

# Fahrberichte I

## Road tests I



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PHOTO BY RAINER SCHLEGELMILCH

# FORD FIESTA

*Henry builds a minicar*

BY RON WAKEFIELD  
European Editor

**A**DD ONE MORE name to the list of "mini" producers: Ford. The long-rumored Ford Fiesta has been introduced and Ford is gearing up to do battle in a very tough field.

What constitutes the battlefield depends upon which market you are talking about. In Europe, where the Fiesta is being introduced first, it's occupied by cars like the VW Polo and Audi 50 (virtually identical), Fiat 127, Peugeot 104, Renault 5 and others that have followed the original British Mini concept. In Britain the Mini itself is still a fairly strong competitor. And in America the Chevette has to be considered the major oppo-

sition, although the VW Rabbit and Honda Civic are strong and cars like the Renault 5 and Datsun F10 have to be considered.

Whatever the specific market conditions, technically the Fiesta was patterned after the Polo/50. Bob Lutz, Ford Germany's dynamic Managing Director says, "It's no coincidence that our prototype Fiestas were seen along with Polos. Some of the best small cars in the world are built in Germany, and we set our sights on them." Lutz's sector of Ford Motor Co will be the first to build Fiestas, at the Saarlouis plant in Germany, so the new car will be up against that tough competition right from



the start. Then at the beginning of 1977, Ford's brand-new, 9000-man plant in Valencia, Spain, will begin producing them for the southern European market. Finally, sometime next year, Ford of Great Britain will build righthand-drive Fiestas. Cars for the North American market will come from Saarlouis, starting at the end of 1976 for an early 1977 introduction. Altogether Ford will be able to build 500,000 Fiestas a year if the market demands them, and the hope is that 100,000 of them can be sold in America.

The Fiesta's concept is familiar: a hatchback 2-door family car with minimum outside dimensions and best possible inside space, similar in size and layout to the European cars named and a bit larger than the Honda Civic. With a transverse engine and front drive, it is technically very different from the Chevette and considerably more space-efficient. Ford went to great lengths to keep its weight down and was successful at it as the basic Fiesta weighs just 1545 lb. Light weight means fuel economy, of course, and aerodynamics figure too if the car is driven much on the highway. The Fiesta's drag coefficient of 0.42 is claimed by Ford to be the best in its field of boxy sedans (the latest fastbacks go below 0.4 but they're much larger cars), and things like a front spoiler and a subtle turn-up of the roofline at the rear made material contributions to this result. Another aerodynamic feature, one on which Ford has applied for a patent, is the so-called *Lamellengrill* first seen on an aerodynamically modified Capri at this year's Geneva Salon. It consists of five aerofoil-shaped slats, which at high speeds build up a cushion of air between them and thus shut out a portion of the onrushing air. The net effect is "less grille" at high speeds, and since grilles incur an aerodynamic loss there is a gain from the arrangement.

Ford is proud of the Fiesta's interior dimensions, which were laid out around four 6-ft-2-in. dummies that represent the Caucasian 95th-percentile man. I'm only 5 ft 9 in., but I don't always sit comfortably in the back seat of small sedans. In the Fiesta back seat, with the driver's seat adjusted for me, I found free space over my head if I didn't sit bolt-upright and there was enough room for my knees too. You don't expect stretch-out comfort in a car like this and you don't get it, but for its extremely compact outside dimensions the Fiesta is impressively roomy.

Four versions are available—basic, L, S and Ghia—and the basic model is already well equipped with inertia-reel front seatbelts, adjustable driver's backrest, 2-speed wipers with washer, folding rear seat, gas struts to hold the hatchback open, steel-belted radial tires and front disc brakes. Instrumentation is typical for this class of car, consisting of speedometer, fuel gauge and coolant-temperature indicator plus a small group of warning lights. The dash has a BMW look (Lutz: "Nothing wrong with that!") with its flat shelf across the passenger side. Upholstery and coverings are plain in the basic car, upgraded by steps in the other three versions. L means a package of luxury and convenience items, S is the sports package and Ghia is the top of the line.

Three engine options are offered. Ford started with the faithful old Kent pushrod four (named for the factory in England where it's produced) and redesigned it for lightness and simplicity, saving about 11 lb altogether by measures such as reducing the number of main bearings from five to three. The basic engine has 957 cc and develops 40 bhp on regular fuel; next step up is a premium-fuel version with 45 bhp, and the top engine has a longer stroke, 1117 cc and 53 bhp. For America the 1599-cc Kent engine will be used, essentially the same one that powered the original Pinto, and will probably deliver somewhere between 60 and 70 bhp.

An entirely new drivetrain had to be developed and it is simple and compact. The engine is placed to the right, with an all-synchro 4-speed transaxle "behind" it on the left. With the differential almost directly beneath the clutch, it is considerably to the left of center and the right axle shaft is almost twice as long as the left. Engine and gearbox do not share their oil and in fact Ford recommends no change of oil for the gearbox.

Earle S. McPherson, a Ford engineer, applied for a patent on a new type of front suspension in 1949. It has become popular only in the last 10 years, and by no means do all Ford cars use it today, but Ford did choose it for the Fiesta. A "pure" McPherson system uses the front anti-roll bar to help locate the wheels, in conjunction with the spring/shock struts and simple lower links, but as the Fiesta has no front a-r bar it uses small-diameter drag (compliance) struts for this function. The Fiesta system has negative steering offset, as is more and more the practice today, to reduce the effect of uneven braking or a tire blowout, and steering is by rack and pinion.

The rear suspension is simple and light. Two perforated, almost dainty trailing arms carry the tubular beam axle, a Panhard rod being used to locate it laterally. Coil springs are used, and on the S there's an anti-roll bar. The system leaves space for the fuel tank ahead of the axle and under the rear seat, making for a relatively deep trunk. Brakes are the usual disc-drum combination, with an optional vacuum booster that will probably be standard in the American version.

Here in Europe, Ford seems to be very aware of the costs and frustrations motorists bear in getting their cars serviced, and is doing something about it. The company made a remarkable comeback after the energy crisis by offering a 1-year, 20,000-kilometer guarantee—so remarkable that the whole

