEIGHT	.....4540 lb
FUEL / CAPACITY	.....91 oct min / 21.7 gal
MPG	.....15/25/18 (city/hwy/comb)

BASE PRICE	.....\$101,000
21" ALLOY WHEELS WITH polished finish, gloss black accents	.....2650
HEADS-UP DISPLAY	.....900
TORSEN LIMITED SLIP DIFF & YAMAHA PERFORMANCE DAMPER	.....460
INFRARED PREMIUM PAINT	.....595
PAINT PROTECTION BY 3M	.....430
CARBON SCUFF PLATES	.....600
DOOR EDGE FILM BY 3M	.....90
TOURING PKG: semi-aniline leather trimmed front seats, climate concierge w upper body heating, heated steering wheel, windshield de-icer, embossed headrest, Mark Levinson 13-sprk Reference Series surround sound audio system	.....5290
ADDTL: trunk mat, cargo net, wheel locks, key gloves280
DESTINATION CHARGE1025
TOTAL\$113,320



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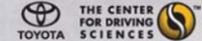
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NASCAR PHOENIX

Spring Race Weekend returns to Phoenix Raceway March 12-13-14, capped off by the NASCAR Cup Series Spring Race on Sunday, March 14. Due to ongoing pandemic enhanced safety protocols and procedures, the facility will be hosting a limited, reduced number of fans throughout the three-day event, with the reduced capacity intended to provide a safe environment for fans, competitors, employees and industry personnel.

As a result of the seating capacity limitations, many guests will have their grandstand seats relocated to ensure social distancing between groups. Also due to the limited capacity, Phoenix Raceway will not be able to accommodate some guests who had already purchased tickets for the spring event weekend. Season ticket holders will receive priority as part of this process.

Due to restricted access to the competition area, the INfield Experience will not be available, but

similarly to the NASCAR Championship Weekend last November, reserved table seating will be available in the infield as part of the INfield Hub for the NASCAR Xfinity Series race on Saturday and the NASCAR Cup Series race on Sunday. Hillside seating will also be made available on Sunday.

Camping will still be available, with campgrounds opening on Monday, March 8. All campers will be pre-screened upon entry and will be asked to park in the same direction on the right side of each campsite with all campsites limited to a maximum of six guests per spot.

In addition to maintaining a strict adherence to six-foot social distancing throughout the venue, all guests will be screened before entering the facility at staggered entry times and will be required to wear face coverings. Multiple handwashing and hand-sanitizing stations will be placed throughout the operating areas and entrances and a "clean

team" of staff, clearly identified for guests, will be cleaning or disinfecting at all times.

FALL: Having hosted the championship for the first time in November 2020, Phoenix will do so again this November 5-6-7. The 2021 NASCAR Championship Weekend will again feature four championship races over three days, with champions crowned in the Cup Series, NASCAR Xfinity Series on November 6 and NASCAR Camping World Truck Series, as well as the ARCA Menards Series West.

TICKETS & INFO: Tickets for the Spring Race Weekend, as well as detailed information about safety protocols, are available online at PhoenixRaceway.com, or by calling the Phoenix Raceway ticket office at 866-408-RACE (7223).

Fans looking to secure their spot at the 2021 NASCAR Championship Weekend as early as possible may do so now by locking in their 2021 season tickets at Phoenix Raceway. Fans can view the full 2021 NASCAR Cup Series schedule and purchase tickets at nascar.com/tickets.

SPRING RACE WEEKEND MARCH 12-13-14, 2021

**ARCA MENARDS SERIES
GENERAL TIRE 150**
FRIDAY, MARCH 12

**NASCAR XFINITY SERIES
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PRESENTED BY ARIZONA 811
SATURDAY, MARCH 13

NASCAR CUP SERIES RACE
SUNDAY, MARCH 14

FALL NASCAR CHAMPIONSHIP WEEKEND NOVEMBER 5-6-7, 2021

LUCAS OIL 150
FRIDAY, NOVEMBER 5

**NASCAR XFINITY SERIES
CHAMPIONSHIP RACE**
SATURDAY, NOVEMBER 6

**ARCA MENARDS SERIES WEST
CHAMPIONSHIP RACE**
SATURDAY, NOVEMBER 6

**NASCAR CUP SERIES
CHAMPIONSHIP RACE**
SUNDAY, NOVEMBER 7



THE STARS ALIGN IN VALENTINE

by Tyson Hugie

Tyson Hugie's blog: www.drivetofive.com
 YouTube channel: Tyson Hugie:
 "2021 Acura NSX: Looking for Love in Valentine, Arizona on Route 66"

It seemed appropriate that several stars aligned during the seven-day period that I would have the keys to a 2021 Acura NSX. It was Valentine's Day weekend, the car was painted Valencia Red, and I'd been itching to get out of town for a road trip for some time. I remembered that Arizona is home to a community called Valentine, and the rest is history: I took a 500-mile day trip to check it out.

During the heyday of Route 66, this roadway carried thousands of travelers between its Santa Monica and Chicago endpoints. But in 1978, Interstate 40 was completed about 30 miles to the south, rendering 66 obsolete and bypassing the town. Valentine, like so many other communities, was left to desolation. As of 2000, the census tallied 36 residents. On my visit, I saw not a single person—nor a single building that looked like it was currently inhabited at all.

Like so many of the adventures I've documented, the destination in this case was far less important than the journey. And spending about eight hours behind the wheel of a \$197k supercar was a pretty nice way to spend the day. My travels took me initially from metro Phoenix up through the towns of Wickenburg and Wikieup—each stuck in a time warp of its own, relying primarily on flow-through traffic between Phoenix and Las Vegas to survive economically.

When I got to Kingman, I stopped briefly at the old power plant, which has been repurposed as a visitor center. Conveniently, there was a restaurant called Mr. D's across the street, and I was ready for lunch. Homemade root beet was served in a frosty glass, and it hit the spot. Kingman embraces its Route 66



heritage in a big way, and you only have to drive a few blocks along the Historic Route 66 Bypass—Andy Devine Avenue—to see that.

It took me about 30 minutes to get from there to Valentine, by way of a mostly flat two-lane road that took me through the desert countryside. I had to make a customary stop at the Hackberry General Store, where people had stapled \$1 bills to the ceiling and walls, accompanied by license plates from around the country and around the world.

My stay in Valentine was short-lived, as I had had a feeling it would be. The most pre-

(cont'd)



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dominant remaining bit of civilization there is the 1903 Truxton school house, a two-story brick building that served as an educational institution for Native Americans until the late 1930s, but is abandoned now.

But that NSX! Talk about a crowd-pleaser. I'm certain I ended up on the TikTok, Snapchat or Instagram of at least a dozen people throughout the course of the day, based on the number of cameras I saw poking out of other vehicles. I guess if there's one modification the car needed but didn't have, it was window tint. Privacy is not afforded with that car. The level of performance, coupled with its overall driving friendliness, is pretty remarkable. It's a car you can pin at 70 mph on cruise control and drive all day comfortably, but still transform into a nasty speed machine on a moment's notice, thanks to its twin-turbo V6 coupled with three electric motors. The press car I was allocated was wearing well-used Continental tires with 7,000 miles on them—complete with very evident outside edge wear. I suppose every journalist before me



discovered the same thing I did: the car handles like nothing else. Taking a corner at any speed becomes confidence-inspiring.

Whether or not Valentine had any love to offer when I got there was beside the point. The mere act of getting there and back was better for my heart and soul than I could have ever expected. ■



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BONDURANT HIGH PERFORMANCE DRIVING SCHOOL



NEW POLICE, MILITARY AND SPECIAL FORCES TRAINING

Bondurant High Performance Driving School, the official high performance driving school of Dodge//SRT, has developed two new training curricula designed to teach US special operations units, the US Marshals Service, FBI and other law enforcement agencies how to successfully navigate high risk driving situations.

Tactical Driver Training (TDT) and Enhanced Driver Training (EDT) courses were introduced for the first time last August during the training of 100 Arizona law enforcement personnel.

The TDT course transitions an everyday tactical driver into a confident high-performance vehicle operators. Daily driving habits are broken down and replaced with 40 hours of new vehicle management techniques. Techniques are paired with the ability to analyze maneuver risks and select the best method to maximize performance and preserve the vehicle, with 90 percent of training time spent behind the wheel of five different vehicle types on four tracks. Training culminates in a series of full mission profiles that present operators with ambiguous scenarios requiring rapid decision making and vehicle management under pressure.

Enhanced Driving Techniques (EDT) is a 40-hour course that builds off the TDT course and includes daily track time to push students to new limits of physical, mental and emotional fatigue which physiologically manifests symptoms similar to hypoxia. Students master new vehicle management techniques to hyper-focus quickly and maximize vehicle performance.

"Repetition, speed and power are integrated into both courses to create a pressurized environment that transitions students from driving under stress to managing duress behind the wheel," says Bondurant chief instructor Mike McGovern. "We've created proven techniques for students to tap into the depths of concentration and emotional control while driving. The ability to make the best micro-decisions at high speeds maximizes vehicle performance and helps the officer safely accomplish the mission."

The largest purpose-built driver training facility in North America, Bondurant has the capacity to train large teams or provide discreet 1:1 low-profile learning on its 60-acre facility. Law enforcement, military and special forces drivers training is available year-round. Call 480-403-7600. ■

Like it never left

BY JOE SAGE

OUR FIRST HANDS-ON TASTE OF THE NEW THREE-VEHICLE BRONCO FAMILY

Bronco is back—and although everything is utterly updated for the new millennium, it's like seeing an old friend after a long time, as all the years in between just disappear. Even if you've never owned a Bronco, you can easily feel that something very important has just made it home.

It's a move that has been long rumored, and Ford finally found everything aligning—significantly their own corporate moves toward more SUVs, an emphasis on “icon” brands and models, and the creation of “families” around those icons. (It's what brings us the Mustang Mach-E, along with moves into EV territory in that case, also.)

Ford Bronco Sport, driven here, is one of three Bronco family members all launched simultaneously, straight out of the chute. (While Mustang waited decades to become a family, this move suddenly makes the whole company-wide plan click.)

The other two Bronco family members—Bronco Two-Door and Four-Door—are most like the original gen-one machine, maximum off-roaders (with plenty of appetite for daily use, too). Bronco Sport gives the family another dimension, with a layout a little more familiar to a wider set of SUV/crossover buyers, great for daily use (with plenty of appetite for off-road adventure, too).

Bronco Sport has the least expensive entry point among the three, though not by much—\$1840 overall (against the Bronco Two-Door). Against the Four-Door, however (the Sport's clearer functional alternative), Sport starts \$6540 lower.

All three have very wide trim ranges. Our Sport's Big Bend trim is second-up (by just \$1340) among four available trims (five when you add a limited-run First Edition this year). As you would expect, it does not have some features that kick in when you move to higher trims. Our Big Bend has rugged cloth seats, no seat-mirror memory, power seats but without tilt, that kind of thing. Its infotainment screen is as complete as any (we suspect), including some pretty entertaining rough and rugged animated graphics when you fire it up.

Though Bronco Sport is bound to appeal to a

wide range of buyers with mainstream needs, its off-road chops are not to be sold short. Wheel sizes and related clearance and approach angle specifications grow as you move up the line, too, as does the engine if you move all the way to the top of the list.

Differentiating Bronco Sport from more mundane SUVs are Bronco staples: its H.O.S.S. (High-Performance Off-Road Stability Suspension) system and its G.O.A.T. Modes (Goes Over Any Type of Terrain), selectable for normal, eco, sport, slippery or sand (leaving it up to us to decide whether a particular snowfall is wet or dry). Ground clearance is average, approach angles are healthy, it tows up to 2000 lb when equipped, and it has unusually good water fording range, almost a foot and a half.

