

# 1963 CHEVROLET Biscayne 283 V-8

**G**IVEN LITTLE PUBLIC notice last fall when the 1963 Chevrolets were announced was the fact that the old-standby 283-cu. in. V-8 engine had had a 15-bhp increase. This, of course, is pretty pale tea to be in the same cup with the new Corvette, the 425-bhp 409 and sundry other delectables. However, there's more to that 8.8% increase than meets the eye.

In the first place, the 283 V-8 is Chevrolet's "standard" V-8, and, as such, is perhaps the world's best-selling single engine. V-8 sales in '62 were one-third more than 6-cyl. sales, which means that most Chevrolet customers bought this bread-and-butter engine. The way things look, even more will buy it in '63.

Second, the 283 has been around since 1957 and has been the basis for some tremendous development work. As a workhorse, it knows no peer.

Third, it is light in weight and cheap to produce, making it an ideal option for the big Chevrolets. It weighs just 135 lb. more (installed) than the new lighter-weight Six and costs only \$100 more in the showroom.

But why the horsepower increase? To be competitive in sales points, to produce better operation economy, to

simplify manufacture. (Engineers are seldom, if ever, allowed to increase horsepower just because they know how to do it.) In the case of the 283 V-8, all three considerations were improved.

Basically, Chevrolet put on the bigger-port heads of the 327-cu. in. V-8 (which is not just a bored and stroked 283) and called on the camshaft department to come up with something special. It did.

On a comparative basis, the cam specifications look like this:

	1963	1962
Valve Timing:		
intake opens (BTC)	32° 30'	33°
intake closes (ATC)	80° 30'	102°
duration	300°	315°
exhaust opens (BTC)	74° 30'	72°
exhaust closes (ATC)	45° 30'	50°
duration	300°	302°
overlap	78°	38°
Valve lift, in.	0.3987	0.333
Spring pressure, valves open, lb.	170-180	150-175
Spring pressure, valves closed	78-86	75-90

The new heads reduced the size of the combustion chamber, thereby increasing the compression ratio from 8.5:1 to 9.25. Despite this increase in compression, the *Car Life* test car performed adequately knock-free.

The addition of 15 more bhp and

10 lb.-ft. of torque, plus some lightening of the overall car, allowed a lower gear ratio to be specified for 283-equipped sedans. From 3.36:1 (for both manual and Powerglide-transmissioned cars) it dropped to 3.08, a gear well-calculated to keep down expense. With the new ratio, the engine turns only a comfortable, economical 2500 rpm at 60 mph cruising.

Mileage on our test car reflected this: we turned up an average of 17 mpg for all our driving. It went as high as 19 mpg and as low as 16, depending upon the driver. Though an all-on, all-off type of sticky throttle plagued us, the overall mileage was far better than we expected.

This lower gear ratio gave us brisk acceleration through the gears, actually making 2nd far more versatile as a passing gear, but it somewhat limited the top speed potential. With this "long" a gear, the engine can't reach its power peak (see data panel). Of course, engine rpm is somewhat limited by just one 2-barrel carburetor, a single exhaust and hydraulic valve lifters. However, it runs out of breath long before lifter pump-up is reached.

The acceleration curve reflects this characteristic—brisk movement all the

**CAR LIFE**  
ROAD TEST

way to 85, then the curve begins to flatten. It's all out of steam at about 100 but will gradually creep up to 105. Although ideal for economy, this gear ratio is not for the performance-minded.

Weighing the car at the public scales turned up another surprise—it is some 60 lb. lighter than last year's similar model. Our Biscayne weighed out at 3460 lb. (with fuel, water and oil but no driver or observer). Some 1868 lb. of this total was on the front wheels, which figures out to a respectable 54/46 weight distribution. Handling, as we shall see, was not unduly influenced by this proportion. Some of the weight was lost when Chevrolet equipped its cars with aluminum-cased alternators instead of iron-cased generators. Perhaps the use of straight windshield pillars instead of those ugly "dogleg" pillars of the past also contributed to the reduction.

