

AUTO CARE

The real birth of a new automobile

By **MONICA PEREZ**
Copley News Service

To bring a new car to market takes up to five years and encompasses the broadest range of skills and talents found anywhere. Most new automotive products originate as part of a long-range plan, based on forecasts for future needs in transportation.

Following is a summary of how a car is "born" based on a report on the manufacture of Chrysler Corp.'s Le Baron GTS and Dodge Lancer.

To begin, marketing experts and product planners try to predict what types of people will make up the biggest segment of the automobile market in the future. Whether they decide this will be baby boomers, senior citizens or families will help define what characteristics a car should have to be sold during that time.

Once the desired characteristics—such as roominess, quietness, economy and aerodynamic styling—have been prioritized, designers develop specifications for the car and make preliminary decisions on size, width, height, length and wheelbase—thus defining the "package." Product engineers then submit recommendations on engines, transmissions and equipment to support the overall vehicle objectives.

As soon as the car begins to take form, product and manufacturing engineers examine the data and report on the practicality of building the car according to proposed specifications. Cost studies determine if the car can be produced at an affordable price for its targeted market.

The complete car package—portfolio of facts, figures, market research reports, cost estimates, charts, diagrams and sketches—has to be approved by corporate man-

agement and then the development of the actual design, detailed engineering and styling can begin.

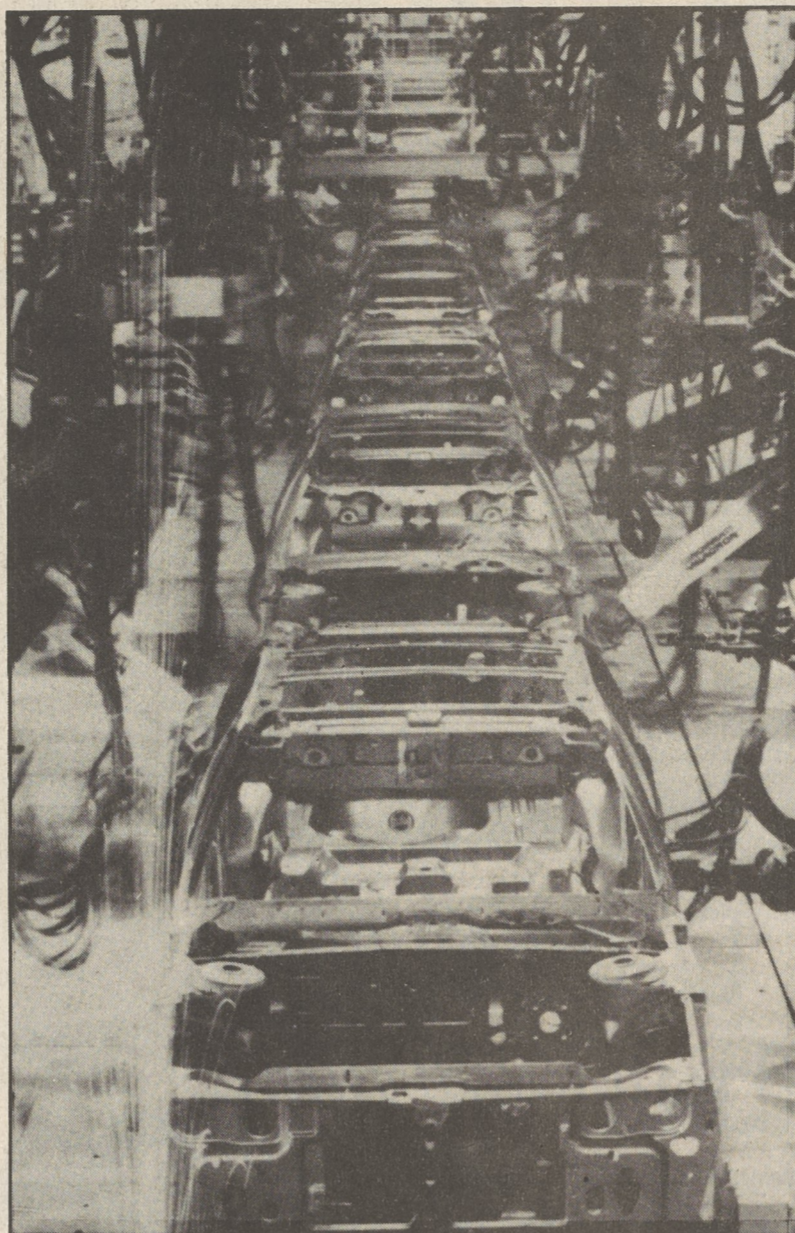
Stylists draw hundreds of sketches of the basic car and its components and from these they develop design ideas and various themes. The best ideas then are sketched in greater detail and converted to full-scale tape drawings. These are done with special black tape on boards as high and wide as the actual car. The technique provides the first full-view perspective, and the removable tape strip allows for easy changing of lines to achieve the best aesthetic results.

