



DIMENSIONS

Wheelbase, in.....	98.0
Track, f/r, in.....	58.7/59.4
Overall length, in.....	182.1
width.....	69.0
height.....	48.0
Front seat hip room, in.....	19.5 x 2
shoulder room.....	46.9
head room.....	37.1
pedal-seatback, max.....	43.7
Door opening width, in.....	33.5

CHASSIS/SUSPENSION

Frame type: Ladder.	
Front suspension type: Independent by s.l.a., coil springs and telescopic shock absorbers.	
ride rate at wheel, lb./in.....	110
anti-roll bar dia., in.....	0.75
Rear suspension type: Independent, lower control arms and fixed-length axle shafts, transverse multileaf springs, two trailing arms (0.56 in. anti-roll bar on big-block only).	
ride rate at wheel, lb./in.....	123
Steering system: Recirculating ball gear, linkage power assist.	
overall ratio, Power.....	17.6:1
Manual.....	20.2:1
Manual Fast.....	17.6:1
turning circle, ft. curb-curb.....	39.9

CAPACITIES

No. of passengers.....	2
Luggage space, cu. ft.....	.5 (Coupe); 7.8 (Conv.)
Fuel tank, gal.....	20.0
Crankcase, qt.....	5.0
Transmission/dif. pt.....	3/3.7
Radiator coolant, qt.....	22.0

BRAKES

Type: Ventilated discs, front and rear	
Front rotor, dia. x width, in.....	11.75 x 1.25
Rear rotor, dia. x width.....	11.75 x 1.25
total swept area, sq. in.....	461.2
Power assists: Integral vacuum.	
Line psi at 100 lb. pedal.....	576

WHEELS/TIRES

Wheel rim size.....	15 x 8JK
bolt no./circle dia. in.....	5/4.75
Tires: Firestone, Goodyear or Uniroyal 70 aspect.	
size.....	F70-15

PRICES

List, FOB factory, basic Corvette Coupe.....	\$4781
Convertible.....	\$4438
Option prices and numbers:	
350-bhp engine.....	L46 \$131
370-bhp engine (dfr. inst.).....	LT-1 \$275
390-bhp engine.....	L36 \$221
400-bhp engine.....	L68 \$327
435-bhp, iron heads.....	L71 \$437
435-bhp, alum. heads.....	L89/L71 \$832
430-bhp engine.....	L88 \$1032
Complete suspension, with L71, L89 or L88 only.....	F41 \$37
Heavy-duty 4-sp., L88 only.....	M22 \$290
Turbo Hydra-Matic.....	M40 \$290
Close-ratio four-speed.....	M21 \$184
Wide-ratio four-speed.....	M20 \$184
Positraction rear axle.....	G81 \$46
Power-assist brakes.....	J50 \$42
Power-assist steering.....	N40 \$105
Electric windows.....	A31 \$63
Air conditioning.....	C60 \$428
Side exhausts.....	N14 \$147
AM/FM radio.....	U79 \$105
Adjustable steering column.....	N37 \$84
Price as tested:	
Coupe w/ZQ3, \$6146; Coupe w/L46, \$5959; L36 Coupe, \$6385; L68 Convertible, \$5908; L71 Coupe, \$6425; L89/L71 Coupe, \$6673; L88 Convertible, \$6436.	

SMALL BLOCKS

continued

It's part of the fun or the price you pay. Letters from people wondering if they should buy a sports car are answered with a stock question: How are you at fixing things?

In the Old World, with its dedicated craftsmen, they must build these quirks into the cars. At the Corvette plant, they aren't intentional. Merely hard to avoid. There's a lot of hand labor in a Corvette, and human hands make mistakes. The plant is working at its full capacity and it still can't fill the orders, so some mistakes slip out the door. The dealers should catch them, but they don't always. The belt-breaker led us to an agency where they don't sell many Corvettes, so they don't stock Corvette parts. We would not buy a Corvette there. We wouldn't buy any car there.

Don't let this stop you from buying a Corvette. Consider it a sports car. The Corvette owners polled shopped

for a dealer who understands Corvettes. The mechanically inclined trade tips and parts sources. They tell some stories that are funny when they happen to somebody else, like what it feels like to be a girl and try to persuade the service station attendants they can too change a tire on the Corvette if they'll only try, but we have it first hand: Corvettes respond to care and they're worth caring for.

The coupe's removable rear window and top panels may be more bother than they're worth. On the Phoenix trip, two staffers decided to enjoy the sunshine. Their car had two small suitcases and a camera bag in what is laughingly referred to as the trunk. Another staffer had a Corvette to himself so he drove from Needles, Calif., to Phoenix with the leftover panels from the other car in his passenger seat. Dare we suggest that a scratchproof material would make panel stowage

more practical?

But the convertible top is a joy. Release one lever in back and three catches in front. Pull the back of the top forward, push the front back and lift the top well cover. The top disappears behind the seats, the cover clicks into place and it's done. We asked Mike Cicchinelli to lower the top for pictures and clocked him behind his back. Barely 30 seconds.

After we recorded the acceleration times of the three 350-engine cars tested, we realized the figures need explanation. None of the three was slow, but two were slower than we expected.

The 350 engine is a descendent of the 265-cid V-8 introduced in 1955. Chevrolet has kept it up to date with stronger components and more displacement. The 350 is light for its size and strong for its weight. The best qualities of the original engine—a willingness to rev freely and pull at low speed—are still there. In its three Corvette forms, the 350 varies only in degree. The 300-bhp has a four-barrel carburetor, 10.3:1 compression ratio, and a mid-range camshaft with hydraulic lifters. The 350-bhp engine has more compression—11:1—and hotter camshaft timing, but still uses hydraulic

lifters. The 300 and the 350-bhp engines use the same size carburetor. The LT-1, as mentioned, has a street/competition camshaft, mechanical lifters and a bigger carb. It and the 350 share cylinder heads and compression ratio.

