

U.S. mpg champs

Escort tops the pack, but is fuel economy enough?

By **JIM DUNNE** and **ED JACOBS**
PHOTOGRAPHS BY JOHN KEATING

Escort is Ford's first domestically produced front-wheel-drive car. Along with its twin, Mercury Lynx, it is designed to compete with the most fuel-efficient cars sold in the U.S. Escort is also the one car that may determine the fate of the financially troubled Ford Motor Company.

To find out how good it is, we pitted Escort against its closest domestic rivals: AMC Spirit, Chevrolet Chev-

ette, and Plymouth Horizon. Each had a four-speed manual transmission and four-cylinder engine for maximum performance and fuel economy. Our results are surprising. They show that Escort is superior in some ways, but not as good in others.

One problem common to all four cars is mediocre braking. The shortest stopping distance from 60 mph with hot brakes was 187 feet. In past years, cars like this could be expected to stop in 160 feet or less.

Here's a closer look at the cars:

PS ratings— test report in a nutshell

The ratings are based on test results and measurements. Results should be read with the understanding that they reflect tests only on our sample cars. An excellent rating is 5 points; very good, 4; good, 3; fair, 2; poor, 1; very poor, 0.

	Ford Escort	AMC Spirit	Chevrolet Chevette	Plymouth Horizon
Acceleration	2	0	3	5
Braking	2	1	1	1
Handling	4	2	4	3
Maneuverability	5	5	5	5
Quietness	0	0	0	0
Roominess	3	2	3	3
Visibility	5	3	5	4
Entry/exit ease	5	3	2	3
EPA economy	5	4	5	4
Ride comfort*	3	2	2	3

*Authors' opinion

Ford Escort

Escort's front-drive layout, hatchback body, and fuel-efficient engine combine the best features of the newest small-car models. Ride comfort, due in part to independent suspension on all four wheels, is as good as you could ask for in a car this small. And there's generous head and leg space for front and rear passengers.

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America's prime import fighters (clockwise from left): Chevrolet Chevette, AMC Spirit, Plymouth Horizon, and Ford's all-new Escort.

PS car test & driving report

The all-new 1.6-liter engine is smooth-running at all speeds, but shy on usable power and handicapped by a wide-ratio transmission. Our zero-to-60-mph times averaged 18.5 seconds, slower than Chevette and much slower than Horizon.

Escort nearly scored a top rating in our high-speed handling test, but that belies some questionable road manners and handling characteristics. The chassis and suspension are sensitive to changes in power. For

instance, if you quickly lift your foot from the accelerator in a curve, the car will change from a mild understeer to a noticeable oversteer. It will then turn more sharply *into* the curve even though you don't move the steering wheel. The reverse is also true, to a lesser extent. The car will tend to react by turning slightly out of the turn as you accelerate around a curve.

We also experienced the quick transition from the car's normal under-

steer to distinct oversteer while dodging some truck-tire tread on straight interstate roads—without a change in throttle position. Such characteristics were designed out of other front-wheel-drive cars years ago, and we feel they need immediate attention, since the average driver may be surprised by them, even though they're predictable.

What does all of this mean in normal driving? Let's say you turn sharply to avoid an obstacle, and try to slow simultaneously. The result: The car steers a tighter path than planned. Perhaps the tail would start to swing wide. You must make a quick and perhaps unexpected correction to deal with the situation.

Ford experts claim tires, not the car's suspension, are to blame—at least in part. Flexible sidewalls "give" quickly in cornering, then snap back, causing a change in steering direction, a Ford engineer told us. Our test car was equipped with Goodyear radial tires. Stiffer sidewalls on Michelin tires would eliminate some of the give and snap-back we noticed in most of the moderate- and high-speed turns we encountered.

Ford has put as much cargo space as possible in the rear compartment—about 50 percent more than in the typical full-size sedan. The seat back folds down easily, forming a large load area. Loading and unloading is a cinch through the wide rear hatch.

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Braking problems plagued both Spirit (above) and Chevette (below). Spirit became unstable during its first 60-mph

panic stop and skidded off track, but was more controllable on its second stop. Chevette slewed sideways both times.



PS car test & driving report

As an option, Ford offers a removable security shade to cover valuables stowed in the rear compartment. We recommend it.

