

1976
Plymouth

Volaré

THE NEW SMALL CAR WITH THE ACCENT ON COMFORT





ROBERT B. McCURRY, JR.
... Group Vice President — U.S. Automotive Sales

WHY VOLARÉ?

The builder of America's best-selling compact-car line, Valiant, is writing a new chapter of automotive history. Its title is Volaré, one of the very few fresh nameplates in the entire industry for the 1976 year.

"Plymouth Volaré is a compact only in the sense that it meets the exterior dimensions of that segment of the market," says Robert B. McCurry, group vice president of sales for Chrysler Corporation. "Volaré rivals the quietness, comfort and riding qualities of our full-size cars".

McCurry reports that considerable research went into the development of Volaré. "With all of the publicity about inflation and energy and all of the conversation coming out of Washington, the research showed that people are out there waiting for something," he says. "They are waiting for something that's new in an automobile, something that's different from what has been available in the past."

He adds that research also revealed that the public identifies Chrysler Corporation as an organization with an excellent engineering reputation and as perhaps the best bet in the industry to introduce a unique car.

"Volaré certainly is different from any kind of a compact-size car that Chrysler or anyone else has ever produced," McCurry says. "The new transverse, or across-the-front-of-the-car, suspension system provides a ride that has to be experienced. It's a big-car feeling. The doors on all of the Volaré models . . . four-door, two-door or station wagon . . . open wide for easy entrance. The space in the four-door is as good as it is in many larger cars".

McCurry believes that people today

are very much aware of road noise in an automobile. "With the sound-deadeners available in Volaré, the car is designed to be as quiet as many larger, more expensive cars," he says.

Although Valiant, first introduced in the 1960 model year, will continue in the marketplace, McCurry believes a new car line with a new name and new dimensions will attract even more people to the Chrysler family. "The small-car market is where it's at these days," McCurry contends, "and Chrysler Corporation is going to be out there with more than one choice.

"Duster and the rest of the Valiants are price leaders for the family that wants to spend a little less for a new automobile. If a customer wants something better in space and ride, he will go a few extra bucks for a Volaré."

McCurry believes some of the competition has sold new compacts at the expense of its intermediate lines. "Volaré will have luxury models for those people who want and demand them," he says. "But basically it will be sold as a really compact car in a base version, a high line and a premium line. No segment of the compact area is overlooked."

McCurry has no favorite among the models . . . two-door, four-door, station wagon . . . and sees each accounting for a third of Volaré sales. However, he does predict that the station wagon will be off to a flying start. "Except for one manufacturer, the compact wagon market has been ignored by the domestic industry," he says. "We went out of that segment more than a decade ago. Back in 1964, we had retooled for a new small wagon but never built it because the market simply vanished.

People then were thinking 'big and power.'

"But this Volaré wagon is something else. It has fantastic utility space. It has good visibility because it has good glass area. You can get four, five or six people in it and they can ride comfortably.

"About that competitive wagon on the road. It simply can't compare with Volaré's inside room."

Though Volaré is strictly a Chrysler creation, McCurry concedes that the New York cab drivers had a strong influence on the design of the four-door sedan. "The taxi drivers told us that the rear doors on cars made in this country simply did not open wide enough for easy entry and egress," McCurry reports. "They also complained that their riders wanted more clearance between the tops of their heads, or hats, and the car roof. Well, we have responded with Volaré and I've got to believe that people who ride cabs want the same kind of spaciousness and comfort in their own automobiles."

The Volaré two-door, offering the same fine ride as the other cars, represents a belief that great numbers of people want compact size, but in a car not only sporty but with its own distinctive design. The two-door is proof that America's love affair with the automobile is not on the wane.

Aside from the ride and performance of Volaré, McCurry says another factor in its favor is weight. "This car, which has the features of a full-size car, is 1000 pounds lighter than many larger automobiles. Now, that's got to mean a gallon of gasoline is going farther. People today are very knowledgeable about the relationship of weight to fuel

Isolated Transverse Suspension System

One step beyond. That best describes the Isolated Transverse Suspension System on the new Plymouth small car, Volaré. It is beyond anything Chrysler ever has offered in the ride, handling and quietness of a small car. The illustration shows the system from the underside of Volaré Simply, the torsion bars are across the car ahead of the wheels instead of extending from front to rear. The torsion bars are isolated to minimize noise and vibration. A front sway bar controls cornering roll. Driving Volaré is something else — you've got to drive it to believe it.