The 300-bhp automatic was almost identical to the 300/327 tested last year. It was heavier, but had a numerically higher final drive, both due to air conditioning. The 1969 car was slower than the 1968. All eight cylinders were firing and the engine didn't surge or miss. The car just wasn't as fast. The borrowed convertible with the three-speed manual transmission was lighter

and unburdened by power accessories. It felt stronger, by fractions.

The 350/350 did what it was supposed to do. Tires, gearing, transmission ratios, shift linkage, all complemented each other. The standard performance Corvette is 1.5 sec. quicker over the quarter than the standard touring Corvette. Quite a gain for 50 horsepower.

The LT-1 did not do its best. Its owner, Jeff Butler, believes in careful break-in. The 1600 easy miles were good for the car, but the spark plugs were coated, and the first timed runs glazed them over. The car should turn 6500

rpm, but it bucked and missed at anything over 6000. There goes the top end. Starts were no better. The car was geared for slaloms, where speed in first gear is more important than a blazing leap from the line. Butler had fitted 8.5-in. Appliance Plating wheels, and 5.50/9.75x15 Goodyear road racing tires. Great for traction, but the cammed engine doesn't have excess low-speed torque, and the sticky tires bogged the engine off the line. Even dropping the clutch at 3000 rpm only spun the tires for a few feet. With the engine off song the LT-1 could catch and pass the L46 before the finish line. With lower gears



CALMEST CORVETTES were tried on the street and the test track. At left, Mike Cicchinelli, the owner of a rare three-speed stick transmission, explains his car to Allan Girdler, *CAR LIFE* associate editor (glasses). The three-speed stick is the standard Corvette, and it was the hardest to track down. Below, the 300-bhp/350-cid car with automatic transmission, one of the most popular models, drifts through a turn at Phoenix.



GOOD GUY of the test was Jeff Butler, smiling out of the dealer-built LT-1 he let us test.



ENGINES

	ZQ3	L46	LT-1
Displacement, cid	350	350	350
Type, no. of cylinders	V-8	V-8	V-8
Bore x stroke	4.00 x 3.48	4.00 x 3.48	4.00 x 3.48
Compression ratio	10.3:1	11:1	11:1
Fuel required	Premium	Premium	Premium
Rated bhp @ rpm	300 @ 4800	350 @ 5600	370 @ 5800
equivalent mph			
Rated torque @ rpm	3800 @ 3200	380 @ 3800	370 @ 4000
equivalent mph			
Carburetion, type	Roch. 4-bbl.	Roch 4-bbl.	Holley 4-bbl.
throttle diameter	1.38/2.25	1.38/2.25	1.69/1.69
pri./sec.			
Camshaft timing			
lift, int./exh.	390/410	450/460	485/485
deg., int./exh.	28-72/78-30	52-114/48-62	61-1-5/109-57
duration, int./exh.	280/288	346/340	346/346

DRIVE TRAIN

	3-sp. auto.	4-sp. manual	4-sp. manual
Transmission, type			
clutch dia.	N.A.	11 in.	11 in.
Gear ratios: 4th	N.A.	1.00:1	1.00:1
3rd	1.00:1	1.27:1	1.27:1
2nd	1.48:1	1.64:1	1.64:1
1st	2.48:1	2.20:1	2.20:1
1st x t.c. stall (2.1)	5.21:1	N.A.	N.A.
Differential type:	Hypoid, w/ limited slip	Hypoid, w/ limited slip	Hypoid, w/ limited slip
Axle ratios	3.08:1	4.11:1	3.70:1

WEIGHTS

Curb weight	3405	3295	3240
Test weight	3720	3610	3560
Distribution, % f/r	49/51	49.8/50.2	48.7/51.3
w/driver			



BRAKING

	203	146	LT-1
Max. deceleration rate from 80 mph, ft./sec./sec.	26	26	35 (est)
Percent loss in deceleration rate after 8 stops from 80 mph	8	6	14
Control loss?	none	none	none
Overall brake performance	excellent	excellent	excellent

FUEL CONSUMPTION

Normal cond., mpg	15.5	14.1	12.8
Cruising range, miles	260-310	250-300	240-270

CALCULATED DATA

Lb./bhp (test weight)	12.4	10.3	9.6
Cu. ft./ton mile	133.0	183.0	163.8
Mph/1000 rpm (high gear)	24.6	18.4	20.8
Engine revs/mile (60 mph)	2430	3260	2880
Piston travel, ft./mile	1410	1890	1680
CAR LIFE wear index	34.3	61.6	48.4

SPEEDOMETER ERROR

Indicated	Actual	Actual	Actual
30 mph	30.3	27.8	29.6
40 mph	40.5	38.4	38.3
50 mph	51.0	48.3	47.6
60 mph	61.0	57.5	57.3
70 mph	70.8	67.5	67.2
80 mph	80.2	77.6	77.4
90 mph	90.0	88.4	87.8

PERFORMANCE

Top speed (mph @ rpm)	126 @ 5100	119 @ 6500	135 @ 6500 (est)
Test shift points,			
3rd to 4th	n.a.	90 @ 6200	100 @ 6000
2nd to 3rd	85 @ 5000	69 @ 6200	77 @ 6000
1st to 2nd	51 @ 5000	52 @ 6200	58 @ 6000

ACCELERATION

0-30 mph, sec.	3.4	2.6	3.0
0-40 mph	5.8	3.6	4.3
0-50 mph	7.4	5.0	5.6
0-60 mph	8.4	6.4	7.2
0-70 mph	11.0	8.1	8.6
0-80 mph	14.5	10.2	10.4
0-90 mph	18.8	12.8	12.5
0-100 mph	24.6	16.0	15.2
Standing 1/4-mile, sec.	16.12	14.55	14.44
speed at end, mph	84.46	97.93	99.9

SMALL BLOCKS

continued

and the sort of banzai start we don't use in road tests (even when the owner isn't there), the LT-1 should run in the low 14s. It didn't. We wish there had been time to have the car tuned and timed again, but there wasn't.

