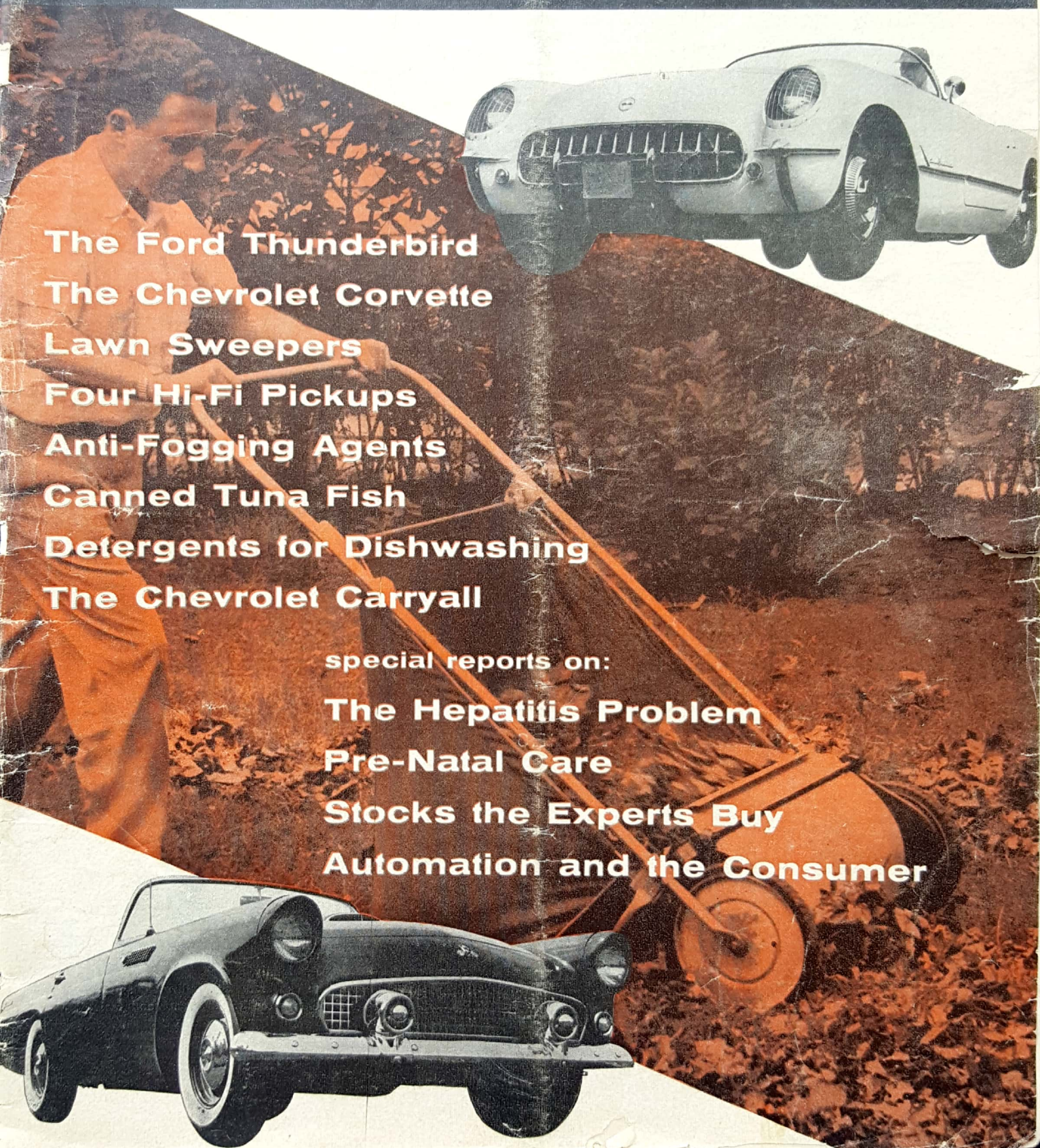


consumer reports

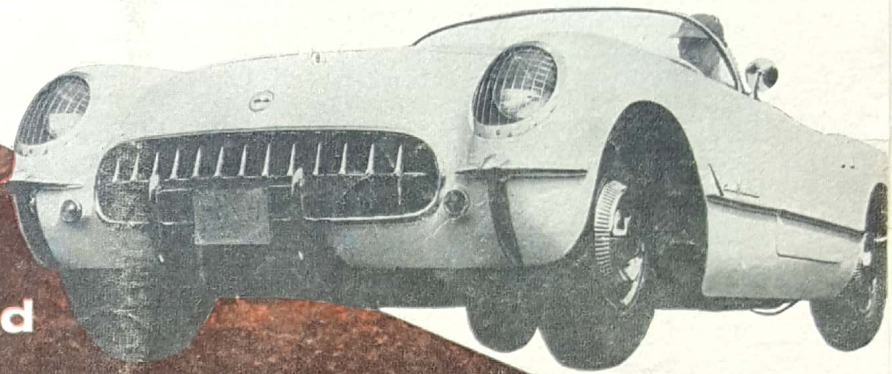
OCTOBER 1955



The Ford Thunderbird
The Chevrolet Corvette
Lawn Sweepers
Four Hi-Fi Pickups
Anti-Fogging Agents
Canned Tuna Fish
Detergents for Dishwashing
The Chevrolet Carryall

special reports on:

The Hepatitis Problem
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Automation and the Consumer





Corvette and Thunderbird

The *Chevrolet Corvette* and the *Ford Thunderbird*, which are the subject of this month's road-test report, are the first sports cars from major American producers. They offer some interesting innovations, in comparison with both European sports cars and American family cars.

In sports car design, there is great emphasis on powerful performance for a given engine size, on speed, maneuverability, and road-holding ability. Hence the height, size and weight of the car are held down. Consequently the seats are usually low, and seating space is limited to two passengers with Lilliputian luggage. Both the *Corvette* and *Thunderbird* follow this formula, but with modifications.

The Thunderbird

Of the two, the *Thunderbird* more nearly resembles a conventional family car. Its engine is the hotbed-up *Mercury* engine available as an option in any *Mercury* and standard in the *Montclair* model. It is a heavy engine, similar to the *Ford's*, using a four-barrel carburetor and hard (non-hydraulic) valve lifters.

In the test *Thunderbird*, the engine was very noisy when idling, though satisfactorily quiet on the road. CU's car was fitted with Fordomatic transmission, and carried an axle ratio giving 3.31 engine revolutions to one revolution of the rear wheels. (The *Mercury* ratio with automatic transmission is 3.15 to 1.) Standard transmissions, or standard-plus-overdrive, are also available in the *Thunderbird*; with these, a lower compression ratio is used to keep the engine from knocking at low speed.