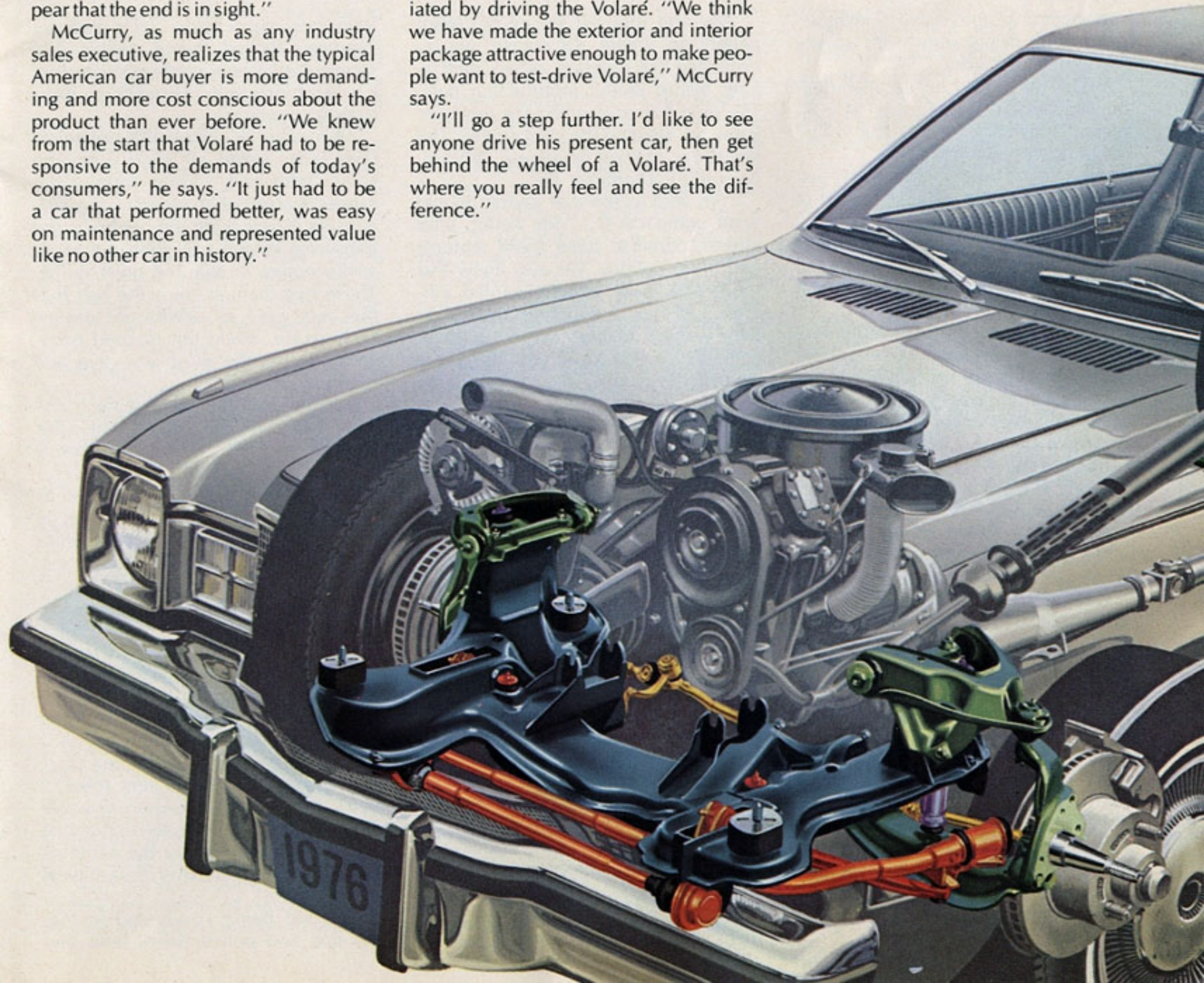


economy. And they are very concerned about gas prices rising and it doesn't appear that the end is in sight."

McCurry, as much as any industry sales executive, realizes that the typical American car buyer is more demanding and more cost conscious about the product than ever before. "We knew from the start that Volaré had to be responsive to the demands of today's consumers," he says. "It just had to be a car that performed better, was easy on maintenance and represented value like no other car in history."

Features like comfort, spaciousness and performance can only be appreciated by driving the Volaré. "We think we have made the exterior and interior package attractive enough to make people want to test-drive Volaré," McCurry says.

"I'll go a step further. I'd like to see anyone drive his present car, then get behind the wheel of a Volaré. That's where you really feel and see the difference."





The start of the two-door coupe in clay back in 1972.



And the four-door clay, minus windows and grille.

VOLARÉ...a Truly New Small

The birth of an automobile from drawing board to dealer showroom usually takes about three years.

Volaré, the new Chrysler-Plymouth compact, took a little longer. Its conception dates back to 1971 but Volaré is no ordinary new small car:

- The Volaré rides on a front-end suspension system that parallels a host of Chrysler Corporation industry firsts.

- Aerodynamic changes to improve gas mileage were made in wind-tunnel tests while Volaré was in a clay model state.

- Extremely accurate development tools permitted designers and engineers to maximize interior space and passenger seating arrangements. Changes during the very early stages of Volaré could be made very easily to create outstanding comfort and room dimensions.

Volaré, like just about every new car in its earliest development, was given a code name. Involved in the planning were engineers, designers, manufacturing people and the sales staff. The job of correlating all of their efforts and maintaining liaison with the top corporate executives belonged to the product planners.

Eugene P. Jacoby, director of domestic car product planning, explains the role of his department: "A big part of our responsibility is to develop recommendations for a car line, say for the next five years.

"While design and chassis work had been going on for some time, the button was pressed officially three years ago. That was before the oil embargo, before sharply rising pump prices, before the recession.

"We feel that our timing has been perfect on Volaré. Of course, we re-evaluated the program as we went along before public introduction date. The more we researched the more we knew we were on the right course. The small-car market is strong. Volaré, basically, is a compact car.

"We anticipated that people would want compacts that ride better, offer greater comfort, have more features and more options. We also knew that more and more people wanted efficiency in their automobiles more than they wanted bigness. Many of them certainly wanted to be able to have a six-cylinder engine, and some favored a V-8."

Though the trend toward smaller cars was evident five years ago, it also was true that people did not want to give up their creature comforts — such as integrated air conditioning, performance, first-rate handling and riding characteristics.

The ride, or suspension system, is a story in itself. Sidney D. Jaffe, executive engineer-chassis engineering, recalls a time five years ago: "We were after a new kind of compact, something innovative and exciting. It also had to have a level of ride, comfort and quietness that would appeal to people who had been accustomed to bigger cars."

