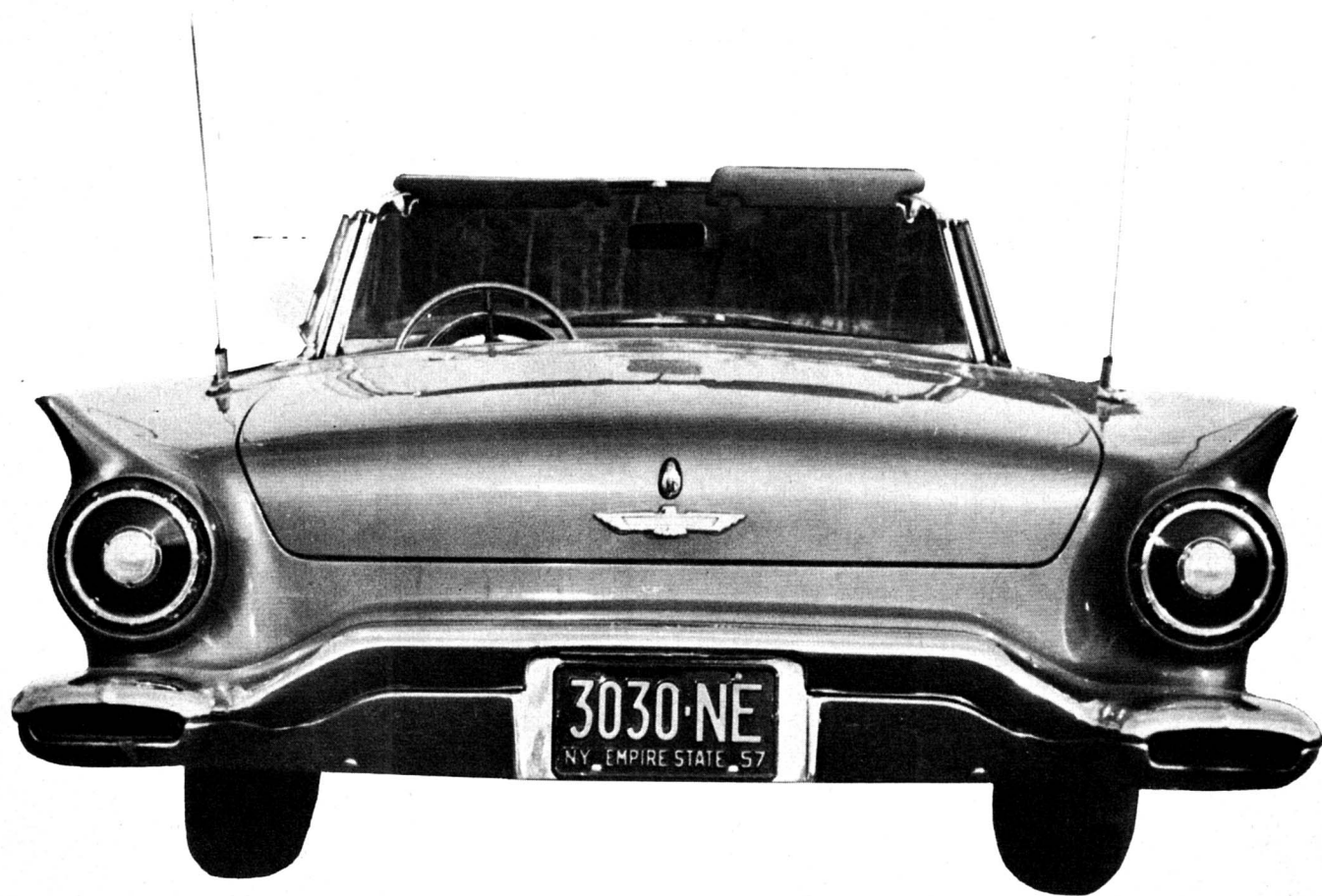




SCOT ROAD TEST: THUNDERBIRD

Thunderbird stuck well at 60 mph on test curve, although tire howl was plentiful. Understeer characteristic was pronounced, but otherwise steering was light and provided excellent road feel. BELOW: Removal of continental spare tire and addition of fender fins were major style changes from previous year. Both changes emphasize low, squat look of the Bird.



YOU DON'T have to be told—a quick glance at a Thunderbird instantly reveals its ancestry. The first Bird prototype was based on a shortened standard Ford chassis for exploratory purposes. This was a valid start, and later versions never wandered very far from this concept. For production and servicing ease, it made sense to build a Bird out of the FoMoCo parts bins. Sense or not, this goes a long way toward explaining the nature of Ford's "personal car."

