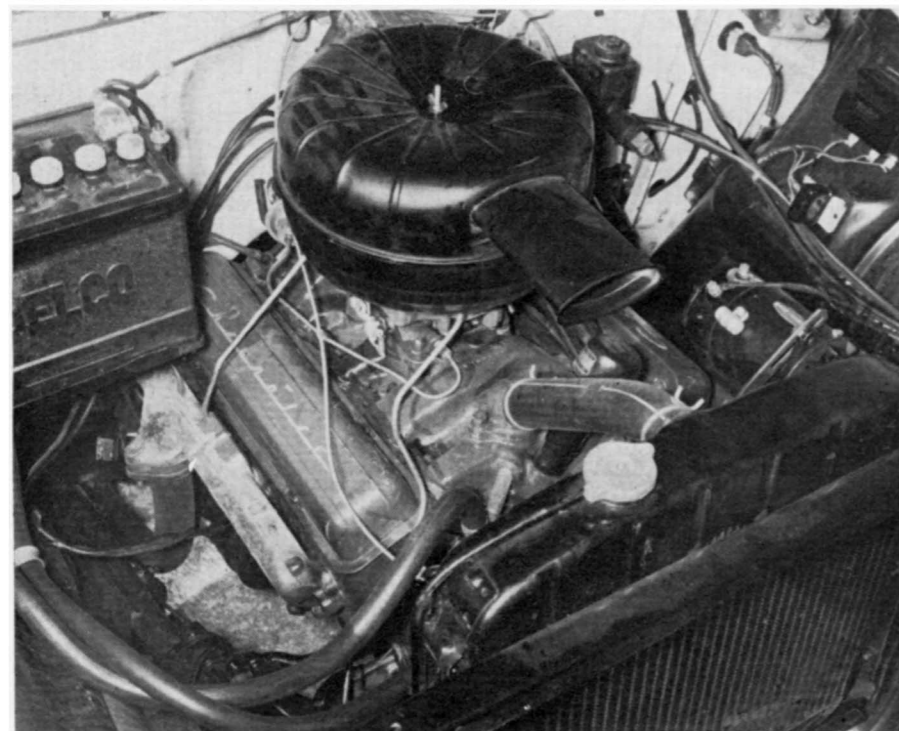




Road Test: THE 205 HP CHEVROLET

"the hot one is even hotter"



LAST YEAR we tested a Chevrolet V-8 equipped with power-pack and overdrive, the only test of a car so equipped which was published. At the time (Feb. 1955) we said "it certainly appears that a Chevrolet V-8 with optional 180 bhp engine and 4.11 axle will out-accelerate any American car on the market today!"

Due to the tremendous interest which last year's test aroused we arranged with the Harry Mann Chevrolet Co., Los Angeles (the largest Corvette dealer in the USA!), for a test of a 1956 Chevrolet equipped to our specifications. The new power-pack gives 205 bhp, up 14%, and due to our previous experience with overdrive (the 1955 car turned a higher top speed in direct drive than in overdrive) we specified a car without overdrive. Also, the radio and heater were omitted to save weight, but even so the new car checked out only 10 pounds under last year's model 210 sedan-coupe.

The startling 111 mph top speed (3 timed runs each gave 111.1 mph) of this automobile furnishes a perfect opportunity for an object lesson on axle ratios.

axle ratio.....4.11 3.70 3.55 2.88(od)
rpm at
111 mph.....5700 5140 4940 3990

Since the engine develops its peak bhp at 4600 rpm, it is possible that the car might go still faster with the 3.55 axle which is standard equipment on the powerglide models. However, the 3.70 ratio is an excellent compromise as can be seen by comparing last year's acceleration times with those obtained on the 1956 test car.

	180 bhp 4.11 axle	205 bhp 3.70 axle	time gain
0-30 mph	2.9	3.0	—
0-40 mph	5.7	4.1	1.6
0-50 mph	7.2	6.8	0.4
0-60 mph	9.7	9.0	0.7
0-70 mph	13.1	11.1	2.0
0-80 mph	18.8	16.5	2.3
0-90 mph	28.0	21.8	6.2
standing ¼ mi.	17.4	16.6	0.8

This table shows that the 14% increase in horsepower more than offsets the 10% reduction in axle ratio. It might also be noted that the improvement in 0-to-40 and 0-to-70 times are partially the result of higher speed shift points, for last year's test car had to shift from 1st gear at 34 to 37 mph and from 2nd at 61 to 66 mph. Incidentally the 1956 car has hydraulic valve lifters, whereas the 1955 car did not. Nevertheless, valve bounce speed remains the same at about 5600 rpm!