Between 1970 and 1972 a team of chassis engineers worked behind security sealed doors. Many suspension systems were investigated. One of several early proposals was what Jaffe calls "the cross-car torsion-bar arrangement." It is now known as isolated

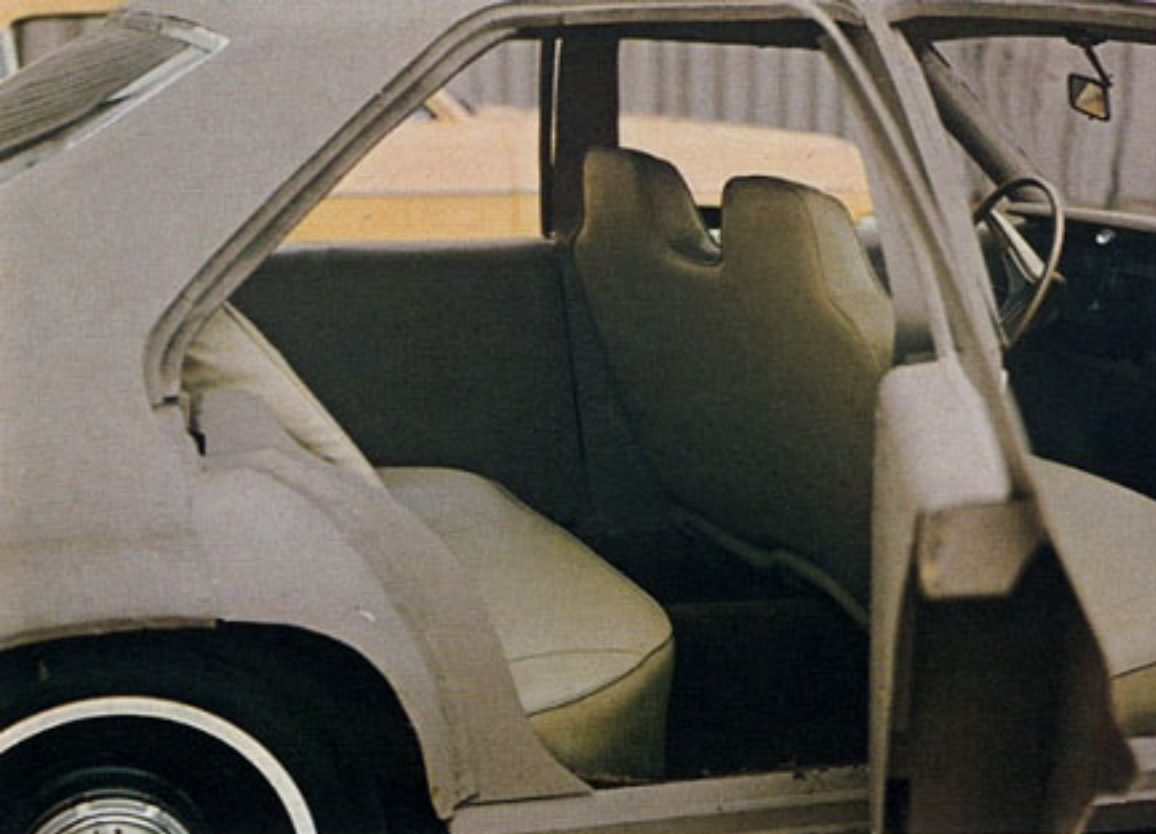
transverse suspension. Jaffe and his engineers looked at coil springs, leaf springs and suspension systems on other Chrysler products as well as non-Chrysler products.

"A number of suspension configurations were tested on early prototype cars," Jaffe says. "Even without the rubber biscuits that separate the suspension system from the car body, the transverse torsion bar stood out as an advancement in soft and quiet riding. Those two features, plus the fact that the bars gave us additional underbody space, made the isolated transverse system the most attractive and outstanding system."

Jaffe revealed that although the transverse suspension got a green light in the first part of 1973, another suspension program was carried on for several months during that year — "just in case." He explains: "This system is so unique it required special manufacturing processes to assure its success. We wanted to be absolutely certain."

A number of test cars with the isolated transverse suspension system have been coursing the Chrysler Proving Grounds at Chelsea, Michigan, over asphalt, concrete, dirt, cobblestone, brick and even pot-holed roads. "The system has run well over 100,000 equivalent passenger miles per car," Jaffe reports. "By equivalent miles, I mean that for the suspension structure 25,000 miles of accelerated endurance cycles is approximately the same as 100,000 miles of driving by a typical Volaré owner."

Tests are being conducted in big-city taxi and police fleets. Jaffe says



Mockup of rear-seat space and configuration.



Checking instruments in a clay model to measure wind flow.

Car Four Years in the Making...

cabs and police cars are a challenge to the durability of any suspension system. "Testing these cars under the toughest type of public conditions is a reflection of the confidence we have in the suspension," Jeffe points out. "We think we have done a good job on our proving grounds of shaking out any problems."

Transverse suspension really is a system with a car built around it. Jeffe explains: "The body engineers had to create an entirely new front end for Volaré which included a different radiator structure and a repackaging of the engine compartment."

Although it is often difficult for the non-professional to recognize an improvement in riding qualities, Jeffe says a fledgling driver training school student or a traveling salesman would quickly notice a change for the better.

"This suspension is designed with the most fore and aft compliance of any compact car we have ever built," Jeffe explains. "That means the wheels can move rearward when they hit chuckholes in the road. In effect, Volaré rolls with the punches of the road. That makes it a quiet as well as a soft ride."

While Jeffe and his team were working out the details of the suspension, another crew was concerning itself with the effect of aerodynamic design. For the first time in Chrysler Corporation history, a three-eighths size scale clay model of Volaré was tested and reshaped in a wind tunnel at Wichita State University in Wichita, Kansas.

"We wanted Volaré to have the highest standards of aerodynamics, to offer as little resistance to wind as

mechanically possible," says James W. Shank, executive engineer — body engineering. "We shipped the clay models to Wichita along with clay modelers. Aerodynamics engineers and designers were in the act, too. Subtle changes were made at the front, the rear and along the fender edges.

"Some of these minor design alterations may have had some effect on the general appearance of a car but they had a major effect on the aerodynamic characteristics of the automobile. There are certain tradeoffs, many things to consider. If you want the best in aerodynamic design, you go to a teardrop shape but that would severely cramp passenger seat room."

The task force at Wichita State tested drag, crosswind stability, wind noise, ventilation, window seals and side window pressure on the scaled-down clays. Three tiny microphones were embedded in clay near the windows. They picked up the sound of air as it moved from the windshield, around the front pillar and measured the turbulence. The clays were subjected to wind speeds of 125 miles per hour, equivalent to 47 m.p.h. on a full-scale Volaré.