Despite its low body and short wheelbase, the *Thunderbird* is very heavy for a sports car—about 200 pounds heavier than the *Jaguar* in the same price class, for instance. Part of this surplus avoirdupois is chargeable to the *Thunderbird's* four-way power seat, its glass windows, which roll up and down like the windows of a convertible, its full bumpers, and the use of standard *Ford-Mercury* steering gear, rear axle, and other components. The added

weight certainly isn't chargeable to an extra-stiff structure, for the *Thunderbird* has the characteristic open-car ague, shaking badly in every limb as it goes over a rough road. (Even the detachable hardtop of the *Thunderbird* adds very little to staunchness of structure; it makes far less contribution than a fully integrated steel sedan or coupe body.)

The *Ford Thunderbird* has a standard tread; it is almost six feet wide and 14½ feet long—big as sports cars go. But it is low, with only a little over half a foot road clearance. The seats are close to the floor, and the floor is close to the ground. Seats as low as the *Thunderbird's* can be comfortable provided they are properly contoured and there is plenty of leg room, particularly for the driver. Most of CU's consultants, however, found the car's seating uncomfortable—especially in comparison with that of the *Corvette*.

The *Thunderbird's* seat is one-piece, bench-type, with only slight contouring to support the driver against side-wise motion. As in most sports cars, the *Thunderbird's* driveshaft tunnel is nearly as high as the seat, and there are no springs in the section of the seat over the driveshaft. Consequently, though the seat is wide enough for three, the person in the center would find it hard going for any but short rides.