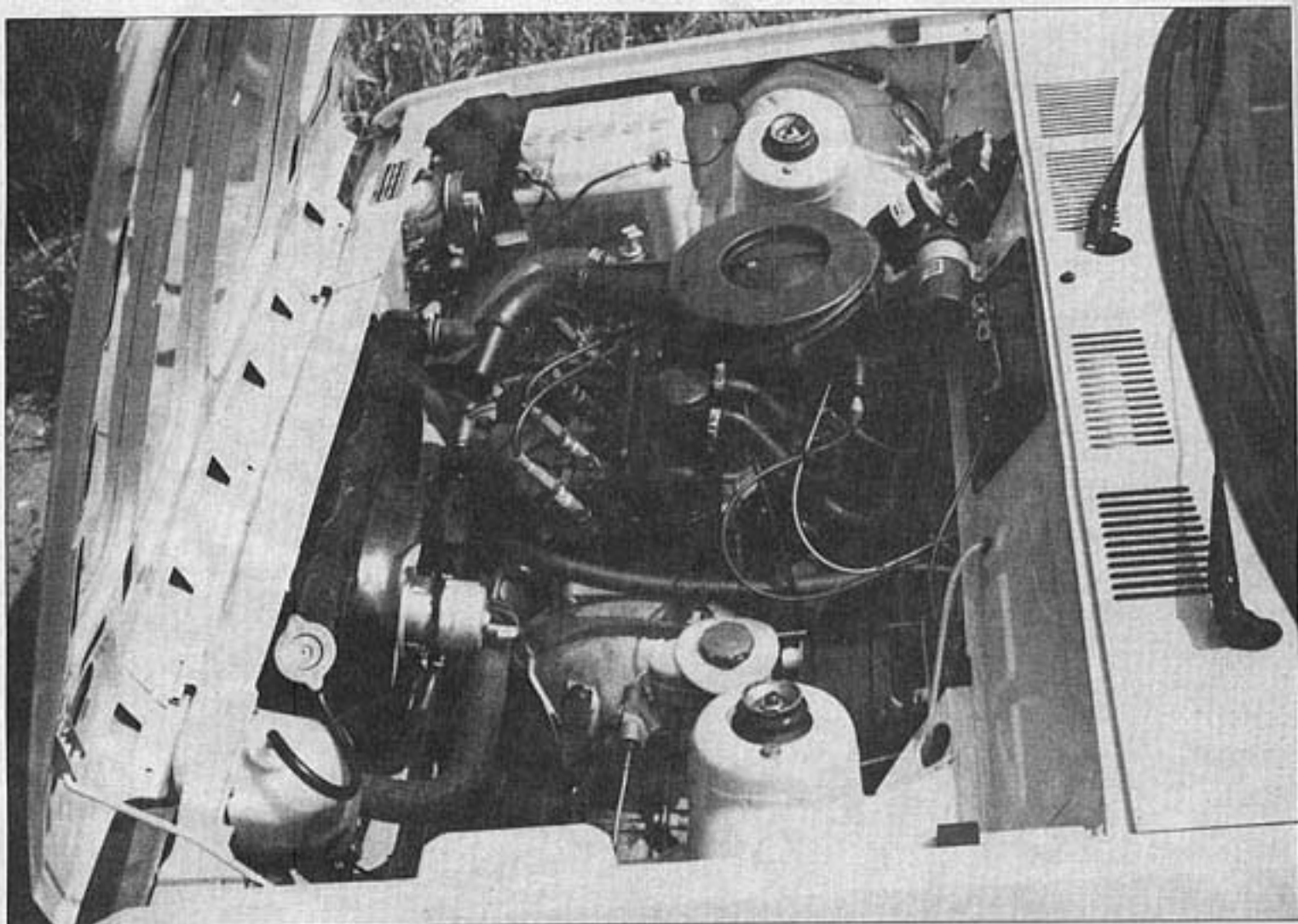


industry copied it and upped the ante to unlimited mileage. The Fiesta is laid out for ease of maintenance; for instance, the diagnostic service that is supposed to be done every 10,000 km (6000 mi) takes only 1.8 hours, as compared to 2.5 for the also-simple Ford Escort. Lutz says 70 percent of all Fiesta service operations can be done in less than an hour, and you need only look under the hood to see how easy the engine is to service.

### Driving Impressions

THE FIESTA is a nimble car, first and foremost, as you expect from a 1500-lb mini. Steering is light and quick and you can nip around city corners or country curves at very decent speeds even on the standard 145SR-12 tires. But the 40-bhp engine is no fun at all; noisy and gutless.

A more interesting combination is the S, with its 53-bhp engine and tighter suspension, and this probably more closely approximates the sort of Fiesta Americans will get, though the U.S. car will inevitably be heavier. I found it still noisier, but at least its performance (0-60 mph in about 16 sec) is some cause for joy. The engine revs freely, and the stiffer suspension →



PHOTOS BY MANFRED HOLZNER

(which comes also with wider tires and wheels) lets you use all its performance freely on a winding road. But the added power also reveals a problem, not unexpected with the unequal-length axles: The car steers to the right when you accelerate hard. A tendency for the steering to tighten up under power is also more noticeable with 53 bhp, but the steering never really becomes heavy.

The Fiesta rides impressively well, softly but well controlled. We ventured off onto unpaved road with two of the cars we drove and found that they had ample spring travel and ground clearance.

I would sum up the Fiesta as a competent, but not outstandingly good, small car. In its "home" market it needs a

price advantage over the Polo to compete, and it's expected to have one. In America it should do very well against the Chevette, which is not very roomy considering its size. Lutz feels strongly that GM made the wrong decision in producing the Chevette in the U.S., that in view of the long term marketing chances for such a car it is too risky to set up production facilities. Production of the Fiesta in America will therefore be considered only if it proves itself beyond current expectations; the expectation of 100,000 cars a year seems a realistic one.



#### FORD FIESTA S SPECIFICATIONS (European Version)

#### DRIVETRAIN

Transmission	4-speed manual
Gear ratios: 4th (0.96)	3.90:1
3rd (1.35)	5.48:1
2nd (2.05)	8.32:1
1st (3.58)	14.53:1
Final drive ratio	4.06:1

#### GENERAL

Curb weight, lb	1595
Wheelbase, in.	90.0
Track, front/rear	52.5/52.0
Length	142.1
Width	61.7
Height	53.5
Fuel capacity, gal.	9.0

#### CHASSIS & BODY

Body/frame	unit steel
Brake system	8.7-in. discs front, 7.0-in. drums rear
Wheels	steel disc, 12 x 4 1/2
Tires	steel radial, 155SR-12
Steering type	rack & pinion
Overall ratio	18.6:1
Turns, lock-to-lock	3.4

#### ENGINE

Type	ohv inline 4
Bore x stroke, mm	74.0 x 65.0
Displacement, cc/cu in.	1117/68.3
Compression ratio	9.0:1
Bhp @ rpm, DIN	53 @ 5700
Torque @ rpm, lb-ft	59 @ 3000
Carburetion	one Ford (TV)

Front suspension	McPherson struts, lower lateral links, com- pliance struts, coil springs, tube shocks
Rear suspension	tubular axle on trailing arms & Panhard rod; coil springs, tube shocks, anti-roll bar





# FORD FIESTA GHIA

*Cheers to Ford: We like your bright idea!*

PHOTOS BY JOHN LAMM



FORD INTRODUCES THE Fiesta. Your immediate reaction to that statement might be: So what, another small car in an already overpopulated market. And that would be unfortunate because the Fiesta, the first front-wheel-drive mini from an American auto maker even if it is built in Germany, is a fine small car. Fiestas first rolled off the assembly line at Saarlouis, Germany, the same plant where U.S. Fiestas are built, in May 1976, but the earliest stages of development which would ultimately result in the Fiesta had their beginnings in 1969. In September of that year the idea of Ford entering the market with a subcompact car was proposed by Ford of Europe and a task force was approved to study initial feasibility. Although the germ of the idea came from Europe, the Fiesta is truly an international design. It was approved in the U.S., researched on three continents, designed by a team of Europeans and Americans, engineered in Germany and is built in three countries: England, Germany and Spain.

In concept it follows the now familiar front-wheel-drive, 2-door hatchback, family-car configuration popularized by the VW Rabbit and the Honda Civic. It's no coincidence that the overall shape is strikingly similar to the Rabbit as the Fiesta was patterned after the VW Polo, a scaled down version of the Rabbit

not sold in the U.S. Slice 4.5 in. out of the Rabbit's wheelbase, pare the overall length by 8.2 in., knock about 2.0 in. off the track, width and height and, *voilà*, you'd have the Fiesta.

Providing roomy accommodations for four adults in a car measuring only 3.1 in. more than 12 ft isn't easy but Ford manages this feat without resorting to trick mirrors or other deceptions. There really are no secrets. The space savings offered by front-wheel drive, a transverse drivetrain layout and a boxy hatchback body are well known and Ford has used all three to maximum advantage. The interior is about as roomy as a Rabbit's except in one area—leg room. As clever as the Fiesta engineers are, they aren't magicians and there's no getting around the Fiesta's 4.5-in. shorter wheelbase. A compromise was called for. The Fiesta's front seats don't move as far aft as they do in the Rabbit so drivers taller than 6 ft 2 in. might be a little short of leg room but, conversely, rear-seat occupants who are less than 5 ft 10 in. tall get adequate leg and knee room even with the front seat pushed all the way back.

