ROAD TEST

FORD FALCON

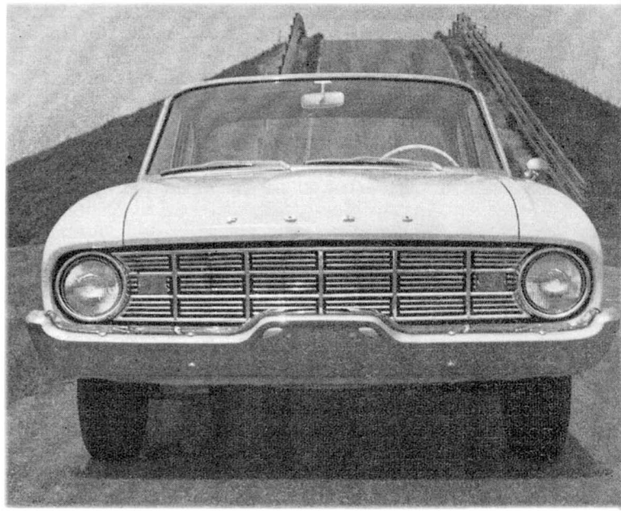
Congratulations, Mr. Walker. A difficult job well done

FOR OVER 25 YEARS the Ford Motor Company has been besieged by the cry, "Bring back the Model A!" As far as we are concerned the new Falcon 6 is a reasonably close facsimile, at least in terms of what the Model A might have been if it had continued with year-to-year improvements. Automobile design can never stand still, but the basic concept of the new Falcon is pretty much that of the Model A—good, solid, honest transportation. At this point some of our readers are bound to remark that the Falcon is a 6 and that Henry Ford had no use for this "odd" number. However, one of the earliest Fords was a 6 (the Model K), and late in 1940 the company introduced another 6 (a darned good engine) which lasted right up to 1952. They then switched to an ohv short-stroke engine which has been the most advanced 6-cyl design in the U.S. to date.

Strictly speaking, the Falcon project started in July 1957, but this is only a part of the background story. Since 1945 Ford has done a great deal of small-car engineering work, most of it unknown to the general public. The people responsible for this advanced engineering ultimately came to be known around Ford by the code name "XK-Thunderbird," and it was this design group which engineered Ford's light car of 1945–46 (a side-valve 6). A later project was the much publicized 5-cyl in-line; obviously, neither got into production. Cars from the XK group that did get into production include the Ford Vedette (the French-built V-8 60, now a Simca), the Consul and Zephyr (British), the Ford Taunus (German) and, no surprise, the 2-passenger Thunderbird! All these were designed, engineered and developed at Dearborn.

Our first look at the XK group's latest effort took place in the experimental garage, located in a building which once produced the famous old Ford-Stout tri-motor monoplanes. The car itself, a 4-door Falcon, had been specially prepared for the press and it stood out like Cinderella on skid row among the dull and dirty experimental test cars in the area. Although it had the optional automatic transmission, we took it out for a few laps on the short test track and then posed it for the photographs you see here. Later, the car we had asked for, a stick-shift model, supplied the test data.

Engineers, if left to their own devices, would never finalize on specifications. Of dozens of Falcons we saw in the garage, only one was the exact model scheduled for production. If this seems strange, bear in mind that secrecy is very important in the automotive industry (several cars had Zephyr bodies). Furthermore, engineering evaluation must be on a comparative basis—i.e., change one thing at a time and try it out. Our actual test car, for example, did not have the front suspension of the auto-



Form follows function and with a minimum of fuss.



R&T publisher John Bond emphasizes low build of Fo-Mo-Co's new Falcon.

matic-equipped press car we tried earlier. Frankly, we couldn't tell the difference.

Driving impressions of the Falcon are not difficult to describe, but do not sound glamorous. In simplest terms, everything has been extremely well planned, and there's absolutely nothing basic to criticize. The seating position is excellent, the visibility good, the controls smooth and light. The car feels like and is a very brisk performer: it will readily out-accelerate the standard 1959 Ford 6, by almost 2 sec to 60 mph to be specific. As is our usual practice, we made our stop watch and Tapley checks on the stick-shift model, plus a few spot checks on the automatic transmission car. As expected, the stick-shift gives better times from a standstill, but the torque converter gives slightly better high-gear Tapley readings and better acceleration in the 50/65-mph range. There was no opportunity to test for top speed or for fuel consumption. Accordingly, the figures given in our data panel for these tests are those supplied by the manufacturer. We believe them to be quite accurate, even conservative. The time for a standing ¼ mile is our estimate—no ¼ mile was laid out anywhere on the test track, and the company wasn't about to let us take the car off the grounds.