Engine power is a differentiator. The first three Bronco Sports bear a 1.5-liter EcoBoost turbo with a reasonable 181 hp and 190 lb-ft of torque. Ford doesn't make a lot of noise about the fact this is a three-cylinder, but perhaps they should—we first drove a 1.0-liter EcoBoost three-cylinder at their Dearborn Development Center test track in Michigan back in 2012, and it blew us away. With a weight under 3500 lb, the engine performed quite well in our Bronco Sport, and while our sticker didn't state fuel mileage, EPA reportedly has it at 28 mpg highway. If budget allowed, though, we'd also take a look at the Badlands (and this year also First Edition) for its 2.0L EcoBoost four-cylinder putting out 250 hp and 277 lb-ft, reportedly getting 26 mpg highway, and of

course with more features at higher cost.

Check out the build and dimensional specs for our Big Bend in the sidebar. You can compare all three Broncos and all trim levels online to parse exactly where this one sits, point by point. Or do as we did and just take it straight out into the wild.

Driving around town, as a customer will in any brief test drive, is useful to a point. But we're able to go well beyond that, so we did, taking our Bronco Sport on some rough and rocky roads we visit regularly. It's not major rock crawling—with pandemic rules, there's no spotter along, for one thing—but it's a really rocky road with notable high points in its rocks. It tests your traction, ground clearance in general, articulation, the ruggedness of the whole setup—if anything went wrong, you'd find yourself quite far from home very fast as the sun goes down—and in all counts, the Bronco Sport is quite impressive. This is one rugged little utility.

Between capabilities and its prominent Bronco badging, even someone who never leaves town and treats it like just another SUV will find plenty of bragging points in hand. But you'll really want to take it somewhere adventuresome when you can, or you're going to miss a lot.

The Bronco brand was away from us for a quarter century—even the newest of older Broncos now qualify for vintage plates—yet the world never forgot about it, nor did Ford forget about the world that was clamoring for its return.

We now of course look forward to some time in its big siblings, the Bronco Two- and Four-Door. ■



One look at the bucking bronc logo and our first thought was it was worth bringing the Ford Bronco back just for that, as solid a mascot as the Mustang running horse that's been with us for over 50 years straight.

SPECIFICATIONS

ASSEMBLY.....	Hermosillo, Sonora, Mexico
ENGINE BUILD.....	Chihuahua, Mexico
SEATING.....	five
ENGINE.....	1.5L EcoBoost 3-cyl turbo alum/alum block/head, DOHC, TI-VCT, composite intake manifold, integrated exhaust manifold, alum pistons, powder forged rods, cast iron crankshaft
HP/TORQUE.....	181 hp / 190 lb-ft
DRIVETRAIN.....	4x4 w air-cooled PTU, disconnectable drive- shaft, single clutch RDU
TRANSMISSION.....	8-spd automatic
G.O.A.T. MODES™.....	Goes Over Any Type of Terrain: selectable modes: Normal, Eco, Sport, Slippery, Sand
FINAL RATIO.....	3.81
CRAWL RATIO.....	18:1
CHASSIS / SUSPENSION.....	H.O.S.S. System F: indep MacPherson strut-type w coils, stblzr bar, twin-tube hydraulic gas-pres- surized shocks; steel subframe w alum lower control arm and cast knuckle; R: indep dbl lateral link semi-trailing arms w coils, stblzr bar & monotube hydraulic gas-pressurized shocks; isolated steel subframe w cast knuckle
STEERING.....	elec power-assisted (EPAS)
BRAKES.....	vacuum standard (elec optional) F: 16" vented, single piston; R: 16", single piston, elec park function
WHEELS.....	17" carbonized high-gloss alum
TIRES.....	225/65R17 A/S
LENGTH / WHEELBASE.....	172.7 / 105.1 in
HEIGHT / WIDTH.....	70.2 / (excl mirrors) 74.3 in
TRACK, CURB (F/R).....	63.4 / 62.8 in
TURNING CIRCLE.....	37.4
HEADROOM (F/R).....	41.5 / 41.7 in
LEGROOM (F/R).....	42.4 / 36.9 in
CARGO CAPACITY.....	32.5 / 65.2 cu.ft
GROUND CLEARANCE.....	7.8 in
PTU TO GROUND (F/R).....	9.4 / 8.7 in
OVERHANG (F/R).....	33.7 / 33.9 in
APPRCH / DEP / BRKOVER.....	21.7 / 30.4 / 18.2°
WATER FORDING.....	17.7 in
PAYLOAD / TOW CAPACITY.....	1170 / 2000 lb
WEIGHT.....	3457 lb
FUEL CAPACITY.....	16 gal
MPG.....	na

BASE PRICE \$28,160

BIG BEND INCLUDES: cloth front bucket seats, rubberized cargo floor, SecuriCode keyless entry keypad, zipper pockets w Molle strap system (front seatbacks), LED foglamps, 17-in carbonized gray-painted high gloss alum wheels, terrain mgmt system (TMS) w five G.O.A.T. Modes™, safari style roof.

BIG BEND PKG: power moonroof, reverse sensing system, wireless charging pad, heated front seats.....1595

ALTO BLUE METALLIC.....395

FORD CO-PILOT360 ASSIST+: adaptive cruise w stop-&-go & lane centering, evasive steering assist, voice-activated touchscreen nav w pinch-to-zoom compatibility, SiriusXM Traffic & Travel Links, speed sign recog.....795

DESTINATION CHARGE.....1495

TOTAL.....\$32,440

BRONCO SPORT MODELS / TRIMS

Base.....Starts at \$26,820

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Outer Banks.....Leather, tech, style upgrades

Badlands.....Maximum off-road model

First Edition.....Badlands-based lmted run 2000x

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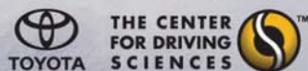
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NIKOLA UPDATES

COOLIDGE FACTORY: After a late 2020 ground-breaking ceremony, steel erection at Nikola's greenfield manufacturing facility in Coolidge, Arizona started by the end of the year and is now almost complete. Roof installation, siding and concrete slab work are well under way, with installation of manufacturing equipment set to begin in May. Nikola is hiring manufacturing employees in the Pinal County area have started training their manufacturing technicians. Trial production of Nikola Tre BEVs at Coolidge starts in third quarter 2021.

WATER SERVICES: Regulatory filing and permit processes are underway for Global Water Resources Inc, a pure-play water resource management company, to be exclusive provider of water, wastewater and recycled water services to Nikola's Coolidge plant. The site is adjacent to 2,700-acre Inland Port Arizona, a mega-site a 3.4-sq-mi region between Tucson and Phoenix, under development by Saint Holdings, where the Arizona Corporation Commission (ACC) recently granted Global Water an exclusive water, wastewater, and recycled water services permit.

APS ELECTRICITY DEAL: In December 2020, Arizona Public Service Company (APS) and Nikola negotiated a competitive rate, unanimously approved by the Arizona Corporation Commission on January 12, 2021. Nikola estimates that under the innovative rate structure they will be able to produce hydrogen at price parity with diesel fuel, delivering hydrogen at market leading prices and within the range required for Nikola to offer customers a competitive total cost of ownership.

PROGRESS IN GERMANY: Nikola and IVECO made big progress during the fourth quarter at their joint venture manufacturing facility on IVECO's campus in Ulm, Germany. Dismantling and refurbishment of buildings is done, and crane and subgroup infrastructure are installed. Onsite installation of customized automatic guided vehicle systems is next, with logistics warehouse, internal logistics, end of line, finishing, enterprise resource planning system implementation, and ordering and installation of tools and equipment to be complete by the end of May. Trial production of Nikola Tre BEVs starts in June.

TRE BEV: Nikola has completed assembly of their first five Nikola Tre full battery-electric (BEV) prototype semi-trucks. All are in the commissioning process and are ramping up to full speed, torque and payload hauling capacity as part of a level two software release and vehicle validation process. Four trucks are in North America at multiple locations undergoing powertrain, durability and extreme weather testing; the fifth remains in Europe for ABS braking, traction control and electronic stability control testing. Nikola and IVECO have also begun assembly of a second batch of prototypes at their German JV facility.

FUEL-CELL VEHICLE LINEUP: Nikola has revealed more details of its North American hydrogen fuel-cell electric vehicle (FCEV) commercial truck program. Following the North American production launch of the Nikola Tre BEV for metro/regional trips up to 300 miles, Nikola plans a fuel cell Nikola semi-trucks: the Nikola Tre FCEV Cabover, for regional trips up to 500 miles with fast fueling and quick turnaround needs; and a Nikola Two FCEV Sleeper (for long-range missions up to 900 miles, targeting best-in-class efficiency for North America.

FUEL-CELL AND HYDROGEN STORAGE SYSTEMS: The Nikola Tre FCEV Cabover and Nikola Two FCEV Sleeper are expected to utilize multiple common fuel-cell power modules and scalable hydrogen storage systems, both currently in development and testing with industry leaders in collaboration with Nikola Engineering. The first Tre prototypes using these systems are expected to begin road testing in 2022.

"Our plan is to enter the market in steps," says Jason Roycht, global head of FCEV at Nikola. "We are building on the current Tre platform with the planned launch of our fuel-cell and hydrogen storage systems in 2023... designed to be scalable in order to handle the greater power and longer-range requirements for long-haul, which allows for concurrent integration into the chassis design of the Nikola Two FCEV Sleeper. Utilizing common components and systems for hydrogen propulsion will support greater economies of scale and also allow Nikola to continuously expand and adapt our FCEV truck portfolio to address the diverse requirements of commercial trucking." ■

(Right, top to bottom) Groundbreaking, first steel, Coolidge manufacturing facility progress, Nikola Tre FCEV Cabover, Nikola Two FCEV Sleeper.



The Sorento midsize crossover has been a hot seller for Kia for its ten years. Its newer sibling, the big three-row Kia Telluride, has been a hot seller for its two years—so hot, it has quickly caught up with Sorento over the past year and has in fact passed it in sales for the past few months.

The two are now more apples-to-apples, two rows or three, as Telluride influences from styling to features are noticeable in the new fourth-generation Kia Sorento, revealed just over a year ago.

The Sorento family includes twelve models with three powertrains and varying drivetrains.

Gasoline-only models come with either of two engines: a 191-hp 2.5L normally aspirated four-cylinder, or a 281-hp 2.5T turbo-four. Each of five trim levels is available with either front- or all-wheel drive. (SX Prestige tosses in one apple-and-orange by making the AWD version an X-Line.)

The Sorento Hybrid, new to the model, offers one powertrain, front-drive only and two trim levels (which equate to the second-up and midlevel trims of the five gasoline models). Drive power in the Hybrid comes from a combination of a 177.2-hp 1.6T gasoline turbo-four and 60.1-hp electric mot-

or, together producing 227 total system horsepower and 258 lb-ft of torque. Both specs fall firmly between the two gasoline engines' specs (welcome for avoiding apples-to-oranges overlap sometimes encountered in this scenario).

Sorento Hybrid can tow—1654 lb unbraked (the same as the gasoline lineup, although those show a 2000-lb capacity when braked; Hybrid doesn't).

One more piece of big news for a popular question: yes, a PHEV should arrive later this year.

The new Sorento Hybrid was here for effectively just one drive day. We're scheduled to receive the line-topping SX Prestige X-Line for a week in late April (new to Sorento, this is along the lines of the Kia Soul X-Line seen in our pages two years ago—an edgy, high-end treatment now working its way into other models). We'll flesh out the new Sorento overall in more detail at that time.

