

SEND IT 2020 CORVETTE Z51 **MOTORTREND**



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BEST DRIVER'S CAR



12 Contenders • One Winner



EXCLUSIVE

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THE C8 CORVETTE KEEPS ITS PROMISES

This far, no farther. Chevrolet's Corvette engineering team has been clear: They had taken the front-engine, rear-drive sports car platform as far as possible. The only way forward was to move the engine backward. After pulling the pin and blowing up 65 years of history and heritage, the mid-engine C8 Corvette made its debut to incredible promises.

And after decades reporting rumors and false starts, we can finally confirm: Chevrolet keeps its promises.

You'll forgive any skepticism. Chevrolet told us moving the engine back a few feet, adding 35 horsepower (give or

take), and employing a dual-clutch transmission would make the 495-hp C8 Corvette Z51 quicker to 60 mph than the 755-hp C7 Corvette ZR1, despite the C8's considerably worse power-to-weight ratio. Plus, they said, it would come within a tenth of a g or two on the skidpad while wearing all-season tires. Oh, and it'll do all that for half the price, give or take.

That's quite a target to aim for. With launch control engaged and 61 percent of the weight on the rear tires, the C8 Corvette Z51 shot to 60 mph in a staggering 2.8 seconds on the way to an 11.1-second quarter mile at 123.2 mph.

Let's geek out on these numbers for a hot minute. The best the C7 could

ever manage is 3.0 seconds to 60. That 2019 C7 ZR1 weighed only a few dozen pounds more than this 3,622-pound C8 Z51 but had to launch just 4.8 pounds per horsepower to the new car's 7.3. The best a C7 Z51 could ever do was 3.7 seconds to 60, with the same power-to-weight as the new car thanks to a slimmer curb weight. Even the C7 Grand Sport, with its stickier tires and Z06 suspension, only managed a 3.6. The quickest factory Corvette ever is the new base model with a sport package.

As you'd expect, much of the advantage is in the launch, but you'd be surprised just how much. The quickest C7 ZR1 ran a 10.8-second quarter mile at 133.1 mph, just 0.3 second quicker. So great was the

PARTY IN THE BACK



C8 Z51's launch advantage that the C7 ZR1 barely got ahead of it by the quarter by running 10 mph faster.

And what of the other big number? Breaking 1.00 average lateral g on the skidpad is an accomplishment, but it's easier when you have summer tires rather than all-seasons, and the Michelin Pilot Sport 4S included in the Z51 package is very much a summer tire. With it, the C8 Z51 pulled 1.04 average lateral g on the skidpad—which is actually less than a C7 Z51, which pulled as much as 1.11 average

We called the 7.0-liter LS7 in the C6 Z06 a "hall of fame engine" for making 505 hp and revving to 7,000 rpm, and here's a 6.2-liter that makes 495 hp and revs to 6,400 plus a dual-clutch transmission and mid-engine balance. Progress is beautiful.





Give it a lot of throttle sans ESC, and you'll likely end up backward. Be extremely patient and roll into the throttle correctly, and the C8 will dig in and push hard off the exit of a corner. Give it too much gas, though, and the rear end is happy to step out. The line between a nice power-on drift and a spin is razor thin.

Which explains the understeer. Moving the engine (and thus the weight balance) to the center decreases the polar moment of inertia, making a vehicle more prone to spinning. Understeer makes it harder for the vehicle to get sideways and reduces the chance of a spin. The Corvette team is more than capable of tuning the car for a more balanced demeanor, which makes us think this was intentional.

The vast majority of C8s sold will be base Stingrays. More than likely, those who buy them will have never driven a mid-engine car or one that hits 60 in less time than it takes to start the engine. Severe understeer will help prevent the overeager owners from pulling a Mustang exit at their local cars and coffee. Given all that, we also expect future performance models, from Grand Sport to Z06 to ZR1 and anything else, to dial back the understeer in pursuit of performance.

There's more to the story, though. Although the C8 struggles for grip

midcorner, it dwarfs the C7's ability to put down power coming off the corner; the ultra-quick transmission and extra power conspire to reduce the time between corners. Witness the C8 Z51's 23.3-second figure-eight lap at 0.90 average g, 0.4 second ahead of any C7 Z51 and 0.2 behind a C7 Z06 with steel brakes.

Brakes are the one area where the C8 does not have a decided advantage over the C7. At 97 feet, the C8 Z51's best stopping distance from 60 mph falls on the longer end of the C7 Stingray and Z51's scale, costing it precious time in short figure-eight laps. The brakes were also a source of contention among the staff. In everyday and even sporty driving, they get the job done fine. It's when pushed to the limit that they fall short.

The car stops fine, but the brake-by-wire pedal feel isn't reassuring. ABS activation happens before the pedal reaches the end of its travel, and once you're there, it's difficult to modulate. You have to learn to listen and feel for other signs that you're approaching the limit because cars stop considerably better under threshold braking than with ABS

lateral g on the Pilot Super Sports that preceded the Pilot 4S.

How did that happen? With grinding, infuriating understeer, as testing director Kim Reynolds was bemused to discover. This is the C8's default move at its limits, even as a mid-engine car with the Z51 package. Why do this? Because of what happens if you turn off the excellent stability control and Performance Traction Management computer.

Put simply, the C8 is no drift car. Try to correct the understeer with a nudge of throttle, and you get more understeer.