The next step, clay models, provide the first three-dimensional perspective of the new product. Meanwhile, interior designers develop ideas for instrument panels, seats, various hardware and other interior parts.

Designers then convert two of the clay models selected to full-scale fiberglass models.

During each step designers and engineers use complex computer systems that enable engineers or draftsmen sitting at graphics terminals to make precise, elaborate and detailed drawings of any piece of machinery or part. Furthermore, designers can analyze and test components they design right before their eyes. They can pull drawings apart, render them in three dimensions or in solid forms, enlarge details, apply colors, change shapes and viewing angles and subject them to electronically simulated temperature changes, mechanical stresses and other real-life conditions.

Once necessary changes resulting from these studies have been made, the car is recast in fiberglass for final review. With this approval, engineers move onto the next major task—building a prototype, a hand-made working model of the new car.



Assembly line

An automatic welding system uses computer-controlled robots to weld components in the body structures of Chrysler LeBaron GTS and Dodge Lancer automobiles.

When buying used, be rather careful

By **JANET GORDON**
Copley News Service

Whether you don't have enough cash to buy a new car, or whether you want to sell your old car to get enough cash to buy a new one, buying and selling used cars is a part of the American way of life.

But with used cars, a consumer runs a number of risks—whether he's buying or selling. When buying, a person runs the risk of buying someone else's lemon or a stolen vehicle. When selling, a person risks getting a fair price or having a lawsuit filed if paperwork is not handled correctly.

The best way to avoid these scenarios is to do as much research on the car as possible before buying or selling.

Following are tips from the Automotive Information Council.

To determine the appropriate price, check newspaper ads for vehicles similar to the one you are trying to buy or sell. Keep the condition of the car in mind—a consumer will not pay top dollar for a car with abnormally high mileage or in need of major repairs. Remember, too, that people selling used cars are in competition with used car dealers who have reconditioned their vehicles and offer a warranty.

If attempting to sell a car you're

still making payments on, you must get the title or a release from the loan agency.

If buying, don't buy a car that doesn't have all the proper paperwork. Check the car's Vehicle Identification Number with the VIN listed on the title.

If the paperwork looks right, request a test drive. Check to make sure that all lights, doors and windows work. Check the tires for wear and proper inflation. Ask if the seller has a record of car maintenance required over the past years.

If selling, go along on a test drive with the potential buyer or take some kind of security deposit. Request a certified check or cash as payment and don't let the buyer have the car or title until you receive payment.

When buying, avoid a deal if the seller absolutely demands cash. Always obtain a receipt for the sale, which both parties have signed. If selling, be sure to keep a copy of the receipt for yourself. The receipt should state the year, make and model, serial number of the car and the price paid. Indicate whether the car is sold "as is" or with some kind of guarantee.

Most state vehicle registrations must be transferred to the new owner. Also remember to cancel—or buy insurance coverage on the car.

Some tidbits on automobiles

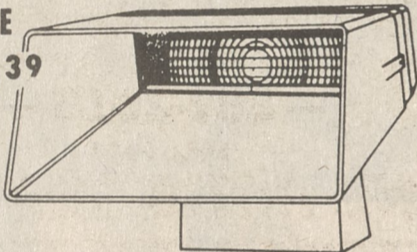
An invention that was to have an enormous impact on the rubber industry was announced in 1888 when the first practical pneumatic tire was made by John Dunlop in England.

The first president to ride in a car was Theodore Roosevelt, who, on Aug. 22, 1902, toured Hartford, Conn., in a purple-lined Columbia Electric Victoria. He was accompanied by Col. J.L. Greene.

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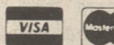


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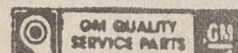
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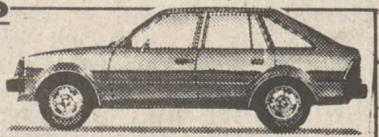


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