So the timed figures aren't much. The engines are. Chevrolet has made choosing engines so tough you might as well flip a coin. The lowest rated engine revs like a racer, while the racing engine lugs the car uphill at idling speed. Duntov's belief that bigger engines tolerate wilder cams is valid. The Z/28 we tested last year couldn't rip the fuzz off a dandelion at low rpm. The LT-1 had a rumpety-rump idle, but that was the only sign of its racing tune.

The transmission choice is just as

good. Mike Cicchinelli made the right decision: The 300-bhp Corvette doesn't need the four-speed transmission. All forward gears are synchronized. The linkage is quick and precise. The engine winds tight, in a hurry. First gear becomes a passing gear in town and second is good for 80 mph on the highway. The wide gear split between first and second drops rpm on upshifts, but the engine's flat torque curve makes up for it.

The 350-bhp engine and the close-ratio four-speed are just as good a combination. Torque peak comes at higher rpm. There's more power but it's concentrated. The four-speed lets the driver put the power to work by providing a gear for every occasion.

The automatic transmission has virtues of its own. In traffic, it's the best. It shifts quickly and smoothly, up or down. It's not quite as sporting, because the driver doesn't have as much control. He can't downshift to first unless the car has slowed to a pre-determined speed. Full power sometimes brought on a downshift when it wasn't expected, with more power than the driver wanted or needed. No problem. The performance fan won't order one and the cross-country Corvette driver will find that the advantages outweigh the shortcomings.

Corvette handling is stupendously good, like 12 on a 10-point scale. The independent rear suspension has been around long enough by now so that all it needs is a brief nod. There it is, and it works.

Duntov's constant-development program this year involved widening the car's track and changing the suspension geometry slightly, so the wheels remain upright for maximum grip when the car leans.

Corvette handling is, in one word, superior. Superior to any other production car made in this country. It's the best, in several directions at once. First, the Corvette has the most cornering power, with the highest limit of adhesion, so that maximum cornering speed in a Corvette is off the road into the bushes in other domestic cars. This is an advantage to any Corvette driver, even one who doesn't go as fast as the car will. At any speed, he has more reserve cornering power in hand so he's better equipped to survive the unexpected.

If the driver overestimates himself, the car will save the day. It's a very forgiving car in all its forms. As Duntov said, an instinctive lifting of the foot will allow the car to catch hold of the pavement again and return to the proper line. Under power total grip is so high that the car will sustain incredible slip angles without swapping ends.

There are variations with model. The LT-1 was the lightest and had the biggest tires, and it had the most grip. The L-88 wasn't far behind. Its added power made it the quickest around

the two road racing courses we used.

Both quasi-racers had manual steering for road feel and instant reaction. On the track, they were the best. For road use, we're not so sure. There is very little margin for error. The driver doesn't sit there and enjoy himself: he drives. The hair-trigger response can bring over-reaction with the car twitching back and forth. It won't go off-course, but the driver will feel foolish.