The *Thunderbird's* cockpit layout is far from ideal. The wraparound windshield, deep enough to form a shallow U, projects so far into the door opening as to make getting into the car quite difficult. The glass sides of this U, furthermore, were full of very annoying distortions. The car's adjustable steering wheel, which works like a telescope, and its four-way seat ameliorate but do not solve the difficulty of squeezing under the wheel, or the wheel's tendency to block the view of the speedometer and tachometer. Nor do they keep the long-legged driver from banging his knee on the wheel because of inadequate brake-pedal-to-steering-

Continued on next page

CORVETTE AND THUNDERBIRD continued

wheel distance. The automatic-transmission *Thunderbird* has a selector lever mounted on the floor, in the same location as the gear lever was in the old days. The selector positions (P R N D L) are illuminated at night—and a good thing, because even after practice you have to look to find the position you want, then press a latch to move the lever. Ventilation of the cockpit is inadequate in hot weather. Small-article storage is limited to an undersized dash locker.

Sports cars are seldom notable for roomy storage space, and the *Thunderbird* is no exception. When its fabric top is stowed, only a thin slice of storage space is left behind the seat. Top up, or in the detachable hardtop model, there is more room, but the space is cluttered with the power-seat mechanism. The trunk will hold one medium-sized suitcase, plus odds and ends, or even a set of golf clubs—but that's all.

Like all real sports cars, the *Thunderbird* is really designed to be driven without its top, either hard or soft. Both tops limit visibility seriously. The soft top, while it is substantial enough once set into position, takes plenty of effort to get it there; the effort is much more like that of hoisting the top on an old-fashioned touring car than the push-button ease of raising a convertible top. The roof hardware on CU's test *Thunderbird* wasn't able to take the strain; locking pins sheared off in the course of necessary raising and lowering of the soft top. Incidentally, the cloth top has no detachable rear panel; once it's up, the only ventilation comes from the side windows.

At that, though, the soft-top model has its advantages. You can start out with the top down and, with the exercise of a good deal of brawn, turn it into a closed car in case of an unexpected downpour. With the hardtop, you place your bet at the beginning of the trip as to whether it will rain or shine, and then live with it. If you've bet the wrong way, you'll have to live with being too warm, or too cold, or too wet. Incidentally, there is no tonneau cover for the *Thunderbird*; when you park it with the top down, it's open to the elements and to dirt.

The Corvette

The design of the *Corvette* embodies much less compromise toward standard car components and features than the *Thunderbird's*. Aside from its automatic transmission, it is mostly sports car.

The *Corvette's* chief novelty, of course, is its fiberglass plastic body. CU's road test was not long enough to allow any prediction of how this body will stand up. It was certainly stiff and light in weight; it didn't, of course, rust; it seemed to have considerable sound insulating quality. The *Corvette's* plastic is not of the type that is the same color all through; as on conventional cars, the body is painted. CU's car held the paint well, but the finish was not mirror-like. It is said that the repair of small cracks or breaks in the body is fairly simple; major damage is

difficult to fix and is likely to require a helping hand from factory specialists, with perhaps a long wait for replacement panels. The body is not well protected against parking damage; it has "rubbing strips" fore and aft, rather than bumpers.

The plastic body is mounted on a sturdy, conventional steel chassis frame. The front suspension on CU's car was not of the ball-joint type used on the current production of *Chevrolet* passenger cars.

The *Corvette* is available either as a Six or a V-8. The V-8 engine with which CU's test car was equipped employs a "hot" camshaft and a four-barrel carburetor; it ran more quietly than the *Thunderbird* engine. In the non-racing use CU gave the car, the spark plugs supplied as standard became fouled and had to be replaced by hotter-running plugs with less tendency to collect a coating of oil and to misfire. Such hot spark plugs would probably be required on any *Corvette* not used for really high-speed driving.

The *Corvette* is available only with *Chevrolet's* Powerglide transmission, and it carries the same axle ratio as do Powerglide sedans: 3.55 to 1. Hence—as with the *Thunderbird*—the *Corvette's* speed advantage over comparable sedan models comes from its lower air resistance and the higher peaking speed of its engine (5000 rpm in the *Corvette*), while the extra acceleration derives also from the sports car's lower weight.