We generally keep an eye on weather throughout the region, with adventuresome drives in mind—especially if we have a pickup or SUV coming in wintertime, when we might be able to tackle the snows of Northern Arizona. Weatherwise, we lucked out—the state was hit with a snowfall that

painted the Valley's mountains white and dumped more than two feet in about a day at higher elevations. With the hybrid a front-driver only, though—due to components of its complex motor and battery format, at least for now—a more extreme winter drive was not in the cards. Irresistible as a concept, though, we headed out the Beeline Highway to at least photograph the vehicle with deeper snows in the background—but to no avail, as the highway was completely closed several miles north of Fountain hills, due to the snowy conditions farther up.

It was enough time to learn the vehicle's basics. There are just three drive modes: eco (default in the hybrid, in lieu of normal), sport and smart (a system-calculated set of attributes for conditions and drive style). The hybrid drive experience is quite transparent. A binnacle gauge set reflects electric charge conditions, where a tach would otherwise be. (Its very aggressive auto start-stop system might reveal itself too readily on a tach, anyway).

The console-mounted rotary shifter is a spring-loaded knob—reverse or drive, return to center, with park operated via a center button. It's elegant and functional enough, but you will want to be sure not to confuse it with the infotainment controller, a smaller knob nearby with similar look and feel.

You can spot this model by its 17-inch wheels and tires, in line with rolling resistance goals of a hybrid. The gasoline Sorento lineup has 17-inchers only on the entry trim, with others bearing 18- or 20-inchers, more in line with the times. Turning circle is the same on all models, regardless of wheel

electrified apples and oranges

BY JOE SAGE



SPECIFICATIONS

FACTORY	.....Hwasung, Korea
ENGINE	.....1.6L 4-cyl turbo GDI hybrid engine
HP / TORQUE	.....177.2 hp / 195.4 lb-ft
COMPRESSION RATIO	.....10.5:1
ELECTRIC MOTOR	.....permanent magnet synchronous
POWER / TORQUE (F/R)	.....60.1 hp / 194.7 lb-ft
BATTERY PACK	.....high voltage: 270 V, 6 Ah, 1.5 kWh
TOTAL SYSTEM PERFORMANCE	.....227 hp/ 258 lb-ft
DRIVETRAIN	.....FWD
TRANSMISSION	.....6-speed automatic
0-TO-60 / TOP SPEED	.....8.6 sec (to 100 kph) / 120 mph
BRAKING DISTANCE	.....126 ft
SUSPENSION	.....F: MacPherson strut; R: multi-link
STEERING	.....rack mounted motor-driven power
BRAKES	.....F/R: 12.8" vented disc
WHEELS / TIRES	.....7.0Jx17 alloy / 235/65R17
LENGTH / WHEELBASE	.....189.4 / 110.8 in
GROUND CLEARANCE	.....6.85 in
APPROACH / DEP / BRKOVER	.....16.8 / 21.3 / 15.1°
TURNING CIRCLE	.....37.92 ft
HEADROOM (F/2/3)	.....40.3 / 39.1 / 36.8 in
LEGROOM (F/2/3)	.....41.4 / 40.7 / 29.6 in
CARGO CAPACITY	.....12.6 / 38.5-45.0 / 75.5 cu.ft
WEIGHT	.....3542 lb
TOW CAPACITY	.....1654 lb
FUEL / CAPACITY	.....na / na
MPG	.....39/35/37 (city/hwy/comb)

BASE PRICE	.....\$36,590
RUNWAY RED PAINT	.....445
EX TRIM LEVEL ADDS:	Panoramic sunroof w power sunshade; smart power tailgate; wireless charge pad; front LED foglights; enhanced fwd collision (cyclist-junction); park distance warning front; smart cruise w stop & go.
DESTINATION CHARGE	.....1170

TOTAL **\$38,205**

size—almost 38 feet, not remarkable, but it feels tighter than this in real world use, a plus.

Hybrid pricing is very close to the AWD versions of corresponding trims in the gasoline lineup. The tradeoff is a generous dose of what you would expect from a hybrid—its best fuel mileage (39 mpg city) is ten points higher than the most frugal gasoline number (base 2.5L, 29 mpg highway).

Stay tuned for more info with our X-Line drive. ■

2021 KIA SORENTO LINEUP

Front-wheel-drive unless noted as AWD

Sorento 2.5	LX	.....\$29,390
	LX AWD	.....31,190
	S	.....31,890
	S AWD	.....33,690
Sorento 1.6T Hybrid	S	.....\$33,590
	EX (driven here)	.....36,590
Sorento 2.5T	EX	.....\$34,990
	EX AWD36,790
	SX37,990
	SX AWD39,790
	SX Prestige40,590
	SX Prestige X-Line AWD42,590

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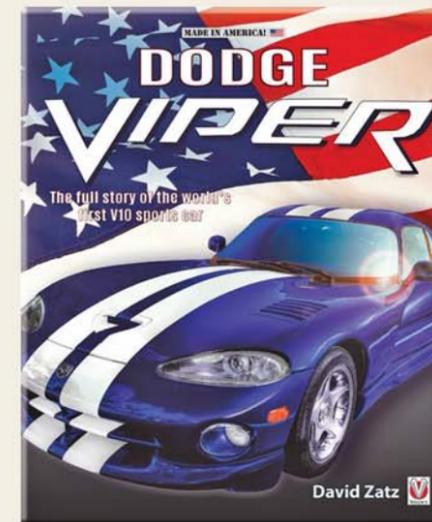


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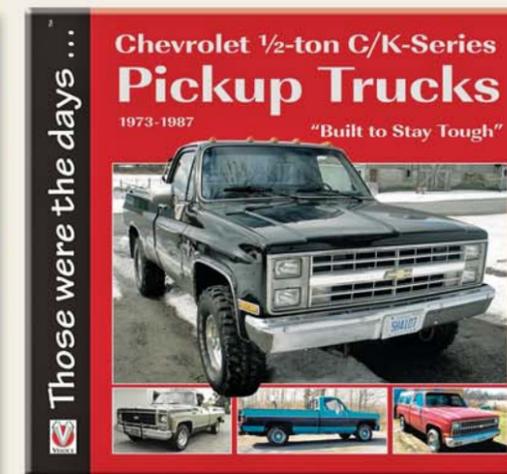
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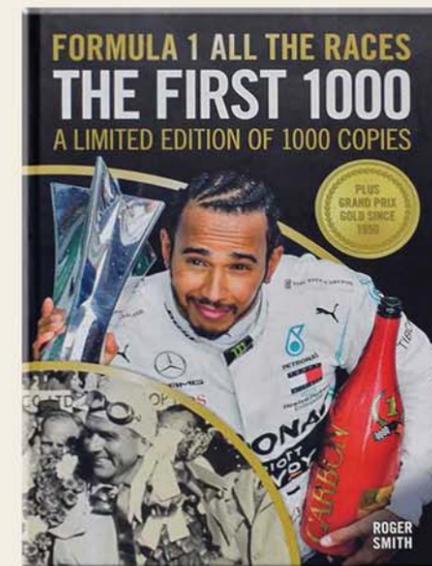
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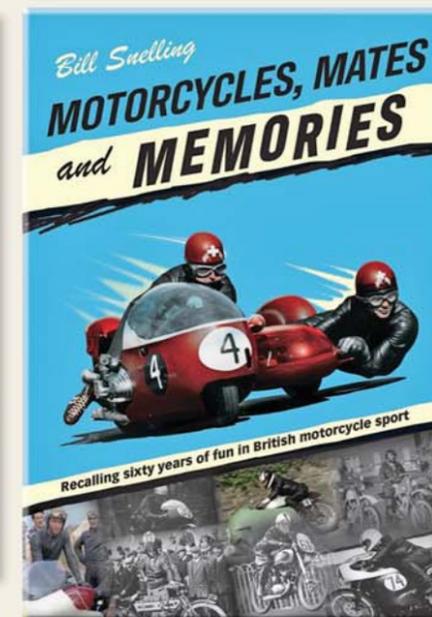
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"Built to Stay Tough"
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 Publisher: Veloce
 7.5 x 8 in - 96 pp - 112 pictures
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A limited edition of 1000 copies
 Roger Smith
 Publisher: Veloce
 16.9 x 23.3 cm - 720 pp - 189 authentic photos
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Sixty years of fun in British motorcycle sport
 Bill Snelling
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 14.8 x 21 cm - 160 pp - 202 pictures
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Dodge Viper: the full story of the world's first V10 sports car
DAVID ZATZ - The Viper showed America that Dodge, then known for front-wheel-drive, four-cylinder K-cars, could make a raw, brutal, V10-powered car that could run with the best. Viper then showed the world, proving at Le Mans that it could handle turns, too—so well that it won its class, repeatedly, at a fraction of the cost of the cars it beat. This book covers concept to rough, brutal rocket to world-class supercar, over every generation, as well as rough times as a business and alternative paths Viper might have taken—an objective view with business, historical, enthusiast and owner perspectives on each generation.

Chevrolet 1/2-ton C/K-Series Pickup Trucks 1973-1987
NORM MORT - This detailed book looks at the history and development of the popular third-generation Chevrolet half-ton C/K Series pickups from 1973 to 1987—going head-to-head in a highly competitive marketplace with Ford's always popular F150, while other truck builders—Dodge, International Harvester and Jeep—were constantly applying pressure to capture more market share. Complete with specifications, model options and revelations about the market forces that influenced the pickup's evolution, it includes rare cutaways, previously unpublished photos, and examples of restored and customized vehicles.

Formula 1 All The Races - The First 1000
ROGER SMITH - Detailing Formula 1's first 1000 races is this numbered limited edition, popular with F1 fans and pundits alike. Only available direct from Veloce till now, you could get a copy with the number of your choosing whenever possible. Now they are making it available to more stores and to more online vendors, worldwide—where you won't be able to choose a specific number, though you still can direct from Veloce. Released in September 2019, before the F1 season ended, with a free download bringing coverage up to date, this book—even without a global pandemic and 2020's shuffled F1 schedule—is the most current source for F1 statistics, standings and trends available. Get your unique numbered copy today, online or by phone.

Motorcycles, Mates and Memories
BILL SNELLING - This autobiography is a social history at the heart of British motorcycle sport—decades of two-wheeled mayhem, mud and madness, that have characterized the author's 70-odd years, from early days at Arthur Lavington's Velo shop, to pounding long distance trials and race circuits. Better off-road than on tarmac, he did win one race, in 1972 at Cadwell Park. Having worked in motorcycle shops, as an advertising exec at *Motorcycle Sport* magazine and as a dispatch rider in London, in 1975 he visited the Isle of Man to watch the TT—and has remained there ever since. For over a decade, Bill amassed a historical archive of over 250,000 photos, covering the TT, Manx Grand Prix, Southern 100 and Andreas Racing from inception to current day, as well as the Ulster Grand Prix and UK short-circuit meets in the '50s. Included are Ducati, Morini, Norton, Triumph, Velocette—and Bill's passion and experiences as a rider and competitor in classic motorcycle racing. ■



Neither rain nor sleet nor snow nor dead of night

shall keep this truck from its appointed rounds

The classic Post Office slogan springs to mind as we take this nightlife-ready special build north to meet the elements

by Joe Sage

Tundra has long been sort of the odd-man-out among pickups, evolving from a “7/8-sized” T100 to Tundra, then to conventional full-size, but never achieving a presence as big as the major brands. (It comes only as a 150/1500 equivalent, and its lack of a heavy duty model surely limits its impact in the marketplace.) Setting aside relativities, Tundra offers all the fundamentals of the category’s definitions of size, format and function.

DoubleCab or CrewMax cab and bed variables aside, there are basically three levels of Tundra—SR5, Limited, and Platinum or 1794 Edition (those last two roughly equal top tier level, with varying style and finish details).

