Chevelle Chevelle Chevelle

CAR LIFE
ROAD TEST

1 Malibu, 1 El Camino, and 1 Super Sport Equal 1 Suburbia Set for Triple Trial . . .

ONE FORTE OF THE Chevrolet dealer organization is that it can sell just about any sort of rolling stock, provided the cars meet its conception of what an automobile should be. The Corvair did not and only a mushrooming public interest saved it from an apathetic fate at the dealers' hands. Then came the Chevy II, a car which the dealers could understand, and that reputation for salesmanship was maintained. It comes as no surprise, then, that Chevrolet's new line, the aggressively conventional Chevelle, has accounted for more than the 15% of production originally scheduled for it at introduction time.

What has been somewhat of a surprise, however, has been the continued demand for the Chevy II, which factory planners figured would have to face a dwindling market. The Chevelle was conceived as a bigger car, completely divorced from the austere economy image, which would allow Chevy II customers to move into a larger car at a time when the pendulum of public taste was swinging back toward largeness and luxury. The top series in the Chevy II line had been dropped, only to be returned to production as 1963 drew to a close and the strong demand for the Chevy II line continued.

It was a late decision last spring to continue an emasculated Chevy II line as a hedge on the Chevelle bet and production continued with negligible appearance changes. Availability of the 283-cu. in. V-8 engine as an option, however, raised the Chevy II stakes in this popularity poker game.

With that in mind, the appearance of the Chevelle line then begins to seem a merchandising master stroke. Not only does it complete the "something for everybody" line which can snare a shopper into driving home from the Chevrolet dealership in a new car, it also retains for the Chevy dealer near-equal footing with the local Pontiac, Buick and Oldsmobile stores. He had had a small advantage over the B-O-P smaller cars in a slightly better passenger package with the Chevy II before the A-series cars were introduced.

Chevrolet and its dealers are well aware that a vast segment of the motoring public couldn't care less about the things that, to the enthusiast, are the heart and soul of an automotive love affair. It is precisely for that great group, quite often seen choking the highways in dawdling drives on springtime Sunday afternoons, for whom the Chevelle was designed and built. Small wonder that its sales performance exceeds the forecast of the production planners.

Since it is a new line of standard-sized cars available in 13 models, *Car Life* editors decided to expand the usual test to include three varied examples with differing power trains. The result —a standard 6-cyl. 4-door sedan, a sporty V-8 El Camino pickup with Powerglide, and a sleek 2-door hardtop with the new Chevrolet-built "Muncie" 4-speed transmission—was a veritable suburbia kit: a car each for Mom, Dad and Junior.

As it worked out, Mom would have been pleased to find the 2-speed Powerglide bolted behind the 230-cu. in., 7-main-bearing Six in her sedan, even though the testers would have preferred the 3-speed manual, with or without overdrive, to permit a more thorough evaluation of the available power trains. When announced, the Chevelle was to have four engine and four transmission options, for a total of 13 power trains. As *Car Life* testers began work, however, Chevrolet announced that the 327-cu. in. Corvette engine would be available in three bhp ratings, increasing the power options to 19. They are:

CHEVELLE POWER OPTIONS

Engines	Transmissions			
cu.in./bhp	3-speed	O/D	4-speed	PG
194/120	X	X		X
230/155	X	X		X
283/195	X	X	X	X
283/220	X		X	X
327/250	X		X	X
327/300			X	X
327/365			X	

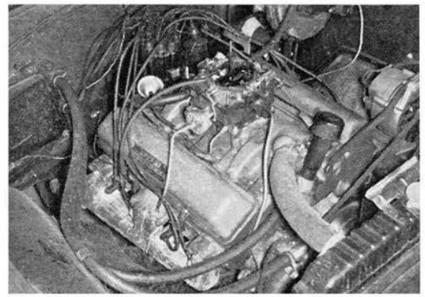
Father and son undoubtedly would have to Indian-wrestle for the keys to the El Camino, if both had surfing, motorcycling, hunting, or ranching as major interests. The reappearance of this stylish pickup truck, enhanced by the optional bucket-seated and carpeted interior, puts Chevrolet back into competition in that growing segment of the market—particularly in the Southwest and on the West Coast—that wants lushness with its load-carrying and has found that station wagons aren't the answer. For the past two years, Ford Rancheros have had this segment to themselves until Dodge edged in with its whimsically experimental (and subsequently adopted) "sports pickup."

