



Ford's Zephyr is not a small car, but is more appropriately called compact. It appears to be only slightly smaller than the U. S. Ford.

Even while turning, the car is sure-footed at all speeds. Brakes are good, even by sports car standards, and steering is quick.



Instruments are grouped before the driver, and there is plenty of room. A power operated top is an option.

SCI CAPSULE ROAD TEST: FORD'S ZEPHYR

ALTHOUGH this specifically is a test report on the new English Ford Zephyr, a great many of the observations that follow apply equally to the new Consul and Zodiac. All three cars are much larger than previous models, they have the same basic body shell in common and, most important, the same admirable engineering philosophy. The Consul (\$2012 Port Of Entry base price) is powered by a 104 cu. in. (1703 cc) ohv four-cylinder engine. The other two cars are about nine inches longer and two additional cylinders of the same bore and stroke as the four give them a swept volume of 156 cu. ins. (2553 cc). POE base price of the Zephyr sedan is \$2193. The convertible costs about \$400 more and the Zodiac sedan's POE tab is \$2365.

There is nothing about these cars to suggest transatlantic origin. In fact, if they had been designed in Dearborn (they probably were) instead of in Dagenham, they could not be more precisely suited to the requirements of the Stateside motorist who has had big cars but for whom little cars have no appeal. These larger EnFo products are in between—they are compact cars that offer all the comforts of the large Detroit machine but without its excesses of weight, mass, appetite, initial cost and all the rest. They genuinely deserve to be termed rational designs for individual or family transportation. Their success on the U. S. market should be limited only by supply and by the extent to which Dearborn is interested in having them compete with the home-made product.

Wherever it was seen our test Zephyr was admired by men and women alike for its good looks and clean lines. Wiseacres had no chance to rib its size: pulled alongside a current U. S. Ford the Zephyr looks only slightly smaller and every bit as sharp. It does not look "foreign" but blends right into the American scene. It could have been made to look sleeker and longer by being made lower, but its designers resisted this. The Zephyr is a full five inches higher than a '57 Dearborn Ford but its overall form is so harmonious that

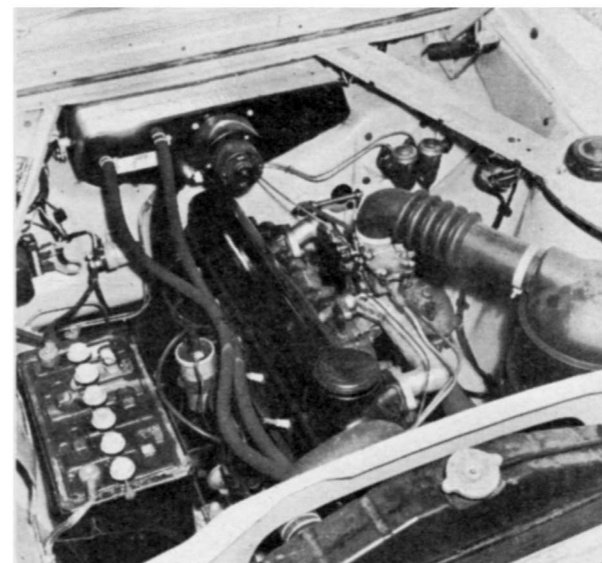
this greater height is only noticeable in a side-by-side comparison. It pays off in great ease of entry, minimum shaft tunnel intrusion, loads of foot room and almost unheard-of head room. The car welcomes its occupants instead of challenging them.

The chair-height character of the Zephyr's seats is related to the entire body to make the seating position ideal. Vision is almost unimpaired for the full 360 degrees in the sedan and the gently dropping hood line permits a view of the road very close to the front of the car. The height of the seat, plus four inches of fore-and-aft adjustment in just the right range, plus just the right inclination of the steering wheel, makes the Zephyr a natural fit for drivers of widely varying stature. It can be worn in comfort like a suit of well-fitting clothes.

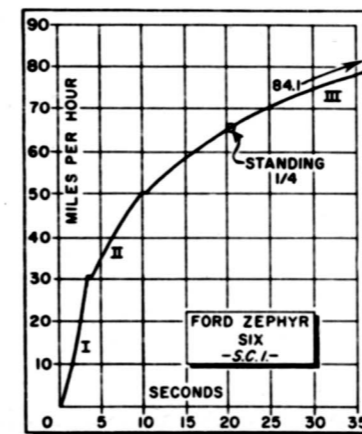
All this is testimony of intelligent, painstaking body engineering, but in the chassis and engine this competence and care shine even more brightly. At its 600 rpm idle the engine is absolutely smooth and it stays that way all through its speed range. The valve train is so designed that engine revs are automatically and firmly governed at 4600 rpm, 200 rpm above the horsepower peak. Thus, when it's working as hard as it can this engine still is loafing at a piston speed that is almost ridiculously low. Its compression ratio is modest and so is its output in relation to displacement: the engine simply isn't stressed.

