

Kiryu Department

#### YAMADA MANUFACTURING

**YAMADA** https://www.yamada-s.co.jp

2-1284-35, Koubayashi-cho, Isesaki, Gunma, 379-2206, JAPAN



TEL:+81-(0)270-63-0221

■Isesaki Head Office
2-1296, koubayashi-cho, Isesaki, Gunma, 379-2206, JAPAN
TEL:+81-(0)270-40-9111

1-2757, Hirosawa-cho, Kiryu, Gunma, 376-8585, JAPAN TEL:+81-(0) 277-54-2379

■Engineering Department (Equipment Section・Metal Mold Section)

1-2757, Hirosawa-cho, Kiryu, Gunma, 376-8585, JAPAN TEL:+81-(0) 277-54-2382

■Isesaki Department

Hamamatsu Sales Office
7F, North Star Bldg., 216-4, Motoshirocho, Chuo-ku, Hamamatsu-shi,
Shizuoka, 430-0946 JAPAN
TEL: +81-(0) 53-413-1123

■YAMADA North America Inc.
9000 Columbus-Cincinnati Road, PO Box Y South Charleston,
TEL:+1-937-462-7111
Ohio 45368, U.S.A.

■YAMADA SOMBOON Co.,Ltd.

Siam Eastern Industrial Park, 60/4, 42/12 Moo 3, Mabyangporn, Pluakdaeng
Rayong 21140, THAILAND

TEL:+66-(0) 38-891-250

■Chengdu Yamada Auto Parts Co.,Ltd

No2 Shiji dadao, Chengdu Economic & Technological Development Zone,

Longquanyi, Chengdu, Sichuan 610100, CHINA

TEL:+86-(0) 28-84876350

■Yamada R&D China Co.,Ltd.

No2 Shiji dadao, Chengdu Economic & Technological Development Zone,

Longquanyi, Chengdu, Sichuan 610100, CHINA

TEL:+86-(0) 28-84879500

#### Company Profile



YAMADA MANUFACTURING CO.,LTD.

### Company Creed

Contribute to the society and prosper our life by making products with best quality and at minimum cost.



#### The Eagle Mark, a Guarantee of Technology and Reliability

An eagle maintains a piercing gaze as it soars to the farthest reaches of the sky. Yamada has long used this symbol rich in grandeur to represent the stance we ourselves present to the world. The Eagle Mark now appears on all Yamada products as a guarantee of technology and reliability.

# Company Creed

# Top Message



President

Masaru Sato

Founded in 1946, Yamada has been supplying auto parts for the critical functions of driving, steering, and braking, including transmission components, steering system components, and a variety of pumps, particularly oil and water pumps for automobiles and motorcycles.

Our mission throughout the more than 70 years of the company's history has been to manufacture products with "the best quality in the world". Based on our Company Creed of "Contribute to the society and prosper our life by making products with best quality and at minimum cost", we have built up relationships of trust by satisfying the expectations of auto manufacturers in Japan and elsewhere, and by striving to produce products to worldclass standards, in terms of both quality and other factors such as cost and delivery time. To deepen the bond with our customers and respond to increasingly diverse needs, including the protection of the global environment, we intend to continue deploying our comprehensive manufacturing practices, which extend from development through to production and delivery, on a global basis. This includes taking advantage of our advanced technical capabilities to develop the next generation of products, and producing them using our unique production technology. Based on the philosophy that, "a company is its people", the driving force behind our business is human resource development, which we undertake using our own training systems and materials. In addition to product development and production technology, we also seek to instill and maintain strong ethics and a sense of responsibility, and we have created an environment in which everyone in the company is enthusiastic and able to demonstrate the full extent of their abilities in their own way.

We intend to continue taking up challenges and working tirelessly to contribute to the progress of industry, particularly the automotive industry, by supplying products with world-leading quality that companies can trust, and also by supplying products and technologies that help people in their daily lives.



#### Brand message: Creating the Desired.

Expressed in this message is our strong desire for creating things that meet latent "wants" of the world with our even more original ideas, not to mention the history and strengths that Yamada has accumulated to this day. The message symbolizes Yamada's thoughts underscored in our management vision.