Both the El Camino and the Malibu Super Sport hardtop (Dad, being a bit out of shape for physical exertion, settles for the latter) were powered by the 220 bhp V-8, the special Chevelle-only option that was the line's most potent powerplant before the addition of the 327s. Improved breathing from the four 1.44-in. barrels of the Carter carburetor (Rochester with Powerglide) instills new life into this 283-cu. in. engine. The breathless struggle in the higher rpm ranges to which our Chevy II test car was heir (Jan. CL) is not evident with the 4-barrel modification. The 4800 rpm power peak is readily attained, aided to some extent by the dual exhaust system which is standard with the 220 bhp version. A different distributor and incorporation of a rubber-mounted vibration damper to the crankshaft are the only other differences from the 195 bhp engine. Particularly with the automatic transmission, it appears that the more powerful of the two is the better choice for a car of this weight.

The data panel only partially illustrates the penalty extracted by the Powerglide transmission. Chevrolet could well use Buick's new variable vane torque converter automatic so long as it has no plans to build a true 3-speed automatic. Evidence abounds at most drag strips that the opposition knows the importance of a well-designed, modern 3-speed automatic. The transmission's lack of efficiency, demonstrated in sluggish starts from rest and in the gap in power transmission at medium speeds, is readily apparent in driving the Chevelles. However, past experience indicates that the more powerful 327 engines would overcome this deficiency by sheer brute force.

On the other hand, the Muncie 4-speed is an entirely different story. This robust gearbox does a most admirable job of transmitting power to the pavement. With ratios of 2.56 first, 1.91 second, 1.48 third and 1.00:1 high, the ▶

IN LINE behind, our trio of test cars shows new silhouette for American car market.



FAMILIAR 283-cu. in. engine serves as optional power with up to 220 bhp.

Chevelle

unit is more evenly spaced than the formerly used Warner Gear T-10. It is fully synchronized in all four gears, which have wider faces to handle the torque loads from Chevrolet's largest engines and a different tooth design for noise reduction. Larger synchronizers and a new output shaft aid in measuring up to big inch engines, as do larger capacity bearings. The tubular shift lever, slightly bent for easier reach and topped by a chrome ball, has a spring loaded lock-out gate at the base to prevent accidental shifts into reverse. A sliding collar sprouting a pair of lifting pegs, which lives under the knob, unlocks the gate. Because of a more rigid bracket assembly, shifts have a somewhat tighter feel than the T-10 unit but are quick, positive and a wrist-flick apart.

This stout (0.68-in. diameter) stick reaches up from a console which hardly justifies the name. It is no more than a raised bright metal trim cover extending from firewall to rear seat footwell, with a light (which didn't work) at the aft end. When Powerglide is specified in the Super Sport, it also is controlled from a floor-mounted lever—in that case a T-shaped handle with a piano key-like button on top to control the Park-Reverse-Low lockout. The shift pattern, incidentally, is now in a straight line instead of requiring a stepped motion.

The single dry-disc centrifugal clutch betrayed no signs of either slipping or grabbing. It is 10.4-in. in diameter with the more powerful V-8s and is housed in a new ribbed aluminum casting. Positive clutch action even at high rpm was possible because of the "bent finger" design of the new pressure plate, and pedal effort seemed moderate despite the 2300 lb. plate pressure involved.