At the same time the 2.5 liter engine's displacement is large enough that the Zephyr is far from being short on power. In spite of its low numerical axle ratio of 3.9 it has gobs of pulling power at both low and high speeds. From zero to 30 mph—the important getaway range for city traffic—it can stay with most of the hot ones. From zero to 60 it's a match for anything remotely in its class and just one second slower than a famous rear-engine sports car. From 60 to 75 it still packs a healthy passing thrust and in the next ten

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The 156 inch (2553 cc) engine is not overstressed or overworked. It is, however, dwarfed by the battery.



PERFORMANCE FORD ZEPHYR COUPE DE VILLE.

TOP SPEED:
Two-way average 82.8 mph
Fastest one-way run 84.1 mph (4600 rpm)

ACCELERATION:

From zero to	Seconds
30 mph	3.8
40 mph	6.8 (Shift to II at 30 mph)
50 mph	10.1
60 mph	16.0 (Shift to III at 50 mph)
70 mph	24.6
80 mph	37.7
Standing 1/4 mile	20.5
Speed at end of quarter	65 mph

SPEEDOMETER CORRECTION:

Indicated	Actual
30	27
40	36
50	46
60	55
70	64
80	73
90	82

FUEL CONSUMPTION:

Hard driving (during speed runs)	17.6 mpg
Average driving (under 60 mph)	23.4 mpg
Average for entire test	19.2 mpg

BRAKING EFFICIENCY: (10 successive emergency stops from 60 mph, just short of locking wheels):

1st stop	50	6th	65
2nd	60	7th	60
3rd	61	8th	68
4th	63	9th	63
5th	63	10th	50

SPECIFICATIONS

POWER UNIT:

Type	Six cylinder, in-line.
Valve Arrangement	Pushrod ohv.
Bore & Stroke	3.25 x 3.13 ins./82.55 x 79.5 mm
Stroke/Bore Ratio	0.96/1
Displacement	155.8 cu. ins./2553 cc.
Compression Ratio	7.8/1
Carburetion by	Single-throat downdraft Zenith.
Max. bhp @ rpm	86 @ 4400
Max. Torque @ rpm	136 lbs-ft @ 2000
Idle Speed	600 rpm.

DRIVE TRAIN:

Transmission ratios I	2.84
II	1.642
III	1.00
Final drive ratio (test car)	3.9
Axle torque taken by	Leaf springs

CHASSIS:

Wheelbase	107 ins.
Front Tread	53 ins.
Rear Tread	52 ins.
Suspension, front	IFS by vertical pillar & coil springs; anti-roll bar.
Suspension, rear	Semi-elliptic.
Shock absorbers	Front—telescopic; Rear—lever-piston hydraulic.
Steering type	Worm & peg.
Steering wheel turns L to L	3.25
Turning diameter	36 ft. 2 ins.
Brake type	Front—2 leading shoes; Rear—leading & trailing.
Brake lining area	147 sq. ins.
Tire size	6.40 x 13 tubeless. (Loaded radius 11.875 ins.)

RATING FACTORS:

Bhp per cu. in.	0.55
Bhp per sq. in. piston area	1.73
Torque (lb-ft) per cu. in.	0.87
Pounds per bhp—test car	30.9
Piston speed @ 60 mph	1730 fpm
Piston speed @ max bhp	2295 fpm
Brake lining area per ton (test car)	111 sq. ins.
MPH per 1000 rpm	18.2

HOW THE COMPACT ZEPHYR COMPARES WITH THE BIG U. S. FORD SIX, THE COMPACT RAMBLER, AND THE LIGHT VOLKSWAGEN

	VW	Zephyr	Rambler	Ford
Dry weight, lbs.	1580	2500	2900	3470
Wheelbase, in.	94.5	107	108	116
Length, in.	160	180	191	202
Height, in.	59	62	58	57
Width, in.	60.6	69	71	77
Turning Diameter, ft.	36	36	37.5	40.5
Displacement, cu. in.	73	156	196	223
Horsepower	36	86	125	144
Pounds per hp.	43.9	29.1	23.2	24.1
Axle ratio	3.61	3.9	3.77	3.7
Brake lining area, sq. in.	80.6	147	150	180
Sq. ins. per ton	102.1	117.5	103.5	103.7

Ford's Zephyr

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mph band it cruises as smoothly as a rolling ball. It can be cruised flat-out all day.