Although the Fiesta is built in Europe you can't escape the fact that it's a captive import when you start looking down the option list. In the best Detroit tradition, it's long and intimidating. Four trim levels are offered: standard, a decor option group, a sport

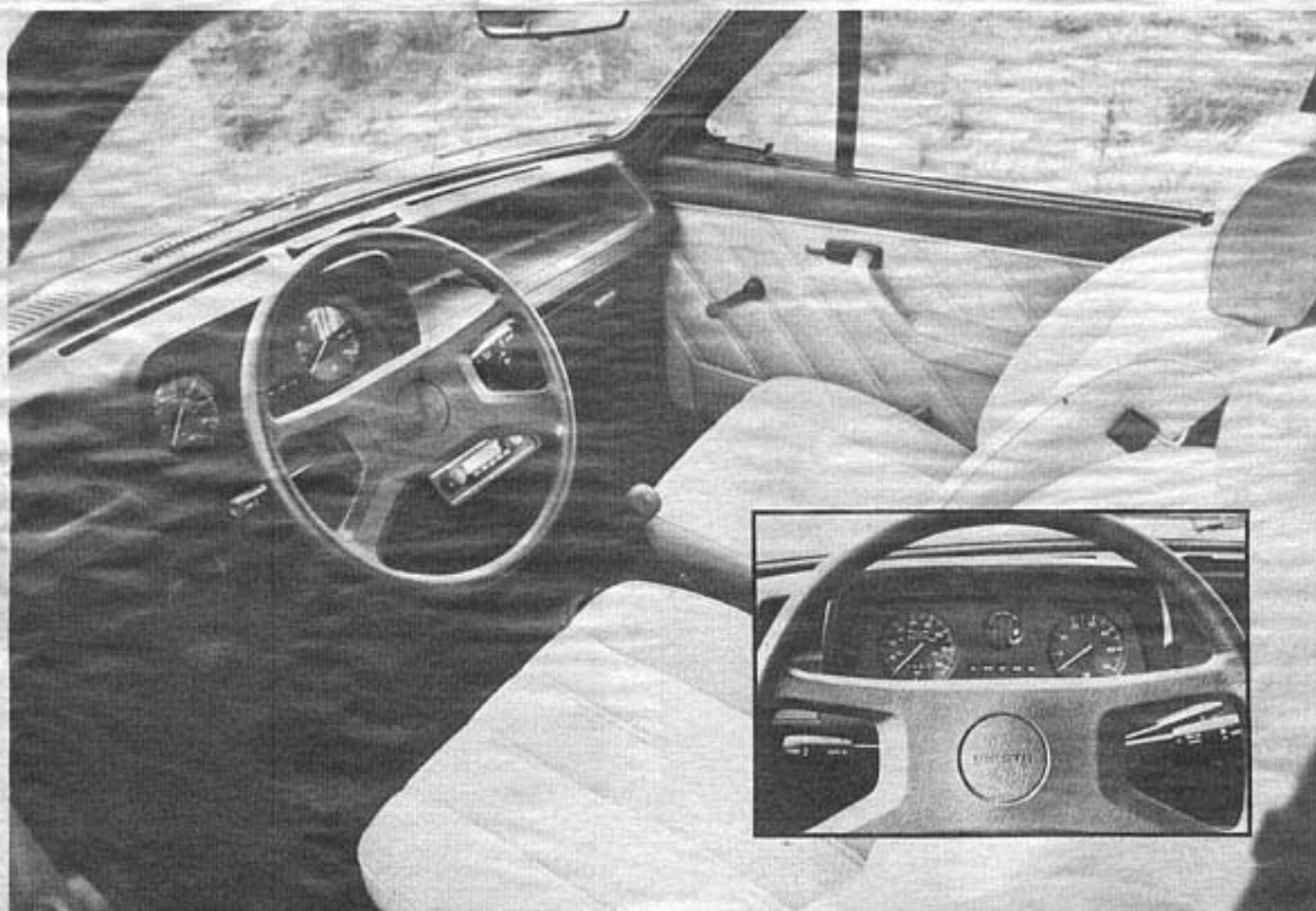
option group and the top-of-the-line Ghia option group. We have neither the space nor the patience to describe each option group in detail, but a brief explanation will reduce confusion when you visit your local Ford dealer. All Fiestas come equipped with Michelin steel-belted radial-ply tires, front disc brakes, rack-and-pinion steering, fold-down rear seat and gas struts to hold the hatchback open. Instrumentation is simple and readable with two large circular dials situated directly in front of the driver; the left dial housing the speedometer and the one on the right the coolant temperature and fuel-level gauges. Heater/vent controls are logically arranged and the most used controls are conveniently located on three steering column stalks. The lever on the left activates the turn signals, high beam, headlight flash and horn, while the two on the right operate the lights and windshield wipers.

Ordering the decor group adds such things as reclining front seats (shame, shame, Ford, these should be standard!) a conveniently located seat-back release lever, a rear-window heater, a glove box door and integral arm rests/door pulls. An intermittent position is added to the wiper control and an electric stalk-operated washer replaces the foot-activated washer of the base Fiesta. Of course, the usual assortment of exterior brightwork and upgraded vinyl and cloth upholstery are included.

Moving on to the sport option group, the most significant additions are 0.5-in. wider wheels, upgraded suspension including a rear anti-roll bar, a 4-spoke padded steering wheel in place of the standard 2-spoke and a tachometer. The high-line Ghia features such things as extra sound insulation, wider wheels and tires, a tachometer, storage pockets in the doors, a day/night mirror (this should be standard on every Fiesta also) and more plush materials for the carpeting, seats and door trim panels. Naturally, you can also order convenience items such as tinted glass, various radios, removable/flip-up roof panels, air conditioning, power-assisted brakes, dress-up items such as cast aluminum wheels and functional extras like opening front vent windows and a rear-window wiper/washer.

For this test we borrowed the two most interesting Fiesta models: the Ghia version we tested and a sport Fiesta which we drove to compare the chassis differences between the two models. There's a definite look and feel of luxury to the Ghia interior. It's nicely detailed and a high level of fit and finish is evident throughout. It's obvious Ford stylists went to a lot of trouble to hide interior painted surfaces. All the posts and the rear wheel-well humps are trimmed and the door trim panels extend up to the bottom of the side glass. The front seats are wider and more comfortable than in the other models and are covered in a soft body-gripping corded cloth material. Most drivers found the seats in the sport Fiesta harder, flatter and generally less comfortable. Both cars had the optional instrumentation that adds a tachometer (without a redline indicated) and moves the fuel level and coolant temperature gauges to a small dial inserted between the larger ones. A glaring problem with either the standard or optional instruments is the flat plastic cover which reflects light into the driver's eyes. In the Ghia, unusually tasteful-looking simulated wood extends along the leading edge of the dash and surrounds the instrument cluster, breaking up the monotony of the otherwise all-black fascia. In the sport Fiesta a flat-finish silver material serves the same purpose. Both cars were equipped with the 2-way sunroof that features two interchangeable roof panels. One is steel painted body color and the other is tinted safety glass which is treated to appear transparent from inside but screens out a high percentage of the sun's rays to keep down interior heat. These panels can be tilted up at the rear edge to improve flow-through ventilation or removed when the driver desires alfresco motoring. Ordering the sunroof or the opening vent wings is worthwhile because the standard ventilation system is marginal. The small outboard dash-level vents don't swivel enough to allow air to be directed where it's needed most and the central flip-up duct puts out only wisps of air even when force fed by the fan.

As expected, the hatchback design results in impressive package carrying ability. With the rear seat up and the trunk security ➡





panel in place there are 6.3 cu ft of storage capacity. With the rear seat folded, an additional 19.1 cu ft become available. The second figure includes the rear footwell compartments but leaves space for the driver to see out the rear window and compares to 10.4 and 10.7 cu ft for the Rabbit.

The Fiesta is powered by a 1599-cc four cylinder with cast-iron block and head and overhead valves operated by pushrods. It's essentially a 1977 version of the engine that powered the original Pinto, though it's now produced at Dagenham, England, instead of Kent. The engine starts easily, suffers from a little stumbling as it warms up and also following a hot soak but otherwise exhibits good driveability. It revs freely to 6000 rpm and suffers from a 4-cylinder resonance that sets in at about 3700 rpm, an engine speed that equates to 75 mph which is high enough above normal driving speeds that the buzzing never becomes bothersome. Weighing only 1835 lb and with 66 bhp and 82 lb-ft of torque on tap the Fiesta is an eager performer. It runs from 0-60 mph in only 11.5 sec and trips the quarter-mile lights at 18.2 sec. That's faster than the Rabbit we tested in May 1975 which recorded figures of 12.7 and 19.0 sec in these acceleration tests, but remember the latter car was tested with our old equipment and we'd expect the performance of the two cars to be about equal if they were tested under the same conditions. The one negative aspect of such snappy acceleration is rubberbanding of the drivetrain and hopping of the front wheels during hard initial acceleration and in tight turns with the power applied. This condition, along with the tendency for the car to pull to the right when power was applied, was much reduced in the sport Fiesta we drove. Except for a round-house throw from 2nd to 3rd, the shift linkage is fairly typical for a fwd car—a little vague but quick and light. Incidentally, an automatic transmission is conspicuous by its absence from the Fiesta's extensive option list. The reason, Ford says, is that an automatic would extract too great a performance penalty. Based on our testing, however, we believe the Fiesta could handle an automatic quite nicely.

