

1978

LINCOLN-MERCURY

1978

ZEPHYR MAKES NEWS

ACCORDING TO PEOPLE WHO KNOW!



**MOTOR
TREND**

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**MOTOR
TREND**

**ZEPHYR-
FORD'S NEW
GENERATION
COMPACT**



MOTOR TREND—SEPTEMBER, 1977

THE ZEPHYR...AN OLD NAME FOR A NEW COMPACT... LEADS THE 1978 L-M LINEUP

by Jim Norris

Just at a time when the old Lincoln-Zephyr was becoming something of a collector's item—Ford would have to go and resurrect this hallowed name. For, as poets and bearded wizards will tell you, a zephyr is a gentle, mild breeze—simple and smooth in bearing. More to the point of literati, it is the West Wind personified, and the brand-spanking-new Mercury Zephyr has let no one down! The original Zephyr was a mass-produced and eminently affordable small Lincoln. The new Mercury Zephyr is an eminently affordable small Mercury, beholden to nothing that has ever gone before. It's easy on the eyes and tough under the skin.

The trouble is, there weren't more of them to drive, since at Ford's preview Zephyrs were always in demand. We did, however, latch onto a cream-of-the-crop example in Zephyr's new 2998-lb., 4-door Villager station wagon with the 302-cid V-8 and 3.08:1 rear axle. Since we were more interested in driving the car than a hard look at the specifics, it took time to realize that there was an abominably high axle ratio of 2.47:1 available—and we had inadvertently picked up the High Altitude Option. But no matter—the luxury options of this nimble

hauler sold us right off the bat.

In the first place, to this viewer, the overall styling was not unlike the crisp G.M. school, something similar to the popular Buick LaSabre, it seemed, only smaller and more compact. The dash was good because it was big—two big round dials, black on white, easy to see quickly. The bench seat was comfortable and there was an overhead chrome-plated swivel lamp that added to the aircraft feel.

The 302 started quickly. The car has lots of glass and to get a further idea of its size . . . do you remember the Fairlane Squires? Well, this Mercury Zephyr Villager is the best looking compact wagon ever to come from Dearborn. But more to the point, this may be the finest-handling stock station wagon in Ford's history. We know that's a heavy statement, but we're prepared to back it up. Reason? Lightweight components and outstanding weight transfer characteristics stemming from excellent adhesion and rear suspension design. Ford wisely went to the rear, European-type 4-bar link coil design and the MacPherson strut-type front suspension, but with a coil spring on the lower arm. With its rack and pinion steering this new Zephyr

grabbed pavement and held the corners like a crazed bulldog. The Zephyr's handling is that good. Having learned its lesson well over the years, Lincoln-Mercury decision-makers appear to have put Zephyr in a premier competitive position. Substantially lighter than its overall size would indicate, Zephyr is billed as one of a "new generation of mid-sized cars."

There's visibility, good instrumentation, a new ventilation system with a whole bag of tricks and cargo capacity on the sedans of a whopping 16.8 cu. ft.—due in part to a full rear tire under the trunk's bottom. The Zephyr is some 300 lbs. lighter than the 1977 Comet, but has more space due to thinner doors and glass, the lavish use of high-strength synthetics. The Zephyr is now available in a 2-door, 4-door, 4-door station wagon and a jazzy Z-7 sport coupe will be available in January. A standard in-line 4 is supplemented by an in-line 200 CID 6, and the 5.0 liter 302 CID V-8.

It would be easy to continue the Zephyr's praises. After that test drive in the new Zephyr station wagon, it's a feeling that won't let one go.

MOTOR TREND—OCTOBER, 1977

MERCURY ZEPHYR—One of the most impressive surprises of '78

by Bob Hall

Taken all as a piece, the Zephyr is a highly-competent family car that has a decidedly "trans-Atlantic" feel to it, which isn't at all sur-

prising since Ford of Germany engineers helped out with the suspension. The Zephyr comes as a breath of fresh air.

ROAD & TRACK

SEPTEMBER 1977

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TECHNICAL ANALYSIS AND ROAD TEST
ZEPHYR
FORD'S CHALLENGE TO THE IMPORTS

ROAD AND TRACK—SEPTEMBER, 1977

by John Dinkel

The Zephyr represents the first of a new family of Ford cars designed with efficiency of space, fuel and materials foremost in mind.