2

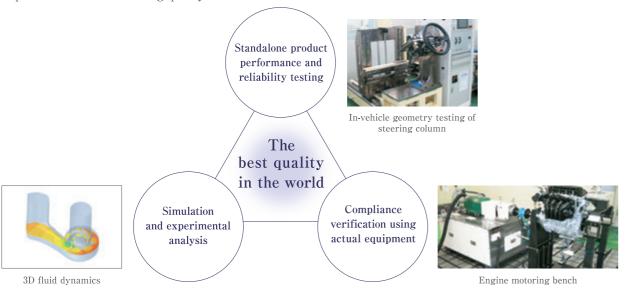


# Research & Development

Our distinctive technology platform for development of products with world-leading quality

innovative products

One of the strengths of our manufacturing business comes from our own distinctive technology platform for development, built on know-how acquired from our experience with a wide range of functional automotive components, particularly oil and water pumps. Using simulation analysis based on data acquired from research on specific topics, we can quickly produce product designs with a high degree of completeness. We also conduct performance and durability testing based on the actual conditions a part is likely to experience when fitted in a vehicle, using our own special equipment to perform both standalone unit tests and evaluations, and full system evaluations. Research and development based on these advanced technical capabilities provide the driving force behind our ongoing production of products with world-leading quality.



Taking up the challenge of new products and technologies to produce new generation of value

Yamada will never rest content with its own technological innovations. Based on the designs, analytical testing, and other core technologies we have built up over time, we strive on a daily basis to develop even more advanced technology, including study into new materials and the development of machining and assembly techniques. Based around the development of our key products including oil and water pumps that are smaller, lighter, and deliver higher performance, we are responding to the demands of the automotive industry, which are rapidly becoming more diverse and sophisticated, through measures such as the development of new products and through the research and development of new technologies that help make vehicles more fuel-efficient. For the future, we intend to continue enhancing our distinctive tech-

nical capabilities and supplying products that contribute to progress in a range of industries, particularly the automotive industry, but also in other fields such as the environmental sector.



Four R&D centers in different parts of theworld provide drive behind Yamada technology

Yamada operates four R&D centers, in Japan, America, China, and Thailand. The development division charged with coordinating these centers is equipped with a wide range of test equipment, such as actual condition testing equipment in the engine test bench building, and functions as a think tank for building up Yamada's core technology and developing our own new technologies. The duties of our overseas R&D centers also include developing product specifications and providing backup for local production based on customer needs and other

factors specific to different regional markets. The organic collaboration between these R&D centers helps improve Yamada's technical capabili-



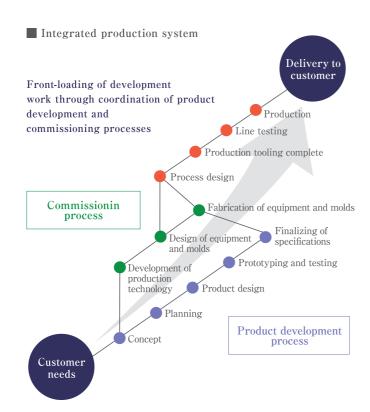
## Integrated Production System



### Trust earned through an uncompromising devotion to quality

#### Integrated production system for volume manufacturing of high-quality products

Yamada has adopted an integrated production system in order to maintain a level of product performance and quality recognized as among the best in the world. All processes from the forming of malleable materials using techniques such as casting or sintering through to machining and assembly are performed in-house. Through the detailed management and analysis of each process along our various different production lines, we are boosting our global competitiveness in the industry by establishing capabilities for reliable mass-production of products with high quality and low cost. Similarly, we are establishing a highly efficient and technological production system through ongoing improvements whereby our highly focused staff regularly seek to weed out the problems in each process.



#### Drawing on innovative technical capabilities to bring production system manufacturing in-house

Manufacturing at Yamada is not limited only to products. Our innovative technical capabilities are put to use in a range of different processes. In addition to making more than 70% of our production machinery in-house, we also manufacture most of the molds we use for casting. By developing, designing, and manufacturing everything from production machinery to molds in-house so that we can build optimal production lines at our factories in Japan and elsewhere, we have established a production system able to produce high-quality products efficiently. This policy of bringing production system manufacturing in-house is one of the factors behind the high reliability of Yamada products.



### Company-wide commitment to comprehensive quality control

To produce products with order of magnitude difference in quality, Yamada unveiled a grand plan for quality assurance entitled, "Achieving an order of magnitude quality improvement in customer satisfaction". This is bringing the capabilities of the entire company's together in an effort to improve product quality. Yamada has also gained certification under the IATF16949\* quality management system and we are working to strengthen our quality management systems and put business processes in place. We have also set up in-house testing stations equipped with a range of advanced analytical instruments at our factories and in the Engineering Division, including the R&D centers. These



are used to conduct quick and accurate testing during each of the processes of research and development, design, prototyping, testing, and production.