Only three axle ratios are listed for the Chevelle, effectively limiting any factory-installed improvement in performance for the line. Standard is 3.08:1 with 3.36:1—standard for the station wagons and El Camino—as the readily available option. Overdrive-equipped models have 3.70:1. The lighter El Camino, despite the higher gearing, still failed to match the hardtop because of its Powerglide handicap.

Chevrolet uses the 194-cu. in. Six of Chevy II heritage as the basic engine for the Chevelle line, teamed with a 3-speed synchromesh manual transmission as standard. Since this is the case, our data panel includes figures extrapolated from previous tests of this power train weighted (literally) against Chevelle specifications.

The optional Six is, of course, the very familiar 7-main-bearing 155 bhp powerplant which has been doing yeoman service since it replaced the venerable "stovebolt six" in late 1962. It weighs 465 lb. and is readily identifiable in the Chevelle with its chromed air cleaner, rocker arm cover and oil filler cap. High performance is not this engine's plate of hashish, but economical, long-lived operation is; the sturdiness and smoothness resulting from the more expensive 7-main crankshaft help insure this. Breathing restrictions are built in with the single barrel (1.56-in. venturi) carburetor and manifold, to the point where 4000 rpm is barely within reach. The engine is easily capable (at 3000 rpm) of maintaining maximum legal cruising speeds, with some margin and minimum obtrusiveness, which should be acceptable, considering the market for which the Chevelle was designed. Except for the new 4-speed, then, there is nothing unfamiliar about Chevelle power trains.

An analysis of the body and chassis is, of course, largely repetition of that for the Oldsmobile F-85 Cutlass (Jan. CL). The fact that about two-thirds of the 1965 American passenger cars will have almost identical design, however, makes it worthy of repeating.

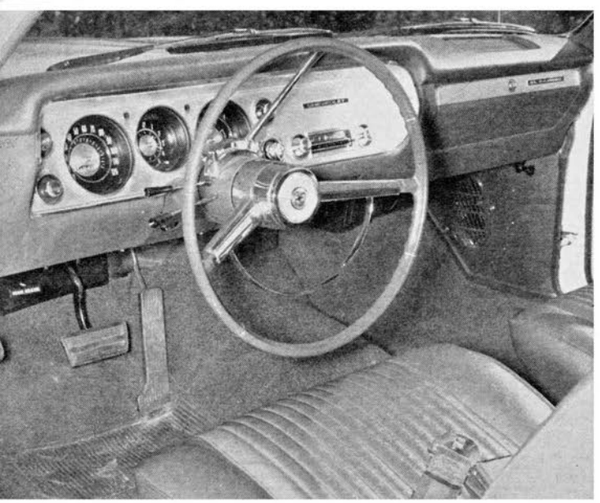
The Chevelle shares General Motors' A-series body design, using a perimeter-type frame with torsional rigidity somewhat less than past practice. To this is attached a welded-up body structure which approaches unitized construction in structural rigidity. Suspension is by unequal length A-arms in the front and a 4-link live axle behind, all sprung via coils and damped with double-acting telescopic shock absorbers. All suspension attachment points and the 10 mounting points between chassis and body are heavily rubber-bushed, resulting in a progressive resistance to jolts and twists as they travel from roadbed to passenger compartment.

The frame consists of a pair of full-length side rails, joined laterally by three cross-members which form part of the structure. A large box-section cross-member loops down under the engine and forms the attachment point for front suspension components. A deep C-section cross-member attached in front of the rear kick-up forms a similar base for rear suspension components. The third cross-member is a simple channel section joining the rear of the two side rails. A fourth, non-structural cross-member is used to support the rear of the transmission housing and is fully rubber bushed at attachment points to eliminate vibration.