Chrysler went full tilt on its aerodynamic testing. To test the accuracy of the clay model work, a full, steel-bodied pre-production model later was taken to a larger wind tunnel at the Lockheed Aircraft facility in Marietta, Georgia. The time interval between the first clay model work at Wichita State and the full-size, metal car test at Marietta was about three years. "Volaré is the first car on which Chrysler has run a complete cycle (clay through steel) on aerodynamic

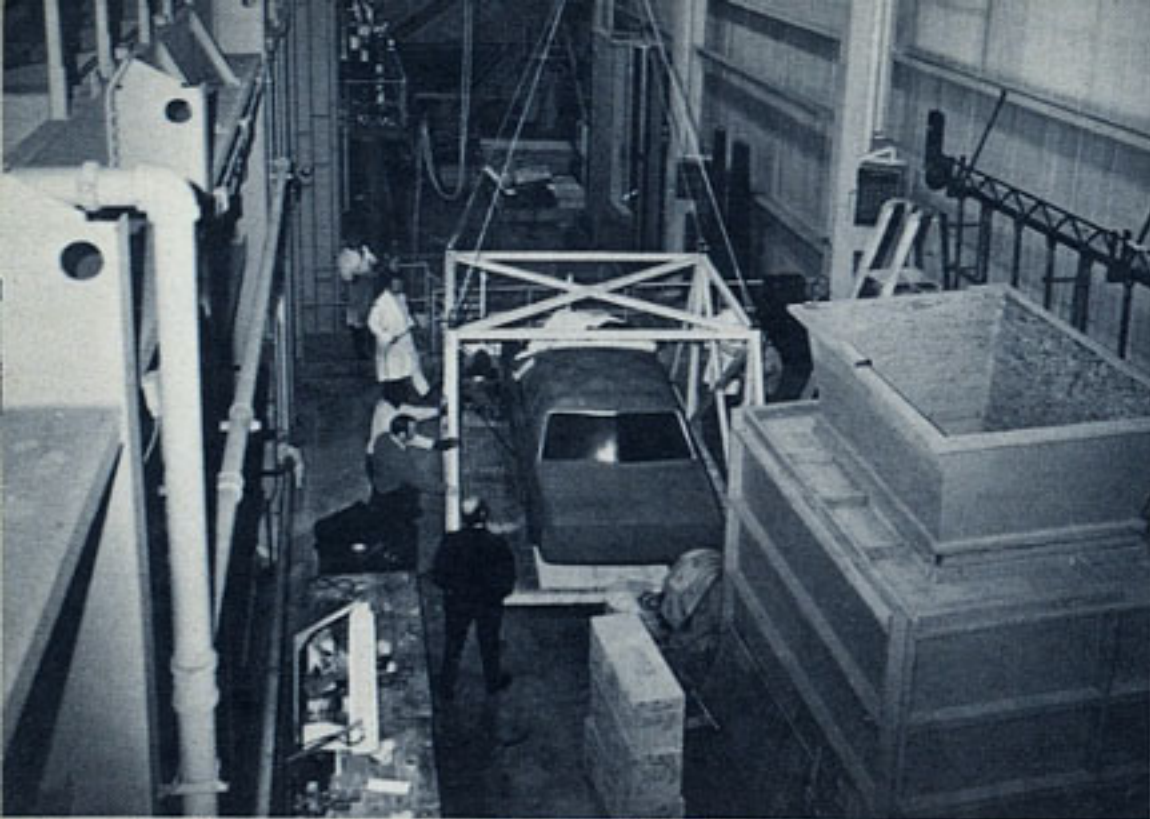
development," Shank says.

He reports that much of the wind-tunnel tests went on at 70 m.p.h. before the national speed limit was reduced to 55 m.p.h. "We know that for every percent in reducing wind resistance (drag), you improve fuel economy a half percent at 70 m.p.h.," he explains. "In other words, if you can reduce drag coefficient 10 percent, gas economy will rise 5 percent — a car that delivers 20 miles to the gallon will get another mile if the wind drag is cut 10 percent.

While the chassis engineers and body engineers were prominent in the long development of Volaré, the stylists under the direction of Richard G. Macadam, vice president-design, also got an early start.

Macadam, Chrysler Corporation's top designer, strongly disagrees when he hears talk about styling losing its importance in the great American automobile sales race. "An automobile has to have styling appeal," he argues. "People are not going to get into a car unless it is attractive to them. They are not going to realize the qualities of Volaré's superior ride or its quietness unless they have a desire to drive or ride in the car. I think people will find Volaré appeals to them when they walk up to the car and after they drive it — because we have concentrated very heavily to provide satisfaction for a Volaré owner. The car has excellent visibility and the space has been carefully planned. Volaré has human advantages."

The earliest design work on Volaré began in 1971. "We were trying to



A clay model on the way to the wind tunnel.



Jotting down data in the wind tunnel.

...with an Exceptional Ride

identify which direction the compact-car market might take in the mid-Seventies," Macadam recalls. "We were probing for size and the kind of customer value that might go into the car at that early stage. A year later we did more serious planning like setting up dimensions and structural sections. At that time we were becoming quite definite about space for the passengers, space for the drive train and space for luggage.

"The shape that Volaré was going to take really reached full form in January, 1973. At that time we were stressing the two-door coupe, doing a variety of themes in clay. The four-door and the station wagon went on the design stream during the second quarter of 1973. Some two dozen clay versions of the two-door were completed before the final body choice was made."

Management's decision to produce three body styles of Volaré came earlier, in 1972. It has been more than 10 years since Chrysler-Plymouth last produced a compact station wagon. Macadam explains the reason for its return in 1976:

"We felt that cars were trending smaller and we wanted to provide a station wagon in the compact segment because we thought people would be moving down, looking for big-wagon utility and space in a smaller size.

"Another factor that surfaced was our belief that people who had bought subcompact cars and station wagons, purely on the basis of economy, would be extremely disappointed in the amount of space. We thought those buyers would want to move up.