Most fundamentals, including a single 5.7L V8 gasoline engine, are the same across the entire Tundra lineup, other than in TRD Pro,

which has beefed-up suspension and added skid plates for higher ground clearance and tougher off-road duty. Our last full-week Tundra drive, last summer, was an Army Green TRD Pro, and we found a lot to like.

Toyota revealed two new Tundra Special Editions last summer—the Trail Edition and the Nightshade Edition we are driving here.

Nightshade is conceived with more of a Gotham City at midnight persona, while Trail as more of a great outdoors adventurer. Trail is based on the SR5 CrewMax, while Nightshade is based on Limited with either a DoubleCab or CrewMax build. Both are built on the basic Tundra, with the same engine, transmission, four-wheel-drive system, suspension, steering, brakes and other fundamentals. Details vary by general style and



function. Based as it is on the mid-level Limited, the Nightshade Edition has a solid set of features and finishes at a decent price.

Overall, either should be just about equally good for a run up I-17 to the high country, other than a difference in wheels and tires, significant in winter. Nightshade does have bigger wheels and wider tires than the Trail Edition, ours bearing Dunlop SP Sport 5000M Ultra High Performance All-Seasons. Combining UHP and all-season characteristics in the same tire is a new direction from several tire makers, and though they’re a minor miracle, they are certainly not full-blown snows. We’d been keeping an eye on the forecast for up north, thinking about a dash to Flagstaff or beyond for a change of weather. We weren’t intending to four-wheel or winter rally drive,

just to snag a few snapshots in the snow.

Skies were clear in the Valley all morning, and desert weather systems often vaporize before they hit. But by midday, we could see a wall of major weather building to the north. Good! That’s what we want. We headed out.

The drive up I-17 has built-in challenges—mostly two lanes each way, twists and turns and radical elevation changes, all the things we love that preserve the terrain and make for a great drive. The Tundra delivered the power, performance, handling and solid lane-holding always welcome here, to continually avoid being boxed in by semis, campers, livestock trailers, cars and trucks large and small, new and old, at wildly varying speeds.

Tundra’s intelligent transmission gets the job done reasonably if somewhat imperfectly—for example, on a long uphill grade where it needed to shift down, it shifted up, then realized its mistake and shifted down. On the plus side, that was quick and did not cost us any noticeable speed or momentum.

As we neared Flag at about 3:30 pm—having already noted sunset time, but not adding a factor for the thick blanket of weather forming between us and the waning sun—we were greeted by late dusk light or lack thereof. We stopped shy of town, before it got any darker, and grabbed these photos.

We headed into town at about 4:30, and by now it was not only completely dark, several inches of snow had fallen, and it was getting heavier. Winter driving skills vary in Flagstaff—people have come from all over, plus many have just pulled off while passing through on I-40—and pockets of slip-sliding chaos were developing in spots. An overnight might give us great morning photos. It might also give us a really long drive back, as the Interstates (if open) slow down considerably during heavy snowfalls. Most of all, it wasn’t even 5 pm yet, far from bedtime. We decided to head back home that same evening. We had plenty of slow traffic and wide plow wings to dodge for the first half-hour or so, then smooth sailing.

SPECIFICATIONS

ASSEMBLY PLANT	San Antonio TX
ENGINE	5.7L DOHC EFI V8, 32v Dual VVT-i, EFI dir inj, aluminum block
HP/TORQUE	381 hp / 401 lb-ft
TRANSMISSION	6-spd electronically controlled auto w ECT-i intelligence, sequential shift mode, uphill/downhill shift logic, tow/haul mode
DRIVETRAIN	4x4: 4WDemand part-time 4WD w electronically controlled transfer case, active traction control (A-TRAC) and automatic limited slip differential (Auto LSD)
DIFFERENTIAL RATIO	(w tow pkg) 4.30
TRANSFER CASE (HIGH/LOW)	1.000/2.640
SUSPENSION	F: indep high-mounted dbl-wishbone w 1.42" stblzr bar & low-pressure nitrogen gas shocks; R: live axle w trapezoid multi-leaf springs, outboard-mounted low-pressure nitrogen gas shocks
STEERING	rack & pinion hydraulic pwr w fluid cooler
BRAKES	F: opposed 4-piston, vented disc, 13.9"; R: 78.4 sq.in each side, total 156.8"/rotor
WHEELS / TIRES	20x8 alum alloy / P275/55R20
LENGTH / WHEELBASE	228.9 / 145.7 in
BED LENGTH	66.7 in
TRACK (F/R)	67.9 / 67.9 in
TURNING CIRCLE	49.0 ft
GROUND CLEARANCE	10.4 in
APPROACH / DEPARTURE	26 / 16°
HEADROOM (F/R)	39.7 / 38.9 in
LEGROOM (F/R)	42.5 / 42.3 in
WEIGHT	5680 lb
GVWR	7000-7200 lb
PAYLOAD	1440-1560 lb
WEIGHT	5680 lb
TOW CAPACITY	9800 lb
GROSS COMBINED WEIGHT	16,000 lb
FUEL / CAPACITY	.87 oct reg unl / 38.0 gal
MPG	13/17/14 (city/hwy/comb)

BASE PRICE	\$47,305
NIGHTSHADE SPECIAL EDITION: smoked chrome grille w body color surround, black badging, black door handles, black mirror caps, black exhaust tip, black 20" wheels, black leather-trimmed seats	1000
LIMITED PREMIUM PKG: JBL audio, front & rear parking sonar, blind spot monitor, rear cross traffic alert, anti-theft system & immobilizer	1535
MOONROOF: power tilt/slide w sliding sunshade	850
RUNNING BOARDS	345
DOOR SILL PROTECTOR	70
SPRAY-ON BEDLINER	579
SPARE TIRE LOCK	75
DESTINATION CHARGE	1595
TOTAL	\$53,354

All in all, we consumed some eight or nine hours for a short visit up there, but it’s always worth it. The drive, after all, is the best part.

Toyota Tacoma has totally dominated mid-size pickups for years (though a lot of competition has recently shown up), while Tundra has a far smaller share of full-size. All in all, they’re not that different, making Tundra surely worth a look.

Both premium and utilitarian, Nightshade’s interior doesn’t mind a little mud on the floor, while its beautiful leather finish is ready for a night on the town. This Nightshade Edition is shiny and classy when cleaned up, though now we know it can dress for anything. ■



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Hybrid-electric aircraft concept

MIT design could reduce aviation's emissions problem - Jennifer Chu, MIT News Office

At cruising altitude, airplanes emit a steady stream of nitrogen oxides into the atmosphere, where the chemicals can linger to produce ozone and fine particulates. Nitrogen oxides (NOx) are a major source of air pollution and have been associated with asthma, respiratory disease and cardiovascular disorders. Previous research has shown that the generation of these chemicals due to global aviation results in 16,000 premature deaths each year.

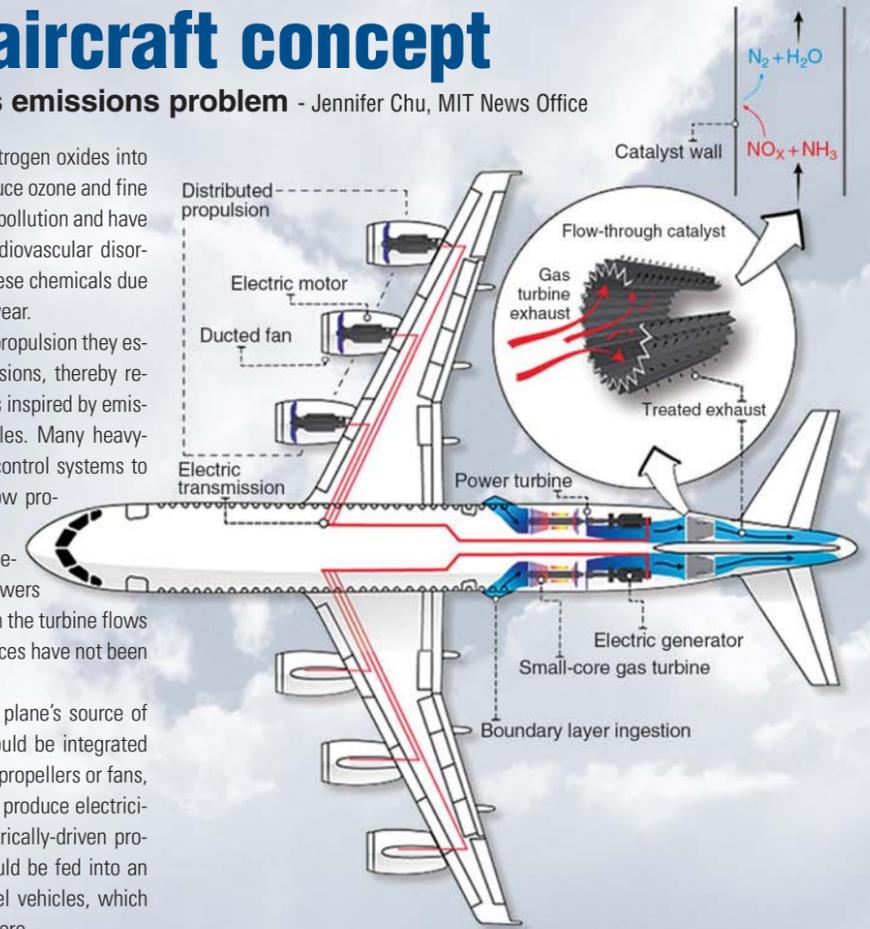
MIT engineers have come up with a concept for airplane propulsion they estimate would eliminate 95 percent of aviation's NOx emissions, thereby reducing associated early deaths by 92 percent. The concept is inspired by emissions-control systems used in ground transportation vehicles. Many heavy-duty diesel trucks today house postcombustion emissions-control systems to reduce the NOx generated by engines. The researchers now propose a similar design for aviation, with an electric twist.

Today's planes are propelled by jet engines anchored beneath each wing. Each engine houses a gas turbine that powers a propeller to move the plane through the air as exhaust from the turbine flows out the back. With this configuration, emissions-control devices have not been feasible, as they would interfere with the engines' thrust.

In the new hybrid-electric (or "turbo-electric") design, a plane's source of power would still be a conventional gas turbine, but it would be integrated within the plane's cargo hold. Rather than directly powering propellers or fans, the gas turbine would drive a generator, also in the hold, to produce electricity that would then power the plane's wing-mounted, electrically-driven propellers or fans. Emissions produced by the gas turbine would be fed into an emissions-control system, broadly similar to those in diesel vehicles, which would clean the exhaust before ejecting it into the atmosphere.

Details of the design, including analyses of potential fuel cost and health impacts, have been published in the journal *Energy and Environmental Science*. Co-authors are Prakash Prashanth, Raymond Speth, Sebastian Eastham and Jayant Sabnins, all members of MIT's Laboratory for Aviation and the Environment. This team's hybrid-electric plane grew out of work by Steven Barrett, professor of aeronautics and astronautics at MIT, and his team in investigating the 2015 Volkswagen diesel emissions scandal, in which environmental regulators had determined that diesel engines had been manipulated to activate onboard emissions-control systems only during lab testing, such that they appeared to meet NOx emissions standards, but in fact emitted up to 40 times more NOx in real-world driving conditions. As he looked into the health impacts, Barrett also became familiar with diesel vehicles' emissions-control systems in general. Around the same time, he was also looking into the possibility of engineering large, all-electric aircraft.

"(Research) shows you could probably electrify smaller aircraft, but for big aircraft, it won't happen anytime soon without pretty major breakthroughs in battery technology," Barrett says, "(but) maybe we can take the electric propulsion part from electric aircraft, and the gas turbines that have been around for a long time and are super reliable and very efficient, and combine that with the emissions-control technology that's used in automotive and ground power, to at least enable semi-electrified planes." But its impact on thrust would effectively ground the design.