The Fiesta is as much fun to stop as it is to make go. Both cars we drove had the optional power assist resulting in just about ideal pedal effort: 30 lb for a 0.5g stop. The Fiesta's disc/drum combination suffered no fade and hauled the car to a stop from 60 and 80 mph in impressively short distances with very good control. The only thing that prevented us from giving the brakes an excellent rating was the moderate to severe front locking that accompanied the panic stops.

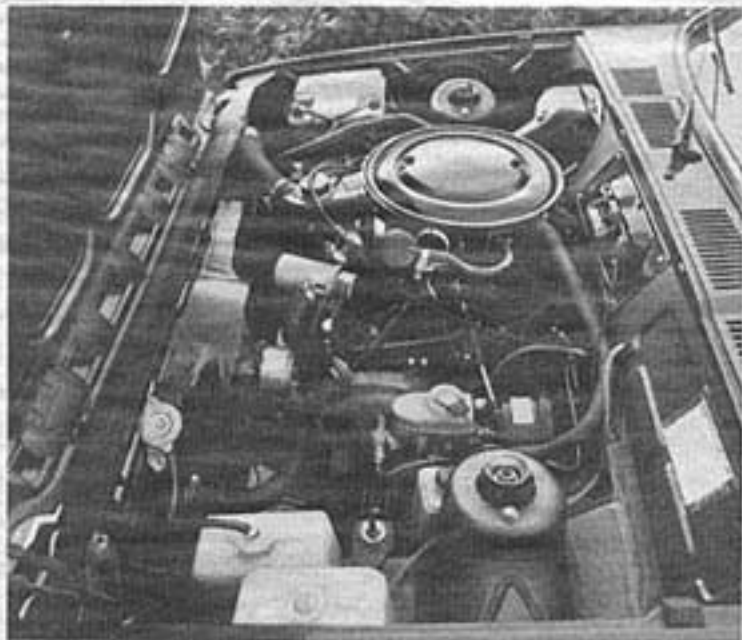
The Ghia has a very comfortable ride and it's obvious that for this top-of-the-line Fiesta, Ford engineers went to great lengths to provide the type of ride most American posteriors demand. The Ghia is softer than the Rabbit and has considerably more compliance built into the bushings to reduce the harsh thumping over small sharp bumps that is so noticeable in the Rabbit.

Conversely, large dips and bumps upset the Ghia more than the Rabbit and there's a definite need for increased rebound damping from the front shocks to prevent the annoying hop encountered during hard acceleration on level surfaces and even normal applications of throttle up steep hills. With the sport option the Fiesta driver gives up some ride comfort in return for improved handling. The Ghia's large-amplitude suspension motions become shorter and choppy but better controlled; front-wheel hopping is reduced and the overall ride is harsher but still more compliant than the Rabbit's.

Nimble and responsive is an apt description of Fiesta handling. The steering is light and quick and just about ideal for darting around slower cars and tight turns. Both versions exhibit characteristic fwd understeer, the sport version a little less, thanks to its rear anti-roll bar. And the way they stick when cornering on their optional wider wheels and tires is confidence inspiring.

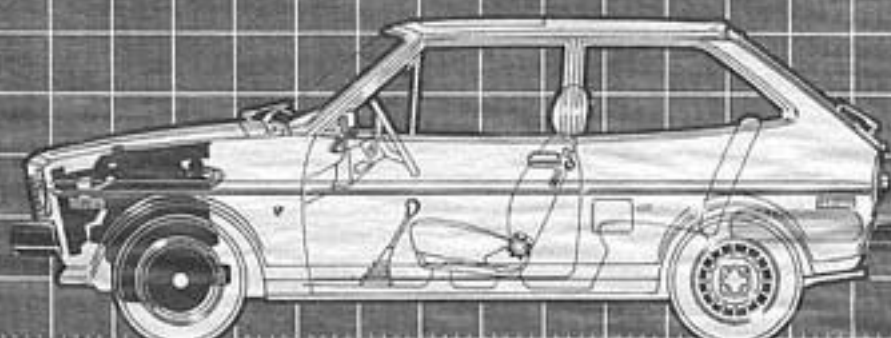
A question Ford officials are often asked these days is: "With the small car market dead in the water, why are you going ahead with your plans to introduce the Fiesta?" The answer, Ford says, is simple. The small car market may be down but it's certainly not dead. And it's going to grow in the years ahead under the pressure of inflation, the rising cost of gasoline and the need for the car industry to meet government-mandated fuel economy standards. Another important reason, according to Ford, is that within the small car market there's one segment that has continued to grow in share despite the ups and downs of the total small car market. That's the mini car segment—a part of the small car market Ford defines as those cars with an overall length of less than 165.0 in., a curb weight of less than 2000 lb and a base engine of less than two liters.

Although no prices have been released for the Fiesta yet, we'd estimate the base price to be around \$3450, less than a Rabbit but more than a Honda Civic CVCC or the Chevrolet Chevette, the Fiesta's major domestic competitor. The high-line Ghia will probably sell for around \$4200, with the other two models falling between these two figures. In the six months since its introduction in continental Europe, 118,400 Fiestas have been sold, the best sales performance of any new car in European history. If this is any indication and if the Fiesta proves to be as reliable and inexpensive to maintain as Ford believes it will, we look for the Fiesta to enjoy a long, happy and successful life in the American market.



Extra roof panel is stowed in a vinyl bag in the cargo area.





SCALE: 1/8" = 1" DIVISIONS

**PRICE**

List price, FOB Detroit... est \$3450  
 Price as tested... est \$4845  
 Price as tested includes cast alloy wheels (est \$200), flip-up sunroof (est \$150), vent windows (est \$50), rear wiper/washer (est \$50), power assisted brakes (est \$60), rear window heater (est \$70), AM radio (est \$65)

**MANUFACTURER**

Ford Division, Ford Motor Co  
 PO Box 2053  
 Dearborn, Mich. 48121

**GENERAL**

Curb weight, lb... 1835  
 Test weight... 1985  
 Weight distribution (with driver):  
   front/rear, %... 61/39  
 Wheelbase, in... 90.0  
 Track, front/rear... 52.5/52.0  
 Length... 147.1  
 Width... 61.7  
 Height... 52.3  
 Ground clearance... 7.0  
 Overhang, front/rear... 27.1/30.0  
 Usable trunk space, cu ft... 6.3 + 19.1  
 Fuel capacity, U.S. gal... 10.0

**ENGINE**

Type... ohv inline 4  
 Bore x stroke, mm... 81.0 x 78.0  
 Equivalent in... 3.19 x 3.07  
 Displacement, cc/cu in... 1599/97.6  
 Compression ratio... 8.5:1  
 Bhp @ rpm, net... 66 @ 5000  
 Equivalent mph... 100  
 Torque @ rpm, lb-ft... 82 @ 3200  
 Equivalent mph... 65  
 Carburetion... one Weber (2V)  
 Fuel requirement, unleaded, 91-oct  
 Exhaust-emission control equipment: catalytic converter, air injection, exhaust-gas recirculation

**MAINTENANCE**

Service intervals, mi:  
 Oil change... 7500  
 Filter change... 7500  
 Chassis lube... none  
 Minor tuneup... 15,000  
 Major tuneup... 30,000  
 Warranty, mo/mi... 12/12,000