The Bird is not truly a sports car; it's not meant to be. It is a compromise resulting from sports car looks on a workday chassis. Ford's interpretation of the appeal of the sports car puts emphasis on the exclusive feel of two seats in a big automobile. They enhanced this in 1956 by hanging the spare tire out back, and for 1957 the major change was the grafting on of the long, canted tail plumage for the Bird. The spare has been tucked back inside, and with it have gone a lot of trunk access problems.

The additional rear overhang was handsomely handled, and the bumper treatment is pleasantly clean. It all contains a huge luggage compartment which is marred only by the inward-angled spare tire. The fuel filler has been moved from the center to the right side to exploit the new space further.

A clever tie-in was achieved by curling the fender peaks around the door handles, while the new front bumper-grille has a commercially massive look. Otherwise the sheet-metal is unchanged, but with the louvered wheel discs this is probably the jauntiest T-Bird yet. And we haven't even mentioned the greatly expanded color range, which includes two exclusive Bird colors: light pink and metallic copper.

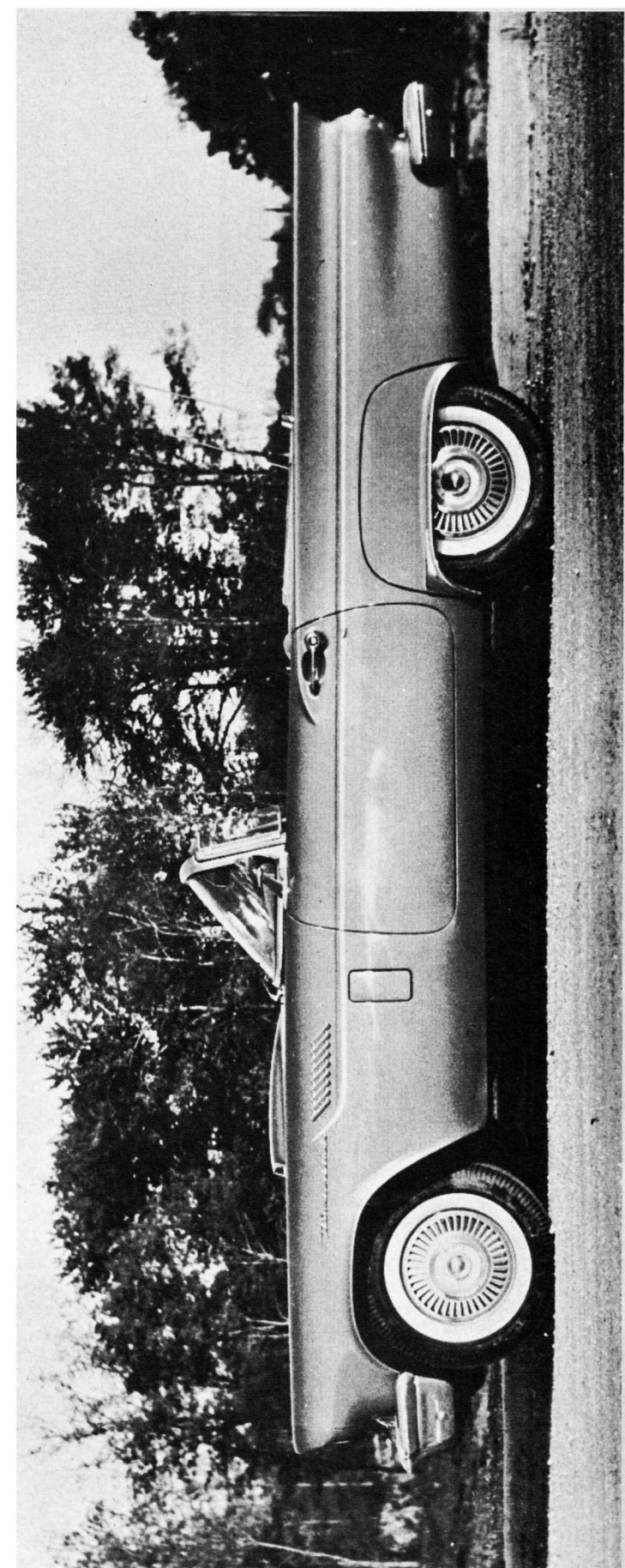
If the hardtop portholes have started to pall, an unpunctured version is optional equipment. Clamping for the hardtop has been revised, and the convertible mechanism modified to make operation considerably easier. Two years' experience has also led to heavier door hinges. Seats in the old Thunderbird never won much praise, and without any change in shape or bulk the new ones have been made much more comfortable. Separate sections for driver and passenger are sprung to give much better adaptation to the spine and deceptively good side support. Cushioning over the drive shaft has been retained to make life easier for a third passenger.