Thankfully, the basic Zephyr 2- and 4-door sedans and wagons are no-nonsense cars with refreshingly functional straight-line styling, expansive greenhouses and efficient packaging of the sort we have come to expect from European sedans and keep hoping Detroit will emulate.

From a marketing standpoint the central thrust will be toward traditional compact owners but Ford expects the Zephyr to appeal to a wide range of buyers.

"We've designed the Zephyr to deliver ease of handling and driving and the good gas mileage at a low price with minimal upkeep and expense that our Comet-Maverick owners have come to expect," said Tom Green, Lincoln-Mercury Forward Marketing Plans Manager. "But we've achieved the low cost of ownership and fuel economy that will appeal to subcompact owners, and a level of style, especially in the coupe, that will attract some intermediate owners. In short the Zephyr is a car that will offer better value than other cars on either side of it are offering right now."

In the case of the Zephyr, market research told Ford that in terms of practicality, the Zephyr was superior to the Comet and Monarch and very much superior to the Chevelle.

To put the Zephyr into perspective, it's necessary to compare it to Ford's current Comet-Maverick, a 1977 Chevrolet Nova, GM's downsized intermediate, 1978 Ford intermediate and fullsize cars and imports such as the Volvo 224DL and the Datsun 810. For convenience all dimensions are for 4-door sedans.

Relative to the Comet-Maverick and the Nova, the Zephyr is slightly roomier, despite having a 4.4-5.5-in. shorter wheelbase. In usable trunk space, the Zephyr advantage is appreciable. The Zephyr also has as much interior space and more trunk room than the slightly larger 1978 Pontiac LeMans.

How does the Zephyr stack up against the imports? Very well indeed. If you were doing overlays you could almost

put the Zephyr on top of the Volvo and hardly distinguish one from the other except in overall height (3.0-in. more for the Volvo) and width (3.1-in. edge for the Zephyr). In the areas that really count—interior roominess—the Zephyr comes out looking good: 1.0-in. less rear head room and 1.5-in. less seat travel (which influences minimum rear leg room) but otherwise it's a question of "you pick 'em." And, surprise, the Zephyr has a larger trunk, although for overall usefulness the Volvo still has an edge. Compared to the more highly styled 810, The Zephyr is 10.3-in. longer overall (most of this is additional rear overhang which equates to luggage space), has 1.5-in. less rear head room, but 4.5-in. wider back seats and 5.0-in. more rear leg-stretching space.

In designing the Zephyr to be as light as possible, Ford designers made extensive use of computer modeling and modal analysis, a technique in which an actual prototype car based on the computer model is subjected to a wide variety of vibrations and forces while attached to a shaking platform. A computer analyzes the data and by examining a 3-dimensional stick model of the car generated by the computer, design engineers can determine where the structure may need additional strength or where it can be lightened without decreasing strength or durability. "Modal analysis enabled us, figuratively, to take a thousand ounces—one at a time—out of Zephyr—yet keep it one of the strongest unitized-body cars we have ever built!" said Robert Marshall, Chief Engineer, Ford Vehicle Design Engineering.

Another element of Zephyr basic design that received particular attention in an effort to give it the highest possible fuel efficiency was the car's aerodynamics. Zephyr prototypes spent 320 hours in wind-tunnel testing—more than any other car in Ford history.

The Zephyr front suspension not only features the first domestic use of MacPherson struts but the design itself is unique. Ford calls it a hybrid MacPherson because instead of the coil spring surrounding the strut, the spring is located between a cross member and the lower A-arm. This design has several important advantages. It allows a

spacious engine compartment for easy accessibility and it's lighter than an unequal-length A-arm and coil spring suspension.

One of the trends in Europe to neutralize the binding friction characteristics of the strut bearings is cocking the spring at an angle to the strut. With the Zephyr that's not possible, so to counteract that friction, Ford has close to a zero scrub radius, meaning the turning axis of each front wheel intersects the road surface near the center of the tire. This reduces nibble, wheel lift and the tendency of road shock and vibration to feed back through the steering system. It also gives quicker steering response with less effort.