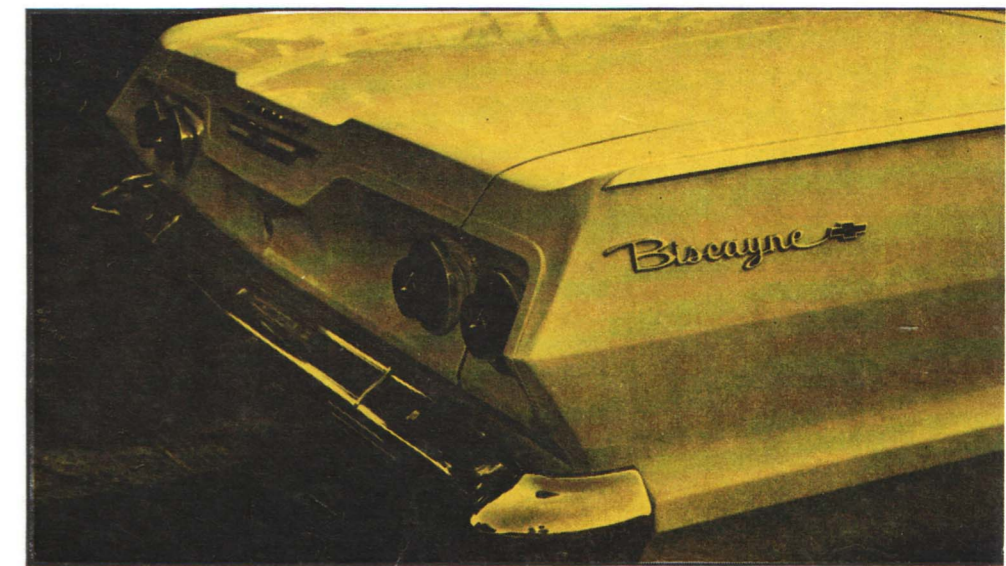
Along with being the lightest (except for the Six) big Chevrolet, the Biscayne 2-door sedan we've tested here is also the least expensive. Its sticker price is \$2429—before destination charges, state and local taxes and accessories. Obviously, it is cheap, economical and has considerable

spunk. It is an ideal car for the traveling salesman and thousands have been sold for just that purpose.

Our Midwest advertising manager bought a similar '62 model last winter. He couldn't be happier. He traded in a compact and now says he gets very nearly the same mileage per gallon of fuel, but more power and stability on

the road and far fewer repairs. In fact, his only problem in driving his Biscayne nearly 22,000 miles around the industrial centers of the Midwest is one of a rattling right door which his dealer hasn't been able to fix. No wonder Chevrolet enjoys such a heady reputation among traveling men.

A good deal of this notoriety stems





# Biscayne

from the fact that the cars are well put together before they leave the factory. Our Biscayne had tolerable panel fitting and overall finish. The paint job was the best we'd seen on a car in this price class but there were a few places where it was rather obvious that putty had been used to fill up sloppy joints. The interior was serviceable but a little plain—but that's what helps lower the price.

And beauty seems to be more than skin deep; the mechanical com-

ponents, with but one exception, are genuinely designed for trouble-free, long-life service. Even this least expensive Chevrolet has an alternator, self-adjusting brakes, extended-period lubrication, positive crankcase ventilation and a heater as standard equipment.

The exception is the 3-speed manual transmission. This unit must be a legacy from Louis' first Six, for it howls and wails like a dyspeptic banshee. It's the reason people a block away can identify a Chevrolet in a traffic jam. Why does it howl? Because the pair of gears which provide low are located in the middle of the case far away from the bearings (other makers put this pair near the end of the shafts

where they'll get maximum support). Consequently, as the shafts flex under loading, the gears climb apart and out of proper mesh, thus producing that characteristic intestinal grumbling. It's enough to make a buyer spend the extra \$199.10 for Powerglide.

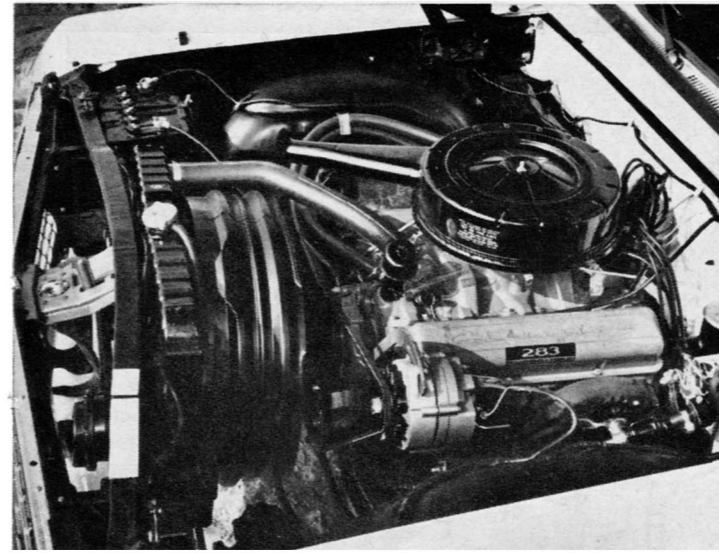
Another, more personal, complaint was the driving position. The Biscayne's seats seemed placed in poor relationship to brake, clutch and throttle pedals and steering wheel. This latter item projects well back toward the driver's upper chest and, indeed, if he pulls the seat up to where his feet can reach the pedals, the wheel nearly pins him to the backrest. Then, too, the seat is not high enough off the floor and a short driver ends up peering through the wheel, rather than over it.