One unusual aspect of the acceleration curve (see data panel) is worthy of men-

tion. The engine's torque curve must be very good in the upper rpm range, since this is the first time we have ever plotted a "curve" which gave absolutely straight lines, through the gears. Normally the acceleration curve in each gear is a mathematical function derived from the engine's torque curve. The 1956 power-pack gives only 3% more peak torque, but at 4600 rpm the torque is 234 ft-lbs as compared to only 205 ft-lbs in 1955. This is a gain of 14% and more importantly a drop of only 12.7% below the peak torque at 3000 rpm as compared to a drop of 21% in the 1955 model.

The Tapley meter pulling power readings indicate a loss of somewhat more than the 10% that might be expected from the change in axle ratio but the drag figures (coasting test) show considerably higher than last year. However, as we have explained several times before, the drag readings are not reliable to an accuracy much closer than plus or minus 10%.

Driving a large car such as this with a wheelbase only 9% shorter than a Cadillac, is not conducive to much ease of mind in heavy traffic, but the extraordinarily high seating position for the driver negates this feeling to some extent. Out on the open road the Chevrolet is very pleasant to drive for hour after hour at high speed. The ride appears to be a little firmer than some of its competitors and the re-instated front anti-roll bar definitely reduces roll on corners, as compared to the 1955 model. Like all American cars, it can be cornered at speeds which closely approach that of a vigorously driven sports car, but the operation demands dexterity, muscles and "grit" bordering on the foolhardy.

The 3-speed manual transmission is surprisingly noisy on the indirect gears and, like last year, we found the control linkage an absolute nuisance, even when making lazy shifts. It is noisy, sloppy and impossible to throw fast shifts without bending the control rods. The car starts off with a rush even in 2nd gear, but the enthusiast purchaser would be well advised to order the new Corvette "stick-shift" controls (see page 27) and have them installed on the floor. Some people claim that all companies are neglecting their "stick-shift" cars to encourage sales of the automatic transmission, which almost appears to be true, in this case.

Without a doubt the greatest charm of this car is its smooth, quiet running engine. Even though the compression ratio is extremely high (9.25 to 1) it was impossible to make it "ping" on full throttle, at any speed. Once or twice we detected a slight knock on part throttle at very low speed when lugging and on a cold (35°F) start, after sitting all night, one of the hydraulic tappets "tapped" for about 10 seconds. But, the surge of power (actually torque) is there at all times and knowing of the ultra-short stroke, one gets the impression that this engine would be impossible to "blow-up" even under the most brutal treatment.

In short, the 1956 Chevrolet is an even better performer than last year and, equally important, it handles slightly better.

ROAD & TRACK ROAD TEST NO. A-2-56

1956 CHEVROLET "210"



SPECIFICATIONS

List price	\$2064
Wheelbase	115 in.
Tread, front	58.0 in.
rear	58.8 in.
Tire size	6.70-15
Curb weight	3380
distribution	52/48
Test weight	3725
Engine	V8
Valves	pohv
Bore - stroke	3.75 x 3.0 in.
Displacement	265 cu. in.
Compression ratio	9.25
Horsepower	205
peaking speed	4600
equivalent mph	99.5
Torque, ft/lbs	268
peaking speed	3000
equivalent mph	65
Mph per 1000 rpm	21.6
Mph at 2500 rpm	108
Gear ratios (overall)	
high	3.70
2nd	6.21
1st	10.9
R & T high gear perf. factor	70.0

PERFORMANCE

Timed top speed	111
Max. speeds in gears	
2nd (5500)	71
1st (5500)	40
Shift points from—	
same as above	
Mileage range	17/21 mpg

ACCELERATION

0-30	3.0 secs.
0-40	4.1 secs.
0-50	6.8 secs.
0-60	9.0 secs.
0-70	11.1 secs.
0-80	16.5 secs.
0-90	21.8 secs.
standing ¼ mile	16.6 secs.

TAPLEY READINGS

Gear	Lbs/ton	Mph	Grade
1st	Off Scale	—	—
2nd	525	45	27%
High	330	55	17%
Total drag at 60 mph, 175 lbs.			

SPEEDO ERROR

Indicated	Actual
10	10.8
20	19.2
30	28.9
40	38.2
50	47.5
60	57.0
70	66.7
80	76.2
90	86.6
120+	111.1