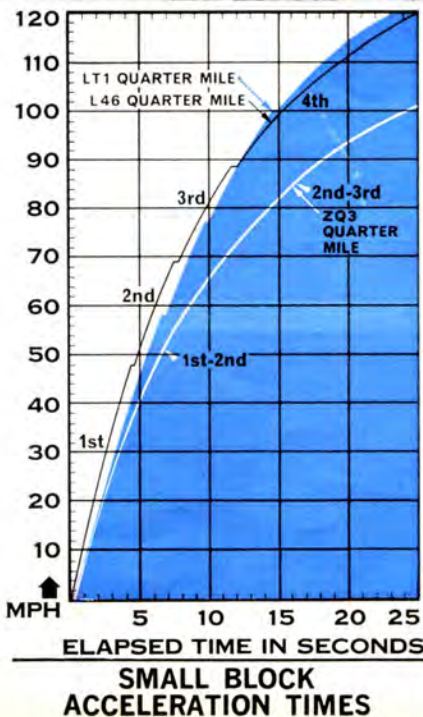
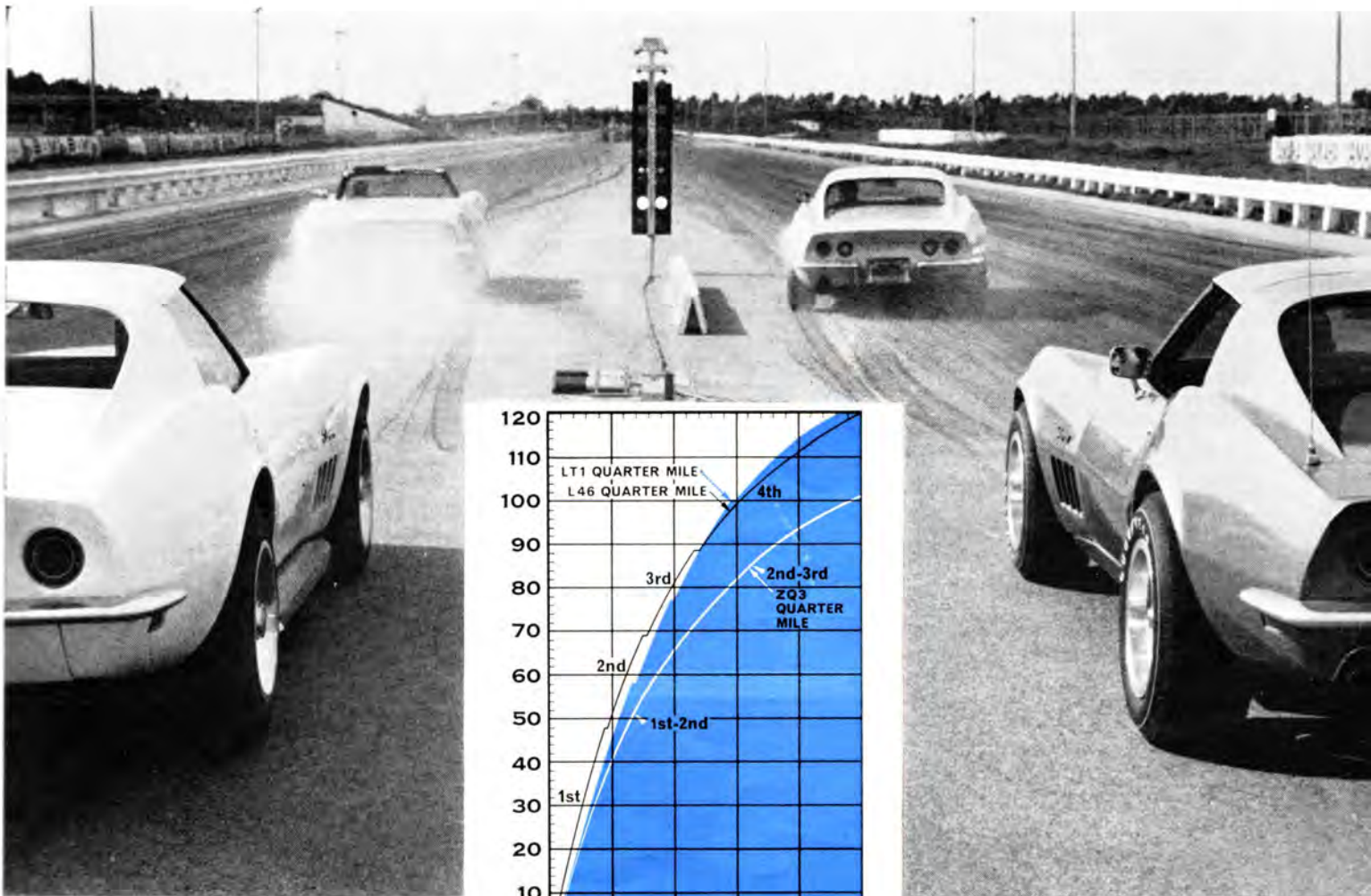
With power steering and standard tires, the Corvette is tamed to dry lightning. The steering isn't quite as precise. The feel remains, but it's dampened just enough to let the competent driver get the maximum from the car.

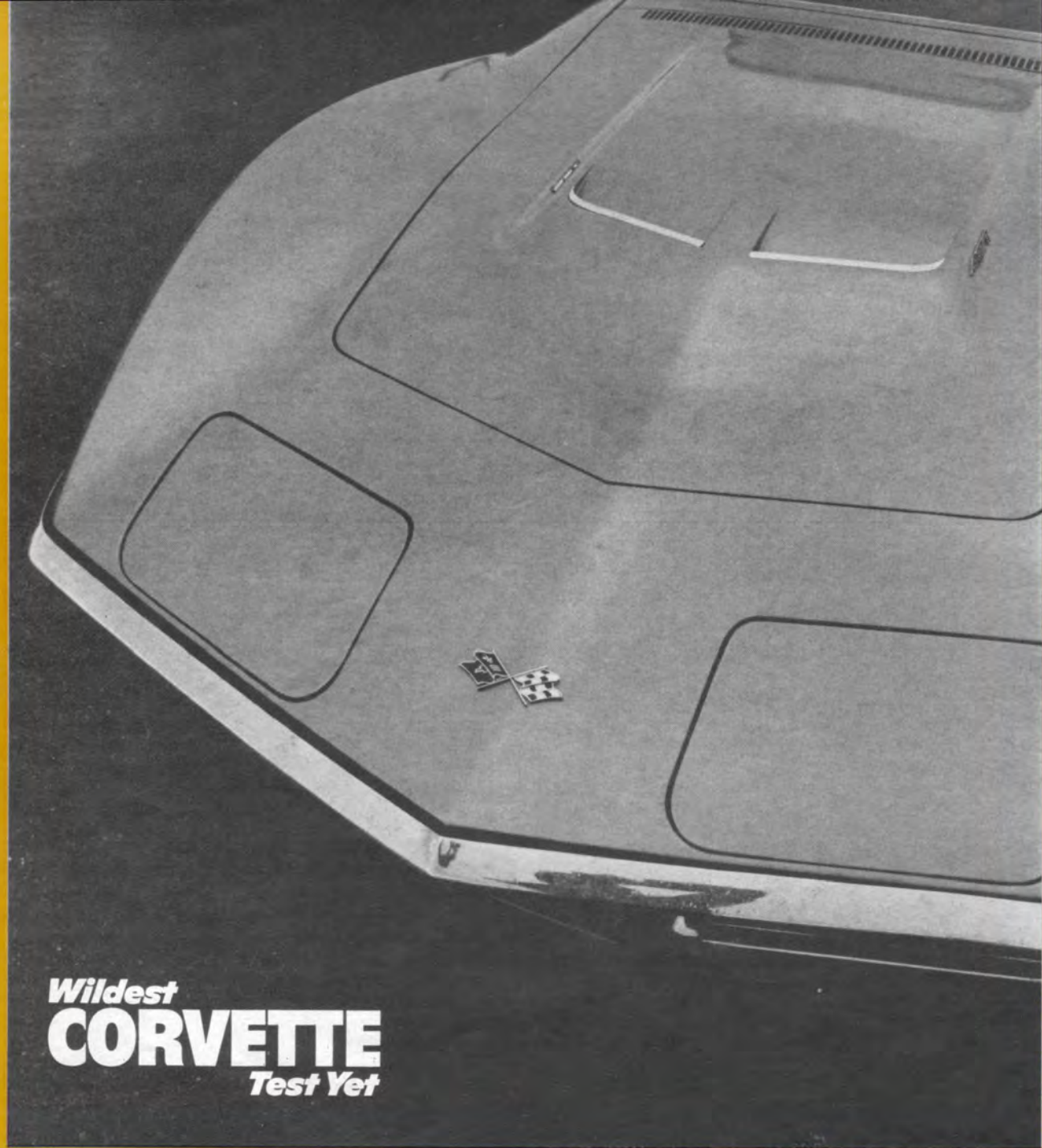
A standard suspension is firm. We have received complaints that our idea of firm is not unlike a coal cart. We repeat: Firm. Prospects should try the car first, but we doubt that the driver who objects to Corvette's ride would be happy in one. It wouldn't like him either.