Barrett's concept gets around this limitation by separating power generation from thrust production, with exhaust from the gas turbine power unit fed into an emissions-control system, which could be folded up, accordion-style, in the plane's cargo hold. He envisions the bulk of the hybrid-electric system—gas turbine, electric generator and emissions control system—would fit in the belly of a plane, where there can be ample space in many commercial aircraft.

The new research paper calculates that the extra weight of such a hybrid-electric system, if implemented on a Boeing 737 or Airbus A320-like aircraft, would require about 0.6 percent more fuel. "This would be many, many times more feasible than what has been proposed for all-electric aircraft," Barrett says. "This design would add some hundreds of kilograms to a plane, as opposed to adding many tons of batteries, which would be over a magnitude of extra weight."

The team also calculated emissions that would be produced by a large aircraft with or without an emissions control system, and found that the hybrid-electric design would eliminate 95 percent of NOx emissions. If this system were rolled out across all aircraft around the world, they further estimate that 92 percent of pollution-related deaths due to aviation would be avoided, based on a global model mapping the flow of aviation emissions through the atmosphere, and calculating exposure of various populations around the world.

The team is now working on designs for a "zero-impact" airplane that emits no NOx or climate-altering chemicals such as carbon dioxide. ■

HIGH-TORQUE TURBO

by Joe Sage

This is the fourth generation of Mazda3, or 12th if you count the whole Mazda 323 and GLC history preceding it since the 1960s. It's been a solid, handsome and popular little unit for the duration, and this latest model is no exception.

The current run was launched in 2018 as a 2019 model, in both hatchback and sedan forms. We spent a week with the hatch a year ago, giving its powertrain and handling high praise.

Our sedan is an automatic (as was last year's hatch), which is a given, as all Mazda3 sedans are equipped this way; only the front-drive Premium

trim level hatchback offers a manual.

This sedan also has the most noteworthy new-for-2021 attribute: a 227-hp 2.5-liter turbo, with a whopping 310 lb-ft of torque (or up to 250 hp and 320 lb-ft running on premium fuel). There is also a 186-hp/186-lbft normally aspired four in both the sedan and hatch, and the sedan (only) also offers one entry level trim with a 155-hp 2.0-liter engine. Lower trims are front-drivers, higher trims AWD.

In all, there are seven trim levels for the sedan, six for the hatch (without a 2.0L base model). As such, our 2.5 Turbo Premium Plus AWD is the top

model (other than the hatch at \$1300 more) and adds a tech and features list a mile long.

All those variables aside, the Mazda3 sedan (also known as the four-door) and hatch (also known as the five-door) are identical in specification, other than two attributes inherent in each—the hatchback has more interior cargo volume, and the sedan is about eight inches longer.

All these decision points can make your mission either complicated or easy, depending upon your

goals and flexibilities.

We've been impressed by Mazda's Skyactiv engines and transmissions since their dawn—if you see these units freestanding, shiny and clean on a show stand, as we do at new vehicle launch drives, they display all the complex wizardry of a Swiss watch, and much of its miniaturization. It's this compactness, which creates far less loss of mechanical advantage in operation, that lets an engine this small, with relatively moderate horsepower, bear about 50 percent more car-launching, road-hugging torque than you might expect.

Especially in this age of turbos and the occasional diesel, people have come to appreciate the once-neglected importance of a strong torque specification. This engine torque (mated to a perfectly matched and sequenced Skyactiv automatic) is a

huge factor in the Mazda3 2.5T turbo's impressive performance attributes. (The engine and transmission are so well integrated, it reduces our ability to bemoan the lack of a manual.)

Our notes for the week basically broke down into two categories: quick and exuberant notes about great performance and incredibly lengthy ones about details of the infotainment interface, more than typical on both. As always, an owner will have plenty of time to sort out the oddities of an interface (expect extra fun with radio presets), while the dominant drive experience will endure.

As the segment shrinks, a sedan may now be as much a specialty vehicle as a hatchback. Mazda has always serviced a smaller volume, and they've never abandoned specialty niches. That puts the Mazda3 right on top of its game. ■

SPECIFICATIONS

ASSEMBLY	Hofu, Japan
SEATING	five
ENGINE	2.5L SKYACTIV-G turbo-4
	16v alum/alum advanced dir injection
HP/TORQUE	(reg fuel) 227 hp / 310 lb-ft
COMPRESSION RATIO	10.5:1
DRIVETRAIN	(std w turbo) iACTIV AWD
TRANSMISSION	SKYACTIV-DRIVE 6-spd
	electronically controlled sport automatic
SUSPENSION	F: indep, MacPherson strut;
	R: torsion beam axle
STEERING	rack & pinion, elec pwr assist
BRAKES	F: 11.61 vented; R: 10.43 solid
WHEELS / TIRES	18x7J / 215/45R18 M+S
LENGTH / WHEELBASE	183.5 / 107.3 in
TURNING CIRCLE	37.3 ft
HEADROOM (F/R)	(w mnrf) 38.0 / 37.3 in
LEGROOM (F/R)	42.3 / 35.1 in
CARGO CAPACITY	13.2 cu.ft
GROUND CLEARANCE	5.5 in
WEIGHT	3379 lb
FUEL / CAPACITY	reg unl / (AWD) 12.7 gal
MPG	23/32/27 (city/hwy/comb)

BASE PRICE	\$32,450
SOUL RED CRYSTAL METALLIC	595
PREMIUM PLUS PKG: leather seats, front & rear parking sensors, 360-degree view monitor, traffic jam assist, auto-dim exterior mirror, traffic sign recognition, Mazda nav system w 3-yr traffic & travel link trial, rear smart city brake support, rear cross traffic w braking, Homelink, black rear lip spoiler.....incl	
DESTINATION CHARGE	945
TOTAL	\$33,990



Our hatchback last year was in Machine Gray Metallic, one of three mildly upcharged colors from Mazda (\$495). Another is Snowflake White Pearl Mica (\$395). The sedan here is in our favorite: Soul Red Crystal Metallic (\$595), surely one of the finest red paints in the business.





Nearing the Nth degree

BY JOE SAGE



In line with a number of high-end brands, Hyundai has been developing “N” vehicles, highly performance-oriented builds, starting with the track-conquering Veloster N, which we drove at Thunderhill Raceway Park in Northern California during its launch in 2018. Next up is the Elantra N.

Also in line with a number of other brands, Hyundai is offering an “N Line” treatment to certain models in its lineup—Elantra, Sonata and Kona so far—partly a visual treatment, but also with a degree of performance upgrades. On the new Sonata N Line, these include engine, clutch, final gear ratio, brakes, steering, and tires and wheels.

This brings the Sonata lineup to five trim levels, starting at \$23,600. N Line is fourth up, at \$33,200 being \$5000 above the SEL Plus, while Sonata Limited is still tops, at \$650 above that. (Though not a full N model, Sonata N Line’s price differential is about the same as Veloster N’s against its next model down.

Elantra will be the only model, so far, offering both N and N Line.

We met the newest eighth-generation Hyundai Sonata at its launch drive (held in Arizona) at the very end of 2019—one of our last live events before the pandemic lockdown hit—covered in detail in our Jan/Feb 2020 issue. At that time, they had a camouflaged Sonata on site at our hotel, generating much curiosity, as intended. Toward the end of the event, we had a chance to drive it on the streets of Paradise Valley, learning it would be the new N Line when completed. Details and drive impressions were embargoed, till now.

The Hyundai Sonata N Line is now complete, going on sale a 2021 model, and we’ve just spent a full week with it.

Incorporating Hyundai’s “Sensuous Sportiness” design language, Sonata N Line’s exterior elements include a cascading grille, aggressive front fascia, three air intakes, various N Line

SPECIFICATIONS

ENGINE	Smartstream 2.5L turbo GDI + MPI DOHC 16v inline-four
HP/TORQUE	290 hp / 311 lb-ft
COMPRESSION RATIO	10.5:1
DRIVETRAIN	FWD
TRANSMISSION	8-spd N wet dual clutch
SUSPENSION	F: MacPherson strut, gas shocks, stblzr bar; R: multi-link, gas shocks, stblzr bar
STEERING	rack mounted motor driven pwr
BRAKES	F: 13.6" vented; R: 12.8" solid
WHEELS / TIRES	19x8.0J alum alloy / 245/40 R19
LENGTH / WHEELBASE	192.9 / 111.8 in
TURNING CIRCLE	35.9 ft
HEADROOM (F/R)	(w/sunroof) 40.0 / 37.4 in
LEGROOM (F/R)	46.1 / 34.8 in
CARGO CAPACITY	16.0 cu.ft
GROUND CLEARANCE	5.3 in
WEIGHT	3552 lb
FUEL / CAPACITY	reg unleaded / tbd gal
MPG	23/33/27 (city/hwy/comb)

BASE PRICE	\$33,200
SUMMER TIRES	no info
CARPETED FLOOR MATS	155
DESTINATION CHARGE	not stated

(Our sample's Monroney sticker had no pricing, though some information has now been released)

badges, side skirts and 19-inch alloy wheels combining to create an aggressive stance, and an N Line rear diffuser, sleek black rear bumper and dual twin exhausts in the rear.

The interior features dark chrome trim and N Line red stitching on sport seats and wheel.

N or N line, you expect performance, and the Sonata N Line’s 290-hp turbo and wet dual clutch transmission deliver. Four drive modes include Sport and Sport+. We were happier around town in Sport, as Sport+, at least anecdotally, seems to wholly or partly defeat traction control, creating quite a handful in some situations with this combination of power and front-wheel drive.

As always, there are a number of things we’d change in instrumentation and controls—better readability of digital gauges in various light, the ability to turn some features off rather than just high-medium-low, the push-button shifter and a few more.

If shopping this category, you might compare with other Sonata trims, or you might compare with other brands’ semi-performance models. Either way, it’s easy to end up with the Sonata N Line’s particular combination of features, performance and price. ■



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70th Pebble Beach Concours d'Elegance is on track—and tickets are going fast

The 70th Celebration of the Pebble Beach Concours d'Elegance, postponed last year, is now scheduled for Sunday, August 15, 2021, on the famed 18th fairway of the Pebble Beach Golf Links. To mark the occasion, a wide array of past Pebble Beach Concours Best of Show cars will be featured, and all the overall winners from the Pebble Beach Road Races will be reunited.

The 2021 Pebble Beach Concours d'Elegance will feature the creations of Carrozzeria Pininfarina, which now encompasses 90+ years of style, and the Tour will showcase these designs as they are meant to be seen — in motion.

Additional features include Talbot-Lago Grand Sport, Porsche 917, Early Electric Cars, Iso Rivolta, Miller and La Carrera Panamericana. And they even have another surprise or two in the works.

If you purchased tickets for the 70th Celebration originally scheduled for 2020, you may have had them held for this year. If not, now is the time to secure your spot, as these coveted ticket options are already selling out fast.

2021 General Admission Tickets: \$400

Stroll through the show field, visit manufacturer displays, bring or purchase a tasty meal and enjoy al fresco lunch at our Café Seating & Picnic Area.