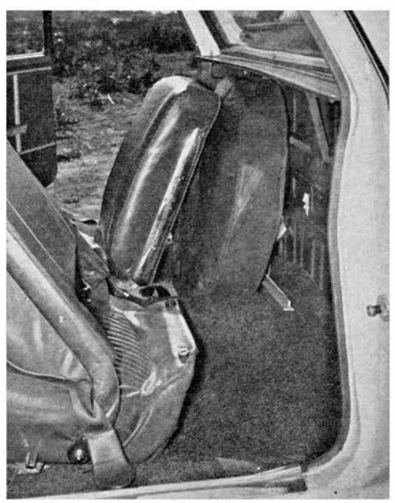
Side rails are of heavy gauge C-section construction, with welded-in torque boxes at the rear kick-up and between the passenger and engine compartments. On the convertibles and sedan pickups (El Camino), another C-section is welded over the usually-open inner side of the rails to provide greater beam strength. Side rails are located just inside the body rocker panels and no cross-member intrudes upon passenger compartment space.

The coil spring independent front suspension is little different from long-standing Chevrolet practice. Stamped short and long control arms swing from rubber bushed pivots and locate the ball jointed hub assembly. Coil ▶

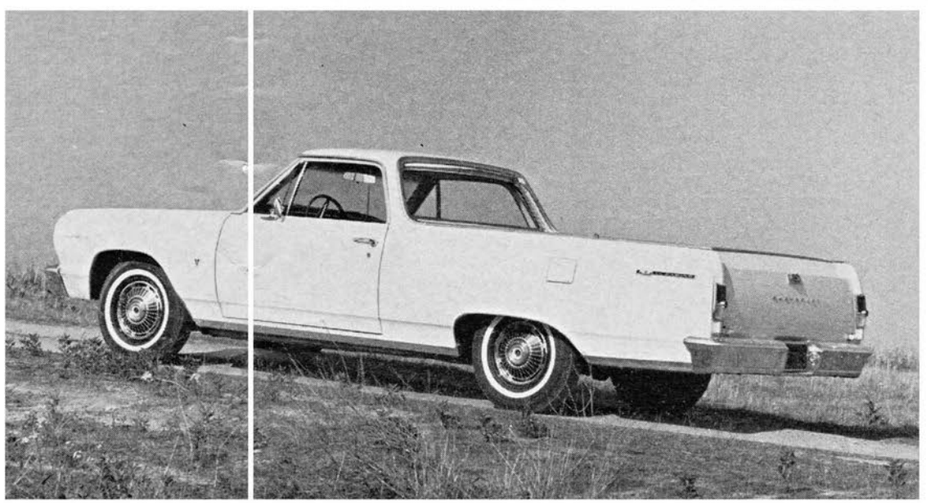
TILT-WHEEL option is available with power steering and was fitted to El Camino.



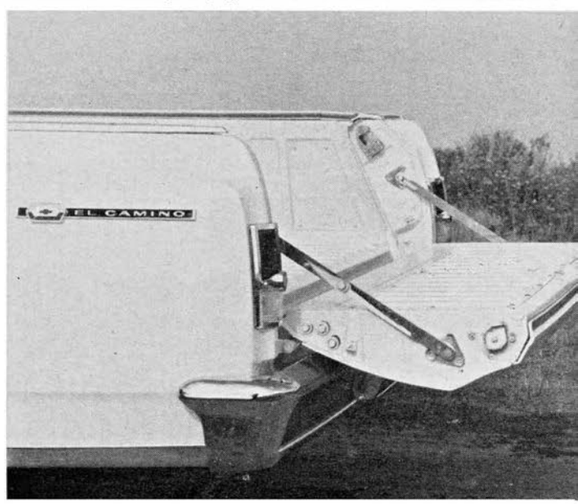
BUCKET seats in pickup tilt for access to spare tire, small stowage space.