Rack-and-pinion steering—a first for domestic cars of this size—is standard. The ratio is variable, ranging from 20.0:1 on center to 16.0:1 at the stops. The ratio change is achieved by varying the spacing of the teeth on the rack across which the pinion gear travels as it progresses toward the end of the rack. The variable tooth spacing accelerates the turning rate of the front wheels as the steering wheel is turned off center, effectively reducing steering wheel movement and increasing driving ease for parking or cornering maneuvers. The optional variable-ratio power-assisted rack-and-pinion steering is an industry first.

Designing the Zephyr around a space efficient interior, rather than attempting to fit people into a styled exterior as an afterthought, is the reason the Zephyr is such a packaging success.

A relatively high seating position, the purposely low cowl and the expansive glass area give a Zephyr driver a view of the world as good as that afforded by the better European sedans and one he probably didn't know existed if he's been driving any other domestic car.

"We put every modern technique and scrap of knowledge we possess into the Zephyr design," Robert Marshall said. "The result, in terms of package versus fuel economy—the number of people per gallon, if you will—is the most efficient domestic car we have ever designed." From what I've seen so far, I have to agree.

SPECIAL NEW CAR ISSUE

NOVEMBER 1977 48750 \$1.25

ROAD TEST

AUTOMOTIVE ENTERTAINMENT

ZEPHYR: AWAY WITH ROAD-HUGGING WEIGHT • NEW LIGHTWEIGHT DESIGN

ROAD TEST—NOVEMBER, 1977

ZEPHYR CROSS-COUNTRY

True to its namesake, it's a fresh breeze on the automotive landscape

by John Ethridge

As a rule, it is necessary to examine a given car maker's products over a span of several years to sense any real change, because the evolutionary process is so gradual. Zephyr's departure from previous practices is apparent almost from the moment the wheels begin to turn. To begin with, the car has a "feel" to it quite unlike that of any other car made by Ford or anyone else in this country. The feel has been described as "European" by some, and it does indeed possess ride and handling traits akin to the current genre of quality (and frequently more expensive) European sedans without exactly duplicating any one of them.

Suspension design and calibration is a major contributor to the Zephyr's feel. We picked up the test car at Ford's assembly plant in Claycomo, Missouri near Kansas City, and drove it to Los Angeles via Pike's Peak, Colorado and a number of other interesting points in between. Wherever possible, we eschewed the monotony and boredom of the Interstate "Super Slabs" in

favor of the rustic farm roads and old highways that more or less paralleled them. The surface of these quite often ranged from poor to atrocious and would have given your typical, less well-suspended car a bad case of the jitters at the speeds we drove. Instead, we managed to "keep up with the traffic" in serene comfort and stability, while the changing panorama kept us awake and alert.

Another key ingredient in the Zephyr feel is its variable-ratio rack and pinion power steering. It assists without overpowering and masking road feel and is very quick and direct. We put it to good use in negotiating the switchbacks when climbing Pike's Peak and found it was possible to drive all the way to the summit without having to reposition our grip on the wheel. We did discover one limitation to the steering system, and that was that the turning circle is rather large for a car with a 105.5-in. wheelbase. It doesn't create any real problems; it's just that 39 ft. curb-to-curb comes as a surprise after experiencing the quickness of the steering.

As might be imagined with 59% of its weight (empty) on the front wheels and no rear stabilizer bar, our test car proved to be an understeerer. When cornered at the limit, the front wheels would "plow" and leave black marks on the pavement from the rolled-under outside tread of the Michelin-X. There is a heavy-duty suspension option (which the test car didn't have) that includes a rear stabilizer bar to force the rear wheels to share more of the cornering work and improve cornering performance. But it should be pointed out that the car does well and is a joy to drive on curvy roads in standard form.

One objective of our cross-country test was to see if the 200 CID 6-cylinder is practical over varied terrain while handling the normal complement of power accessories plus air conditioning and hauling two persons and their luggage. The answer in a word is yes, emphatically so. This 3015-lb., well-equipped car doesn't really need the 302 V-8. At lower elevations there's more than enough power for accelerating into traffic from freeway on-ramps and for safe passing.

