

# Classic Car History - 1963-67 Corvette Sting Ray

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## Specs for 1963-67 Corvette Sting Ray

Engine: OHV 90 degree V-8, 327 cid, 396 cid, 427 cid  
Construction: Cast-iron block and heads, single cam, pushrods  
Compression ratio: 11:1  
Induction: Rochester fuel injection or one/two Carter four barrel carbs  
Maximum Power: 250-375 bhp (327 cid) 390-435 (427 cid)  
Top Speed: 152 mph  
0-60 mph: 5.4 sec, 427 cid  
Transmission: Four-speed, all synchromesh manual, optional three-speed manual, or Powerglide automatic  
Body/Chassis: Steel ladder frame with two door convertible or coupe fiberglass body  
Wheels: Five bolt steel (knock off aluminum optional) 6in. x 15in.  
Tires: 6.7 in. x 15 in. Firestone Super Sport 170  
Brakes: Drums to 1965, then four wheel discs  
Front Suspension: Double wishbone, coil springs, anti-roll bar  
Rear Suspension: Semi-trailing arms, half shafts and transverse links with transverse leaf spring  
Wheelbase: 98 inches  
Length: 175.3 inches  
Height: 49.8 inches  
Weight: 3150 lbs  
Quarter Mile Performance: 12.8 @112  
Fuel Mileage: 9-16 mpg.  
Production: 118,964 including 1963-67  
Price: \$4240 for 1967 Convertible

## The 1963-1967 Corvette Sting Ray

The second generation Corvette was the 1963-1967 Sting Ray, not to be confused with the third generation 1968-82 Stingray (1 word). The styling was the expression of many of the styling ideas of new GM styling chief Bill Mitchell. The interior implemented a dual cockpit similar to earlier Corvettes, but updated for the Sting Ray. Starting in 1963 the first hard top coupe was offered, featuring the a two piece rear window design. Bill Mitchell intended for it to form a visual connection with the central raised sections on the hood. The feature was dropped in 1964 because it limited rear visibility. However the 1963 Sting Ray coupe is now the most sought after model of second generation Corvettes.

Like all Corvettes, the Sting Ray's body is constructed of fiberglass panels mounted on a steel ladder frame. Another new feature was the hidden twin pop-up headlights, which not only added style they aided in aerodynamic efficiency. Other styling cues of the Sting Ray include optional side mounted exhaust, a power bulge on the hood (this was wider for the Corvettes that had the big block engine), and absence of a trunk lid (access is from behind the seats). Additionally the Corvette's convertible top folds away completely when not in use and is stored beneath a flush fitting fiberglass panel behind the driver. There was also an optional hard top. The different year model Sting Ray's can often be differentiated by their side vent designs , for instance the 1967 had 5 side vents, the 1965 and 1966 models had triple side vents, the 1963-64 had horizontal double vents.

Sting Rays came in three engine sizes, the 327 cid, the 396 cid and the 427 cid. Horsepower varied between 250 and 435 hp. The 396 engine was only offered in 1965, and dropped in 1966 in favor of the 427. The 1967 L88 427 cid V8 marked the pinnacle of performance for the second generation Corvette. The V8 engines drive the rear wheels through a four-speed manual or a three speed automatic transmission. The Sting Ray also had an alloy clutch housing and alloy-cased gearbox to help with weight reduction and weight distribution. The 1963 Sting Ray was the first Corvette to have an independent suspension. The 1965 was the first to have 4 wheel disc brakes.

The 63 Corvette also had a racing option, the Z-06. The Z-06 was created by Zora Arkus-Duntov as a purpose built racer. The Z-06 option consisted of a fuel-injected 327 cid V8, 36.5 gallon fuel tank, heavy-duty brakes, heavy-duty suspension, and knock-off wheels. The heavy-duty brakes consisted of drums with sintered metallic linings, power assisted and backed by a dual circuit master cylinder. "Elephant ear" scoops rammed fresh air to the drums and cooling fans spun with the hub.