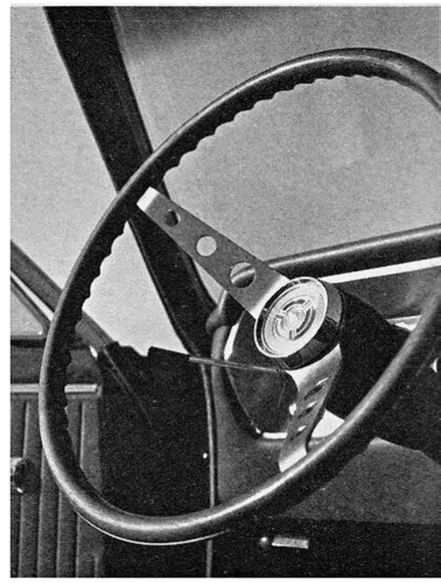
HIGH STYLE of utilitarian El Camino draws praise at every filling station, envy from every surfer.



TAILGATE of wagon provides a more fitting enclosure than usual pickup type.



PARKED IN front of 3-car garage, a Chevelle suburbia set awaits Mom, Dad and Junior.



LOOKS REAL, but wood grained wheel is really plastic imitation.

Chevelle

springs and shock absorbers are concentric, seated in the lower arm and at the side-rail cross-member attachment point. A link-type stabilizer bar of 0.812-in. diameter connects the two lower arms and the short upper arm is inclined slightly at the front for anti-dive control. Lower wishbones are positioned with their pivots on a bias, angling the arm somewhat forward so that the curved leading edge forms a right angle to the car's centerline. In conjunction with rubber-bushed pivots of different sizes and resiliencies, this arrangement provides controlled flexibility fore and aft at the same time high lateral stiffness is maintained. Coil springs are 10.51-in. high and have a rate of 90.5 lb./in. at the wheel, for the sedan.

Two sets of stamped control arms take up drive and brake forces in the rear suspension, which is designed to provide a quite high roll center for the desired understeer. The longer lower control arms attach to the side rails through welded-on brackets, while the upper arms are attached to the kick-up cross-member. A large stamped plate, riveted to the cross-member and welded to the side rails, serves as upper spring seat and shock absorber mounting. The rigid Salisbury-type rear axle rides on brackets attached to the rear ends of the longer arms, with each end of the arm pivoting in compressed rubber bushings. Coil springs are 7.18-in. high and mount directly over the axle housing, while shock absorbers are attached to a bracket behind the axle. The shorter upper arms run diagonally from the differential and also are pivoted in compressed rubber bushings. The diagonal mounting is thought to restrict lateral movement of the axle sufficiently to eliminate the need for radius rods or track bars. Geometry of the rear suspension tends to lift the rear of the frame during acceleration.

Steering is by recirculating ball gear and has an overall ratio of 26.2:1 with 5.48 turns between locks in standard form. However, the test cars all were fitted with the integral power cylinder and control valve which reduced ratio to 19.1:1 and turns to 4.1.

Duo-servo hydraulic brakes are 9.5-in. composite drums at each wheel, 2.5-in. wide in front and 2 in. at the rear, providing a total lining area of 172.7 sq. in. in standard form. Metallic linings of 118.1 sq. in. area are available, with all shoes being self-adjusting. Five-stud steel disc 14 x 5J wheels are fitted, carrying tire sizes from 6.50 through 7.50, depending on model.

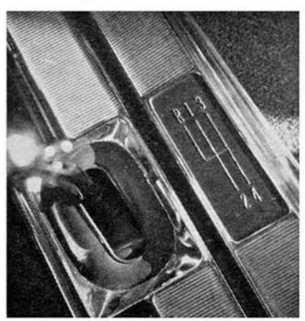
Body construction forms a sturdy, rigid shell, with major panels welded together for the passenger package but bolted together in the front fender and hood area. Roof pillars, headers and rails are box section and welded to the roof panel. The cowl structure is a welded-up double wall affair to which the instrument panel is in turn welded. At the rear, quarter panels and rear end sheet metal are welded together to form a similarly strong section around the trunk opening. The underbody panel is heavily ribbed and formed for maximum strength and ties all the upper sheet metal together. Curved glass side windows are used, permitting a slight improvement in interior shoulder width, and windshield and rear window are bonded in place via adhesive cement rather than by weatherstripping.