At higher elevations there were times we wished we had the V-8 for passing, but keeping up with traffic never was a problem. Power dropped off drastically, of course, as we neared the top of 14,000-ft.-plus Pike's Peak, but we still managed to pass maybe a dozen pokey vehicles and were never passed by any. Of the large assortment of vehicles we observed on the ascent, the only one that seemed to have a clear performance edge on us was an unloaded Chevy V-8 pickup. But the real "trophy" for that hill climb came in the form of a lecture for driving too fast, administered to me at the summit by a young man whom we had passed. Sir, if you are out there, the highest speed I ever attained above 12,000 ft., cross my heart and honest injun, was 35 mph.

Fuel economy of the small six was good. During our trek the worst for any leg was 15-16 mpg while flogging the engine unmercifully doing lots of passing, and all the while using the air conditioning. As a representative number for typical highway usage, we obtained 18 mpg on a leg of Interstate driving around 65 mph (the speed everyone seems content to go when Smokey isn't around) and using the air.

The test car was equipped with vent panes, you know, the kind they used to give you free a few years ago, which photographer David Gooley and I, both non-smokers, didn't use very much because of the noise. There was some wind noise, by the way, in the vicinity of the side mirrors, but not very loud. The AM/FM stereo cassette system, incidentally, emits about as high quality sounds as can be purchased in factory-installed equipment.

I like bucket seats, but I'll have to admit that the split-back bench

with fold-down center armrest over our test car had its good for the kind of long-haul driving this trip entailed. This arrangement permits moving around and shifting the driving position to improve blood circulation, whereas buckets constrain you to one position. Sorely needed are adjustable seat backs, though. The seat cushions are not as soft as usually encountered in domestic products, and the longer we sat on them the more we appreciated them.

Unlike many cars in this wheelbase range, both imports and domestics, this one has a real back seat. Passenger capacity is great for up to four, okay for five with the test car's seating arrangement. Access to the rear seat is easy with the additional set of doors. And the glass in the doors rolls down except for the last 5 in.

The trunk has to be filled to be believed. It took all the luggage three of us could carry out of the Santa Anita Luggage Store in Arcadia, California, and one of us had to return for more. The trunk is not very deep because the spare and fuel tank are located beneath it, but it is quite long, extending all the way to the back of the rear seat.

Both driver and passenger visibility can't be improved upon, because everywhere you look there's glass.

The controls have somewhat of a continental flair to them with the horn, light beam control and turn signals being handled by a fingertip lever on the left side of the steering column and the wiper and washer actuated by a second lever on the left closer to the instrument panel. The instruments are distinctly non-continental and consist solely of a speedometer and a gas gauge. The instruments could use a higher maximum light intensity setting to be seen better when

driving into dawn or dusk. The odometer has its own pale green light and is difficult to read even under ideal conditions.

The parking brake is foot-operated, and the release is located far enough away from that of the hood so that the two are not likely to be confused. The service brakes, by the way, have been designed with weight-saving in mind, but they proved entirely adequate for this car.

The glove box is small, having been encroached upon by the air conditioner, and the ashtray seems a bit flimsy and out of keeping with the rest of the interior appointments. Other than this, even a professional grip will have a difficult time finding things to carp about.

The conclusion is obvious. This car has so much that's right and so little that's wrong with it that it is hard to believe it's going to be mass-produced and sold at a price most of us can afford. And it isn't just a car nut's car, either, even though car nuts will love it. Those who feel they've been driven to turn to imports to get what they want in a car can come home again. Ford Motor Company has issued a general amnesty. Those who have learned to live with cramped back seats, trunks that hold the spare and little else, and engines with big appetites for fuel are in for a pleasant surprise.

The last car out of Ford to make a really big splash in the market place was, of course, the original Mustang. That car didn't represent much that was really new except in the styling/marketing area. Ford's engineers started with a clean board to design the Zephyr and have made the most of it. There's no question but that they've scored an engineering coup. And it's unlikely that anything is going to deny them another one in the market place, either.