2021 Club d'Elegance Tickets: \$900

In an elegant tent at Parc du Concours, a short shuttle ride from the show field. *Limited availability.*

2021 The Venue Above the Concept Lawn: \$1,500

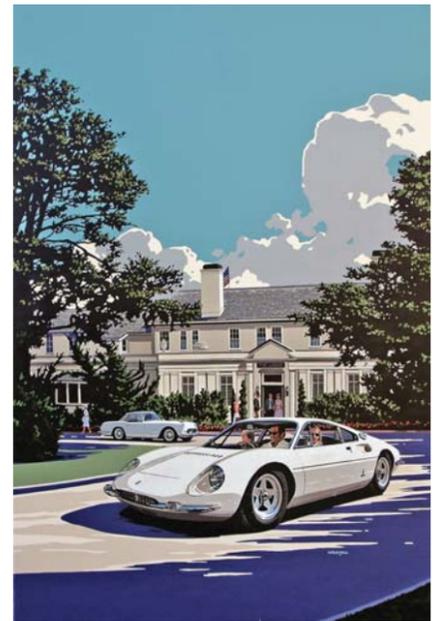
Enjoy walking the show field, then get a sweeping overview of all the automotive industry's latest concept cars while enjoying gourmet luncheon buffet and hosted beverage service inside The Venue, above the Concept Lawn at The Lodge. *Very limited availability.*

2021 Patrons Patio at the Winner's Circle: \$2,750

Hear the roar of the engines, feel the heat of the steam, right next to the action with a seat at our outdoor Patrons Patio, adjacent to the Awards Ramp. VIP luxury full-immersion experience allows you to sit back and relax as each newly awarded winner parades before you as they exit the ramp. *Very limited availability.*

2021 Chairman's Hospitality at the Lodge: \$3,500

The ultimate VIP experience, with seating at the Chairman's Suite inside The Lodge at Pebble Beach. From the comfort of your seat, enjoy a panorama of the show field and a direct overview of all the winners driving up to the ramp. You won't want to miss this spectacular view of the Best of Show presentation! *Very limited availability.*



2021 Pebble Beach Tour d'Elegance Poster celebrates 90+ Years of Carrozzeria Pininfarina, with the innovative Ferrari 365 P "Tre Posti" featured.

www.pebblebeachconcours.net



Fine-tuned factory tuner

CONTINUOUS IMPROVEMENT IS FOUND IN THE DETAILS OF THIS ALREADY CAREFULLY CRAFTED SPECIAL PURPOSE CIVIC

BY JOE SAGE

The purpose-built Type R is no ordinary Civic, its largely perfected specialty build changing only conservatively over time. Though it feels eternal, Type R first arrived in the US in 2017; we drove it here for a week in 2018 and have had seat time at regional comparo events.

Changes are equal parts basic Civic and Type R-specific. In 2019, updates included physical buttons and knobs for controls, updated connectivity tech, and Sonic Gray Pearl as a new Type R paint.

For 2020—which arrived late in the year and carries forward to 2021—updates are more extensive. Suspension is upgraded with dampers for improved ride comfort, stiffer rear bushings for better grip, and revisions to the front suspension and steering. Brakes have new two-piece rotors and pads designed to reduce fade and improve high-speed braking efficiency. Interior upgrades include a new Alcantara-wrapped wheel and a new shifter with shorter throws and a restyled knob. Type R now also bears a Honda Sensing suite of safety and driver-assist tech, making these standard equipment on all Civic models and trims. And again there's a new color: Boost Blue.

Here we're driving a new 2020 model in 2021, a fleet inventory timing quirk. Honda revealed it to us at an early sneak peek in Paradise Valley in October, where we learned that both are identical, after a late-year launch of the 2020 model, though price is up \$900 for the 2021 model (so you may

want to check your dealer's inventory, as well).

Well built, tight in your hands, the Civic Type R is goal-oriented, equally ready for a major rally, a quick smile, or even just solid daily duty that's several cuts above. It's a flat-out great car.

In line with its soul and its market, Type R is a manual shifter, which is not absolutely a given, and which gratifies us. It also remains a front-driver, also not a given, which still always kind of surprises us, as an all-wheel-drive setup seems it could work well in such a car—but in this case is surprisingly not particularly needed. All traces of front-drive twist are erased, while a substantial distribution of its light weight toward the front mitigates the other inevitable front-drive fact of physics, acceleration inherently shifting weight (and traction) away from front drive wheels, which you don't particularly feel in the Type R. Suspension, while of rather standard high-performance design, is perfectly allocated and balanced. What we have not done is to put the car in a crisis handling situation on a track, but generally assume it won't have problems here, or it would not have developed its reputation and record this fully.

Someone not familiar with the Type R (but maybe familiar with a few big-wing-bearing Saturday night do-it-yourselfers), might get one look at its complex shapes and various parts and think it's just cobbled together from loose ends, for appearance's sake. They would be mistaken. Not only does each carefully weighed part serve a purpose, but this is one of the most solid and tightly built machines we've driven, noticeable from the get-

go. The thing is put together like a fighter jet, its mix of shapes far from random, each element contributing to its rock solid planted nature on the road. Cool as the car is, no part is frivolous. And it's all assembled with precision and strength.

The manual is a six-speed, with gearing quite tight—you'll find yourself at high revs in third gear in the low 30s and ready to shift higher still, a formula that delivers solid torque at all speeds.

Under \$40 grand is a heck of a deal for a car with this much spirit and performance. The Type R's list of inclusions (see sidebar) is extensive and on target (though we would accept a pound or two for power seats, if just to fine-tune perfect foot position). We could live without the newly added intrusive driver assist features on such a car, but Honda wanted the simple full-lineup bragging point.

All this adds up to on very special car. But wait—there's one more thing...

Track-focused Type R Limited Edition

A street-legal track-focused Type R Limited Edition this year is 46 pounds lighter (18 via BBS forged aluminum wheels, 28 by deleting rear wiper, tonneau cover, rear heater ducts and some insulation). Gearing and fuel mileage are unchanged. Only 600 will be built, at a price of \$43,995.

In just one model-exclusive color, the Limited Edition has a contrasting gloss black roof, mirror caps and hood intake, with a dark chrome Civic badge on the rear hatch. You may especially like the color: in line with past Type R Limited Editions, its paint is Phoenix Yellow. ■

SPECIFICATIONS

PLANT	Swindon, Wiltshire, England
ENGINE / TRANS	USA / Japan
ENGINE	2.0L turbo 4, 16v DOHC VTEC
HP/TORQUE	306 hp / 295 lb-ft
DRIVETRAIN	FWD, helical limited-slip diff
TRANSMISSION	6-spd manual, rev-match
SUSPENSION	F: dual-axis MacPherson strut, 29.0x5.0mm tubular stblzr bar; R: multi-link, 20.5mm solid stblzr bar
STEERING	dual-pinion variable-ratio EPS
BRAKES	power-assist vented F: 13.8" two-piece; Brembo 4-piston aluminum calipers; R: 12.0" solid
WHEELS	20x8.5 alloys
TIRES	245 / 30 / AR20 90Y max perf summer
LENGTH / WHEELBASE	179.4 / 106.3 in
TURNING CIRCLE	39.5 ft
HEADROOM (F/R)	39.3 / 37.4 in
LEGROOM (F/R)	42.3 / 35.9 in
CARGO CAPACITY	25.7 / 46.2 cu.ft
WEIGHT	3121
WEIGHT DISTRIBUTION	61.9 / 38.1 %
FUEL CAPACITY	12.39 gal
MPG	22/28/25 (city/hwy/comb)

BASE PRICE (2020)	*\$37,895
CHAMPIONSHIP WHITE	395
TYPE R INCLUDES:	Red Honda H badges front/rear, Type R badges front/rear; LED headlights, foglights, brake lights; underbody spoiler kit w red striping; wing spoiler; body-color roof-mounted vortex generators; aluminum hood; center-mount triple-outlet exhaust; fin-type roof antenna; rear window wiper/washer w heated zone; remote entry and hatch security; power side mirrors w integrated LED turn indicators; body-color door handles; Type R serial number plate; Alcantara@18 wrapped steering wheel; sport pedals; aluminum shift knob; dual-zone auto climate; exclusive high-bolstered sport seats w red/black suede-effect fabric & double red stitching; 540-watt premium 12-sprk audio; and more.
DESTINATION CHARGE	*995
TOTAL (2020)	*\$39,285

*Prices shown for 2021. Ours was a 2020 model. The two are said to be identical.





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ULTIMATE OVERLAND BUILD

Based on the 2021 Honda Africa Twin Adventure Sports ES DCT, finished in Darkness Black Metallic, a new colorway for the 2021 model year, Overland Expo—hosts of Overland Expo West in Flagstaff each year—are building their first-ever “Ultimate Overland Motorcycle Build,” a vision meant to inspire others to get outfitted and get going on their own adventures.

Partnering with Honda Powersports, the Overland Expo staff of seasoned and passion-

ate overlanders will transform their already capable Africa Twin adventure motorcycle.

With Honda renowned for toughness, reliability and durability, Africa Twin has become a solid favorite among overlanders, while its crisp-shifting, easy-to-use dual-clutch transmission simplifies the riding experience so riders can focus on the trail ahead.

“No matter how capable out of the box, the bike is just the starting point of any overland motorcycle. Riders outfit their bikes not just to suit their riding style but in order to make their overland journeys more successful and enjoyable,” said Overland Expo motorcycle ambassador Eva Rupert. “That’s why we are so excited to partner with Honda to inspire riders to build their own ultimate overland moto.”

Over the coming months, Overland Expo will work on the project in collaboration with

several aftermarket motorcycle parts suppliers including Outback Motortek, Jesse Luggage, Denali Electronics, Garmin, Wolfman Luggage, Heidenau Tires, KonTour Seats and Superwinch, with additional partners to be added in coming weeks.

The completed Ultimate Overland Motorcycle Build will be revealed on August 27 at Overland Expo Mountain West in Loveland, Colorado. Following its debut, Overland Expo staff will complete their own overland journeys on the Ultimate Overland Motorcycle to demonstrate its prowess in practice, with the aim of inspiring others to get outfitted and going on their own adventures.

The build will also travel to be displayed at Overland Expo West in Flagstaff, September 24-26, and at Overland Expo East in Virginia, October 8-10. ■



Photo: John Allen



CRISP, CLEAN TOUGH GUY

BY JOE SAGE

While a few other brands originally known for smaller vehicles have offered several three-row SUVs for some time, Volkswagen, long known for their smaller vehicles, entered the realm more recently, with the big-box three-row Atlas, introduced in 2017 as a 2018 model. (The EPA seems to classify it as “small” and others as mid-size, but anything with three rows strikes us pretty much as ‘big’ by definition.)

We first drove the VW Atlas at its introduction in spring 2017, during TAWA Texas Auto Roundup at Circuit of the Americas, though it was designated for service road driving only, not track (despite

track not being a race situation), but it’s a route with decent hills, curves, acceleration and braking; we suspect this option was offered to all, but only they took it, and that they would not do so again.

When you have a solid formula, you pretty much leave things alone, which Volkswagen has pretty much done here, though improvements and new features are integrated along the way—a tried and true VW formula. There’s a subtle facelift for 2021—slightly updated upper and lower grille and tail-lights, new wheels, even a new steering wheel—while the price was unchanged from 2020. (There is now a 2021.5 model—info shown in our sidebar—with just a ten-dollar bump in entry price.) Other changes are trim level-dependent tech inclusions and features, including the availability of their fuel-frugal turbo four all the way up the model line—with 85 percent the horsepower and 97 percent the torque of their V6, yet rated at as much as 25 percent higher fuel economy (variously across city-

highway-combined and front-drive vs 4Motion AWD). The four-cylinder models are also about 18 percent less expensive, all of which seems a winning formula. Then again, we were happy to have the V6. And most anyone who tows will definitely want the V6—good for 5000 pounds (when brake-equipped) as opposed to 2000.

Ours is the top of eight trim levels, and you’ll note it includes no options—the trim levels build upon themselves, in many ways functioning as option sets in their own right. The top four are SEL, SEL R-Line, SEL Premium and SEL Premium R-Line, as an example of how this works.