Not only does Escort have the highest EPA highway fuel-economy rating of the subcompacts (44 mpg), but it also scored highest in our PS fuel-economy runs. At a steady 55, it reached 38 mpg, significantly above the others.

Overall, Escort shapes up as a refined version of the small front-wheel-drive sedans that foreign manufacturers have been producing for more than a decade. It's moderately quiet and offers a long list of convenience and comfort options. But it does need more work. (For more information on Escort, see the 7500-mile-test report in this issue.)

AMC Spirit

The Spirit liftback is an updated version of Gremlin. It's the lowest and widest in the group, and the car's two-year-old exterior design is still fresh. The wider hatchback opening is a big improvement. Inside, the appearance is first-rate, with a well-laid-out instrument panel that is both attractive and functional.

Our Spirit was powered by Pontiac's 2.5-liter four, which is more powerful than the Volkswagen engine used two years ago. But the engine ran roughly, and its performance was unimpressive. We chugged from zero to 60 mph in 22.7 seconds, 10 seconds slower than Horizon and more than four seconds slower than Escort and Chevette. In city and highway driv-

ing, however, acceleration didn't seem to interfere with safety or convenience.

Gentle braking is fine, but hard braking, as in an emergency, has special problems. The rear brakes grab quickly, and in combination with dead-on-center power steering that comes alive abruptly off-center, the car can become unstable and twitchy. On a cold-brake panic stop, our Spirit fishtailed and left both the test grid and the pavement (see photo on previous page). Previous Spirits and Spirit derivatives have displayed these tendencies, but not to such extremes.

Despite its touchy power steering, Spirit was still able to share a top rating for low-speed maneuverability with its competitors. The car's steering held it back in our high-speed lane-change test, however, and it finished in last place.

Spirit's fuel tank has a huge 21-gallon capacity (nearly double that of Escort's optional extended-range tank), which gives the car an enormous cruising range. It would be even greater with better fuel economy. Our best mileage was 31.2 mpg at a steady 35 mph.

Among the four cars tested, Spirit has the least comfortable rear seat. The car's fastback roof line cuts head room to below minimum acceptable levels. The rear compartment is suitable only for youngsters, or for adults on short trips.

On the plus side, Spirit is the least expensive of the group—and fully rustproofed at the factory.



Escort narrowly missed taking a top rating in our high-speed handling test, even though it displayed poor road manners and undesirable front-drive traits.

Chevrolet Chevette

Chevette has a proved—though dated—rear-wheel-drive design that's been refined once again. Inside, room is scarce, especially for front-seat passengers, who are crowded by the over-size transmission tunnel. One basic cause of crowding is the car's width—four inches narrower than its nearest competitor. That means interior room *must* be tighter.

In acceleration, the 1.7-liter Chevette edged out Escort, with a zero-to-60-mph time average of 17.9 seconds. We consider this on the slow side, since our yardstick for the ideal time is 15 seconds or less. The car performs without problems, however, under normal driving conditions. The engine doesn't labor at ordinary driving speeds, and unlike Escort, is husky enough to run a full complement of

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Spirit (above) and Chevette (right) performed as well as their front-drive competitors and scored highest ratings in our low-speed maneuverability test.

comfort and convenience options without lugging.

The four-door we tested was a model of versatility, though its door openings were small. The rear-door spaces were just big enough to squeeze through. But the hatchback opening makes loading bulky cargo easy, and gives Chevette some of the versatility of a station wagon. The rear seat folds down easily and quickly when extra loading space is needed. Overall, Chevy makes the best of Chevette's small size, for both passengers and cargo-carrying purposes.

Chevette's fuel economy was 32.9 mpg at a sustained 55 mph, well below Escort and Horizon.

Braking was Chevette's weakest point. Its rear brakes locked quickly in both our cold- and hot-brake panic stops, and the car turned sideward. Handling and maneuverability were its strongest points. It easily tied the others for a top rating for low-speed maneuverability, and tied Escort in high-speed handling.

The car cornered flatly and predictably—more so than Escort or earlier Chevettes we have tested. This was due primarily to the car's F41 suspension package, a \$37 bargain option that makes a radical improvement in overall handling.