One of the features of the wagon that Macadam is enthusiastic about is its visibility. "We have a very thin-shelled liftgate rear door on the wagon with fixed glass. That allowed us to keep the belt line (where the windows meet the top of the lower side body metal) on the same level all around the vehicle. Unlike most other wagons where the rear window is smaller because it has to drop into the lower gate, the driver can look out the back and see down the driveway."

In designing the two-door Volaré, Macadam says Chrysler could look back at a very successful product, the Valiant Duster. "We wound up with more legroom, more headroom and more comfort in the front seat," he reports. "We even got an improvement in rear-seat legroom."

The four-door was viewed by the designers as an opportunity to challenge the luxury, internationally sized imports. "We watched the trend in European cars, primarily compacts, and the appreciation people had for their kind of seating space," Macadam comments. "The four-door Volaré has tremendous space compared to other compacts in every seating dimension, in headroom, legroom and vertical chair height. It's a comfortable package, superior to some very fine luxury imports and domestics. Still, it's available at the price of an American compact."

Macadam credits Volaré's space gains in all three models to extensive time, effort and money in building components to represent seating space. The designers call these early-stage units environmental bucks. "They were

very accurate development tools that we could change easily to take the best advantage of interior room," the top designer says.

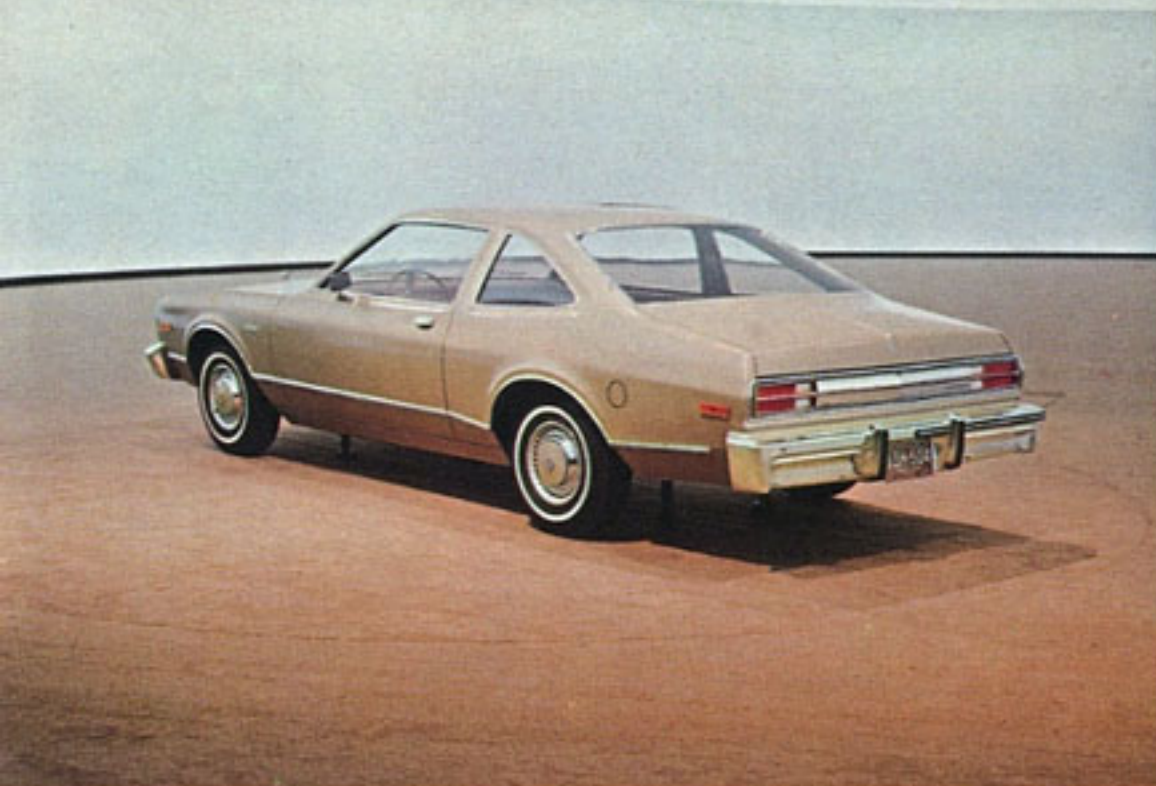
He makes the point that in appealing to the owner of a large car moving to Volaré, "the customer will be driving a vehicle he feels familiar with, he is at home with, and he won't feel cheated. He won't feel let down. He's got everything he needs in a Volaré."

Macadam also contends that Volaré has the physical qualities and the image of strength in a compact size. He explains: "The car has a feeling of solidarity, protection and weight. Not weight as being ponderous or bulky, but weight as a measure of strength. Volaré on the road looks like a car, and is a car, that protects its passengers."

Macadam believes millions of people will share his affection for the design of all the Volaré entries — coupe, four-door and station wagon. As an automotive devotee, the designer is equally enthusiastic about the fine ride.

Isolated transverse suspension is the latest Chrysler Corporation feature that joins a long list of engineering innovations such as standard electronic ignition, the alternator, power steering, ad infinitum.

Chrysler also has a history of compact-car leadership. It consistently took more than 30 percent of the market for many years. "Volaré is an evolutionary development in our compact-car program," says the product planner, Eugene Jacoby. "It is a highly functional automobile in the best American tradition. It is not a me-too imitation of a European automobile."