**DRIVETRAIN**

Transmission... 4-sp manual  
 Gear ratios: 4th (0.88)... 3.15:1  
   3rd (1.29)... 4.62:1  
   2nd (2.06)... 7.37:1  
   1st (3.58)... 12.82:1  
 Final drive ratio... 3.58:1

**CHASSIS & BODY**

Layout... front engine/front drive  
 Body/frame... unit steel  
 Brake system... 8.7-in. discs front, 7.0 x 1.2-in. drums rear; vacuum assisted  
 Swept area, sq in... 169  
 Wheels... cast alloy, 12 x 4 1/2  
 Tires... Michelin ZX, 155SR-12  
 Steering type... rack & pinion  
 Overall ratio... 18.6:1  
 Turns, lock-to-lock... 3.4  
 Turning circle, ft... 30.3  
 Front suspension: MacPherson struts, lower lateral links, compliance struts, coil springs, tube shocks  
 Rear suspension: tubular axle on trailing arms & Panhard rod, coil springs, tube shocks

**INSTRUMENTATION**

Instruments: 80-mph speedo, 7000-rpm tach, 99,999 odo, 999.9 trip odo, coolant temp, fuel level  
 Warning lights: oil press., brake system, alternator, rear window heat, hazard, seatbelts, high beam, directionals

**ACCOMMODATION**

Seating capacity, persons... 4  
 Seat width, f/r, in... 2 x 20.0/48.0  
 Head room, f/r... 36.5/35.5  
 Seat back adjustment, deg... 75

**CALCULATED DATA**

Lb/bhp (test weight)... 30.0  
 Mph/1000 rpm (4th gear)... 20.5  
 Engine revs/mi (60 mph)... 2920  
 Piston travel, ft/mi... 1495  
 R&T steering index... 1.03  
 Brake swept area, sq in./ton... 170

**ROAD TEST RESULTS****ACCELERATION**

Time to distance, sec:  
 0-100 ft... 3.6  
 0-500 ft... 9.8  
 0-1320 ft (1/4 mi)... 18.2  
 Speed at end of 1/4 mi, mph... 74.0  
 Time to speed, sec:  
 0-30 mph... 3.2  
 0-40 mph... 5.3  
 0-50 mph... 7.7  
 0-60 mph... 11.5  
 0-70 mph... 15.8  
 0-80 mph... 22.2  
 0-90 mph... 33.5

**SPEEDS IN GEARS**

4th gear (5000 rpm)... 101  
 3rd (6000)... 83  
 2nd (6000)... 52  
 1st (6000)... 30

**FUEL ECONOMY**

Normal driving, mph... 35.0  
 Cruising range, mi (1-gal. res)... 315

**HANDLING**

Speed on 100-ft. radius, mph... 32.7  
 Lateral acceleration, g... 0.714  
 Speed thru 700-ft slalom, mph... 59.7

**BRAKES**

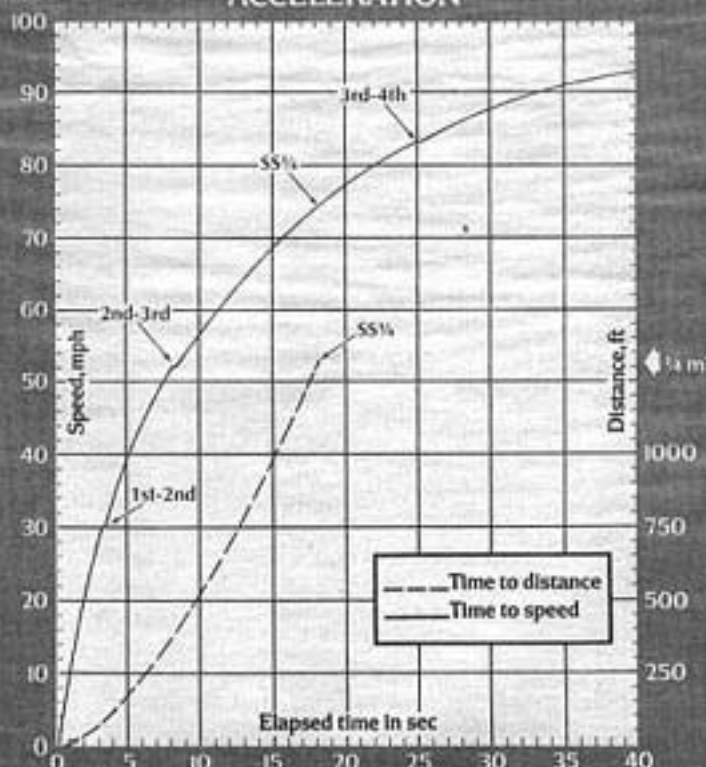
Minimum stopping distances, ft:  
 From 60 mph... 143  
 From 80 mph... 262  
 Control in panic stop... very good  
 Pedal effort for 0.5g stop, lb... 30  
 Fade: percent increase in pedal effort to maintain 0.5g deceleration in 6 stops from 60 mph... nil  
 Parking: hold 30% grade?... yes  
 Overall brake rating... very good

**INTERIOR NOISE**

All noise readings in dBA:  
 Idle in neutral... 56  
 Maximum, 1st gear... 89  
 Constant 30 mph... 66  
   50 mph... 69  
   70 mph... 78  
   90 mph... 80

**SPEEDOMETER ERROR**

30 mph indicated is actually... 31.0  
 50 mph... 50.0  
 60 mph... 59.0  
 70 mph... 69.0  
 80 mph... 79.0  
 Odometer, 10.0 mi... 9.7

**ACCELERATION**



# Ford Fiesta

*Ford enters the Brave New World*

by BOB HALL



In case you haven't had the pleasure of a trip down to your local Ford dealership, and you haven't had the radio or TV on, you might be unaware that Ford Motor Company has introduced the best-selling car in Europe, the Fiesta, to these shores. The German-made, front-drive minicar is Ford's answer to the Chevette, Rabbit, Civic and Corolla-like cars that may soon be the Carter-decreed American standard.

According to the *original* plan hatched in Dearborn, the Fiesta was scheduled to be introduced last spring. For a variety of reasons, not the least of which was Henry Ford II's worry at the end of 1976 that the small-car market in the U.S. had gone "soft," the debut of the Fiesta was postponed until this month. Thanks to President Carter's spring-time energy speech, the small-car market is again firming up, so it looks like Ford's timing couldn't have been better. Plans call for the importation of Fiestas from Ford's Saarlouis plant in Germany.

The Fiesta is not Ford's first attempt at a front-wheel-drive car. That honor belongs to the ill-fated Cardinal of 1962, which was canceled just 60 days before the start of production. (The Cardinal tooling was

packed up and shipped to Germany, where the car was produced as the Ford Taunus 12M until the late Sixties, although its V-4 engine continues in production to this day.) The Fiesta is the first car Ford has built with a *transverse* front-wheel-drive setup, however. Work on the Fiesta began in the late Sixties, and early versions of the car were shown to selected English, German, French, Italian and Spanish drivers at a styling "clinic" in Switzerland (neutral territory) in 1972. At this time, the Fiesta layout was still "fluid"—both front- and rear-wheel drive versions were shown to the groups in Switzerland. By 1973, a front-drive configuration had been selected, and the body design had developed to a production-ready level.

In America the Fiesta has a 1600cc (97.6cid) in-line OHV 4-cylinder powerplant in place of the 957cc (58.4cid) and 1117cc (68.2cid) engines used in the European Fiestas. Even with the emission control equipment that *all* engines are saddled with nowadays, the Fiesta is just as snappy as the Volkswagen Rabbit. Like the Rabbit, the Fiesta owes its sprightly performance to a good power-to-weight ratio, rather than the usual American technique of stuffing the largest available engine (regardless of its weight) into a given chas-

sis. The end result is a balanced car.

What seems a little strange to me is that the Fiesta manages to perform like a Rabbit with little of the latter's technical sophistication. The Fiesta has neither the overhead cam nor the fuel injection of the Rabbit, yet it is virtually as quick. Maximum power output of the Fiesta (66 hp at 5000 rpm) is 12 hp less than the Rabbit, yet it is only .7 sec slower in the quarter mile. Both of the cars weigh approximately the same.