Two cars are represented in this report. One is a factory engineering prototype, driven at Ford's Detroit proving grounds early in the model year as the basis for a driver's report that appeared in the January, 1957 Sports Cars Illustrated. While we were able to give it a good thrashing, conditions and equipment for a full road test were not available at that time. A second car was made available a few months later by Signal Motors, of Rockville Centre, N. Y., for the actual testing. We will identify the cars as the "factory car" and the "road test car."

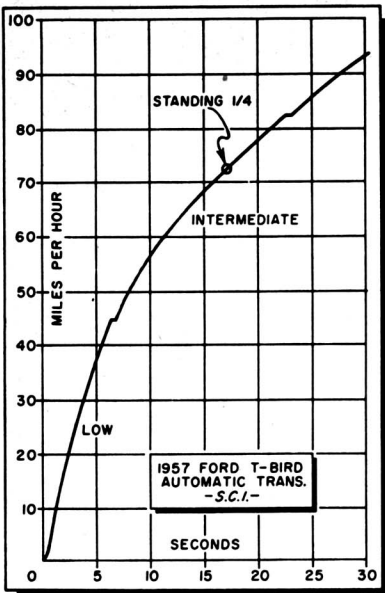
Interior adjustability has always been a good Bird feature, and the factory car had the adjustable steering wheel and four-way power seat. It didn't have the new Dial-O-Matic seat control which is, nevertheless, worth mentioning. This is controlled from the dash by two concentric numbered knobs: one for horizontal and one for vertical positioning.

When the ignition is turned off the seat automatically moves as far back and down as it can go. Turning on the ignition causes the seat to move forward and up to the exact position pre-selected on the two dials. The road test car had the manually-operated seat. The T-Bird is easy to get in and out of in any case, except for those in the six-foot-three range, where a special set of gymnastics is required to avoid clunking a knee into the steering wheel.

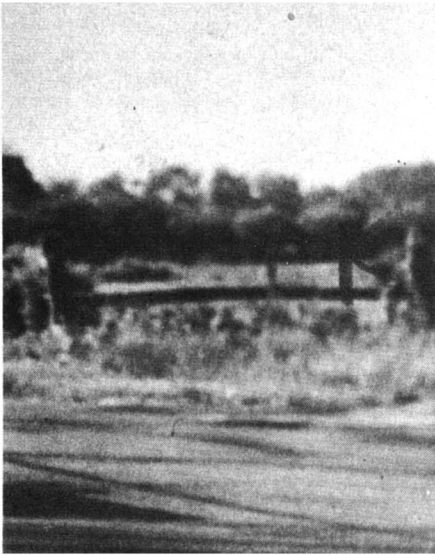
Power assists are again optional for the side windows, but the padded panel and sun visors are now standard. Instru-



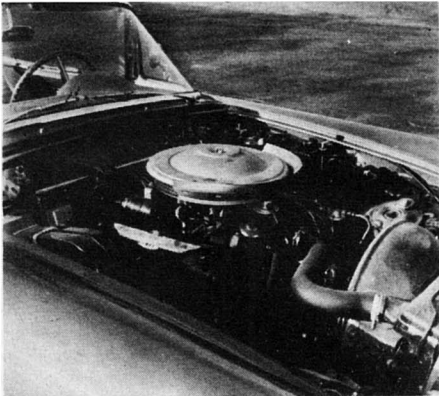
Sports car appearance is combined with a standard chassis to make Ford's "personal car."



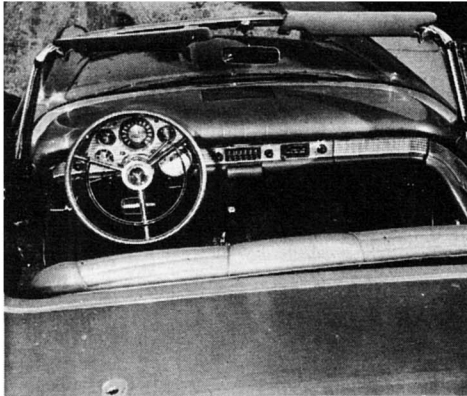
Car leans badly going into a fast turn, although it feels fairly flat to driver. With more than four turns lock to lock, on tight bends car becomes quite a handful. Power assist is excellent on the T'Bird.