Plymouth Horizon

When Horizon was designed five years ago, Chrysler planners borrowed heavily from the VW Rabbit. That was no mistake. Horizon has

more usable interior space for passengers and cargo than its three domestic competitors. And you don't have to check the specifications for confirmation. The flat floor in front, the wide-opening hatch, and spacious head room for rear-seat passengers are telling clues.

Seats are comfortable, but better shaping of the firm padding would improve them. The driving position is good, but could be refined by an adjustable seat back. Moving the position of the turn-signal stalk would help, too. It's too far away from the driver's fingers.

Driving over some of Manhattan's badly cratered streets, we experienced some distinct body rattles. But there were few to be heard on less-rough roads.

Finding Chrysler's responsive, all-new 2.2-liter engine in Horizon was an exciting surprise. Performance equaled the best passenger-sedan V8's, while fuel economy proved fully acceptable. Horizon's EPA ratings of 25/41 for city/highway driving are only a couple of mpg's lower than those of the standard 1.7-liter engine. Our steady-speed tests show that the 2.2 is superior to Chevette by almost three mpg at 55 mph, and more than six mpg at 35.

What's more, the extra displacement of the 2.2 can handle things like air conditioning and big electrical systems without noticeably compromising power. The engine makes a perky, happy match with Horizon's chassis,

EPA fuel mileage (mpg)

	Ford Escort	AMC Spirit	Chevrolet Chevette	Plymouth Horizon
Highway	44	33	39	41
City	28	23	30	25
Calif. city	28	23	28	28

PS fuel-mileage tests

(steady-state mpg)

	Ford Escort	AMC Spirit	Chevrolet Chevette	Plymouth Horizon
35 mph	51.9	31.0	41.4	47.7
55 mph	38.0	25.3	32.9	35.6

and is easily the most tractable and responsive of the test group. It seems well worth the \$104 extra cost.

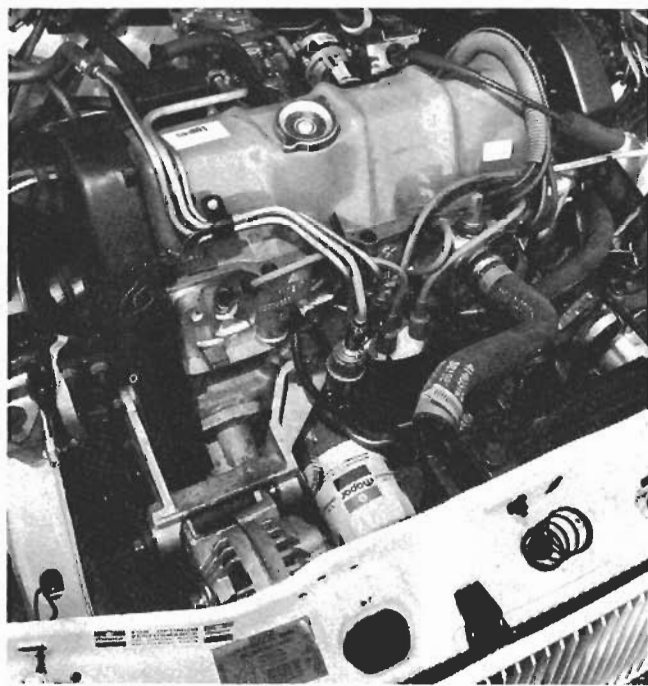
Even though Horizon is 200 pounds heavier than Escort and has a much less aggressive final-drive ratio, it is far and away the zippiest of the bunch. And it displays none of Escort's undesirable road manners and handling characteristics.

Our picks:

I'll take Horizon with the 2.2-liter engine as the best of the small domestics. It's also a strong competitor for the imports.—J.D.

The clear choice here is the 2.2-liter Horizon, although it does need some small refinements in interior layout and comfort.—E.J.