Cockpit layout

The *Corvette* lacks the emergency accommodation for a third passenger offered by the *Thunderbird's* bench-type seat, but its seating is otherwise superior. The *Corvette's* bucket seats are very comfortable. There is also plenty of leg room and foot room. The steering wheel is at a good angle and doesn't obscure the instruments. The pedals are well located. The *Corvette's* wraparound windshield, like the *Thunderbird's*, however, projects rather too far into the door openings, but there appeared to be less optical distortion. The *Corvette's* selector lever, like the *Thunderbird's*, is on the floor, but it is unobtrusive and simple to manipulate by feel, without looking. The handbrake is rather hard to apply. The heater is an old-fashioned recirculating unit.

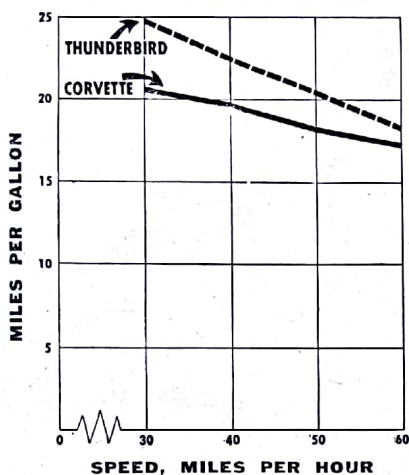
There is no dash locker in the *Corvette* but there is a good deal of storage space for small articles in the doors, left hollow by the absence of roll-up windows.

The *Corvette* soft top is light and, unlike the *Thunderbird's*, easy to manipulate. It stores horizontally under a lid in the rear deck. Both sidewise vision and head clearance are poor with the top up; vision to the rear is satisfactory. The windows in the *Corvette* are of stiff plastic. The windows can be attached either with or without the top up, and have swinging panes to allow for ventilation. But they can't be rolled up and down, as on the *Thunderbird*. There are no outside door handles, and no door locks.

The *Corvette's* trunk, though it isn't very large, is a study in neatness as compared with the *Thunderbird's*. It has a flat floor, room for about two suitcases, and a suspended envelope for storage of the side windows. Spare tire and tools are stored below the trunk floor.

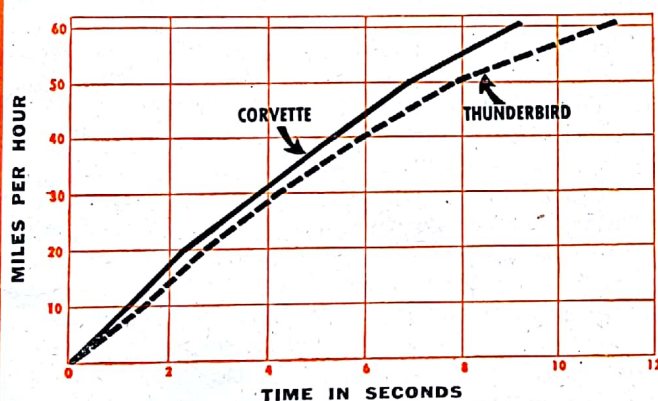
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FUEL ECONOMY AT CONSTANT SPEED



Mileage per gallon of fuel is recorded at various constant speeds by CU's test cars. The acceleration is measured at wide open throttle with the car moving from a standstill to 60 mph.

0 TO 60 MPH ACCELERATION



A GUIDE TO THE FACTS AND FIGURES

PRICE AT FACTORY Includes Federal tax, but not local taxes, freight, optional extras, accessories, or conditioning charges.

ROAD CLEARANCE Distance from road surface to lowest part of car likely to hit high spots in the road.

TURNING CIRCLE Path traced by outermost tip of front bumper with wheels all the way to left, as for a tight U-turn. Some cars turn shorter to right.

CURB WEIGHT Weight of equipped car, full of gas, oil and water, ready (at the curb) for occupants.

TIRE CAPACITY Official but conservative load rating for four tires, minus curb weight of car.

ENGINE DATA From factory figures.

PERFORMANCE 0-60 mph, 1/4 mile runs with all gears used to maximum advantage; 45-65 mph and 9% grade runs with floored accelerator but no manual shifting.

ECONOMY Constant speed tests offer controlled comparison between cars. In normal driving at comparable average speeds mileage will be much lower. Traffic pattern involves moderate acceleration, 35 mph maximum, average speed for course of about 21 mph.