	Fiesta	Rabbit
0-30 mph	3.45 sec	3.30 sec
0-60 mph	11.57 sec	11.09 sec
Standing ¼-mile (sec/mph)	17.91/74.7	17.88/75.4

Probably the Fiesta's only real stumbling block in the States will be the lack of an automatic gearbox. Let me get one thing straight, however: I think the lack of an automatic is *great*, since I still hold the now unpopular view that you shouldn't be able to get an operator's license if you can't drive a stick. Unfortunately, thousands of Americans who have convinced themselves they can't drive a stick will miss out on the Fiesta until Ford drops a slush box in it. As manual transmissions go, the Fiesta's is fine, although the gear-change has a tendency towards balk-



ing if the 2-3 upshift is hurried. Otherwise, the change is better than most transverse-engined front-drive cars I've driven (the gear-change can be particularly nasty with this sort of engine/transmission layout).

Considering that the Fiesta's suspension (like the power unit) is, er, somewhat less sophisticated than that of some of its rivals, the ride and handling are both surprisingly good. Fiesta's IFS system consists of the now-familiar MacPherson struts, and a rigid beam axle is used at the rear. All Fiestas with the optional "Sport" group, such as our test car, have a rear stabilizer bar and somewhat stiffer springing than the standard car. This is a mixed blessing, since the Fiesta S rides much more stiffly than its standard counterpart and (in my opinion) doesn't handle much better. The car in standard form handles beautifully and rides superbly for a car with such a short wheelbase. In fact, the baseline Fiesta "feels" quite like a gutsy Renault 5—soft, smooth and swift cornering, with lots of body roll. In this guise, however, the Fiesta suffers from an inordinate amount of weight transfer-induced pitching during acceleration. The rear of the car squats so much that, under hard acceleration, the front (drive) wheels can break contact with the pavement. When the Fiesta begins these antics, there are some amusing camber changes which look as though they could lead to odd tire wear if one were foolish enough to make full-power, tire-burning starts the rule rather than the exception. With its extra stiffness, the S is affected to a much lesser extent.

The Fiesta S test car was fitted



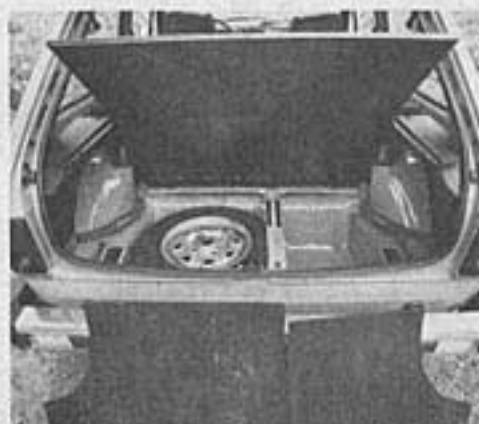
with the optional vacuum booster for the front disc/rear drum brakes. Stopping distances were slightly better than average, at 32.1 ft from 30 mph and 156.0 ft from 60 mph. We also drove a standard car without the assisted brakes, which stopped in comparable distance but required much more pedal effort.

Interior layout of the Fiesta is about the best I've seen on a small car. All of the instrumentation is grouped directly in front of the driver, and legibility is excellent. In-

strumentation on all Fiestas consists of speedometer, fuel gauge and temperature gauge. The optional S and Ghia groups add a trip odometer and tachometer to this. To each side of the instrument cluster pod, there is a shelf-like oddments tray, similar to that in the Honda Civic, which supplements the large glovebox. Handy. Another neat feature of the car is the placement of the headlamp switch, high/low beam selector, wiper switch, windshield washer control and turn indicator on steering column-mounted stalks. The horn is also actuated by pressing one of the stalks toward the steering column, which seems to be cheaper but harder to hit in an emergency than a steering wheel hub-mounted horn button would be.

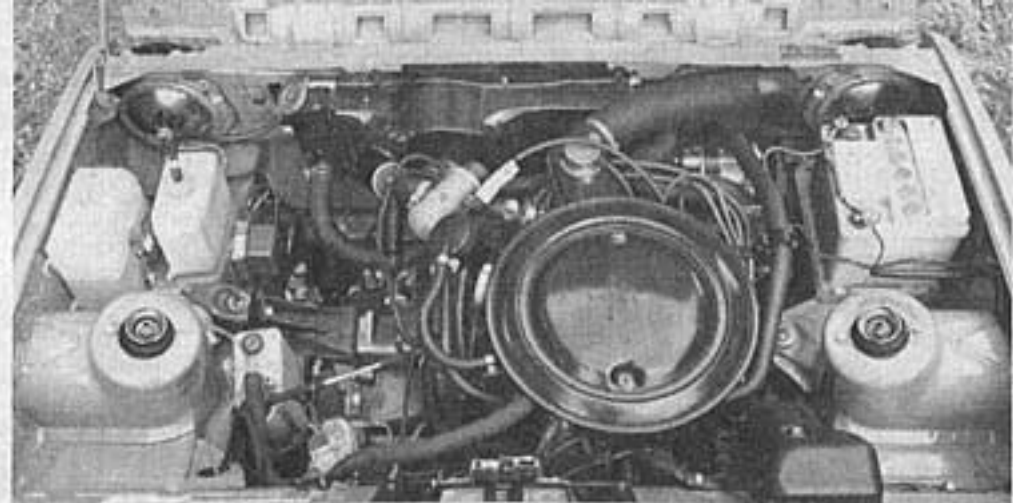
The seating package of the Fiesta is also worthy of merit. I can't figure out how the Ford engineers got so much room in this pint-sized car. With the front seats pushed well back (to make room for 6-foot-3 occupants) there is still sufficient room in the rear seats for a pair of 6-footers. The seats themselves are comfortable, and on the S they are faced with a snazzy striped cloth. With the exception of the base model, all Fiestas are equipped with fully reclining seats.

Another feature that makes the Fiesta comfortable is the car's generous glass area. The Fiesta comes as close to having 360-degree visibility as any fixed-roof car I have driven, thanks to its low beltline and slim pillars.



As little cars go, the Fiesta is quite a good looker, with a decidedly modern appearance. The car is (in the opinion of the *Motor Trend* staff) most attractive in S form with the standard "go faster" stripes and optional aluminum wheels. The U.S. Fiesta also wears its heavy 5-mph bumpers better than some of its competition and manages to look "perkier." During the weeks we had the Fiesta we expected it to attract attention, since this was in the middle of April; but the car was noticed by few people, with the possible exception of VW Rabbit drivers. Apparently, the car looks like a Rabbit to the untrained eye.

In addition to the earlier-mentioned problem with vehicular weight transfer, there are a couple more rough edges which could use a little "smoothing out." The ventilation system is not up to the standard of the rest of the car, with the two free-flow vents mounted at the corners of the dash incapable of delivering or di-



recting needed airflow into the car without opening a window. The heater on the test car also suffered from being difficult to modulate, turning the interior into an inferno or an ice-box, with precious little in between. Considering how outstanding earlier European Ford products have been in these areas, the Fiesta's star dims a bit here.

For its first time in the Brave New

World of transverse front-wheel-drive, Ford has done an admirable job. The car has its shortcomings, but then what car is perfect? At this writing, prices have not been announced for the Fiesta, although Henry Ford II did state that the Fiesta would be "cheaper than the Rabbit." If that means the Fiesta S carries a price tag less than \$4100, it may very well be the buy of the year. MT

# Ford Fiesta

## Specifications

### GENERAL

No. of U.S. dealers .....	5200
Warranty .....	12 months/12,000 miles
Base price .....	N/A at time of writing
Price as tested .....	N/A at time of writing

### POWERTRAIN

Engine type .....	OHV in-line 4
Bore & stroke .....	3.2 x 3.1 in.
Displacement .....	97.6 cu. in./1599 cc
Horsepower at rpm .....	66 at 5000
Torque (lb-ft) at rpm .....	82 at 3200
Compression ratio .....	8.5:1
Carburetion .....	Single 2-bbl
Transmission .....	4-spd manual
Final drive ratio .....	3.58:1

### CHASSIS

Body/frame .....	Unitized
Suspension, front .....	MacPherson struts, coil springs
rear .....	5-link dead beam axle, coil springs, tubular shock absorbers, stabilizer bar
Steering type .....	Rack and pinion
Turns lock-to-lock .....	N/A
Turning circle diameter .....	N/A
Brakes, front .....	8.7 in. disc
rear .....	7.0 x 1.2 in. drum
Wheel size .....	12 x 4.5
Tires, make & size .....	Michelin X 155 SR 12 steel-belted radial

### DIMENSIONS

Wheelbase .....	90.0 in.
Track, front .....	52.5 in.
rear .....	52.0 in.
Length .....	147.1 in.
Width .....	61.7 in.
Height .....	52.3 in.
Curb Weight .....	1775 lb
Fuel Capacity .....	10.0 U.S. gals.