Angle of spare tire keeps trunk deck low, but cuts space available for luggage storage.



Squat 4-barrel carb sits on manifold of 245 bhp mill in cramped under-hood compartment.



Instrument to right of steering column was used to check brake performance during road test.



Driving position is generally good, and bench-type seat gives fair lateral support. Low steering wheel makes entry awkward for a long-legged driver.

ment lights are completely shielded by a wide, deep cowl. The dials themselves are handsomely round and fully visible with the wheel in straight-ahead position. In a turn, the horn ring suddenly confuses things. The sweep-second clock and the 5000 rpm tachometer are welcome, but the latter is hidden away on the lower left and could easily be relocated upward.

Another clever trick for an open car is incorporated in the radio control. Its volume is sensitive to car speed — allowing a louder setting for wind noise which diminished in the quiet of city traffic (No annoying blasting at traffic lights). The right-hand side of the dash is basically unchanged, retaining its pint-sized glove compartment.

The driving position is generally good, and the big, dished steering wheel is nicely angled. There's just enough leg room and plenty of width, but with both standard and power brakes there's a big level difference between accelerator and brake which can cause some discomfort. Although the rear view mirror forms a forward blind spot, vision all around is adequate.

Thunderbird development engineers are primarily interested in improving the ride of their "light" car, and to this end they were glad to move the pendulum weight of the spare tire back inboard. This has reduced pitching, and small

bumps are well damped out. With the improvement in seating, the Bird's space and comfort factors rate high.

A big change, and one which we were curious about, is the adoption of 14-inch tires and safety rim wheels. Unfortunately, these were carrying only standard pressure as we wheeled one Bird over the serpentine Ford handling course. The factory engineer was remarking on the superior handling of the car — we could just hear him above the anguished howling from the tires.

To be fair, the T-Bird didn't stick too badly, and the previously skittish rear end didn't act up at all. Understeer was there in big quantities; the wheel having to be wound well over to hold the car on line. Front/rear stability is somewhat better than before, but at the recommended pressures the overall traction is not outstanding and the car is somewhat of a handful. Power steering was welcome for all that twirling, and the Ford system is a good compromise between road feel and minimum effort. There are still well over four turns to be made, though, and once the car is lost the only way out is an ejection seat.

We didn't pound the brakes too hard on the factory test car, with its standard brakes, but did notice that the power boost would be a worthwhile accessory. Pedal pressure was definitely high for the resulting stopping power. On the road

test car, the power assist made smooth, quick stops possible with minimum pedal pressure and no sudden grabbing. Brake drum diameters for '57 remained at 11 inches, but a lining area increase is claimed as a result of widening the front secondary shoes. This seems to have stabilized the action of the self-energizing mechanism; a valuable step in reducing fade.

Unfortunately, fade is still present. After the sixth stop in our brake fade test, stopping power began to drop off rapidly, and considerable stench of burning linings permeated the car. At the end of the test, in which the car is given 10 successive stops from 60 mph, just short of locking the wheels, we let the brakes cool off for one minute, then tried them again. They had regained all their former vitality.

Basic engine options start with a 292 cubic inch V-8 for the standard shift version. This carries a 9.1 to one compression ratio and babbit mains and with a two-barrel carburetor delivers 212 bhp at 4500 rpm. If overdrive or Fordomatic is ordered, 312 cubic inches are supplied. This engine puts out 245 horses at 4500 rpm on a 9.7 to one compression ratio, and copper-lead bearings are used. Holley produced a new low silhouette four-barrel carb for these cars which is exceedingly open and compact and challenges the fuel-injection boys for lowness. It houses the very thin replaceable-

(Continued on page 131)

FORD THUNDERBIRD
PERFORMANCE

TOP SPEED:

Two-way average	111.1 mph (top up)
Fastest one-way run	112.5 mph (top up)

ACCELERATION (top up)

From Zero to	Seconds
30 mph	4.0
40 mph	5.5
50 mph	8.2
60 mph	11.2
Standing 1/4 mile	17.0
Speed at end of quarter	80 mph

SPEED RANGE IN GEARS

Low I	0-45 (4000 rpm)
Low II	0-80 (4500 rpm)
High	0-Top

SPEEDOMETER CORRECTION

Indicated	Actual
30	27.5
40	35.8
50	44.1
60	51.4
70	62.9
80	74.8
90	81.8
100	90.9