FACTS AND FIGURES

	Chevrolet Corvette V-8	Ford Thunderbird V-8
PRICE		
Delivered at factory with automatic transmission	\$3112	\$3234*
DIMENSIONS		
WHEELBASE	102 in.	102 in.
OVERALL LENGTH	167 in.	175 in.
OVERALL WIDTH	72 in.	70 in.
OVERALL HEIGHT—TOP UP	51 in.	52 in.
OVERALL HEIGHT—TOP DOWN	49 in.	50 in.
ROAD CLEARANCE	6.1 in.	6.3 in.
TURNING CIRCLE DIAMETER	43 ft.**	36 ft.
WEIGHT AND TIRES		
CURB WEIGHT	2800 lb.	3275 lb.***
WEIGHT DISTRIBUTION (% on rear wheels)	46%	48%
TIRE SIZE	6.70x15 in.	6.70x15 in.
THEORETICAL TIRE CARRYING CAPACITY (above curb weight)	900 lb.	425 lb.
ENGINE		
TYPE	Overhead-valve V-8	Overhead-valve V-8
BORE AND STROKE	3.75x3.00 in.	3.75x3.30 in.
PISTON DISPLACEMENT	265 cu. in.	292 cu. in.
COMPRESSION RATIO	8.0	8.1
MAXIMUM ADVERTISED HORSEPOWER	195 @ 5000 rpm	198 @ 4400 rpm
MAXIMUM ADVERTISED TORQUE	260 ft. lb. @ 3000 rpm	286 ft. lb. @ 2500 rpm
ENGINE SPEEDS		
AXLE RATIO	3.55	3.31
ENGINE REVS PER MILE, HIGH GEAR	2677	2492
PISTON TRAVEL PER MILE, HIGH GEAR	1338 ft.	1371 ft.
PERFORMANCE		
LEVEL ACCELERATION		
0 to 60 mph	9.1 sec.	11.1 sec.
1/4 mile time from standing start	17.4 sec.	18.2 sec.
45 to 65 mph	5.5 sec.	7.0 sec.
ACCELERATION ON 9% GRADE		
from 30 to 40 mph	2.2 sec.	3.6 sec.
from 30 to 50 mph	4.4 sec.	8.0 sec.
from 30 to 60 mph	9.0 sec.	13.6 sec.
top speed attainable on grade	83 mph	76 mph
ECONOMY		
CONSTANT-SPEED GASOLINE MILEAGE		
at steady 30 mph	20.7 mpg	24.8 mpg
at steady 40 mph	19.8 mpg	22.5 mpg
at steady 50 mph	18.2 mpg	20.4 mpg
at steady 60 mph	17.3 mpg	18.3 mpg
TRAFFIC GAS MILEAGE (simulated traffic test)	13.2 mpg	15.7 mpg
OVERALL GAS MILEAGE	15.8 mpg for 2800 mi.	16.9 mpg for 3200 mi.
OIL CONSUMPTION RATE AFTER BREAK-IN	3000 mi./qt.	No oil used

* Price with convertible top; with removable hard top, \$3159; with both tops, \$3449.

** To left; to right is 39 ft.

*** Weight with convertible top; with removable hardtop only, approximately the same; with both tops, approximately 60 lb. more.

CORVETTE AND THUNDERBIRD continued

The cars on the road

No one can ride very long in either the *Thunderbird* or the *Corvette* without appreciating the feeling of security and the freedom from the need to brace oneself on curves that a really low, well balanced car can give. Of the two cars, the *Ford* had the better weight distribution and slightly the better balance. Its tires squealed less than the *Corvette's* when cornered sharply; it had a little less wheel spin when started off fast; and it showed even less tendency to lose its footing on rough surfaces.

CU's *Thunderbird* steered harder than the *Corvette*, and required more steering wheel turn to effect a given change in direction. The *Thunderbird* steering, though accurate enough, was insensitive, with too little "road sense"—a serious fault in a car apt to be driven and cornered at high speeds. The *Corvette*, by contrast, not only steered easily and with precision but with excellent road sense. Both cars, it should be noted, steered faster than their sedan counterparts.

The brakes on both cars were reasonably free from overheating and "fade" on CU's half-mile coasting test down a 9% grade. Both cars had rather small brakes for sports cars intended to be driven vigorously, although the brakes worked well in normal driving. The *Corvette's* brakes did not suffer from the unfortunate tendency, observed on CU's 1955 *Chevrolet* sedans, to pull erratically to one side or the other.