## Test Data

### ACCELERATION

0-30 mph .....	3.45 sec
0-40 mph .....	6.47 sec
0-50 mph .....	8.68 sec
0-60 mph .....	11.57 sec
0-70 mph .....	16.99 sec
0-80 mph .....	22.45 sec
40-60 mph .....	5.57 sec
Standing quarter mile .....	17.91 sec
Speed at end of quarter mile .....	74.7 mph

### BRAKING

30-0 mph .....	32.5 ft
60-0 mph .....	149.8 ft

### FUEL CONSUMPTION

EPA weighted average .....	N/A at time of writing
MT 73-mile test loop .....	33.9 mpg

### NOISE LEVEL

Interior at 30 mph .....	61 dBA
Interior at 55 mph .....	73 dBA



ROAD TESTS: FORD FIESTA MODIFIED BY HEALEY  
MERCEDES-BENZ 300TD WAGON, TOYOTA CELICA SUPRA

# ROAD & TRACK

AUGUST 1979

£6.75

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NEW ALFA V-6—\$20,000 4-DOOR LUXURY SEDAN

*Healey  
Fiesta:*  
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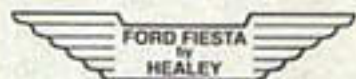




# HEALEY FIESTA

*Donald Healey works his magic*

BY TONY HOGG



WHEN WE FIRST tested the Ford Fiesta in July 1977, we described it as fast, fun and functional.

Recently we had the opportunity of testing the Healey Fiesta, a concept car based on the Fiesta but breathed on by the legendary Donald Healey, and our verdict is that it is faster, more fun and still quite functional. Unfortunately, it's not legal.

The Healey Fiesta is a one-of-a-kind car conceived in the tradition of the 1275 Mini Cooper S of a dozen years ago. Ford plans to exhibit it at various automobile shows around the country, although there is no intention at present of putting it into production.

The body of the car is the familiar 2-door hatchback, but in appearance it looks very smart with a coat of what used to be known as British Racing Green, and yellow pinstriping. It is distinguished by a front spoiler neatly integrated with the fenders, and by its doughnut tires, Firestone BR60-13 SS radials mounted on Minilite 13x6J wheels, lurking under the fender flares. In addition, the car has big square Carello H4 headlights and smaller Hella driving lights in between them.

The interior of the car has a sporting appearance to match the exterior. The rear seats have been eliminated to accommodate a rollbar, and the spare is located horizontally in the center of the floor. The Wolfrace seats have cloth upholstery and are high-sided for lateral support. The small-diameter steering wheel is a Motolito and an additional console-mounted panel containing a voltmeter, a clock and an oil temperature gauge supplements the normal instrumentation. Another necessary addition is a manual choke for the Weber carburetor.

Under the hood the engine compartment is remarkably un-



cluttered, because the first thing Healey did was to remove the emissions control equipment. The engine itself is big for minicars at 1599 cc, and it is of cast iron with valves operated by pushrods. By today's standards it's unsophisticated and relatively old, having been developed from the 1.6-liter unit used in some of the early Pintos and, of course, in the Escorts and Cortinas.

In addition, it has seen service in races and rallies as a Formula Ford engine and in the Escort Mexicos, which were used in a successful sedan racing class in England with the cars named after the winner of the 16,000-mile London-to-Mexico World Cup Rally in 1970. In consequence, its limitations are known and a considerable amount of speed equipment is available for it. Healey started off by increasing the compression ratio from 8.5:1 to 10.1:1 by installing different pistons and a Mexico head, which had previously been ported and flow tested.

The valve timing was obviously restricted on the original engine in order to help meet emission standards, so a different camshaft was fitted allowing considerably more valve overlap. However, it's not a radical grind, and it is perfectly suitable for street use, permitting a smooth idle. The intake manifold is matched to the ports and to the Weber 32/36 DGV 2-barrel carburetor. The crossflow head exhausts into a fabricated bunch-of-bananas manifold in front, and the distributor advance curve has been tailored to the requirements of the engine rather than to the requirements of emissions control.

Healey gave us some chassis dynamometer figures up to 5500 rpm, at which speed he obtained a reading of 80 bhp at the front wheels but he estimates the peak is probably 105 bhp SAE net at 6200 rpm, although the engine will go to 7000, but not very effectively. Not wanting to scatter it, we confined ourselves to



6000 rpm in our acceleration runs. The stock engine in U.S. trim gives 66 bhp at 5000 rpm, so the increase in power is a useful one.

During the course of several phone conversations with Donald Healey's son Geoffrey in England, he pointed out that the original idea was not to make a real road burner out of the car but to first restore it to what it would have been without the limitations of smog control, and then take it a little bit further in the state of tune. The result is a pretty hot car by our standards but merely a quick street machine by European standards.

The clutch is stock and so are the gear ratios, although the final drive ratio has been changed from 3.58:1 to 4.29:1.

In our original Fiesta test we rated the brakes as very good, and all that has been done to them is to swap the front pads for Mintex heavy-duty pads. The steering has not been modified, but the suspension has been changed with slightly stiffer springs and Koni adjustable shocks.

The Healey Fiesta is a joy to drive, although it has not undergone a full road development program and is therefore lacking somewhat in suspension refinement and in other details. The seating position is comfortable and high with excellent visibility except for a blind spot created by the rollbar.

The engine requires the use of the manual choke when started from cold, but it idles smoothly when warm and has a pleasant

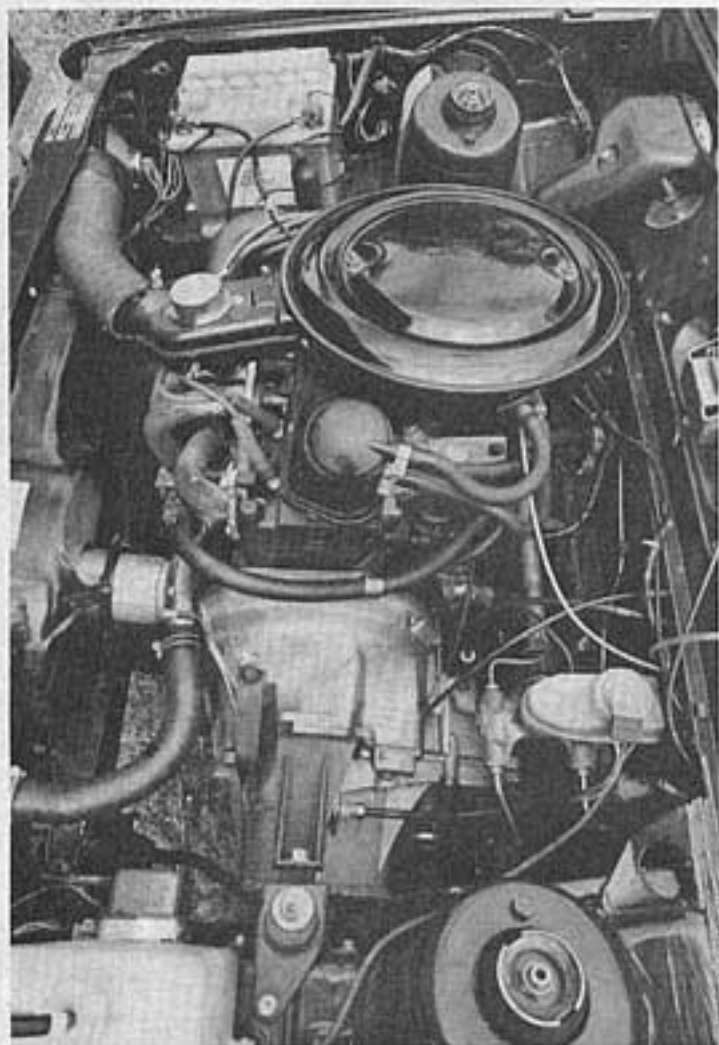
burble in the tailpipe. On driving off, the first impression is that the engine is entirely free to wind out as far as it will go, and it has that harsh feel unique to high-compression engines.