The three-row SUV is one of the most competitive segments right now, with various examples bagging vehicle of the year trophies and landing atop customers’ wish lists. Compare up and down the VW Atlas trim list, or against the greater marketplace, and at about \$50 grand this totally-outfitted Atlas seems to us quite a bargain. The base model at just over \$30 grand surely is, as well.

Vehicle setup was easier than average, controls and interface friendlier than average, notably including knobs and buttons for most climate and audio functions, far less driver-distracting than touch-and-layer alternatives. A downside was that overall arrangements could lead to a stray thumb or knuckle on some of the knobs activating something within the touchscreen, all highly distracting.

We lucked out, having the Atlas while we had a volume of goods to juggle among home-office-storage for the new year. Its volume, along with simple second and third row access and its fairly square shape, devoured it all with plenty of room for more.

The vehicle’s build (a multinational affair assembled in Tennessee) is above average in all specs, from construction to engine, drivetrain, steering and suspension. It definitely addresses the U in Utility, and we like that. Our big-engine AWD Atlas is fairly heavy, with power and torque of the V6 just about what you need—we’d want to back-to-back the smaller turbo and trailering, say on a long grade up I-17, to get the best feel for overall performance.

When Volkswagen was invented as (ver batim) a people’s car, it was conceived to be universal, simple and effective. The car we all know as the Beetle was so quirky and distinctive that its fan base exploded and stuck with it for decades in production and sales, and as enthusiasts for decades more—the VW Beetle is forever.

Roll forward and you have the people’s car of today. Volkswagen Atlas is simple, clean and effective. Quirky it is not. Atlas took VW styling in a new direction—handsome, chiseled, ingot-like—solid and strong, with classic SUV looks, neat and clean outside and in. And look at these prices. ■

SPECIFICATIONS (2021/2021.5)

ASSEMBLY PLANT	..... Chattanooga, Tennessee
ENGINE / TRANS	..... Germany / Japan
PARTS CONTENT	..... 44% US/Can, 24% Mex
SEATING	..... seven
CONSTRUCTION	..... unitary, bolt-on front fenders, two solid mounted subframes
ENGINE	..... 3.6L VR6 24v DOHC, chain-driven, maintenance-free hydraulic lifters, variable intake and exhaust timing; cast iron head, cast iron crankshaft w seven main bearings, aluminum heads.
HP/TORQUE	..... 276 hp / 266 lb-ft
COMPRESSION RATIO	..... 11.4:1
DRIVETRAIN	..... 4Motion® permanent AWD
TRANSMISSION	..... 8-speed automatic, clutch-pack center diff, adaptive torque distribution
SUSPENSION	..... F: Strut-type with lower control arms, coils, telescopic dampers, anti-roll bar; R: Multilink w coils, telescopic dampers, anti-roll bar
STEERING	..... rack & pinion, elec power assist
BRAKES	..... F: 13.2x1.2; R: 12.2x0.9; all vented
WHEELS	..... (SEL Premium) 21x8J alum-alloy
TIRES	..... (*) 265/45 R21 all-season
LENGTH / WHEELBASE	..... 200.7 / 117.3 in
TURNING CIRCLE	..... 40.51 ft
GROUND CLEARANCE	..... na
HEADROOM (F/2/3)	..... 41.3 / 40.4 / 38.3 in
LEGROOM (F/2/3)	..... 41.7 / 37.6 / 33.7 in
CARGO CAPACITY	..... 20.6 / 55.5 / 96.8 cu.ft
WEIGHT	..... 4614 lb
PAYLOAD	..... 1080 lb
TOW CAPACITY	..... (braked) 5000 lb
FUEL / CAPACITY	..... regular / 19.5 gal
MPG	..... 16/22/18 (city/hwy/comb)

BASE PRICE:	
2021 V6 SEL Premium	..... \$50,695
INCL IN SEL PREMIUM R-LINE: leather, ambient lighting, 12-speaker Fender premium audio, overhead view camera, 8-way power passenger seat, panoramic sunroof, 21" wheels, power-fold side mirrors w puddle lights, park steering assist, many other features carrying up from other models in the 8-trim lineup. SEL, SEL R-Line, SEL Premium and SEL Premium R-Line (ours) variously do or don't include some of the same elements.	
DESTINATION CHARGE	..... 1020
TOTAL	..... \$51,715

2021.5 VW ATLAS REFRESH

- VW Atlas receives a refresh as a 2021.5 model, adding a next-generation MIB 3 infotainment system with wireless App-Connect and compatible multi-phone pairing standard on SE models and above, along with VW’s newest driver-assistance features—Travel Assist and Emergency Assist—on SEL models and above.
- The refreshed 2021.5 model is available in eight trim levels: S, SE, SE w/Technology, SE w/Technology R-Line, SEL, SEL R-Line, SEL Premium and SEL Premium R-Line.

VW ATLAS POWERTRAINS

ENGINE	DRIVETRAIN	MPG	STARTS AT (2021.5)
4-cyl	2.0L dir inj turbo four,	235 hp 253 lbft	
FWD	..... 21/24/22 c/h/c	..... \$31,555	
4Motion	..... 20/24/22	..... 33,455	
V6	3.6L VR6 dir inj V6,	276 hp 266 lbft	
FWD	..... 17/23/19	..... 38,345	
4Motion	..... 16/22/18	..... 40,245	

Born to be different

BY JOE SAGE

There are those who say Americans' love affair with the station wagon has never really gone away, the current love affair with SUVs and crossovers being an evolution of much the same thing. They surely share attributes of layout, function and capability. (Minivans, largely in a category all their own, overlap considerably, as well.)

At its launch in 2009, the original Toyota Venza intended to create "a completely new kind of vehicle—70 percent car, 30 percent SUV—expressly tailored to the times and filling a niche that was previously unfilled," combining degrees of the styling, handling, fuel economy and entry-egress of a sedan with the cargo capacity, all-wheel drive and higher driver position of an SUV.

Much was different when Venza hit the market twelve years ago, although it was evidence in and of itself that evolution was underway. The one-of-a-kind-ish vehicle returns today to an absolute tor-

rent of crossover choices. Toyota today says Venza "breaks the sameness barrier," while also, despite its unique-niche origins, simply calling it a crossover. Most features are not specific to this car's layout, with one exception—they refer to its maneuverability, an attribute from the car end of that car-to-SUV formula, and it has the sophisticated suspension and tight turning circle to deliver.

Venza is what you might get if you took a European performance sportswagen—those low-slung supercars with a full-length roof—and gave it the bones, from the waist down, for America's driving surfaces, weekend fun and generally tougher duty.

We liked the original Venza for its stated purposes, distinctive styling, capacity, beyond-sedan ground clearance—and for its range of engines, transmissions and drivetrains (though not every possible combination thereof). In an era when Prius was still a pioneering brand, Venza's drivetrains were more traditional.

The new Venza has just one drivetrain, a well-developed set of systems Toyota has been perfecting for decades—all are hybrids, all with electronic sequential-shift CVT, and all with electronic on-demand all-wheel drive (the electric motor system

kicks in for both front and rear wheels). Three trim levels from low to high 30s make shopping easy.

The new Venza sits up high enough to feel like a crossover as you step in, while cabin height from the beltline up is more like a sedan, which can lead to a tall person hopping in and hitting their head till oriented. Inside, it feels much like a wagon—its long cabin a defining feature, and as with the original bearing ample rear legroom.

The new Venza has equal parts mainstream and innovative styling, layout, and details of form and function that give it just the right futuristic leanings (the kind that aren't so likely to become quickly dated, as many attempts to look like 'the future' do). Inside, the touch interface, with curved 'covers,' within which you can customize the positions and sequence of screen contents, is slick and nicely done, although some contents presented in two shades of grey are not very legible. The console's arrangement presents a combination of well-positioned and ill-positioned controls, with a mix of useful and odd spatial voids and shapes, notably a sizable projecting power button that makes it hard to get a large hand into the USB and device space. Temperatures were in the 30s during our week, and

Venza's rear styling is distinctive in an era of look-alikes, with bold three-dimensional styling evoking somewhat the feel of a very cool sci-fi spaceship.

some controls did not work with gloves on. The shifter is conventional. (We envisioned feature, function and graphics teams that don't talk enough among themselves—style is innovative overall, but could use some fine-tuning for function.)

Driving performance is unremarkable, in a good way—its complex system is quite transparent, other than gauge readouts and some regenerative braking characteristics you may notice.

Though its style and layout are not as distinctive today as they once were, the new Venza still offers all the attributes that defined it in the first place. Are you looking at sedans, but have this feeling everybody is supposed to want a crossover? Looking for a station wagon but maybe not quite? Looking at Prius but maybe not quite? Kind of could use a minivan but kind of not? Venza may be just what you've been looking for—the not-quite-any-of-those option. Do these together comprise a small market niche? Or maybe one of the biggest?

Try it on for size. Then try on some more conventional cars and crossovers. You will likely find yourself saying, "Ah! Now I see what they mean." Toyota Venza may not quite fit the standard categories, but then again, that's the whole point. ■



SPECIFICATIONS

PLANT	.....Takaoka Assembly, Aichi, Japan
ENGINE	.....2.5L Dynamic Force 4-cyl 16v DOHC alum alloy, VVT-iE intake, VVT-i exhaust
HP/TORQUE	.....176 hp / 163 lb-ft
COMPRESSION RATIO	.....14.0:1
ELECTRIC MOTOR	.....perm magnet sync (F/R)
POWER	.....F: 88 kW (118 hp) R: 40 kW (54 hp)
TORQUE	.....F: 202 Nm (149 lbft) R: 121 Nm (89 lbft)
BATTERY PACK	..Li 252V 70 cells, 650V system
TOTAL NET HP	.....hybrid syst comb net 219 hp
DRIVETRAIN	.....electronic on-demand AWD (gasoline+elec front; sep elec rear on demand)
TRANSMISSION	.....eCVT w sequential shift mode
SUSPENSION	.....F: indep MacPherson strut w 24.2mm stblzr bar; R: multi-link w 22.2mm stblzr bar
STEERING	.....elec rack & pinion pwr assist
BRAKES	.....F: 12.0 vented; R: 11.1 solid
WHEELS	.....(XLE, Limited) 7x19 alloy
TIRES	.....(XLE, Limited) P225/55 R19 AS
LENGTH / WHEELBASE	.....186.6 / 105.9 in
GROUND CLEARANCE	.....7.8 in
TURNING CIRCLE	.....(XLE, Limited) 37.4 ft
HEADROOM (F/R)	.....(w pano roof) 38.1 / 36.9 in
LEGROOM (F/R)	.....40.9 / 37.8 in
CARGO CAPACITY	.....(w pano) 28.7 / 54.9 cu.ft
WEIGHT	.....(Limited) 3913 lb
FUEL / CAPACITY	.....regular unl / 14.5 gal
MPG	.....40/37/39 (city/hwy/comb)

BASE PRICE	.....\$39,800
ADVANCED TECH PKG:	heads-up display (speed and hybrid system info), rain-sense variable intermittent wipers.....725
STAR GAZE FIXED PANORAMIC ROOF	.....1400
DESTINATION CHARGE	.....1175
TOTAL	.....\$43,100

VENZA LINEUP

LE AWD	.....\$32,470
XLE AWD	.....36,000
Limited AWD	.....39,800

When something is part crossover and part something else, is it a crossover-crossover?