While there are many points of difference between them, the basic choice between the *Thunderbird* and the *Corvette V-8* depends on how much, or how little, of a sports car fancier you are. Of the two, the *Thunderbird* is much nearer to being a conventional car in its mechanical characteristics, its greater weight, and in such detail refinements as roll-up glass windows, power seat, and optional hardtop.

Furthermore, the *Thunderbird's* riding qualities are good enough to be accepted even by ordinary motorists, whereas the *Corvette* ride is so stiff and uncomfortable as to constitute one of the car's major drawbacks.

Even after you hurdle the *Corvette's* lack of riding comfort—and many dyed-in-the-wool sports car drivers will not find this feature disqualifying—you have to deal with the fiberglass body. There's nothing wrong with the body as it is: in fact, its light weight, stiffness and rustproofness are in its favor. But what may happen to it from age, or what collision repairs will entail, is something the buyer must take more or less on trust. And the *Corvette's* lack of bumpers doesn't improve the situation.

Having hurdled these two difficulties, the *Corvette* buyer finds himself with a car that easily outperforms the Fordomatic *Thunderbird*, steers and handles better and more easily, and has a more comfortable and better laid-out cockpit. Even with its mandatory automatic transmission, the *Corvette*, of the two, should please the true sports car driver more. However, the margin between the two cars

is not wide on an overall basis, and the sports car fancier is likely to find plenty to approve of in the *Thunderbird*.

It should be noted that the entire discussion here has been in terms of the *Corvette V-8*. The *Corvette* is also available as a Six. It is the judgment of CU's consultants that as a Six, the *Corvette* is so lacking in the outstanding sports car characteristic—power—as to be not worth considering compared with the V-8.

But suppose you are not a sports car fancier, and are considering the *Thunderbird* and the *Corvette* as "personal cars," that is, as offering for two occupants the advantages of small size, crisp, low-to-the-road handling, and top-notch controllability combined with style, reasonable comfort, and good performance. Here the *Thunderbird* fills the bill better than the *Corvette*, because of its better ride and such standard conveniences as roll-up windows and fresh-air heater. But the gaucheries mentioned above remain: difficult entrance, uncomfortably located brake pedal, hard-to-see speedometer, hard-to-raise top, bad windshield distortion, silly automatic shift quadrant, "numb" steering, etc. Though the *Thunderbird*, basically, is on target as a "personal" car, these difficulties keep it off the bull's-eye.

Other sports cars

Both the *Ford Thunderbird* and the *Chevrolet Corvette* lend themselves to direct comparison with the *Jaguar XK-140* roadster, which sells in this country for about the same price and is, in fact, a leading seller among imported sports cars (see CONSUMER REPORTS, November 1954).

The American cars' high card is obviously service—any *Ford* or *Chevrolet* dealer can supply some sort of service, whereas the number of *Jaguar* experts (and they need to be experts) is limited. Considering the cars themselves, however, and how they are to drive and handle and live with, CU's consultants would place the *Jaguar* ahead of either the *Thunderbird* or the *Corvette*.

It is a better-seasoned car, designed with more racing and sports car experience behind it, with fewer frills, and with major emphasis on steering, handling, and braking. No automatic transmission is available for the *Jaguar* sports models. East-coast price for the roadster is \$3465; for the coupe or convertible, \$3815.

Another interesting imported sports car with offerings in the *Corvette-Thunderbird* price range is the German *Porsche Continental* (formerly called the *Porsche America*)—roadster \$2995, coupe \$3445, convertible \$3695. The *Continental* models of the *Porsche* are by no means strong performers (it is the \$5000-or-so *Porsche Super* which brings home the bacon in European road races and rallies). But the *Continental* coupe, especially, is a real "personal" car in service where hot performance is less important than the car's beautiful handling ease, its very light and quick steering, small size, high quality, good driver vision, solid structure, outstanding gas mileage, and—a great improvement in the 1955 model—satisfactory quiet over the road. Still, the *Porsche* is not everyone's glass of schnapps; though its lines are classic, it is too small for prestige value or acclaim, and its tiny, air-cooled, vibrationless four-cylinder engine requires the driver to do a lot of gear-shifting.