The handling is the best of many good qualities. It's what sets Corvettes apart, even with the power, the song of the engine, the long-distance cockpit.

Southern California was undergoing its annual unseasonable monsoon at the time of the Phoenix trip, and the convoy was detoured from the main highway over a bumpy secondary road through the mountains. Up, down, around, over buckled pavement, holes not quite filled in, camber changes, surfaces that changed from asphalt to concrete to chat in mid-curve. Didn't faze the Corvettes. Here's where the independent rear suspension pays off. Almost any suspension works on smooth pavement. The Corvette takes the rough and makes it smooth, in the sort of driving that reminds us just how good the Corvette suspension is. So it clunks every so often. As long as the Corvette handles like that we don't care if it whistles dirty songs.

We asked Duntov if he had considered a 2000-lb., 300-bhp Corvette. He has, and the closest he's been able to come is a 3500-lb., 435-bhp Corvette. We know what the car is like inside and underneath, what fun it is to drive. Let's round up the full assortment of big-engine cars and see what more horsepower will do. . . .





PHOTOS BY BILL MOTTA

Wildest
CORVETTE
Test Yet

FIVE WAYS TO GO WITH THE FABLED 427

CODE NAMES are the vital ingredient for any talk about the 427-cid Corvettes. The 427 comes in five forms. Unlike the 350 engines, which follow a normal pattern of high-performance equipment, the 427s

bounce back and forth, juggling carburetors, camshafts and such as only Chevrolet engines can.

Working our way up the price structure...

- We begin with L36, with 10.25:1

compression ratio, hydraulic valve lifters, one four-barrel carburetor and a horsepower rating of 390. Pretty much of a passenger car engine. To suit it, the test L36 coupe had the wide-ratio four-speed transmission

(option M20) 3.08:1 final drive gears and air conditioning.

- L68 is virtually the same engine, except that three two-barrel carburetors make for better breathing at the top end. Rated power is 400, at the same 5400-rpm peak of the L36. The test L68 was a convertible, with side exhausts, 3.08 gearset and the M40 Turbo Hydra-Matic transmission.

- L71 keeps the triple carburetors, but gets mechanical lifters and hotter camshaft, an 11:1 compression ratio and 435 horsepower. This was the quickest car of the group, with 4.11 gearing and close-ratio, four-speed transmission. Our L71 also had side exhausts. And genuine leather upholstery. Not our idea. The factory man said he'd always wanted to order a Corvette with real cow leather and this seemed as good a chance as any.

- L89 is an abbreviation. The factory calls it L89/L71, their subtle way of saying it's the same engine as L71—cam, carbs, compression, everything—except that L89 has aluminum cylinder heads. Rated power is the same as L71—435. The weights are hard to compare, because L89 had the heavier Turbo Hydra-Matic. The engine evidently loses more therefore than the 35 lb. that showed on the test weights. Not quite as dedicated to the dragstrip, the test L89 had 3.70:1 gears.

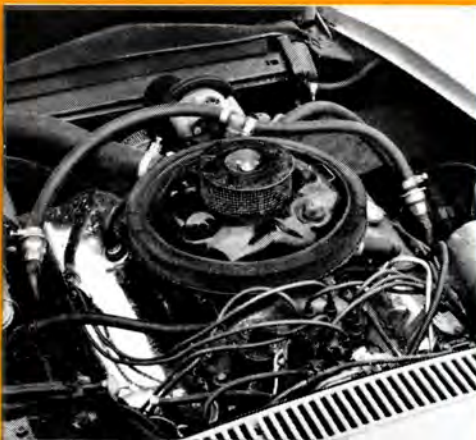
- L88. Pause. The magic of the name and all that in-group stuff. The scornful tone is deliberate. Duntov asked that somebody try to get his message across: The L88 is being bought by people who don't know what it is and don't know or care to use it properly. They hear it's the hot thing to have, and that the factory doesn't put L88 on the order blank, so they order one. But we digress. The L88 engine goes back to the single four-barrel, although not the same one as on L36. The carb sits atop an aluminum manifold, attached to aluminum cylinder heads, with 12:1 compression ratio. Radical camshaft timing, special pistons, connecting rods, and it's all picked by hand. The L88 isn't a junior ZL-1. The additions and corrections done last year on the L88 and incorporated into the ZL-1 are fed back into this year's L88. In street-legal trim, the block material is the only difference. L88 horsepower rating is 430, five less than L89 or L71. The test L88 was a convertible with hardtop. You can order either folding top or hardtop for the price of the convertible. Both cost extra. The L88 was equipped as a point-to-point car, that is, for covering wide-open spaces at the highest possible average speed. It had the engine and the cold-air hood (option ZL-2) for power; the special suspension (option