For 1967, there were four versions of the 427 available. The first version, the L36, cost just \$200 more and featured a single four barrel carb, 10.25:1 compression and hydraulic lifters. It was rated at a stout 390 bhp. Next up was the L68 for \$305 which featured triple two-barrel Holley carbs (a first for Corvette) and was good for 400 bhp. At the top was the L71 with triple two-barrel Holley carbs, solid lifters, special performance cams, and 11:1 compression which was conservatively rated at 435 bhp. Extremely rare (only 20 were built) was the top of the line L88 for \$948 more. The L88 featured new aluminum heads, 12.5:1 compression, and a single Holley four barrel carb rated at 850 cfm that sat on an aluminum intake manifold with a special raised plenum chamber. In addition, you got a transistor ignition and

Positraction differential but didn't get a fan shroud, heater, nor defroster. Chevrolet was reluctant about revealing the engine's true potential and officially rated at only 430 bhp, but most experts believed that it in fact developed close to 600 bhp! In all, 9,707 big-blocks were built, meaning that 42.31% of all 1967 Corvettes were 427s. Transmission choices were relatively simple. With the L36 and L68, buyers could choose between the wide-ratio (\$184) or close-ratio (\$184) four-speed manuals, or Powerglide automatic transmission (\$194). The L71 came only with the close-ratio four-speed. Rear end gear ratios ranged from 3.08 to 4.11. Other options included side-mounted exhausts at \$132, cast aluminum bolt-on wheels at \$263 and detachable hardtop for the convertible for \$232.

Stats by year:

1963

Production: 21,314  
Coupe: 10,594  
Z06 Coupe: 199  
Convertible: 10,919

Engines: 327 V8 250 bhp @ 4400 rpm, 350 lb-ft @ 2800 rpm.  
L75 327 V8 300 bhp @ 5000 rpm, 360 lb-ft @ 3200 rpm.  
L76 327 V8 340 bhp @ 6000 rpm, 344 lb-ft @ 4000 rpm.  
L84 327 ("fuelie") V8 360 bhp @ 6000 rpm, 352 lb-ft @ 4000 rpm.

Performance: 327/370: 0-60 in 5.9 seconds, 1/4 mile in 14.9 seconds.

1964

Production: 22,229  
Coupe: 8,304  
Convertible: 13,925

Engines: 327 V8 250 bhp @ 4400 rpm, 350 lb-ft @ 2800 rpm.  
L75 327 V8 300 bhp @ 5000 rpm, 360 lb-ft @ 3200 rpm.  
L79 327 V8 350 bhp @ 5500 rpm, 360 lb-ft @ 3600 rpm.  
L76 327 V8 365 bhp @ 6200 rpm, 350 lb-ft @ 3400 rpm.  
L84 327 ("fuelie") V8 375 bhp @ 6200 rpm, 350 lb-ft @ 4600 rpm.

Performance: N/A

1965

Production: 23,652  
Coupe: 8,186  
Convertible: 15,376

Engines: 327 V8 250 bhp @ 4400 rpm, 350 lb-ft @ 2800 rpm.  
L75 327 V8 300 bhp @ 5000 rpm, 360 lb-ft @ 3200 rpm.  
L79 327 V8 350 bhp @ 5500 rpm, 360 lb-ft @ 3600 rpm.  
L76 327 V8 365 bhp @ 6200 rpm, 350 lb-ft @ 3400 rpm.  
L84 327 ("fuelie") V8 375 bhp @ 6200 rpm, 350 lb-ft @ 4600 rpm.  
L78 396 V8 425 bhp @ 6400 rpm, 415 lb-ft @ 4000 rpm.

Performance: 396/425: 0-60 in 5.7 seconds, 1/4 mile in 14.1 seconds @ 103 mph.

1966

Production: 27,720  
Coupe: 9,958  
Convertible: 17,762

Engines: L79 327 V8 300 bhp @ 4800 rpm, 360 lb-ft @ 3400 rpm.

L36 427 V8 390 bhp @ 5400 rpm, 460 lb-ft @ 3600 rpm.  
L72 427 V8 425 bhp.

Performance: 427/425: 0-60 in 5.7 seconds, 1/4 mile in 14 seconds.

1967

Production: 22,940  
Coupe: 14,436  
Convertible: 8,504

Engines: L79 327 V8 300 bhp @ 4800 rpm, 360 lb-ft @ 3400 rpm.  
L36 427 V8 390 bhp @ 5400 rpm, 460 lb-ft @ 3600 rpm.  
L68 427 V8 400 bhp @ 5400 rpm, 460 lb-ft @ 4000 rpm.  
L71 427 V8 435 bhp @ 5800 rpm, 460 lb-ft @ 4000 rpm.  
L88 427 V8 430 bhp @ 5200 rpm, 460 lb-ft @ 4000 rpm.

Performance: L88: 1/4 mile in 12.8 seconds @ 112mph.

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