2020 Chevrolet Corvette (3LT/Z51)

DRIVETRAIN LAYOUT	Mid-engine, RWD
ENGINE TYPE	90-deg V-8, alum block/heads
VALVETRAIN	OHV, 2 valves/cyl
DISPLACEMENT	376.0 cu in/6,162cc
COMPRESSION RATIO	11.5:1
POWER (SAE NET)	495 hp @ 6,450 rpm
TORQUE (SAE NET)	470 lb-ft @ 5,150 rpm
REDLINE	6,400 rpm
WEIGHT TO POWER	7.3 lb/hp
TRANSMISSION	8-speed twin-clutch auto
AXLE/FINAL DRIVE RATIO	3.55:1/1.70:1
SUSPENSION, FRONT; REAR	Control arms, coil springs, adj shocks, anti-roll bar; control arms, coil springs, adj shocks, anti-roll bar
STEERING RATIO	15.7:1
URNS LOCK TO LOCK	2.5
BRAKES, F; R	13.3-in vented disc; 13.8-in vented disc, ABS
WHEELS, F; R	8.5 x 19-in; 11.0 x 20-in cast aluminum
TIRES, F; R	245/35R19 89Y; 305/30R20 99Y Michelin Pilot Sport 4S
DIMENSIONS	
WHEELBASE	107.2 in
TRACK, F/R	64.9/62.4 in
LENGTH X WIDTH X HEIGHT	182.3 x 76.1 x 48.6 in
TURNING CIRCLE	36.4 ft
CURB WEIGHT	3,622 lb
WEIGHT DIST, F/R	39/61%
SEATING CAPACITY	2
HEADROOM	37.9 in
LEGROOM	42.8 in
SHOULDER ROOM	54.4 in
CARGO VOLUME, F; R	4.0; 8.6 cu ft
TEST DATA	
ACCELERATION TO MPH	
0-30	1.0 sec
0-40	1.5
0-50	2.1
0-60	2.8
0-70	3.7
0-80	4.6
0-90	5.8
0-100	7.1
0-100-0	10.8
PASSING, 45-65 MPH	1.4
QUARTER MILE	11.1 sec @ 123.2 mph
BRAKING, 60-0 MPH	97 ft
LATERAL ACCELERATION	1.04 g (avg)
MT FIGURE EIGHT	23.3 sec @ 0.90 g (avg)
TOP-GEAR REVS @ 60 MPH	1,300 rpm
CONSUMER INFO	
BASE PRICE	\$76,945
PRICE AS TESTED	\$88,305
STABILITY/TRACTION CONTROL	Yes/Yes
AIRBAGS	4: Front, fr side/head
BASIC WARRANTY	3 years/36,000 miles
POWERTRAIN WARRANTY	5 years/60,000 miles
ROADSIDE ASSISTANCE	5 years/60,000 miles
FUEL CAPACITY	18.5 gal
EPA CITY/HWY/COMB ECON	16/27/20 mpg (est)
ENERGY CONS, CITY/HWY	211/125 kW-hr/100 mi (est)
CO2 EMISSIONS, COMB	0.99 lb/mile (est)
RECOMMENDED FUEL	Unleaded premium



As it has for years, the roof comes off and stows in the trunk, but now you have a frunk for some of the cargo the roof displaces.

software cycling through them. This applies doubly if the braking zone isn't perfectly smooth, as even a slight loss of grip at either front wheel sends the C8's ABS into conniptions. Chevrolet says the pedal travel and resistance characteristics change depending on the driving mode, but we couldn't feel the difference. No mode seemed any better than the others in limit braking. Although isolating brakes may be a shortcoming, the C8's isolating ride on long cruises is a highlight. The magnetic dampers, set to Tour mode, ride like a luxury sport sedan. Impacts from expansion joints, crumbling pavement, and railroad crossings are heard far more than they're felt. Even big impacts struggle to rattle the cabin. Twisting the drive mode knob up through Sport and Track settings stiffens the ride and increases the amount of vertical motion for occupants, but even at its most inflexible the ride is never punishing. It's just one element of an unusually coddling interior for a Corvette. No longer can we chide Chevrolet for cheap materials, mediocre build quality, and unsupportive seats. Our 3LT trim tester was loaded up to nearly \$90,000, and you could see and feel where every penny went (except maybe the cupholders). The GT2 seats offered excellent support under hard driving and equal comfort the rest of the time. The leather is the best quality

we've seen in a Corvette, and the cabin is quiet enough to whisper across at 80 mph. The steering wheel places your hands in awkward positions during cornering, but we appreciate the clear view of the instrument cluster it affords. The other side of the coin is a disconnectedness from the raw performance of the car. The engine is rather quiet for a Corvette (though it retains that distinctive small-block roar), and the transmission is so smooth in Tour mode that you don't get a sense of just how fast you're going, at least until you brake. Similarly, it neither looks nor feels like a sub-3-second 0-60 sprint, but the numbers don't lie. There's never a big shove of torque; the engine's delivery is always exactly the same. You just gain speed, as simple as that. The dual-clutch transmission is exceptional for a first try, a game effort to match Porsche's benchmark PDK. The steering is precise and accurate but could stand to give you more road feel. For decades, we made excuses for the Corvette's foibles, arguing its performance per dollar trumped all else. The C7 changed that, showing us Chevy could afford to make the Corvette nice, too, in addition to fast. Still, it wasn't as nice as the cars it was beating on the stopwatch. No more. The C8 is not only powerful, but, dare we say, it's also the most premium-feeling Corvette that Chevrolet has ever made. It's the quickest Corvette to ever roll off the assembly line and up to a stoplight, and it somehow still starts at \$60,000. And this is just the beginning. ■