As it rolls out of the showroom, the Chevelle is an admirable vehicle for the market it is intended. It must be classified as among the most handsome of the 1964 automobiles, provided the too-busy "dual cove" rear styling treatment is overlooked. With a 115-in. wheelbase and 193.9-in. overall length, it fits the standard size class and is, in fact, quite similar in dimensions to the 1955 Chevrolet.

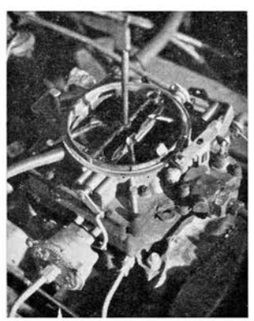
In operation, it has adequate power —regardless of engine—to provide easy cross-country tours and the seating and riding comfort to go with them. Brakes provide a nice, progressive action that is excellent for easy around-town travel. Steering is quite light, although at idling rpm the power assist was slow in coming on to help. The ride is almost identical to the larger Chevrolet's heavily-promoted one of "jet" smoothness. On any turnpike, it will transport up to six people and a big batch of baggage with ease, although one of the more powerful V-8 engines is needed to do the job with less strain and a consistently high velocity. For the type of driver the designers had in mind, it is an excellently tailored suit of steel.

But for the smaller group of drivers ▶

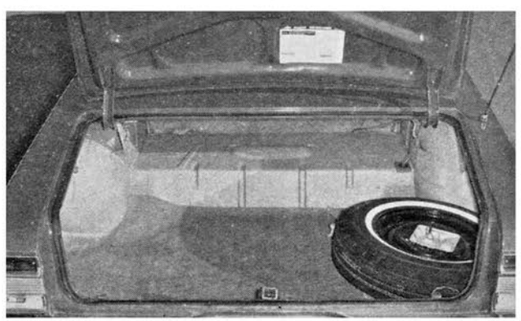
SHIFT pattern is on console which really isn't a console.



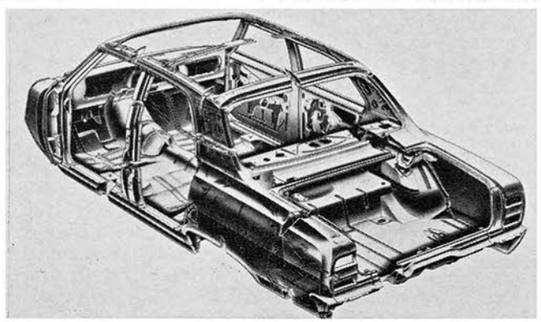
BREATH of life is given to 283 by 4-barrel carburetor.



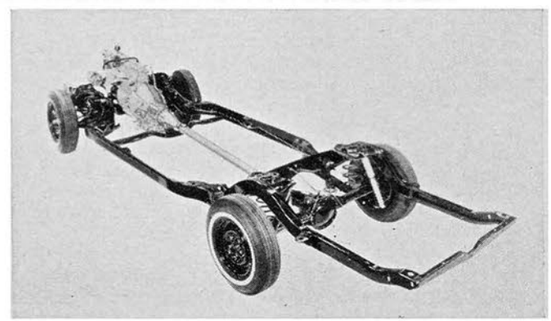
MORE THAN adequate baggage capacity is available in new line despite spare tire's location.



PHANTOM VIEW of body shows rugged construction, almost as strong as an actual unit body.



PERIMETER frame is somewhat flexible base, helps absorb road shocks before they reach passengers.



Chevelle

who take their motoring seriously, it doesn't have quite so much to offer. The fine styling and near-perfect dimensions are attractive, to be sure, as are the 4-speed transmission and power potential of the 327 Corvette engine options.