To our minds the Falcon has two outstanding features. The first is the engine. It is smooth, quiet and has extraordinarily good torque. Considering its low numerical axle ratio (3.10:1), the low-speed pulling power and acceleration through the gears are even more unusual. What's more, the engine will rev surprisingly well. An indicated speed of 65 mph in 2nd gear, still not the limit, is an actual 62 mph at 5050 rpm. Undoubtedly the engine will go beyond that, but we didn't try it. At any rate, the well rounded engine performance characteristics and typical Ford shift linkage (good) are responsible for the excellent acceleration figures given in the data panel.

The second outstanding feature of the Falcon is in the ride and handling departments. It isn't hard to get good handling in a compact car, but it is extremely difficult to combine handling with a good ride. The Falcon has both to a superlative degree, though we would rate the ride a little the better of the two, primarily because the steering is slower than need be. Nevertheless the steering feels right, and the car is much easier to maneuver and control than the large Fords with which so many Americans are familiar. There is understeer, of course, and a fast bend takes a little pressure on the wheel to hold it—but it's nothing like one of our larger cars. It's definitely a step in the right direction, even if it isn't a sports car.

Reverting to the technical aspects of the Falcon, perhaps the most interesting story is that of its curb weight. From the very beginning the car was conceived as a full 6-passenger model and, for performance and economy reasons, the weight goal was set at 2400 lb. The final production curb weight with no accessories is 2382 lb, and anyone who has ever worked on this end of the business, in either the automotive or aircraft industry, will realize what a feat of design engineering this unusually close adherence to the original weight specifications represents.

Naturally, the unit body/frame construction is partly responsible for meeting the weight goal. However, the engine weight is even more interesting. Ford's big 6 weighs 525 lb complete with flywheel, but without clutch. Engine weight does not go down directly with reduction in piston displacement; therefore the Falcon's corresponding weight of 345.5 lb is truly remarkable, particularly since the pistons are the only major parts made of aluminum. This low weight was possible in the "all-iron" engine because of some very careful design and some new approaches to foundry practices. Three illustrations should suffice: weight was saved by splitting the crankcase at the main bearing centerline, by eliminating the usual ohv side cover plate and by casting the intake manifold integral with (but external to) the head. Of course, the ultra-short stroke (2.50 in.) saves weight too; connecting rods, for example, are only 4.855 in. long, center to center. On the other hand the 4-main-bearing crankshaft is not light; it has 2.248-in. mains and 2.123-in. crankpins. Valve timing, incidentally, is a conservative 15-37-45-7 sequence.

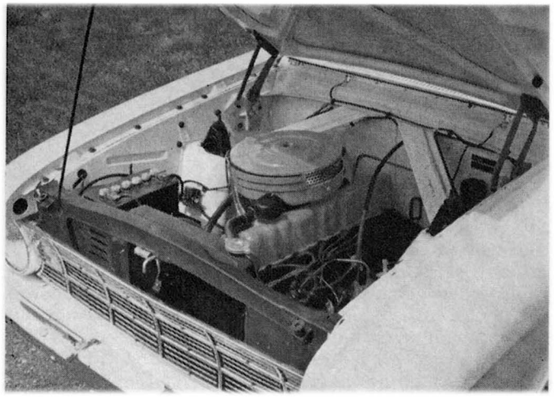
The clutch is non-centrifugal and has an 8.5-in. diameter. The 3-speed transmission is conventional and smaller than the standard Ford's. The optional automatic transmission has some parts from the larger Ford's, but the 3-element torque converter is smaller. It has a low-gear ratio of 1.75 and a converter multiplication of 2.40. No rear-axle ratio options are listed. The axle is a special hypoid unit of high-offset type (1.75 in.) with a 6.75-in.-diameter ring gear.