ENGINES					
	L36	L68	L71	L89	L88
Displacement, cu. in.	427	427	427	427	427
Type, no. cyl.	V-8	V-8	V-8	V-8	V-8
Bore x stroke	4.25x3.76	4.25x3.76	4.25x3.76	4.25x3.76	4.25x3.76
Compression ratio	10.25:1	10.25:1	11:1	11:1	12:1
Fuel required	premium	premium	premium	premium	Super premium
Rated bhp @ rpm	390 @ 5400	400 @ 5400	435 @ 5800	435 @ 5800	430 @ 5200
equivalent mph	132	132	105	129	115
Rated torque @ rpm	460 @ 3600	460 @ 3600	460 @ 4000	460 @ 4000	450 @ 4400
equivalent mph	88	88	73	89	98
Carburetion, type	4-bbl. Roch	3x2 Holley	3x2 Holley	3x2 Holley	4-bbl. Holley
throttle dia., pri./sec.	1.38/2.25	1.50/1.75	1.50/1.75	1.50/1.75	1.75/1.75
Camshaft timing					
lift, int./exh.	.461/.480	.461/.480	.520/.520	.520/.520	.539/.560
deg., int./exh.	56-114/62/118	56-114/62/118	44-92/86-36	44-92/86-36	62-115/110-74
duration, int./exh., deg.	350/350	350/350	316/302	316/302	364/357

DRIVE TRAIN					
	4-sp. manual	3-sp. auto. w/torque convt.	4-sp. manual	3-sp. auto. w/torque convt.	3-sp. auto. w/torque convt.
clutch dia.	11 in.	N.A.	11 in.	N.A.	N.A.
Gear ratios: 4th	1.00	N.A.	1.00:1	N.A.	N.A.
3rd	1.46:1	1.00:1	1.27:1	1.00:1	1.00:1
2nd	1.88:1	1.48:1	1.64:1	1.48:1	1.48:1
1st	2.52:1	2.48:1	2.20:1	2.48:1	2.48:1
1st x f.c. stall (2.1)	N.A.	5.21:1	N.A.	5.21:1	5.21:1
Differential type	Hypoid, w/limited- slip	Hypoid, w/limited- slip	Hypoid, w/limited- slip	Hypoid, w/limited- slip	Hypoid, w/limited- slip
Axle ratio	3.08:1	3.08:1	4.11:1	3.36:1	3.36:1

WEIGHTS					
Curb weight, lb.	3570	3525	3560	3505	3410
Test weight, lb.	3890	3840	3880	3820	3710
Distribution, w/driver, % F/R	51.2/48.8	50.7/49.3	50/50	49.1/50.9	49/51

BIG CORVETTE engines come in a wide assortment. Directly below is the L36, the understressed base for the 427-cid range. At lower right is the L89, the hottest street Corvette. It looks like the L71, same engine with aluminum heads or the L68, same triple carburetors but the camshaft from the L36. At bottom left is the L88, with cold-air air cleaner and a huge four-barrel carb.



427

continued

F41) with stiffer springs, shock absorbers and front and rear anti-roll bars for high speed control at the expense of a jarring ride in town. The M40 automatic transmission made things a bit easier for the driver. The 3.36:1 final drive gears did the same for the engine by allowing a relaxed gait on the highway. They also provided an astonishing top speed.

L88 is not just an engine. It's a package, or more properly L88 is a combination of things that come on the car or can't be ordered with it. No air conditioning, or even a radio. The L88 is supposed to be a competition car. Racers remove everything they don't need. Duntov saves them as much trouble as he can by not putting on anything that competition or the government don't require. There's no radiator shroud, because it isn't needed at high speed. The owner of a rental fleet in St. Louis has a shopful of L88s, which overheat constantly in traffic; and he wishes Duntov would do something. Duntov wishes people wouldn't buy racing cars for use in cities.

We vote for Duntov. The manual steering was sharp and responsive at speed and mulish in town. The idle was set at 2000 rpm, so the engine would have enough torque to idle at all. The testers learned to be standing on the brake when the L88 was put in reverse. If the car wasn't snubbed, the L88 would light its tires backing out of parking places. At low speeds, the brakes keep the driver alert. The engine doesn't develop much vacuum, even idling at 2000 rpm. There isn't much boost available for the power assist, and the pedal touches bottom on a hard stop from 20 mph or less. It doesn't make for driver confidence until the driver finds out that when increased road speed makes more brakes necessary, increased engine speed and vacuum make better braking possible.

In exchange for these little shortcomings, the L88 driver gets nothing that he doesn't get with the L89, not even status. One of the factory's ways to discourage casual buying of L88s is not to supply a little badge on the fender for the unfortunate many to see and envy. The L88 is the only performance car on the American