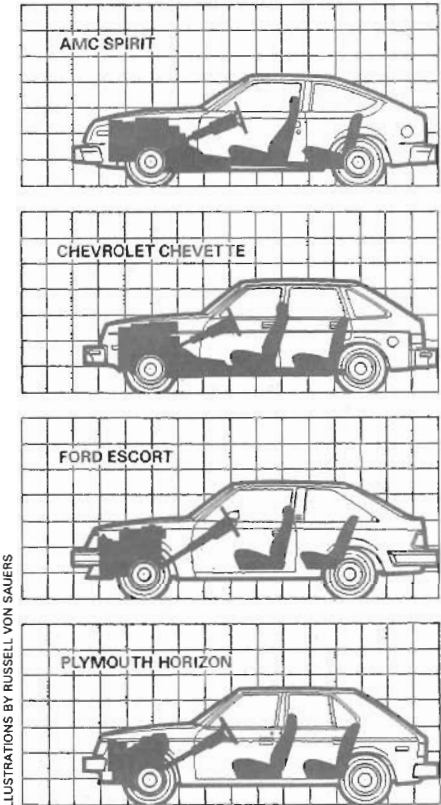
For specs and test results, turn page



Owner-serviced parts on Horizon's 2.2-liter engine are unusually easy to get at. Note spark plugs, distributor, and oil filter.



Spirit's large hatch and fold-down split rear seat permit easy carrying of long or bulky cargo, even with one rear passenger.



ILLUSTRATIONS BY RUSSELL VON SAUERS

Ford Escort, AMC Spirit, Chevrolet Chevette, and Plymouth Horizon: dimensions, specs, and test results

	Ford Escort	AMC Spirit	Chevrolet Chevette	Plymouth Horizon
DIMENSIONS (inches)				
Wheelbase	94.2	96.0	97.3	99.7
Overall length	169.3	167.3	164.9	164.8
Overall height	53.3	51.4	52.3	53.5
Overall width	65.9	71.9	61.8	65.8
Track, F/R	54.7/56.0	57.5/57.0	51.2/51.2	56.1/55.6
Ground clearance	5.2	6.6	5.3	5.0
Front head room	38.0	38.1	38.3	38.3
Front hip room	52.0	54.2	49.4	52.6
Front leg room	41.5	40.8	41.5	42.0
Rear head room	37.0	35.6	37.4	37.4
Rear hip room	44.4	40.3	40.5	46.4
Rear leg room (min.)	35.8	26.2	33.5	33.0
Rear knee room (min.)	0.6	-6.4	-2.7	-1.3
Coupe distance	29.7	22.0	26.7	29.4
SPECIFICATIONS				
Engine type	In-line 4	In-line 4	In-line 4	In-line 4
Displacement (cu. in./L)	98/1.6	151/2.5	104/1.7	135/2.2
Compression ratio	8.8:1	8.3:1	8.6:1	8.5:1
Carburetion	2-bbl.	2-bbl.	2-bbl.	2-bbl.
Net hp @ rpm	69 @ 5000	n.a.	70 @ 5200	84 @ 4800
Net torque @ rpm	86 @ 3200	n.a.	82 @ 2400	111 @ 2800
Transmission	Four-speed manual	Four-speed manual	Four-speed manual	Four-speed manual
Axle ratio	3.59:1	3.08:1	3.70:1	2.69:1
Tire make	Goodyear	Goodyear	Firestone	Michelin
Tire type	Arriva radial	Viva radial	721 steel-belted radial	XZX steel-belted radial
Tire size	P165/80R13	185/75R14	P175/70R13	175/70R13
Steering	Rack and pinion, manual	Recirculating ball, power	Rack and pinion	Rack and pinion
Overall steering ratio	21.3:1	24.3:1	18.4:1	18.0:1
Turns, lock to lock	3.1	3.4	3.6	3.1
Turn diameter (ft.)	35.1	31.5	30.8	34.1
Front suspension	Independent, MacPherson struts	Independent, dual ball joint, coil springs on upper control arms	Independent, single lower control arms, coil springs	Independent, Iso struts, coil springs
Rear suspension	Independent, modified MacPherson struts	Solid axle, Hotchkiss, leaf springs	Solid axle, control links, track bar, coil springs	Semi-independent, trailing arms, coil springs
Front stabilizer-bar diameter (in.)	0.87	0.81	0.87	0.86
Rear stabilizer-bar diameter (in.)	none	0.75	none	none
Trailer towing (max. lbs.)	700	none recommended	none recommended	1500
Trailer tongue weight (max. lbs.)	100	none recommended	none recommended	150
Brakes	Disc/drum	Disc/drum	Disc/drum	Disc/drum
Brake swept area (sq. in.)	203.5	279.8	279.8	197.5
Fuel tank (gal.)	11.3*	21.0	12.5	13.0
Trunk space (cu. ft.)	30.6**	25.0**	27.4**	35.8**
Liftover height (in.)	31.4	28.6	28.5	29.0
Curb weight (lbs.)	1987	2665	2122	2170
F/R weight distribution (%)	63/37	54/46	53/47	63/37
Basic price	\$5158	\$5133	\$5371	\$5690
Price as tested	\$7644	\$6803	\$7453	\$7200
Major options on test car	A/C \$524, cruise control \$128, SS package \$981, AM/FM stereo \$100, forged wheels \$183	A/C \$757, AM/FM stereo \$130	A/C \$525, deluxe exterior \$118, AM/FM stereo \$100, cloth interior \$235	2.2-liter engine \$104, special paint \$155, custom interior \$189, premium exterior \$216, road wheels \$213
TEST RESULTS				
Acceleration (sec.)				
0-60 mph	18.5	22.7	17.9	12.6
25-70 mph	22.8	29.1	22.0	15.2
Brake test (cool) 60-0 mph				
Stopping distance (ft.)	175	225	171	192
Pedal pressure (lbs.)	100	80	125	115
Brake test (hot) 60-0 mph				
Stopping distance (ft.)	187	202	196	203
Pedal pressure (lbs.)	110	60	135	135
Interior noise @ 60 mph (dBA)	73	73	74	72
Handling test (mph)	63.7	57.6	63.7	61.4
Maneuverability test (mph)	27.6+	27.6+	27.6+	27.6+