#### Human resource development system training the next generation of professionals

The passing on of skills is essential to the manufacture of world-leading products. To instill craftsmanship in young employees, we provide training in areas such as core technical skills and improving their use at the Yamada Technical Center (Y-Tec), which received official recognition as a technical college (vocational training school) from Gunma Prefecture in 2011. We undertake professional training in a various fields. This includes both specialist training involving systematic study of the knowledge, skills, and techniques needed for each profession, and level-specific training whereby trainees acquire the skills they need progressively as they ad-

vance their careers. Manufacturing at Yamada is underpinned by personnel equipped with superior skills, extensive knowledge, and tireless enthusiasm.



 <sup>\*</sup> IATF16949: A international quality standard based on the ISO9001 with additional provisions specific to the automotive industry.

#### Automobile parts

Automobile parts are Yamada's core products. We combine the latest technologies to develop and manufacture functional parts, including pumps, steering, and other components with high performance and quality.

Water pumps

Water pumps circulate coolant to keep engines and inverters cool.

Yamada water pumps feature superior characteristics that minimize

cavitation while still achieving a high level of efficiency. The

product range includes numerous variations to suit different drive

#### Oil pumps

Oil pumps supply lubricating oil to the powertrain. YAMADA's original tooth profile rotor realizes high efficiency and quietness. Our large product range encompasses oil pumps for a diverse range of applications.





Balancer integrated oil pump



30W class electric water nump

systems and a wide range of specifications.



Light weight water num

Producing world- leading products

with dependable performance

### Products

#### Motorcycle parts

Yamada develops and manufactures parts for all types of motorcycles, both small and large, including pumps, brake panels, speedometer gearbox parts, and continuously variable transmissions for scooters. Small and lightweight Yamada parts featuring high performance that takes account of the environment are available in a wide range of model variations and are widely used in motorcycles around the world.





Crank shaft connected oil pump

#### ■Steering column

Steering columns transmit steering wheel movements to the gear box. Yamada supplies steering parts that combine safety and comfort, including an impact-absorbing mechanism in case of an accident, and tilting and telescoping mechanisms to provide a comfortable driving position.



■Intermediate shaft



Steering column with tilt / telescopic function

Intermediate shafts are parts to prevent torque steer by equalizing

the lengths of the right and left drive shafts. We offer products

that are designed to be flexibly adapted to the vehicle parts layout.

#### **Transmission components**

Transmission components incorporating solenoid valves and other internal parts keep the oil pressure inside the transmission at the correct level and ensure it is supplied where required at the appropriate timing. These components demand an extremely high level of quality and Yamada works jointly with customers on developmentfr om an earlys tage.



Electric oil pump for transmission



Double-rotor oil pump for CVT



Oil Pump for Torque distribution control in AWD



Oil pump for multistage



for hybrid system

#### Other functional parts and flow measurement devices

Yamada also produces a large number of functional parts other than those for automobiles and motorbikes, such as golf cart gear boxes, outboard motor oil pumps, and generator exhaust pipes. Drawing on flow measurement technology built up over many years and our expertise in mechatronics, we also supply highly reliable test equipment to suit customer needs, including carburetor flow stands, pulse pressure generators, and standard flow generators.



Manual gear box for



Outboard motor oil pump



used in various test systems because of their ability to produce a constant flow.



Sonic nozzles are flow meters Laminar flow meters use the differential pressure method for precise flow measurement.



### Global Network

### Building a network that transcends borders with a focus on global markets

### Global development and production network delivers products to customers around the world

As a global manufacturer of functional parts for automobiles and motorbikes, Yamada has business operations at three sites in Japan as well as in America, Thailand, and the China. Each site has its specialty products that take advantage of local circumstances, and we utilize our network of relationships between plants to operate production efficiently. We operate our business globally to deliver Yamada products to customers around the world.





#### Seeking to become a company that is kind to people and the Earth, and appreciated in the places we do business

Multifaceted environmental initiatives aimed at making us a company that is kind to the Earth

All of our sites in Japan and other countries are accredited under the ISO14001 international standard. We have an action plan in place for protecting the environment, and environmental measures are incorporated into all company activities including formal environmental training for all staff. We are working on objectives such as zero emissions, whereby we minimize waste produced by manufacturing processes, and also resource recycling and energy efficiency improvements. We also play our part in making our car-based society kind to the global environment by supplying the world's automotive manufacturers with functional parts that are efficient and have a low impact on the environment.



#### Contributing to local communities so we can advance in tandem

Seeking to coexist in harmony with local communities, Yamada is actively engaged in a wide range of measures that contribute to society. In addition to local environmental measures and participation in summer festivals, these also include a wide range of other initiatives such as the establishment of a system of volunteer leave which allows staff time off to help with the recovery from the Great East Japan Earthquake. For the future, Yamada intends to actively pursue measures for contributing to society with the aim of becoming a company that is appreciated and loved in the places we do business.







Participation in ocal summer festival

9