BRAKING					
	L36	L68	L71	L71/89	L88
Max. deceleration rate from 80 mph, ft./sec./sec.	27	27	28	29	25
Percent loss in deceleration rate after 8 stops from 80 mph	18	30	14	12	2
Control loss?	none	none	none	none	none
Overall brake performance	excellent	excellent	excellent	excellent	excellent
FUEL CONSUMPTION					
Normal cond., mpg	13.2	13.1	10.4	12.9	11.3
Cruising range, miles	240-280	240-280	180-220	210-250	200-240
CALCULATED DATA					
Lt./bhp (test weight)	9.9	9.6	8.9	8.8	8.6
Cu. ft./ton mile	155.7	157.8	209.8	167.9	173.0
Mph/1000 rpm (high gear)	24.5	24.5	18.2	22.3	22.3
Engine revs/mile (60 mph)	2450	2450	3290	2595	2595
Piston travel, ft./mile	1535	1535	2300	1626	1626
CAR LIFE wear index	37.6	37.6	67.8	42.2	42.2
SPEEDOMETER ERROR					
Indicated	Actual	Actual	Actual	Actual	Actual
30 mph	31.3	27.3	29.0	31.6	28.2
40 mph	41.9	37.8	39.0	42.4	38.9
50 mph	52.0	48.0	48.9	53.4	49.0
60 mph	62.0	58.3	58.8	64.2	59.0
70 mph	71.5	68.7	68.7	74.4	68.9
80 mph	81.0	78.9	78.6	84.6	78.5
90 mph	90.2	89.1	88.6	94.2	88.0
PERFORMANCE					
Top speed (mph @ rpm)	134 @ 5500	137 @ 5500	119 @ 6600	141 @ 6300	151 @ 6800
Test shift points,					
3rd to 4th	92 @ 5500	n.a.	95 @ 6500	n.a.	n.a.
2nd to 3rd	72 @ 5500	91 @ 5500	73 @ 6500	98 @ 6500	103 @ 6900
1st to 2nd	53 @ 5500	54 @ 5500	55 @ 6500	58 @ 6500	62 @ 6900
ACCELERATION					
0-30 mph, sec.	3.4	3.2	3.3	2.9	3.5
0-40 mph	4.6	4.4	4.3	3.9	4.5
0-50 mph	5.9	5.8	5.4	5.1	5.6
0-60 mph	7.6	7.3	7.0	6.6	6.8
0-70 mph	9.2	8.9	8.4	8.4	8.2
0-80 mph	11.2	10.8	10.1	10.4	9.8
0-90 mph	13.6	13.0	11.8	12.7	11.3
0-100 mph	17.6	15.8	13.9	15.5	13.0
Standing 1/4-mile, sec.	15.02	14.70	13.94	14.58	14.101
speed at end, mph	93.45	97.6	105.63	98.57	106.89

market we can think of without one.

The horsepower ratings tell the rest of the story. Camshafts in the higher rated L71 and L89 are designed to give maximum power through the stock exhaust manifolds and mufflers. The L88 cam is designed to give maximum power, period. It won't give all it's got unless, and until, it has tuned exhaust headers blasting unmuffled into the air. The factory can't sell it like that. L88 has more potential, but the buyer must extract it for himself. The L89 was designed to be the hottest Corvette in street trim. The L88 is, in Duntov's words, for sport.

Wot'll they do? We dunno, honest. Every one of the eight Corvettes put through the full test procedure would reach redline in top gear. Routine for cars with acceleration gears. We spend entirely too much time explaining that Supercar X has the horsepower to go more than 110 mph, but that the gearing and our reluctance to exceed the manufacturer's limit meant that the car couldn't be driven faster.

The Corvettes were something else. The L88 had the highest top speed, with that 3.36:1 gearset. It would do 6800 rpm in high, 151 mph. There was power left at that speed, enough to



MATCH races, right, were won by the L71, above. The L71 had the 435-hp engine, a four-speed, 4.11:1 gears. It was the only test Corvette to break 14 sec. Time was recorded for posterity.



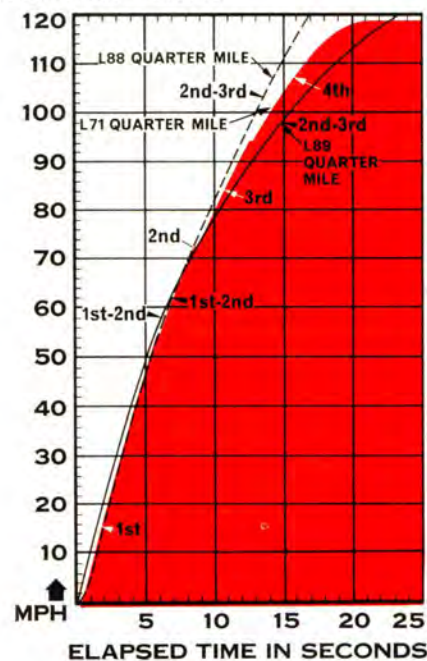
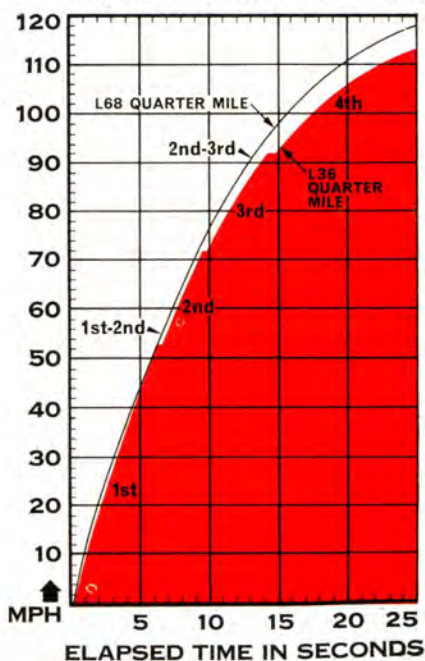
make one wonder just how fast the car will go with suitable gearing. The order blank shows a 2.73:1, and a salesman who specializes in Corvettes said a 2.54:1 can be specially ordered. Duntov's ZL-1 can come close to 200 mph. We didn't test final drive ratios lower than 3.08 or higher than 4.11, because they're too specialized to be of general interest. But we can't help thinking that an L89 with the lower gear would be a contender for the fastest production car in the world.

We would drive it. For most cars, the best that can be said is that the car is easily driven at highway speeds. Corvette handling is as good as the engine. The suspension smooths out and the car roars along. The driver is conscious of speed, but still secure in the knowledge that the car is doing what he and the designer meant it to do. What is initial understeer on a tight turn becomes a reluctance to depart from the chosen path in a high-speed bend or straight line.

Acceleration runs provided support for the factory ratings and Duntov's statement that the L88 isn't the best street performer. Quarter-mile E.T. and trap speed moves almost in a straight line, down for the former and up for the latter, as horsepower goes up.