Vague and bland ride and handling, unnoticed at moderate speeds by less critical drivers, becomes pronounced during more vigorous treatment. The bump-sopping suspension turns out to be prone to wheel-flapping in front and bounce-stepping behind. The substantial understeer, compounded by the greater noseward weight bias with the V-8 engines, could only be overcome by powersliding the tail outward—a procedure more often than not helped along by rear-wheel polka on all but the smoothest of surfaces.

As expected, the Malibu handled best because of the more proper weight distribution, just as the El Camino was the biggest handful because of its lightly loaded rear (but not quite as hopeless as it might have been, since it was equipped with Air-Lift spring helpers). Such an angle is assumed by the inside front wheel under hard cornering stresses that tire contact with the ground is virtually on the inside sidewall, even with increased pressures for compensation.

Heavy-duty suspension components, which are available, might go a long way toward improving this situation, of course. By the same token, the optional metallic brakes are to be recommended, since the fast-fade standard linings proved to be quite marginal for a 3500-3800 lb. car. During all-on braking from 80 mph, none of the test cars registered better than 20 ft./sec./sec. on the *Car Life* decelerometer and all experienced complete fade in doing that well. Only the Malibu sedan, however, seemed to be prone to brake lockup.

The El Camino, which imparted more of a sports car impression because of the closeness of the passenger compartment, gave a more definite demonstration of the perimeter frame's reduction in torsional rigidity. Twist and sideway over any irregular road surface was readily evident. It was also prone to the characteristic groans and creaks of a pickup truck.

If the Chevelles tested are any indication, Chevrolet's owner relations program will be sorely tried this year. All three left something to be desired in the way they had been assembled, with a level of workmanship that had all but disappeared from the industry in recent years.

Floor carpets were poorly fitted, with gaps between sections; exterior bright work was plagued with misalignment and was pulling away from its mounts in spots; interior lights failed to work; the sedan's electric wipers refused to stop running; fuel gauge needles had a palsied flutter, particularly in the sedan; the hardtop's hood refused to latch securely and its front fenders had a 0.5-in. mismatch where they joined the cowl (as did the El Camino's); curved side windows on the El Camino and sedan wouldn't raise all the way without pressure on the outside to keep them in the lift channels; and all the rubber pedal pads continually slipped adrift from their intended moorings.

Despite all of that, the Chevelle will sell—and sell well. And in the process, it apparently is having an effect on competitors' cars in this class. Where there had been some dwindling of sales, the appearance of the Chevelle and its A-bodied brethren has apparently helped spark new interest from buyers in such things as Fairlanes and Comets.

At this writing, Chevelle accounts for 18% of Chevrolet sales and the percentage is on the rise. It is a market, as we said, that is larger than that of the enthusiasts. ■

