

Vehicle Manufacturing That Provides Joy and Excitement

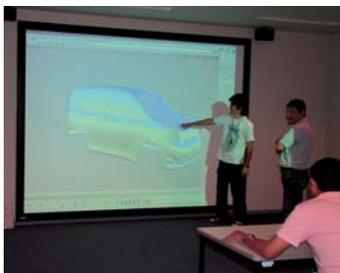
— A Commitment from “Development” Through “Production” —

Toyota Auto Body is deeply committed to vehicle manufacturing that provides joy and excitement to the customer by supervising the manufacturing processes from production planning on through design and production.

Vehicle Operations

Design and Development

Product design managers and designers are developing vehicle designs by making use of digital technology and thorough communication.



Checking design by digital image

Design plans using computer graphics

Design

For us at Toyota Auto Body, developing truly efficient and high-performance vehicles involves constructing CAE (Computer Aided Engineering) technology that allows simulation of basic vehicle performance at the design stage. We perform simulation analysis that corresponds to the actual vehicle. Moreover, we are actively expanding less time-consuming vehicle manufacturing with high-quality and high-performance through technologies that allow for *kaizen* and performance estimation at each stage through use of such as DA (Digital Assembly).



Collision simulation using CAE

Testing and Evaluation

We are performing analysis and evaluating the four major performances of operational stability, collision safety, strength durability, and vibration noise in order to develop and produce durable vehicles that gain the trust of our customers. Subjected to a strict evaluation covering all the angles, our vehicles are put through tests ranging from the Bench Endurance Test that simulates extended driving on poor roads, the Surrounding Condition Test (-30 degrees), and the Vehicle Driving Test on a test course.



Collision Safety Test



Vehicle Environment Test

Production

We have constructed a production line based on the concepts of “Safety” and “A Cooperative Industry That Achieves a Balance Between Humans and Their Equipment.” In thoroughly pursuing *kaizen* for work conditions and improving the work environment, we have created a flexible, highly-efficient line covering press through assembly by differentiating between the “human line” and use of the “unmanned process,” which has promoted a high-degree of automation.



① Press line



② Body line



④ Assembly line (Completed vehicles)



③ Paint line

Specially-Equipped Vehicles and Welfare Operations

Specially-Equipped Vehicles That Broaden Mobility

In answering to the differing needs of our customers and their environments, we are making efforts in engineering, development, and production for using our know-how and technology developed in our vehicle operations through specially-equipped vehicles and welfare operations that broaden mobility.

● **Loading Vehicles**

With ease of use, speed, and safety vehicles for export as the basis for transporting objects, we go further by considering the environment in supporting logistics in Japan.

● **Welfare Vehicles and Equipment**

In order to provide freedom and joy to society, we support the lives of senior citizens and the disabled by developing vehicles and equipment.

● **Specially-Equipped Vehicles for Export and Customized Vehicles**

In pursuing vehicle functional performance, convenience, and freedom of use, we tailor to the preferences of the user and the environment for use.



Porte, WelCab, and Friendmatic
(33rd International Home Care and Rehabilitation Exhibition)



Welfare Vehicle construction line



Construction line for loading vehicles



Construction line for specially-equipped vehicles for export

New Operations

Toward a New Field That Uses Technology and Know-how Cultivated by Vehicle Manufacturing

Linear Operations

In 1985, Toyota Auto Body developed and successfully mass-produced the world's first linear motor curtain for vehicles. Thereafter, we have expanded to products that apply this technology to residential linear motor-type curtains and linear motor-type doors, and also transport equipment for electric parts (IC).



Linear test room (Kotobuki New Development Center)



Linear rails

Water and Air Quality Operations

In 1989, Toyota Auto Body developed deodorizing equipment for the cargo rooms in transport trucks, and sold Ozone Water Deodorizer Cleaner. Since that time, we have pushed on to further please our customers through hearing their needs for smaller, lighter, and refined functions. Customers are satisfied with the effectiveness of our deodorizing and bacteria eliminating in many industries requiring a higher level of hygiene for the environment such as supermarkets, fisheries, and food processing facilities.



Assembly of Ozone products
(Ace Industry Co.,Ltd. Shinbayashi Plant)



Ozone Water Deodorizer Cleaner
[OZONE DASH TWIN 60PSA]

Research and Development

Research and Development of Kenaf and fuel cells are progressing as we look to strengthen new operations that contribute to manufacturing of next-generation vehicles. (Refer to page 32 for details)