FUEL CONSUMPTION

Hard driving	15.2
Average driving (under 60 mph)	17.9 mpg

BRAKING EFFICIENCY

1st stop	55 per cent
2nd stop	55
3rd stop	48
4th stop	52
5th stop	52
6th stop	55 (right rear wheel locking)
7th stop	45 (heavy smell)
8th stop	40
9th stop	41
10th stop	40

SPECIFICATIONS

POWER UNIT

Type	V8
Valve arrangement	Pushrod-operated ohv.
Bore & Stroke (Engl. & Met.)	3.80 x 3.44 ins. 96.5 x 87.3 mm.
Bore/Stroke ratio	0.9 to one
Displacement (Engl. & Met.)	312 cu. ins. 5100 cc.
Compression Ratio	9.7 to one
Carburetion by	Single four-throat Holley
Max. bhp @ rpm	245 @ 4500
Max. torque @ rpm	332 @ 3200
Idle speed	500 rpm

DRIVE TRAIN

Transmission ratios	
(auto) Low I	2.40 to one
Low II	1.47 to one
High	1.00 to one
Final drive ratio (test car)	3.10 to one
Other available final drive ratios	3.56, 3.70 to one

CHASSIS:

Wheelbase	102 ins.
Front Tread	56 ins.
Rear Tread	56 ins.
Suspension, front	Ball joint wishbone, coil spring.
Suspension, rear	Semi-elliptic leaf springs
Shock absorbers	Double-acting tubular.
Steering type	Worm and roller, power assist.
Steering wheel turns, L to L	4 1/4
Turning diameter	36 feet
Brake type	Hydraulic
Brake lining area	176 sq. ins.
Tire size	7.50 x 14

GENERAL:

Length	185.2 ins.
Width	70 ins.
Height	52.4 ins.
Weight, test car	3230 lbs.
Fuel capacity — U.S. gallons	20

RATING FACTORS:

Bhp per cu. in.	78
Bhp per sq. in. piston area	2.6
Torque (lb-ft) per cu. in.	1.06
Pounds per bhp — test car	13.5
Piston speed @ 60 mph	1192 fpm
Piston speed @ max. bhp	2580 fpm
Brake lining area per ton (test car)	109 sq. ins.

Thunderbird

(Continued from page 15)

paper element air filter; one wingnut takes all this apart.

Our factory hack and the road test Bird both had the standard Fordomatic combination with the now-familiar floor control quadrant. Properly used, of course, this can hold the gearbox in each of its three forward speeds as long as desired. To review briefly, low is held by leaving the shift lever in "L" position. The shift to second is made by moving the lever to "D", and that gear can be held by returning again to "L". Finally, high is reached by going up to "D" again.

Sports Cars Illustrated's test procedure is to click the watch as the throttle is punched, which accurately reproduces real operating conditions. This properly penalizes the more sloppy automatics, and in this case the time from zero to 30 was a mediocre 4.9 seconds on the engineering prototype, and a better 4.0 seconds on the road test car. Using more extreme methods our 1956 test produced a figure of 3.3 seconds, which the newer car, being all of five pounds lighter, should be able to duplicate.

With the lever set in "D", allowing the box to shift for itself, we moved on up to 50 in 9.3 seconds and to 60 in 12.7 in the engineering car. By holding the box in low and intermediate ranges as described above, we ran the road test Bird up to 50 in 8.2 seconds, and to 60 in 11.2 seconds. With real clutches, the Ford test drivers are running much closer to 10 seconds to 60.

Our test car had a little better than 4000 miles on the odometer, and was delivered to us in what can best be described as "standard tune." With it we turned the standing quarter mile in 17 seconds flat, and averaged 111.1 on the top speed runs. The best one way run was 112.5 mph. Ford engineers estimate a reasonable 116 mph top speed for the Bird, and with fine tuning, our car might have approached that figure. At 112 mph the convertible top was lightly drumming the top of our heads. A driver under 6 feet tall would not be faced with that annoyance.

Throughout the acceleration and speed runs, the V-8 spun with a competent whir and dug in nicely as it picked up revs. A modified manifold and bigger intake valves contribute to this, as does a new camshaft, but idling remains dead smooth at 600 rpm. The exhaust note is clean and not too blatty.

Final refinements for 1957 include gas tank capacity up three gallons from last year's seventeen, and a completely new rear axle with straddle-mounted pinion. Ford has kept an open ear to customer wants in this very specialized line and its product should now be well in tune with demand. Sales so far seem to be a function of production, anyway, the target for this year is 20,000 units and over. As a comfortable, rakish, exclusive road machine, the T-Bird is a nice package, and it's farther from Sebring than ever.

—Karl Ludvigsen & Tom Bottomley

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