There's still material for bench racing. Before the test, we got a short course in Corvette ownership. The L89 arrived with a very sharp engine, except that it detonated fiercely under full power. It went to a shop, not the agency where it came from. They changed the spark advance and that

BIG-BLOCK CORVETTE ACCELERATION TIMES



threw the engine response out with the detonation. Back to the agency, where they compromised: No detonation, but it wasn't quite as sharp as it was at first. We picked up the L71 the same day. Don't worry, they said, this one is ready. It was to laugh. At light throttle, it played Student Demonstrator. A soft cry of non-violence, and it went limp. Put to the wood, it blew all the power out the carburetors, or shot ducks. Off to the repair shop, where they put things right.

They all felt fine, but the results

weren't up to par. Last year's L89 was quicker and faster, running in the mid-13s at 109 mph. This year, the L71 was the only Corvette willing to break 14 sec. Best time was a 13.94, making the editor so happy after watching scores or runs in the 14s that he ordered a picture taken of the clocks. Only lack of authority kept him from donating a suitable plaque to mark the spot.

The E.T.s are debatable. The L88 had cold air and traction, while L71 had optimum gearing. They were

ROAD CAR vs. racer, right, has the L36 leading the L88 through a tight turn. The L88 had more cornering power, but not enough to pass until the straights. ZL-2 hood, below, takes air from the high-pressure area at cowl.





COCKPIT DESIGN works with big, legible instruments, good seats and controls within reach. Four-speed gearshift, right, is one of the best factory-built shifters out.

427

continued

close to a dead heat. Trap speed is a better indication of horsepower. L88 and L71 are so close we'd conclude that the five-horsepower difference in ratings is about right. The L89 was obviously down on power, compared to this year's L88 or L71 or last year's L89.

Engine choice is another coin-flipper. L36 is the most popular with buyers. For a 427, very calm, very quiet. L68 is just as strong in low- and mid-range driving, with 10 huge horses more if needed. The three goers were all lumpy in town. The torque peaks are moved way up and the power must be reached with the gearshift.

All three transmissions were as good. More important, they were beautifully matched to the engines. The wide-ratio four-speed gave L36 more than enough poke in first, passing speed in second and third and long legs on the open road. The close-ratio four-speed takes more attention, but the ratios have been chosen to keep the engine close to its power peak.

Those who can overcome the four-speed mystique are in for a surprise. The Turbo Hydra-Matic fitted to the high-performance 427s is magnificent. It slips from gear to gear in traffic without so much as a nudge. Power tightens the shifts into a series of iron hands, strong enough to light the tires at every change. There is no downshift time at all, none of the usual engine-reaction-becoming-gear-

box-action-translated-into-acceleration. Shove hard and the engine is in the lower gear at full song before the pedal is all the way to the floor. In the mild engine, the M40 was set to shift up quickly. In the wild engines, the transmission stays in the lower gear until the driver lifts his foot, right up to redline.

Standard Corvette tires seemed below the standards for the rest of the car. Duntov is frank about it: Cost is an object. The F70 tire comes from several companies. It's special to Corvette, being chosen to match the suspension and wheel-well clearance. The ride is pleasant. Traction could be better. We don't know the answer. Radials have flexible side walls, and could collapse under the massive torque of the Corvette. Belted/bias? "We tried them," Duntov said. "You'll notice we're not using them."

Racing tires aren't the answer. The tires on the L88 were of a tread and compound intended for damp tracks. On pavement that was merely wet, they had some grip, probably as much as a conventional tire. On water, they aquaplaned. On the way to Phoenix, there was an inch or so of water running across the highway at the apex of a gentle uphill curve. Ever get out of shape going uphill? Oh, wow.

We coveted the F60 Goodyears on the Hurst/Oldsmobile tested on page 22. They'll go on the Corvette rims, and they look as if they'll fit under the fenders. We didn't actually try it. We understand persons found trespassing on Dr. Oldsmobile's property are liable to be experimented upon.

The tire problem reared its head highest during the brake tests. Corvette's four-wheel disc system is an excellent design, not put to full use. With standard tires, the Corvettes would stop repeatedly from 80 mph in the range of 28-29 ft./sec./sec. The brakes were ready to do more, but the drivers had to be careful not

to do too much. With more pressure, the tires began skidding on the pavement. The wheels weren't locking. The cars didn't skid or swerve. The drivers just didn't have that secure nailed-to-the-pavement feeling so pleasant when the road ahead is filled with obstacles.

What the brakes could do showed up with the LT-1. The CAR LIFE decelerometer is a metal case with brackets and suction cups to hold the case to the windshield. Inside the case is a glass tube, filled with mercury and marked with graduations up to one "G," or 32.2 ft./sec./sec. One G is reckoned maximum, and the tube disappears inside the case at 33 ft./sec./sec.

Up to 80 in the LT-1, and hard on the brakes. The tube went white. The braking force was so strong all the mercury was drained off the scale. Exactly how good the brakes are with sticky tires we won't know until we have a decelerometer reading more than one G. That won't be for some time. We doubt we'll need it more than once a year.

The Corvette isn't a perfect car. Nobody, especially Duntov, ever claimed it was. The Corvette is one heck of a big car for two people and almost no luggage. The styling is flamboyant, as if it were designed to be photographed rather than merely seen. The mechanical details are overdone in some places, underdeveloped in others. Things fall off, or don't work, or rattle.

We don't care. The Corvettes we drove, and that's all the Corvettes the factory has plus one, varied so much in specification that it would be more accurate to draw conclusions on the basis of Corvettes, not Corvette. So we'll do it. Corvettes are for driving, by drivers. Winning races, going to the store or driving cross-country, the Corvette driver will be tired of smiling long before he's tired of the car. ■