In our earlier test of the 1963 Bel Air Six, we complained also about the ride as being too soft for good control of the vehicle at highway speeds. Same thing applies to the Biscayne V-8. Again we must qualify this with the statement that the car handles well enough inherently, in that it has good, if slow, steering, suspension geometry and weight placement. This problem is nothing that the optional heavy duty springs and shocks won't help a lot.

The brakes, we discovered again, are quite good. As with the Bel Air Six, they survived the usual 2-stop test with flying colors and no squeals. In fact, we made two consecutive, all-on stops from 85 mph just to check again. Same thing—they're good. The vacuum-boost power option is not particularly needed.

This braking efficiency, particularly at the severe end of the scale, has come as a by-product of the redesign necessary for the self-adjustment feature. Part of it came from rotating the primary lining downward 14° toward the adjusting screw, which gave a better pattern of lining wear. Still more came from making the primary and secondary shoes and facings more flexible than before; the thinner web contours give better conformity to drum shape over a wider range of operating conditions.

The self-adjusting unit itself is an articulating mechanism mounted on the secondary shoe. One end of its linkage is attached to the anchor pin by a heavy wire link; at the other, the pawl meets the star wheel of the adjusting screw. On reverse stops, the secondary shoe moves outward and rotates slightly forward until the primary shoe contacts the anchor pin. If adjustment is needed and the movement is large enough, the self-adjuster is actuated and the pawl turns the star wheel to spread the brake shoe apart in the normal manner. A ratcheting action returns the mechanism when the brakes are released. An overrider pro-



REFINED 283-cu. in. V-8 delivers 15 bhp more in 1963.



REALLY BIG trunk invites that extra piece of luggage.

vides against over-adjustment. Manual adjustment can be made through a slot in the drum web when the road wheel is removed.

With so many factors in its favor, plus General Motors' new 24-month or 24,000-mile guarantee and the generally high resale value of Chevrolets,

the Biscayne V-8 would seem to be an excellent buy. Our best advice here is: try the seating/driving position before you sign the papers. ■



## CAR LIFE ROAD TEST



### 1963 CHEVROLET Biscayne V-8 2-door sedan

#### SPECIFICATIONS

List price	\$2429
Price, as tested	2429
Curb weight, lb.	3460
Test weight	3750
distribution, %	54/46
Tire size	7.00-14
Tire capacity, lb @ 24 psi	3680
Brake swept area	328
Engine type	V-8, ohv
Bore & stroke	3.88 x 3.00
Displacement, cu in.	283
Compression ratio	9.25
Carburetion	1 x 2
Bhp @ rpm	195 @ 4800
equivalent mph	116
Torque, lb-ft.	245 @ 2400
equivalent mph	58

#### DIMENSIONS

Wheelbase, in.	119.0
Tread, f and r	60.3/59.3
Over-all length, in.	210.4
width	79.4
height	55.5
equivalent vol, cu ft.	537
Frontal area, sq ft.	24.5
Ground clearance, in.	6.0
Steering ratio, o/a	28.0
turns, lock to lock	5.8
turning circle, ft.	40.7
Hip room, front	63.5
Hip room, rear	62.5
Pedal to seat back	37.0
Floor to ground	10.0
Luggage vol, cu ft.	19.0
Fuel tank capacity, gal.	20.0

#### GEAR RATIOS

4th ( ), overall	3.08
3rd (1.00)	5.17
2nd (1.68)	9.06
1st (2.94)	

#### EXTRA-COST OPTIONS

None

PERFORMANCE	
Top speed (4360), mph	105
Shifts, rpm-mph (manual)	
3rd ( )	72
2nd (5000)	14.3
1st (5000)	41

ACCELERATION	
0-30 mph, sec.	3.5
0-40	5.1
0-50	7.8
0-60	10.7
0-70	14.3
0-80	20.7
0-100	47.0
Standing 1/4 mile	17.9
speed at end	76

FUEL CONSUMPTION	
Normal range, mpg	16-18

SPEEDOMETER ERROR	
30 mph, actual	27.8
60 mph	57.3
90 mph	86.7

CALCULATED DATA	
Lb/hp (test wt)	19.2
Cu ft/ton mile	109.2
Mph/1000 rpm	24.0
Engine revs/mile	2495
Piston travel, ft/mile	1250
Car Life wear index	31.2

PULLING POWER	
3rd, lb/ton @ mph	240 @ 65
2nd	440 @ 49
1st	off scale
Total drag at 60 mph, lb	165