The EnFo ohv six is more than just a scaled-down copy of Dearborn's excellent ohv six. All the hallmarks are there though: shell-molded cast steel crank, integral valve guides, built-in full-flow oil filter; which means that any mechanic who can work on a U.S. built Ford six—or one built in Texas by Texans for that matter—will be wholly at home with the Zephyr. It means that the EnFo engine is backed up by all of Dearborn's know-how. It uses the new international standard thread sizes, which wipes out a service disadvantage that's typical of many foreign cars. An exceptional life-expectancy is assured and the delightful smoothness is a bonus scarcely to be hoped for in a top-volume, rather low-priced foreign car. The engine has none of the vices of the typical hard-working, highly-stressed under-sized power plant. Its great hop-up potential was covered in the August issue of SCI.

EnFo's engine designers did their job extremely well. Those responsible for the transmission are in the same league. A four-speed gearbox would, it must be ad-

mitted, make this one hell of a lot more automobile. It would also add to the selling price, so a three-speed box is what you get, and it's a splendid one. The column-shift mechanism is excellent. You don't have to fight it; merely guide the lever to the slot of your choice and it follows willingly. The synchro-mesh on second and top can't be outwitted even by fast, chopping shifts and the linkage feels strong, as opposed to the delicate, springy systems of rod, pins and levers with which many imported cars are provided. Silent double-clutch downshifts to low are very easy to make, while they're all but impossible with many comparable cars. For those who are bothered by the limitations of a three speed box, a Borg-Warner overdrive is available; while for those who are just bothered, there is a B-W automatic transmission.

The brakes with which these "big" English Fords are endowed are among the very best. Pedal pressure is light enough to compare with most power-brake systems. The braking action is strongly self-energizing and a very light touch pulls the car down quickly. Dearborn would do well to imitate these brakes. One high-speed stop can use up much of the pedal of a U. S. Ford but ten successive emergency stops from 60 mph affected our Zephyr's brakes hardly at all.

These brakes are good by sports car standards and so is the Zephyr's steering: it's very light, very quick, very positive, giving the driver wonderful command of the vehicle. Due to the seating position

and location of the steering wheel the driver of average proportions sits somewhat above the wheel. This gives him an unusual leverage that makes steering during vigorous cornering a particularly pleasant exercise.

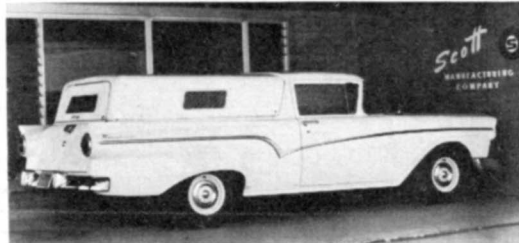
The car understeers gently at low cornering speeds but as these speeds increase, the rear end slides out gently. It can be made to tuck itself back into line instantly by backing off slightly on the throttle. The side-bite at the rear is soft even with 30 psi tire pressures and this tendency for the rear end to hang out takes a little getting used to. Once it is well understood, it becomes a useful factor in developing a powerful cornering technique.

The overall impression given by the Zephyr's ride—even when you have explored the range where sliding replaces tracking—is one of exceptional sure-footedness during all maneuvers and at all speeds. On good pavement the occupants are so well insulated from road shock that, for example, we found it easy to write legible test notes while the car was zooming over a fast, winding mountain road at very high speed. On brutal surfaces the Zephyr does not have the uncanny shock-digesting ability of some cars designed primarily for European road conditions. Its ride has a more characteristically American feel: smooth where the surface is smooth and thumpy over the bumps. But the thumps don't reach the occupants and the ride is quite free from pitching and tramping effects. Rear axle hop on rough surfaces is pronounced.