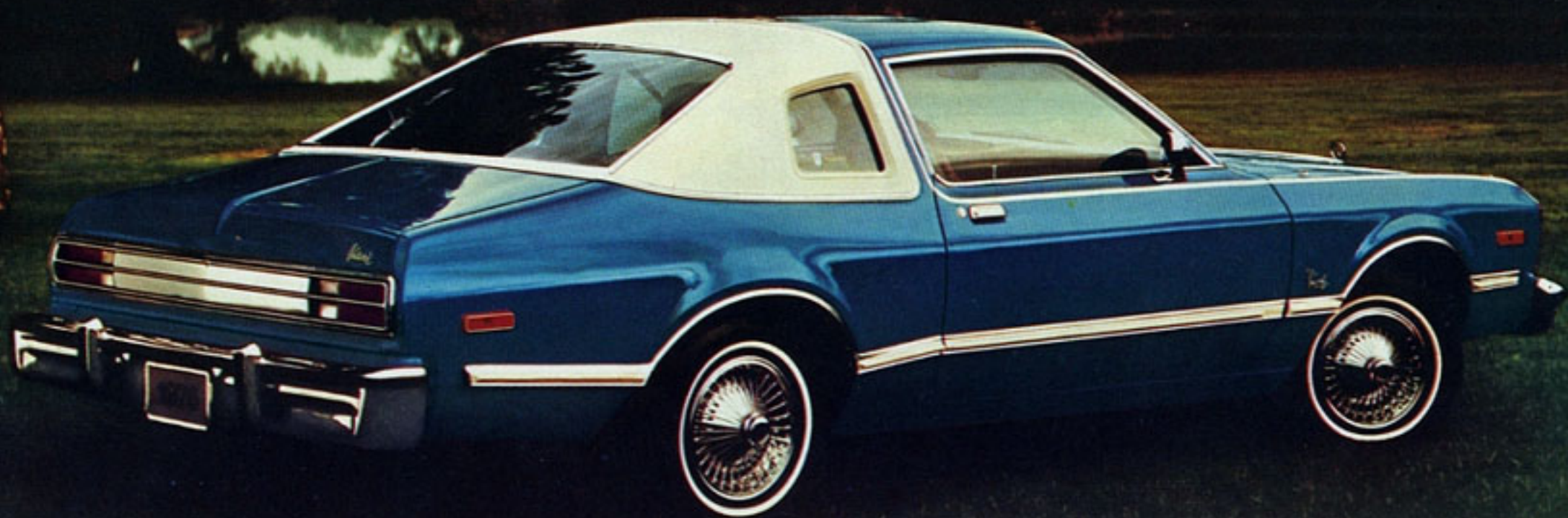


After changes, the two-door in clay in March, 1974.



And the revised four-door in clay the same year.

...and Beauty Like This...



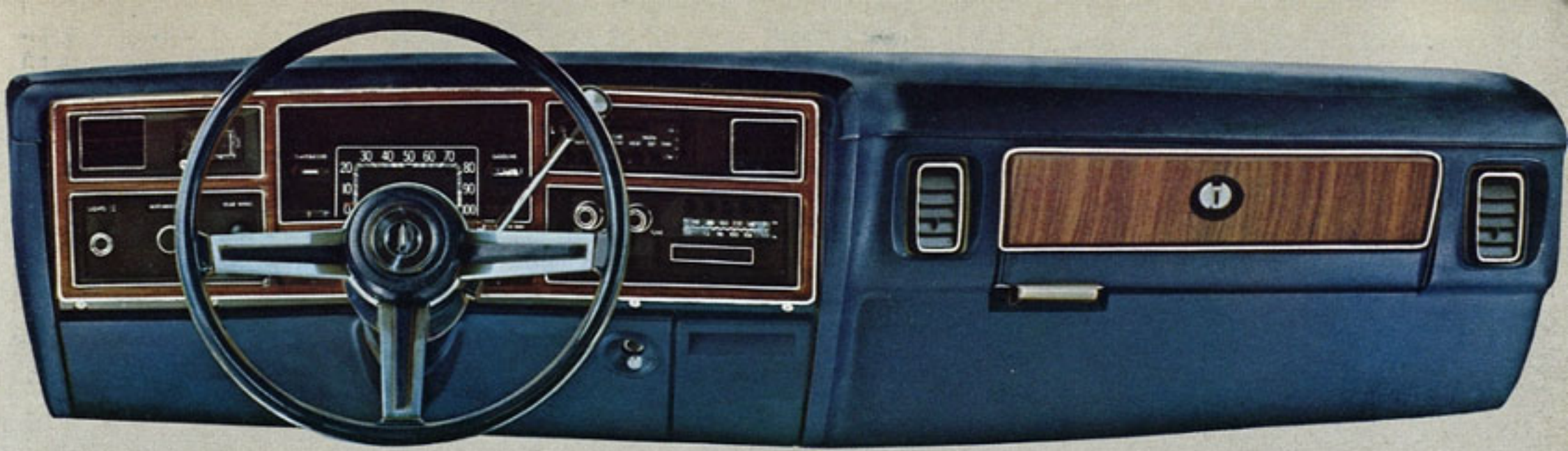


AM/FM 4-speaker stereo radio for your listening pleasure.

In terms of exterior dimensions, economy of operation and miles to the gallon, Volaré is a small car. The comparison with what we once knew as a standard car ends with those three points. Volaré is more like a big car in its comfort, the way it rides, its quietness. The design is fresh and that can only be said about a very few 1976 automobiles. Volaré comes in three versions: the top of the line Premier Coupe, the Custom 2-door as shown on the left page with optional two-toning and the base Volaré. Road Runner (right page) beeps into the line-up as a special package with its own exclusive trim.

The Two-Doors...





Fully appointed modular instrument panel allows easy service access to each operational control and gauge. (Premier decor illustrated.)





Optional trailer-towing package for light loads. See your dealer for details.

Optional Auto-Speed control.

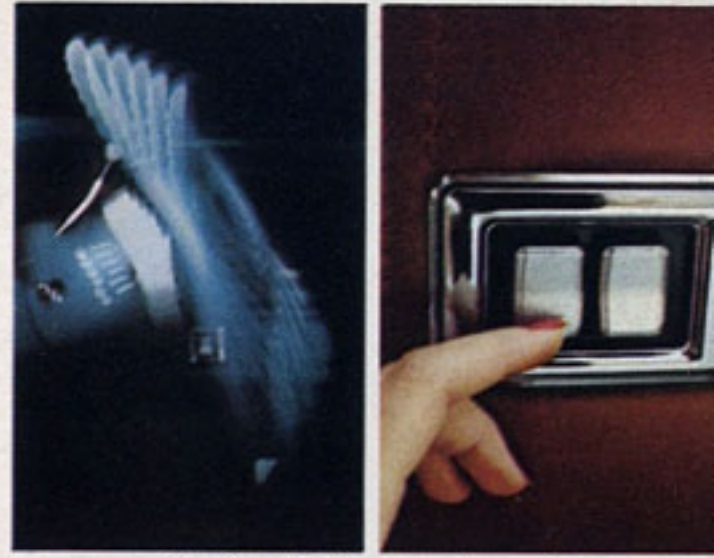


Optional Six-way power seats.