TEST CONDITIONS: Ambient temperature, 63°F; relative humidity, 80 percent; barometric pressure, 30.1 inches Hg
 *With extended-range tank
 **With rear seat folded

Contemporary domestic subcompacts are getting lighter, smaller outside, roomier inside, and are switching to more space- and fuel-efficient front-drive power trains—just like the big cars.

PS serviceability ratings

How easy is it to service these cars? To give you an approximation of how difficult it is for a typical person to perform various service operations, we examine each test vehicle. The numbers mean: 1, very difficult; 2, difficult; 3, average degree of difficulty; 4, easy; 5, very easy.

	Ford Escort	AMC Spirit	Chevrolet Chevette	Plymouth Horizon
Checking fluid levels				
Battery	5	5	5	5
Master cylinder	4	4	2	4
Windshield washer	5	5	5	5
Engine oil	2	1	3	4
Coolant	5	3	5	5
Checking the engine				
Spark plugs	4	4	1	5
Distributor	5	1	1	5
Carb adjustment
Oil filter	2	2	1	4
Oil fill	5	3	2	5
Replacing hoses				
Upper radiator hose	5	5	3	5
Lower radiator hose	4	1	3	4
Heater hoses	2	3	2	3
Changing bulbs				
Headlights	3	3	1	3
Taillights	4	1	1	4
Front running lights	3	3	3	3
Front parking lights	3	3	3	3
Front directionals	3	1	3	3
Rear directionals	4	1	1	4
Rear running lights	4	1	1	3
Checking fuses	4	4	3	4
Spare-tire accessibility	4	4	3	4
Changing belts	3	3	3	3

*Sealed

Performance comparison with selected 1980 and earlier models

	Mpg (city driving)	Acceleration 0-60 mph (sec.)	Brakes 60-0 mph (hot) (ft.)	Handling (mph)	Maneuverability (mph)	Noise @ 60 mph (dBA)
1979 Chevrolet Chevette in-line 4	25	18.5	152	64.7	30.1	71
1979 Dodge Omni in-line 4	25	14.1	155	64.7	29.6	71
1979 Plymouth Champ in-line 4	33	15.6	137	67.1	30.1	73
1979 AMC Spirit in-line 4	22	18.4	165	62.4	29.1	70
1980 Volkswagen Rabbit in-line 4	30	13.0	160	63.7	29.6	74
1980 Mazda GLC in-line 4	30	15.6	145	60.0	31.7	75
1980 Honda Civic in-line 4	36	13.1	148	62.4	30.6	71
1980 Datsun 210 in-line 4	31	18.4	160	60.0	26.0	72