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NEW "SCOTTOP"

Ford "Ranchero Sombrero"



1957 Ford Ranchero

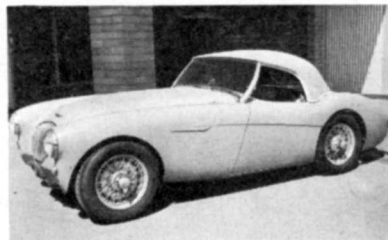
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Ford's Zephyr

(Continued from page 59)

During any road test experience certain words or phrases come to mind that tend to sum up the car's essence. In the case of the Zephyr these turned out to be "finely engineered" and "absolutely effortless to operate." It is one of the least-fatiguing cars we've driven. A car that obviously works hard, that has to be prodded into doing its job, tends to be a tiring one to drive. The Zephyr is opposite to all this. All that it does is without effort, noise, vibration or strain. It responds to all commands calmly, efficiently, and without fuss. It's a happy-feeling car, friendly to those it serves so willingly and well.

Even so, it has its imperfections. The pendant-type brake pedal cannot be reached by simple sidewise movement of the throttle foot and is therefore inconvenient to operate. The rear deck lid is not countersprung to reduce lifting effort on the convertibles. The spring-loaded choke control is located next to the key-operated starter switch to the right of the steering wheel. Until discovering that the choke control can be locked in place by rotating the knob, rather awkward contortions are required to engage the starter and to choke the engine at the same time. The Zephyr's fuel consumption, while not bad, is not particularly good. This can be explained in part by the fact that our test ended before the odometer had registered 1000 miles and the car still was not fully broken in; after a ten minute run, for example, the differential housing was hot to the touch. These cars have a reputation for not limbering up before the first few thousand miles and it's fair to state that gas mileage will improve with more miles on the clock.

The body work of the sedans we inspected was excellent and structurally firm, but the Zephyr convertible was less impressive. It lacks the natural structural strength of the hardtop and raises a question as to whether unit body-frame construction is compatible with open body styles. Isn't the greenhouse necessary to tie the whole structure together? While a power-operated top is optionally available our test car had the manual type. This was easy for one person to raise or lower, but its fit even when factory-fresh was far from being weather tight. On the other hand, this is one of the very few convertible tops we have encountered that is perfectly silent, that does not drum or flap even at top speed.

Certain sages in Detroit have predicted that the huge-car cycle is nearing the end of its course and that, within ten years, 50 per cent of the U. S. automobile market will belong to the compact car. If this is the case, Ford is well in front of its competition having, in its EnFo line, tomorrow's cars available today.

Griff Borgeson

Inches . . .

(Continued from page 41)

(from an American car) Balshowsky joined the American section to the Mercedes unit. The engine was then dropped into position and it aligned easily.

New headers were built for the mill. Before the engine change, the exhaust was carried low, under the car. The new headers, tuned for the competition uses of the engine, came out the air-vent openings on the sides of the car.

He kept the Mercedes radiator, but one of the water outlets was blocked. A three gallon surge tank was added beside the engine because Porter felt the Mercedes design did not provide sufficient frontal area for proper cooling. The stock oil cooler was also retained.

Incidentally, this cooling system has not proven satisfactory to Porter. He is now planning a special 4-inch thick radiator to be fitted in place of the Mercedes unit.

Instrument gauges were changed from metric to US standard readings. Using Stewart-Warner panels, Porter installed water and oil temperature gauges, oil pressure and gas gauges. He kept the stock Mercedes tachometer, but changed its 4 to 1 gearing to 2 to 1, and fitted the sending unit to the front of the Buick mill.

Next step was to replace the 6.50 tires of the Mercedes with 8.20's. He retained the Mercedes mag wheels, but cut out wheel openings front and rear to fit the over-size rubber. He kept the 3.89 rear-end gear combo that came stock with the machine, but provided 40% greater stopping ability by installing larger wheel and master cylinders. Heavy-duty Lockhead units did the job.

When the car was completed it weighed 120 pounds less than with the Mercedes mill installed. Some 35% less weight was up front: some 22% more horsepower bottled under the hood.

But to Porter, horsepower was not enough. He still remembered the humiliating experience of the Corvette. He took the car to Willow Springs, a torturous up and down hill road-racing course not far from Los Angeles, where the car (before the swap) had clocked a 1 minute 52 seconds lap time.

Porter revved up the Buick mill 'till it screamed. Dropping the clutch, he took a fast warm up lap and then signalled for time. His consistent lap time: 1.46. He had cut off seven seconds and was now roaring around the course at times comparable to the fastest machinery ever clocked there. Acceleration was up, too. He clocked 13.9 seconds for the quarter mile standing start.

"Come to the next race," Porter said chewing his cigar, "Those Corvettes are going to have troubles."

Robert Lee Behme