ROAD TEST—NOVEMBER, 1977

The Lincoln-Mercury Zephyr is one of the freshest new cars to come from Ford since the Pinto.

Both Fiesta and Zephyr have been exposed to RT readers in earlier issues. They both exemplify the most modern thinking in

automobile design. The common golden thread that runs through them contains strands of boxy yet attractive styling, generous interior room, excellent handling, ample luggage space and miserly fuel economy.* Zephyr should win approval from previous big-

car owners who would have sworn that such room and comfort were impossible in anything under two tons. Yep, those old traditions die hard, but Ford should kill-off a few of them with cars like these.

*E.P.A. Fuel Economy Highway 33, City 23. Zephyr sedan with standard 2.3 litre engine and manual transmission. EPA ratings are estimates only and your actual mileage may vary depending on your type of driving, driving habits, car's condition and optional equipment selected. California ratings lower.

TESTING THE '78s: L-M Zephyr, Bower

CAR and DRIVER

SEPTEMBER 1977 • ONE DOLLAR

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CAR AND DRIVER—SEPTEMBER, 1977

by Patrick Bedard

As much as I cringe at the use of superlatives by road testers, I'm going to take this opportunity to blurt one out. The Mercury Zephyr is the best American sedan I've ever driven. It combines the best features of the typical American sedan with the agility and handling feel of an import. And that is something I never thought would spring forth from Detroit.

The Zephyr is extremely efficient in its use of space, worlds ahead of the Comet it replaces, but the handling is what really gets my attention. Ford has changed its way of making cars. The result is a neatly balanced sedan, a car that works with you when you're trying to make time. I am impressed.

A Hot New Corvette Competitor: The DeLorean DMC-12

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ROAD TEST

AUTOMOTIVE ENTERTAINMENT

The Fantastic Zephyr:

ROAD TEST—SEPTEMBER, 1977

PROBING MERCURY'S ZEPHYR

by Don Fuller

The effete intellectual snobs who like to think of themselves as car enthusiasts have long pointed to Detroit's products as a blanket condemnation of the inadequacies of American engineers, of the creativity swamp most American product planners are in and even as evidence of the personal moral decay of the giants of American automotivodom who infest—and invest the fortunes of—the industry.

They ask, why can't Detroit build a decent car? And then they compare a Plymouth Grand Fury to a Mercedes 450 SEL, a comparison about as relevant as judging the sex appeal of a lady on the size of her, uh, eyes. The model for the future American car was from Europe, all right, but farther to the north than the home of the Mercedes-Benz. The snobs showed only their stupidity by expecting Detroit to emulate the expense and complexity that characterizes the M-B products. No, the model for the future American car really has been the Volvo, with its simple structure and suspension, boxy styling, reasonable space efficiency, light weight and good fuel economy. And now, the best example of the future American car, of the Yankee Volvo copy, is here in the Mercury Zephyr.

Zephyr is one of the best designed cars ever produced by Ford in this country. It is an engineered car. The styling is upright and boxy for maximum space efficiency, but the shape is attractive and has been seen inside of a wind tunnel. The roof is high, the belt line low, the windows large; you can sit inside and see out. The trunk is box hung

on the back, big and square to hold the big and square things you will put in it. The curb weight for the base model is a very light below—2800 pounds and even a loaded, big engine version should be under 3200; but even without all that road-hugging weight the Zephyr still doesn't show any tendency to suddenly go flying off the pavement or do anything else uncivilized. In fact, it's subjective feel is surprisingly good. Ford engineers finally have a car you could drive in Stuttgart, Germany, or Stuttgart, Arkansas, and not feel out of place in either.

The car's styling features; suffice to say the window moldings, the flush grille, the pillars, drop to the hood and the sharp crease on the edge of the trunk lid are all the result of blowing wind over clay. All done to help more air get past the windows and more pavement below the bumper for every gallon of the Lord's oil you use.

The good work continues underneath. There are no carryover suspension pieces or axles or steering gears. The chassis is right out there on what some would call the fringe of American cars, with MacPherson struts for front suspension.