Front suspension is the now conventional ball type with 35% anti-dive and the roll center raised 2.5 in. above the ground. However, the coil spring is located above the upper wishbone. Ride rate is 80 lb/in. in front, with 90 lb/in. at the rear via conventional leaf springs. An anti-roll bar is fitted in front.

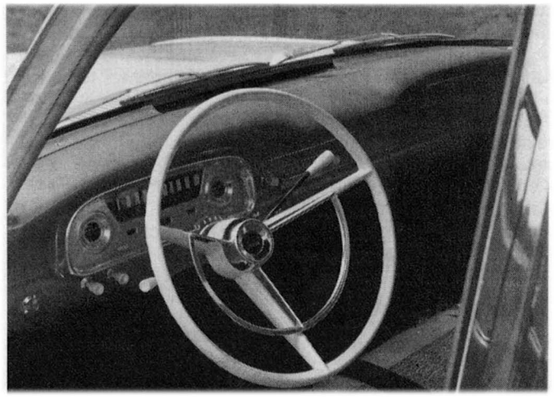
The car will be offered in either a 2-door or a 4-door sedan. Hip room front and rear, for both, is 57.1 in. Effective leg room is 44.6 in. front and 40.1 in. rear, and the trunk volume is 24.5 cu ft.

In summation the Falcon is a car which will not only delight the millions of Ford proponents but will give them sensible, economical motoring. As Henry Ford II said recently, "The economic impact and the interest value of such a development [the Falcon and competitive entries of other manufacturers] could well be comparable in significance to the appearance of the Model T and Model A on the American scene."

Upper suspension mounts are braced to cowl for rigidity.



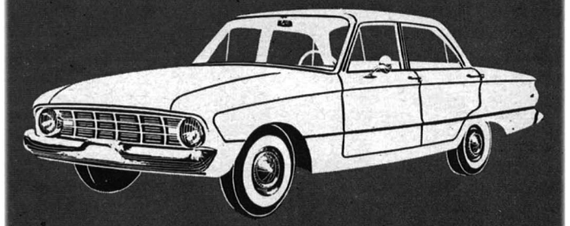
Falcon interior is not totally unlike other Ford cars.



Simplicity is beauty but with strong personal identity.



ROAD & TRACK ROAD TEST 225



FORD FALCON

SPECIFICATIONS

List price	n.a.
Curb weight	2375
Test weight	2700
distribution, %	52/48
Dimensions, length	181.1
width	70.0
height	54.5
Wheelbase	109.5
Tread, f and r	55/54.5
Tire size	6.00-13
Brake lining area	114
Steering, turns	4.6
turning circle, ft.	37.7
Engine type	6 cyl, ohv
Bore & stroke	3.50 x 2.50
Displacement, cu in.	144.3
cc	2366
Compression ratio	8.70
Bhp @ rpm	85 @ 4000
equivalent mph	86
Torque, lb-ft.	138 @ 2000
equivalent mph	43

PERFORMANCE

Top speed (mfg), mph	87
best timed run	n.a.
3rd ( )	
2nd (5050)	62
1st (5050)	33

FUEL CONSUMPTION

Normal range, mpg	25/30

ACCELERATION

0-30 mph, sec	4.8
0-40 mph	8.3
0-50 mph	12.8
0-60 mph	17.7
0-70 mph	25.5
0-80 mph	36.5
0-90 mph	
0-100 mph	
Standing ¼ mile (est)	20.8
speed at end, mph	64

GEAR RATIOS

O/d (n.a.), overall	
4th (n.a.)	
3rd (1.00)	3.10
2nd (1.75)	5.43
1st (3.29)	10.2

TAPLEY DATA

4th, lb/ton @ mph	@
3rd	200 @ 40
2nd	350 @ 35
1st	530 @ 22
Total drag at 60 mph, lb	135

CALCULATED DATA

Lb/hp (test wt)	31.8
Cu ft/ton mile	86.0
Mph/1000 rpm (3rd)	21.6
Engine revs/mile	2780
Piston travel, ft/mile	1155
Rpm @ 2500 ft/min	6000
equivalent mph	129
R&T wear index	32.2

SPEEDOMETER ERROR

30 mph	actual 29.1
40 mph	38.8
50 mph	48.5
60 mph	58.2
70 mph	67.9
80 mph	77.6
90 mph	
100 mph	