CAR LIFE ROAD TEST

1964 CHEVELLE

SPECIFICATIONS	MALIBU	300	SUPER SPORT	EL CAMINO
List price	$2338	$2338	$2635	$2449
Price, as tested	2918	n.a.	3342	3090
Curb weight, lb.	3265	3100	3390	3180
Test weight	3585	3430	3720	3560
distribution, %	52/48	n.a.	56/44	58/42
Tire size	6.50-14	6.50-14	7.00-14	7.50-14
Tire capacity, lb.@24 psi	3520	3520	3896	4340
Brake swept area	228.6	228.6	228.6	228.6
Engine-type	IL-6, ohv	IL-6, ohv	V-8, ohv	V-8, ohv
Bore & Stroke	3.875 x 3.25	3.563 x 3.25	3.875 x 3.00	3.875 x 3.00
Displacement, cu. in.	230	194	283	283
Compression ratio	8.5	8.5	9.25	9.25
Carburetion	1 x 1	1 x 1	1 x 4	1 x 4
Bhp @ rpm	155@ 4400	120@ 4400	220@ 4800	220@ 4800
equivalent mph	101	101	123	117
Torque, lb-ft	215@ 2000	177@ 2400	295@ 3200	295@ 3200
equivalent mph	46	55	82	78
GEAR RATIOS				
4th, overall			(1.00)3.08	
3rd		(1.00)3.08	(1.48)4.56	
2nd	(1.00)3.08	(1.68)5.17	(1.91)5.88	(1.00)3.36
1st	(1.82)5.62	(2.94)9.05	(2.56)7.88	(1.82)6.12
1st	(1.82 x 2.10)11.78			(1.82 x 2.10)12.8
DIMENSIONS				
Wheelbase, in.	115.0	115.0	115.0	115.0
Tread, f & r	58.0	58.0	58.0	58.0
Overall length, in.	193.9	193.9	193.9	198.9
width	74.6	74.6	74.6	74.6
height	54.5	54.5	54.0	54.0
equivalent vol., cu. ft.	454	454	452	463
Frontal area, sq. ft.	22.6	22.6	22.4	22.4
Ground clearance, in.	6.0	6.0	6.0	6.5
Steering ratio, o/a	19.1	26.2	19.1	19.1
turns, lock to lock	4.1	5.5	4.1	4.1
turning circle, ft.	34	34	34	34
Hip room, front	59.9	59.9	2 x 22	2 x 22
Hip room, rear	59.8	59.8	58.7	n.a.
Pedal to seat back, max.	44	44	43	44
Floor to ground	8.5	8.5	8.5	8.5
Luggage vol., cu. ft.	16.9	16.9	16.9	n.a.
Fuel tank capacity, gal.	20.0	20.0	20.0	20.0

PERFORMANCE	MALIBU	300	SUPER SPORT	EL CAMINO
Top speed, rpm/mph	4000/92	4000/90	4300/110	4500/110
Shifts, rpm/mph	auto.	manual	manual	auto.
3rd			5500/86	
2nd		4150/65	5500/65	
1st	4050/51	4150/37	5500/50	4300/56
FUEL CONSUMPTION				
Normal range, mpg	16-20	16-21	15-19	15-18
ACCELERATION				
0-30 mph, sec.	4.7	5.5	3.1	4.1
0-40	6.8	7.9	4.6	5.5
0-50	9.6	10.6	6.6	7.2
0-60	13.4	14.3	8.7	9.1
0-70	18.8	20.0	11.3	11.8
0-80	26.0	27.2	14.8	15.3
0-90	38.0	n.a.	19.4	20.8
0-100	n.a.	n.a.	27.9	30.0
Standing ¼ mile, sec.	19.6	19.5	16.2	16.5
speed at end, mph	72	69	84	82
PULLING POWER				
90 mph, max. gradient, %	n.a.	n.a.	6.5	7.0
70 mph	8.5	6.0	15.2 (3rd)	12.0 (2nd)
50	13.6	13.3	21.6 (2nd)	24.5 (1st)
30	23.8	20.0	off scale (1st)	28.8 (1st)
Total drag at 60 mph, lb.	160	n.a.	120	160
SPEEDOMETER ERROR				
30 mph, actual	30.6	n.a.	30.2	35.5
60 mph	61.2	n.a.	61.6	63.0
90 mph	90.2	n.a.	93.0	90.0
CALCULATED DATA				
Lb./hp test weight	23.1	28.6	16.9	16.4
Cu. ft./ton mile	97.5	85.6	102	114
Mph/1000 rpm	22.9	22.9	25.7	24.3
Engine revs/mile	2620	2620	2325	2470
Piston travel, ft./mile	1420	1420	1162	1234
Car Life wear index	37.2	37.2	27.0	30.5

NOTE: Data presented for Chevelle 300 with 3-speed manual transmission have been extrapolated from previously published test results for this power train and manufacturer's specifications.