▼ **Karma** Automotive is elevating their Karma Revero GT's nameplate to a new halo vehicle slot, above an upcoming GS-6 Series. The new Revero GT model, boasting top handcrafted coachbuilt luxury and technological innovation, promises over 1100 hp and four-wheel drive, in both extended-range and full-EV versions. Revero GT customers will schedule concierge-style design appointments to personalize their vehicle with custom luxury interior appointments and a unique, vibrant exterior color palette. The new Revero GT halo car will package race-inspired structure, componentry and technology suited for both track and street, promising a pure driving experience and an emotional bond between driver and machine. VVIP customer treatment and choices of custom materials and bespoke options will await new Karma Revero GT owners at the Karma Design Studio in Irvine, California, where designers will provide expert assistance. Once spec'd, custom fabrication takes place at Karma's Innovation and Customization Center (KICC) in Moreno Valley CA. Karma will soon release more details about the forthcoming Karma GS-6, a new evolution of the brand retaining elements of Revero GT exterior styling, while moving the price point to a more attainable level. The new GS-6, expected to deliver this year, will join the brand's first full EV, the GSe-6, announced last fall. Both vehicles are aimed toward a new customer demographic, as the brand addresses an ever wider market.

▼ BrightDrop is a new **General Motors** business unit in GM's Global Innovation organization, which has recently launched OnStar Insurance, OnStar Guardian and GM Defense. BrightDrop's mission is to improve delivery of goods and services via an integrated ecosystem of electric first-to-last-mile products, software and services. BrightDrop solutions aim to lower business costs, maximize productivity, improve



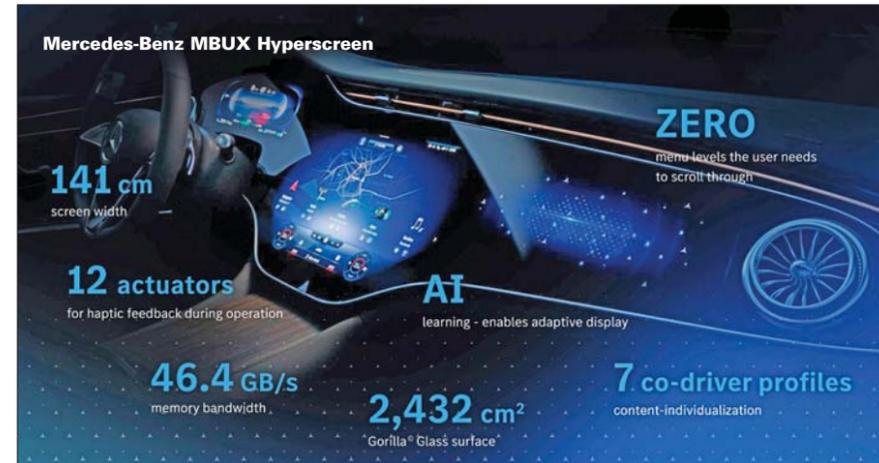
GM BrightDrop EP1 electric pallet and EV600 commercial truck

employee and freight security, and support overall sustainability. BrightDrop's first product is the EP1, a propulsion-assisted electric pallet due early this year, to easily move goods over short distances, such as from a delivery vehicle to a customer's front door, reducing package touch points, costs and physical strain on drivers. Built-in electric hub motors vary speed up to 3 mph depending on walking pace and make

it maneuverable in tight spaces. The unit carries about 23 cubic feet of cargo, up to 200 pounds. Adjustable shelving and remote access lockable cabinet doors provide flexibility and security. Later this year comes the BrightDrop EV600, a light commercial purpose-built EV for delivery of goods and services over long ranges, combining zero emissions with advanced safety and convenience features more common in consumer EVs. Powered by GM's Ultium battery system, the EV600 targets a range up to 250 miles or DC fast charge peak rate per hour via 120kW of up to 170 miles. With over 600 cubic feet of cargo volume, the truck will be available at a GVWR of less than 10,000 pounds. Driver assist tech includes a rear vision HD camera. Cargo area security includes motion sensors. Front sliding pocket doors, wide cabin walkways and a large auto-open cargo bulkhead door provide driver efficiency. Working closely with FedEx on both products, GM BrightDrop found the EP1 allowed couriers to handle 25 percent more packages per day, and more easily. FedEx Express is slated to be first to receive the

EV600, later this year, with the truck more widely available by early 2022. BrightDrop is also developing a cloud-based software platform with integrated access via web or mobile interfaces, providing location and battery status, detailed data and insights on operations, route efficiency and a variety of other tasks, and remote lock-unlock. EV600 fleet operators also have data for driver safety coaching, incident recording, remote

diagnostics, safety alerts, predictive maintenance insights and over-the-air updates. GM estimates that by 2025, the combined market opportunity for parcel, food delivery and reverse logistics in the US will be



over \$850 billion. E-commerce-fueled demand for urban last-mile delivery is set to grow by 78 percent by 2030, leading to 36 percent growth in delivery vehicles in the world's 100 largest cities, raising delivery-related carbon emissions by nearly one-third. BrightDrop aims to meet this surge while reducing its impact.

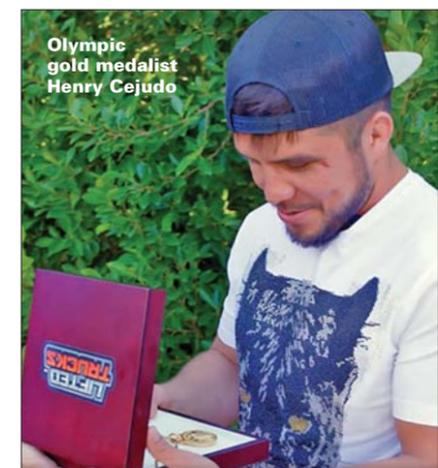
▼ **Lifted Trucks** of Phoenix, Glendale and Mesa, a custom truck dealership also offering stock trucks and hard-to-find used diesels, likes to go above and beyond for its customers, some of whom are world-class athletes like Olympian gold medalist and UFC fighter Henry Cejudo. When they learning that Cejudo had lost the Olympic gold medal he won in the 2008 Summer Olympics, when he had to escape a hotel fire after attending a charity event in 2017, Lifted Trucks decided to create a solid-gold replica for Cejudo and surprise him with it at his home—replacing the irreplaceable.

▼ **Mercedes-Benz** introduced its new MBUX Hyperscreen system first via a digital world premiere, then at the first all-digital Consumer Electronics Show (CES). The screen unit, almost four-feet-eight-inches wide—their largest human-machine interface to date—comprises three seamlessly merged displays. They say it is their most intelligent unit to date, by far—aesthetically pleasing, radically easy to operate and—thanks to artificial intelligence—"downright eager to learn." The display's operating system adapts to the user, making per-

sonalized suggestions for numerous infotainment, comfort and vehicle functions based on circumstances. One feature presented for the first time at CES is "Mercedes Travel Knowledge," which evaluates both map



data and live surroundings to provide a wealth of information about landmarks along the route—from individual buildings or points of interest to entire cities. The driver or passenger can simply ask a question as they drive past—for example, "Hey Mercedes, what can you tell me about this building?" or "Hey Mercedes, what is the name of the restaurant on the left?"—and the information is spoken by the voice assistant while also appearing on-screen. A



Olympic gold medalist Henry Cejudo

welcome interface foundation (our weekly review notes industry-wide have long contained many references to too many layers for functions), is what Mercedes-Benz calls a "zero layer" system. On the MBUX Hyperscreen, the user does not have to scroll through submenus or enter voice commands—the most important applications, such as navigation or telephone, are always offered situationally and contextual-

ly on the top level in the field of vision. More than 20 other functions—from active massage to suggestions for the to-do list—are automatically displayed if the system feels they are relevant for the customer. Twelve haptic feedback actuators under the touchscreen surfaces trigger a noticeable vibration of the cover plate when a finger touches certain areas. The system boasts eight CPU cores and 24 GB of RAM with 46.4 GBps of bandwidth. The MBUX Hyperscreen will launch first in the fully electric EQS luxury sedan, and the Travel Knowledge feature will be immediately available in the new S-Class, with flexible cloud-based updates.

▼ **Lordstown Motors**, a new manufacturer of electric light duty trucks focused on the commercial fleet market, has received more than 100,000 non-binding production reservations for its Lordstown Endurance all-electric pickup truck, at an average of nearly 600 vehicles per fleet. The Lordstown Endurance is a full-size EV pickup expecting a range of 250 miles, the equivalent of 600 hp and tow capacity up to 7,500 lbs. After successful prototype and alpha builds, Lordstown is now building the first beta vehicles, on track for start of production this September. The initial build is a crew cab with medium bed length, priced



Lordstown Endurance EV pickup

at \$45,000 after federal rebate. Lordstown has accepted an invitation from the US Department of Energy to start the due diligence process toward securing an Advanced Technology Vehicles Manufacturing Loan, a program authorized by the Energy Independence and Security Act of 2007 to support manufacturing of eligible light-duty vehicles and qualifying components in the US. ■

UPCOMING FEATURES

2021 Ram 1500 TRX



2021 Ford Mustang Mach-E EV



2021 Mercedes-AMG GLA 45



2021 Kia K5 EX



Specialty and personalized plates primer



TAWA Texas Spring Auto Roundup



Global YouTube sensation Sarah-n-Tuned of Tucson



K1 Speed indoor kart racing



THE BUSTED KNUCKLE GARAGE AN AUTOMOTIVE GIFT SHOP



Commercial Strength Shop Stools

Heavy duty garage counter shop stool with full swivel seat & great vintage look! Built in the USA, this shop stool is an industrial/restaurant grade counter stool built for long lasting durability, comfort and strength. Available in 36 designs!

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- Minor assembly required • Tables to match—please inquire

Miracle Car Repair Shop Stool / SKU: 09-BKG-MCR

Gas, Oil & Toil Shop Stool / SKU: 09-BKG-TOIL

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Neon Garage Clocks

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- Features a spun aluminum black case, glass face and a separate on/off switch for the white neon lamp. (100,000 hours of neon, that's 11 years continuous running!)
- Measures a large 20" in diameter and 5" deep • 8' Power Cord, Chain Pull for Lamp • Limited warranty against defects in material and workmanship; runs on 110 Volt AC • Several Car Guy Styles to Choose From...Check 'Em All Out! • We've been selling these clocks for over 15 years; Never a Return, Never a Complaint, you have our word on it • Looking for something smaller? Check out our BKG-76600 for a 12" alternative

Shown: Vintage Iron Speed Shop Clock / SKU: 09-BKG-VI

~~Were \$399~~ Now \$349 / Free shipping on this item!

All-Steel Toolboxes

The Greasemonkeys have the feeling their full line of durable all-steel portable toolboxes with lift-out tray and a variety of the most cool car guy graphics (five styles now and more coming!) just may be too good to stash tools in—we may have to call them "deco-boxes"!

- Rugged all steel end cap construction • Powder coated, rust resistant • Heavy-duty stainless steel handle • Nickel-plated steel latch and hinge for added security • Full length lift-out tote tray
- Cool car guy quality color graphics • 6 lbs • 16" x 7" x 7.5"

Wrench-In-Hand Steel Tool Box / SKU: 10-BKG-WCL

Vintage Pickup Truck Steel Tool Box / SKU: 10-BKG-VT

\$49 each / Eligible for free shipping!

♥ Not only are your products awesome, but the service and the people are too! I very much intend to pass the word along about how great it is to do business with the Busted Knuckle Garage.
— Many thanks! Jackie B.

♥ I just had the most wonderful buying experience! I only hope my father asks for something from The Busted Knuckle Garage for Christmas so I can do business with such a wonderful company once more.
— Cheers! Michelle

♥ My husband just loves everything, especially me for getting him such cool stuff. I'd have to say we will be lifetime customers, oh ya!! Thank you, Greasemonkeys.
— Sincerely, Pam

♥ First, let me be the one thanking you! I honestly cannot remember such extraordinary customer service.
— Thanks again, "JR" Jean



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