A design usually chosen for its low cost (that was a consideration with Ford, too), the Ford engineers have added a filip to their strut design by placing the coil spring on the lower control arm instead of wrapping it around the shock absorber. According to engineers, this allows more underhood room (the Zephyr has it in spades) and a simpler

structure with the loads being taken into a spot lower on the car. The stock tower inclination gives near zero offset steering, but unfortunately, results in a less-than-favorable geometry. But still, the strut at front, coupled with the four-link coil sprung rear axle, combines to provide handling and feel that are exceptionally good.

There are three body styles, a two-door and a four-door and a four-door station wagon. The usual range of options and decor groups will be available to ensnare the buyers in a web of choices. Engines will be the 2.3 liter four (Pinto/Bobcat/Mustang), throwing its muscle into a four-speed or automatic, the eternal 200-CID six with a three-speed or automatic, and the 302 V8, which you can only get with the automatic. An important option is the ES option, which includes a lot of what Americans seem to think Europeans like on their cars—like black molding and such—and special suspension tuning including a rear suspension stabilizer bar and lower front stabilizer bar. Steering is a new variable ratio rack and pinion unit with optional integral power assist, another first for Ford; this steering unit also will be included in other Ford small cars.

So what we have here is the car this country should be building, a car the UAW can put together and make work, a car a mid-town Manhattan mechanic can fix, a car Ford will build in increasing numbers, the standard American family car of the future. A sensible, logical answer that works. From Ford, that alone is refreshing.

THE CHICAGO SUN-TIMES

September 18, 1977

by Dan Jedlicka

The Zephyr provides excellent ride control and cornering . . . If you think the car's light weight and short wheelbase give it a choppy ride, you're dead wrong. Thanks to clever use of suspension components, the Zephyr handles rough roads with aplomb . . . The Zephyr has a 34-pound sound package that virtually surrounds the passenger compartment designed to provide a quiet ride.

THE ATLANTA JOURNAL

September 9, 1977 by James Hightower, Business Writer

With hundreds of its salesmen in Atlanta to check out its 1978 models, Ford's Lincoln-Mercury Division is predicting its new Mercury "Zephyr" compact car will help boost sales to new records during the next 12 months.

Preliminary EPA fuel economy ratings indicate the Zephyr, equipped with a 2.3 liter engine and automatic transmission, will get more than 30 miles per gallon on the highway.

THE BOSTON HERALD AMERICAN

September 4, 1977

by Fred Stafford

Zephyr is the big news maker from Ford for 1978 . . . It is slightly shorter yet considerably lighter than its predecessor, featuring vastly improved handling, more usable interior space, improved fuel efficiency . . . A part of the weight-saving story involved the use of strategic lightening holes in support braces and interior sheet metal. The technique, common in the aircraft industry and among car racers . . . is computer-controlled and does not result in any loss of structural strength . . . The interiors are spacious for cars of their size. Headroom is exceptionally good.

THE SAN DIEGO UNION

September 11, 1977 by Dick Applegate, Automotive Editor

Mercury's Comet is out of orbit. Its replacement is Zephyr available in two and four-door sedan and station wagon models. "The techniques used to design Zephyr enabled us to minimize its exterior size, weight and wind resistance, while providing excellent key interior dimensions and outstanding performance. Zephyr's combination of roominess, good gas mileage and excellent handling make it the best compact car we have ever offered the American public," stated Walter F. Walla, Lincoln-Mercury Division General Manager.

THE SOUTH BEND TRIBUNE

September 4, 1977

by Ray M. Lellaert, Jr.

"The Mercury Zephyrs will be making believers out of a lot of people this year. They may be the most significant models so far amongst the smaller, more efficient cars that have begun appearing in Detroit . . . Developed by a Ford engineering team that included veterans of the European division, the Zephyr has a number of features that many imported buyers expect in the Volvos, Audis, and BMW's that cost twice as much."

LOS ANGELES HERALD EXAMINER

September 11, 1977

by Floyd Hall, Automotive Editor

Lincoln-Mercury Division's new compact Mercury Zephyrs will offer roomy interiors, agile handling, excellent fuel economy and clean styling. Lightweight and with a modern approach to design and engineering the Zephyrs are extraordinarily roomy cars.

MERCURY
ZEPHYR

LINCOLN-MERCURY DIVISION