The Four-Doors...



Those expensive foreign cars are mostly four-door sedans. Volaré four-doors challenge their reputation but at a price that's just a fraction of those high toned imports. The Volaré size comparison is a near standoff. Its ride is unique. And it's quiet and highly efficient. The seating position of Volaré provides wide visibility and spaciousness. The four-door comes in three versions — Premier on the right, the Volaré on the left and the Custom, not shown. Unlike most 1976 entries, Volaré is new in design and engineering. It's the type of a car that looks great but has to be driven to be fully appreciated.



Optional Tilt steering column,
Optional Power windows.





Family-size 71.9-cubic-foot cargo area.



Cylinder-assisted liftgate door is easy to open, convenient for loading.



Spare tire well is below cargo area.

...and the Station Wagons

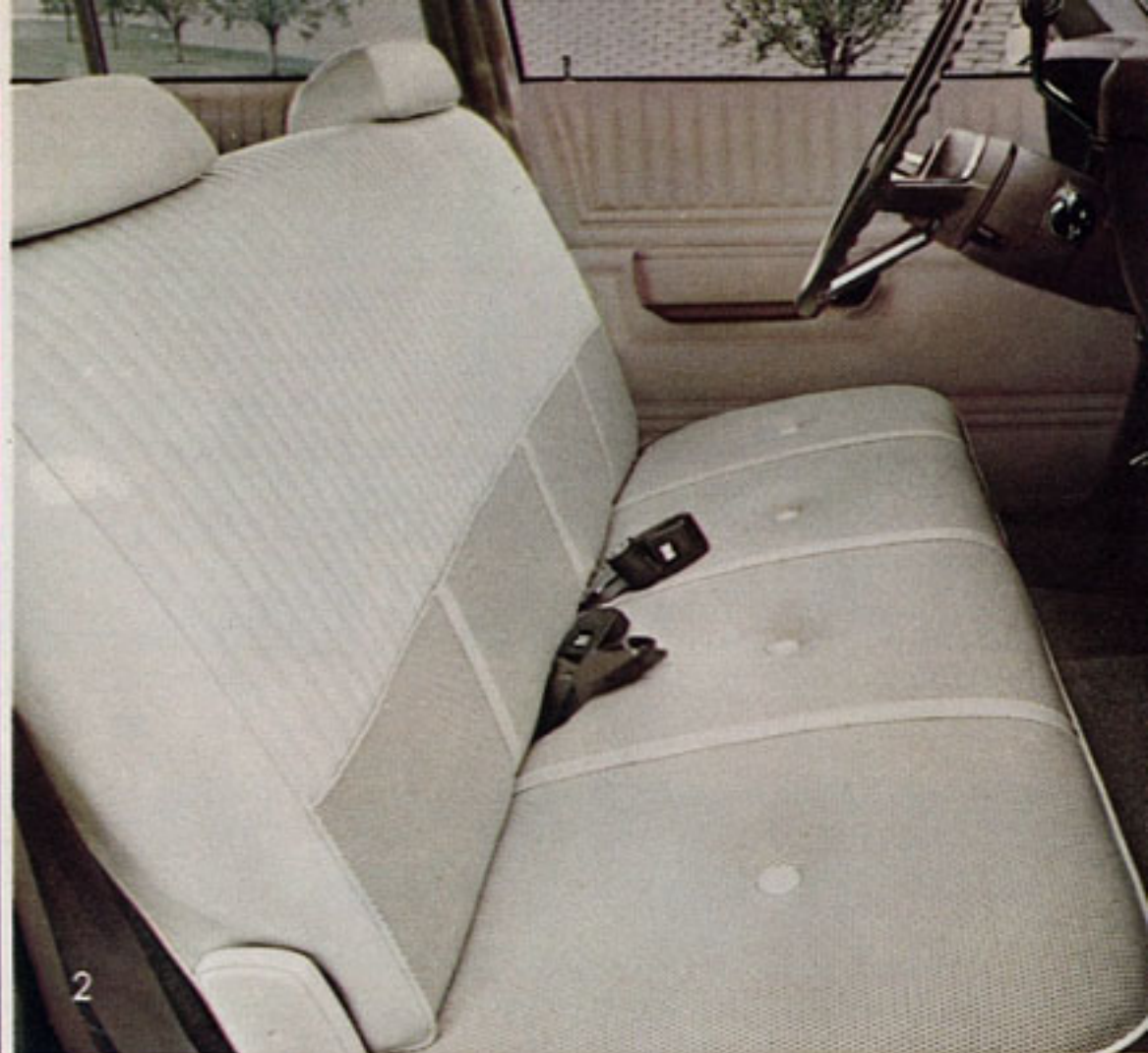


A small, but not too small, station wagon in the compact size is Volaré. Available as a Premier (left) and standard Wagon, it has a cargo volume of 71.9 cubic feet. The cargo area runs 73.5 inches at the belt line, 43.3 inches wide between the wheelhouses. It will haul that big piece of lumber, easily with a one-piece liftgate opening that is 47.7 inches wide and 27.6 inches high. The four-door Volaré station wagon's load capacity is a hefty 1100 pounds. The option list includes a luggage rack, roof air deflector and an electrically-heated rear window defroster.



Rear air deflector and roof rack.