A common feature of transverse-engine, front-drive cars is a pronounced tendency for the engine/transaxle to twist on its mounts, making the clutch engagement and acceleration erratic because the throttle linkage is affected by the movement of the drivetrain. Because of the increased power of the Healey Fiesta engine, this tendency is accentuated, so one has to feed the power to it more gradually, rather than just standing on the accelerator.

Another tendency displayed by the Healey Fiesta is strong torque steer, which is inherent in cars with this engine/transmission layout when they have been breathed on. It manifests itself in front wheel hop when accelerating at low speeds. Driving this car at speed over a poor road is a little like flying an airplane, in that you only correct its major deviations allowing the minor ones to take care of themselves.

The Motolito steering wheel is fashionably small, which means it's ridiculously small unless you are driving a formula car with half a turn lock-to-lock and a body that limits the diameter of the wheel. Fashion is presumably important; the size of the wheel doesn't help much in countering the torque steer, although it does have a thick rim to provide maximum grip. The minicar with the most torque steer in the standard form is the Honda Civic, and it has a steering wheel of normal dimensions, but of simulated wood which slips through your hands. The wheel in the Healey is a great improvement.

With the exception of a long vague throw from 2nd to 3rd—the lever tends to hang up in the neutral gate—the Fiesta's transmission is as good as one can expect in a car in which the gearbox is totally remote from its operating lever. In the Healey version, the performance of the car is vastly improved by shortening the final drive ratio because it makes 4th a useful gear for acceleration work instead of just something you stuff the lever into for freeway cruising. However, it also makes 1st and 2nd too low so you waste time stirring the box around at low speeds, and



PHOTOS BY JIM RUSZ



## AT A GLANCE

	Healey Fiesta	Ford Fiesta	Volkswagen Scirocco
List price	not available	\$4198	\$7090
Curb weight, lb	1880	1835	1950
Engine	inline 4	inline 4	inline 4
Transmission	4-sp M	4-sp M	4-sp M
0-60 mph, sec	9.6	11.5	10.4
Standing ¼ mi, sec	17.4	18.2	18.0
Speed at end of ¼ mi, mph	79.0	74.0	77.0
Stopping distance from 60 mph, ft	159	143	143
Interior noise at 50 mph, dBA	71	69	70
Lateral acceleration, g	0.791	0.714	0.766
Slalom speed, mph	62.0	59.7	59.3
Fuel economy, mpg	27.0	35.0	28.0



the car would be much more effective for sporting driving if the lower three ratios were closed up a little toward the existing high.

The front heavy-duty brake pads require high pedal pressure, but they work very well at high speeds after they have been warmed up. The hard pad material is also the reason why the brakes didn't perform as well in our simulated panic stops from 60 and 80 mph. We also discovered that the suspension bottoms easily over bumps, but further development would rectify this problem. Not needing improvement are the lateral acceleration

and transient response. On the skidpad the Healey Fiesta corners at 0.791g; in the slalom it zips through at an average 62.0 mph.

Because we are starved for small, high-performance cars, the Ford Fiesta by Healey is a revelation to drive and it brings back fond memories of what driving was all about a decade ago. Like all cars of its type, it demands to be driven hard and it responds well at the top end of its range. Compared to a stock Fiesta, the Healey will do the quarter mile in 17.4 seconds with a terminal speed of 79.0 mph, as opposed to 18.2 sec and a terminal speed of 74.0 for the production version.

But it is higher up the speed range that the Healey really comes into its own with a 0-80 mph time of 17.9 sec compared to 22.2 sec, and a 0-90 mph time of 25.8 sec compared to 33.5 sec, which is why it must be allowed to wind out before its true qualities become apparent.

Because the Ford Fiesta by Healey was designed primarily as a show car it is not as sophisticated as it could be although its various minor shortcomings could easily be sorted out. Unfortunately, in its current form it can't be made legal, and anyway the Fiesta is to be discontinued in 1981 and replaced by a new version of the Pinto, which will be similar to the Fiesta although slightly larger. Perhaps Ford will be able to persuade Donald Healey to work his magic on a legal but turbocharged version of the new Pinto—a project that would undoubtedly put a twinkle in Donald Healey's eye, and also something that might turn out to be one of Ford's better ideas.



#### PRICE

List price	not available
Price as tested	not available

#### GENERAL

Curb weight, lb/kg	1880	854
Test weight	2010	913
Weight dist (with driver), l/r, %		60/40
Wheelbase, in./mm	90.0	2286
Track, front/rear	54.3/53.4	1380/1356
Length	147.1	3736
Width	63.4	1610
Height	52.2	1326
Trunk space, cu ft/liters	15.4	436
Fuel capacity, U.S. gal./liters	10.0	38

#### ENGINE

Type	ohv inline 4
Bore x stroke, in./mm	3.19 x 3.07 81.0 x 78.0
Displacement, cu in./cc	97.6 1599
Compression ratio	10.1:1
Bhp @ rpm, SAE net/kW	est 105/78 @ 6200
Torque @ rpm, lb-ft/Nm	na
Carburetion	one Weber (2V)
Fuel requirement	premium, 94-oct

#### DRIVETRAIN

Transmission	4-sp manual
Gear ratios: 4th (0.83)	3.56:1
3rd (1.30)	5.58:1
2nd (2.06)	8.84:1
1st (3.58)	15.36:1
Final drive ratio	4.29:1

#### CHASSIS & BODY

Layout	front engine/front drive
Body/frame	unit steel
Brake system	8.7-in. (221-mm) discs front, 7.0 x 1.2-in. (179 x 30-mm) drums rear
Wheels	cast alloy, 13 x 6J
Tires	Firestone SS, BR60-13
Steering type	rack & pinion
Turns, lock-to-lock	3.4
Suspension, front/rear	MacPherson struts, lower lateral links, compliance struts, coil springs, tube shocks/tubular axle on trailing arms & Panhard rod, coil springs, tube shocks, anti-roll bar

#### CALCULATED DATA

Lb/bhp (test weight)	19.1
Mph/1000 rpm (4th gear)	18.2
Engine revs/mi (60 mph)	3300
R&T steering index	1.03
Brake swept area, sq in./ton	168

## ROAD TEST RESULTS

#### ACCELERATION

Time to distance, sec:	
0-100 ft	3.2
0-500 ft	9.3
0-1320 ft (1/4 mi)	17.4
Speed at end of 1/4 mi, mph	79.0
Time to speed, sec:	
0-30 mph	3.1
0-50 mph	7.0
0-60 mph	9.6
0-70 mph	12.4
0-80 mph	17.9
0-90 mph	25.8

#### SPEEDS IN GEARS

4th (6000 rpm)	108
3rd (6000)	73
2nd (6000)	47
1st (6000)	27

#### FUEL ECONOMY

Normal driving, mpg	27.0
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#### BRAKES

Minimum stopping distances, ft:	
From 60 mph	159
From 80 mph	275
Control in panic stop	good
Pedal effort for 0.5g stop, lb	40
Fade: percent increase in pedal effort to maintain 0.5g deceleration in 6 stops from 60 mph	nil
Overall brake rating	good

#### HANDLING

Lateral accel, 100-ft radius, g	0.791
Speed thru 700-ft slalom, mph	62.0

#### INTERIOR NOISE

Constant 30 mph, dBA	70
50 mph	71
70 mph	80

#### SPEEDOMETER ERROR

30 mph indicated is actually	32.5
60 mph	59.5

#### ACCELERATION