The "living room" of your automobile has to measure up in comfort, elegance and an atmosphere of enjoyable and safe motoring. Volaré does. Interior designers for all models of the Volaré . . . two-door, four-door and station wagon . . . came up with seating space that is comparable to larger automobiles. There's a lot of leg room, head room and hip room in Volaré. Here are only a few of the interior designs:

1. The bench seat of the Custom four-door sedan looks and feels like your favorite chair. This is a standard cloth-and-vinyl seat with padded deluxe door trim and color-keyed carpeting.
2. The front seat of the lowest priced four-door sedan is vinyl with color-keyed carpeting and soft door trim. It's comfortable and positioned for excellent visibility.
3. Premier tops the four-door line and in keeping with its stature is an optional cashmere-like upholstery of cloth and vinyl. The seat divides 60/40 with a fold down arm rest. The backs recline as illustrated by the young lady.
4. Here's the rear seat of the Premier four-door with a view of the shag carpeting, carpeted lower door panels and another touch of class, door pull handles. (Standard seat belts not shown.)
5. Optional Premier station wagon 60/40 front seat with recliner for driver and passenger. Upholstery is woven vinyl that "breathes."
6. The best of the buckets in the Volaré Premier Coupe. An optional super soft vinyl seat, the colors are matched with door panels and deep carpeting.
7. Volaré Custom Coupe doesn't take a back seat to any two-door for its interior decor. This an all-vinyl bench seat with color-keyed carpeting and soft door trim panels — all standard plus a spacious interior.
8. Optional on the Custom Coupe are individually adjustable bucket seats. The upholstery is all-vinyl, full foam. Note the floor mounted transmission lever in the optional, center console.



Big Size Car Luxury in a Small Car



Living Room
Comfort
In a Small Car
... That's Volaré

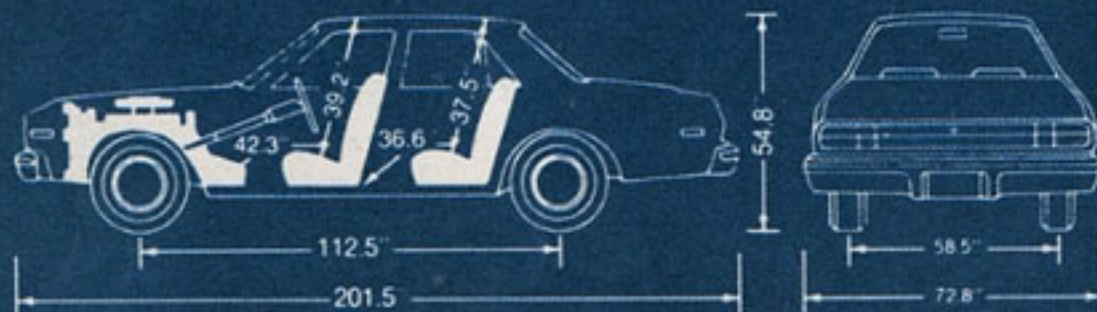


1976 Volaré Dimensions

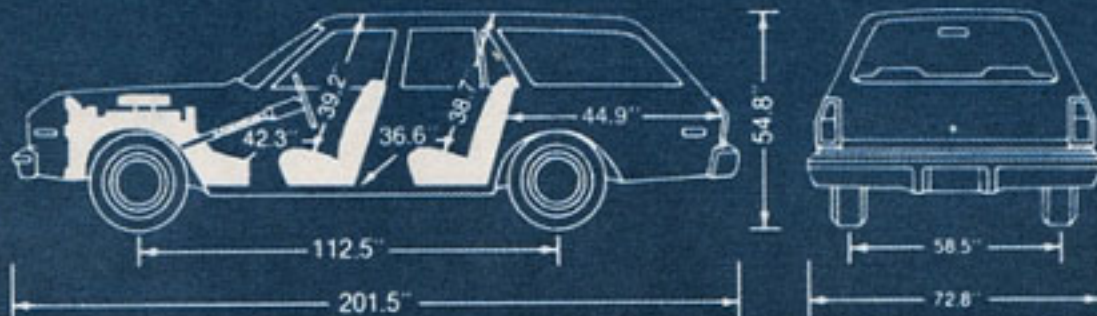
Volaré Coupe



Volaré Sedan



Volaré Wagon



Facts and Figures

STANDARD SPECIFICATIONS

Engine	225 6-cyl, 318 V-8
Transmission	3-speed manual
Suspension	Front: Transverse torsion bars with sway bar Rear: Asymmetrical leaf springs
Tires	D78x14 BSW; E78x14 BSW; F78x14 BSW
Wheels	14x5.0 Sedans; 14x5.5 Wagons
Brakes	Front: Disc; Rear: Drum
Electrical System	Battery: 305 amp, 225 & 318 CID; 440 amp, 360 CID; Alternator: 41 amp; Electronic Ignition System; Transistorized voltage regulator
Fuel Tank	18.0 gallons
Trunk Capacity	Sedans 14.2 cu. ft.; Wagons 71.9 cu. ft.; Coupes 14.5 cu. ft.

REAR AXLE AVAILABILITY

Engine	Transmission	Standard	Optional	Sure Grip
225 Six	3-speed manual ¹	3.21	2.94 ²	3.21
	4-sp overdrive ¹	3.21		3.21
	TorqueFlite automatic	2.76	2.94, 3.21	3.21
318 V-8	3-speed manual ²	2.45	2.76, 2.94, 3.21	2.71, 3.21
	4-sp overdrive ²	2.94	3.21	3.21
	TorqueFlite automatic	2.45	2.76, 2.94, 3.21	2.71, 3.21
360 V-8 ²	TorqueFlite automatic	2.76	2.45, 2.94, 3.21	2.71, 3.21

¹N/A in Calif. on Wagons ²N/A in Calif.

and here's "The Clincher!"

For the first 12 months of use, any Chrysler Motors Corporation dealer will fix, without charge for parts or labor, any part of our 1976 passenger cars we supply (except tires) which proves defective in normal use, regardless of mileage.

The owner is responsible for normal maintenance service such as changing filters and wiper blades.