

Business Activities

Materials Handling Equipment ————— P. 26-31

Automobile (Vehicle / Engine / Car Air-Conditioning Compressor / Electronics) ——— P. 32-37

Textile Machinery ————— P. 38

Materials Handling Equipment

As a market leader with an extensive knowledge of global logistics needs, Toyota Industries provides a range of materials handling equipment, mainly lift trucks, and logistics solutions to customers.



Medium-Term Direction of Business

We will work to develop and propose new products and services incorporating cutting-edge technologies through the proactive use of open innovation and co-creation with customers.

Our goal is to become the logistics solutions partner of the first choice for customers by meeting their wide-ranging needs and helping them increase their logistics efficiencies based on the Toyota Industries Group's comprehensive strengths covering both the lift trucks and logistics solutions fields.

Business Characteristics

Strengths

- An extensive logistics-related product lineup both for lift trucks (internal-combustion type, electric type, fuel cell (FC) type, etc.) and logistics solutions products (automated storage and retrieval systems, automatic guided vehicle (AGV) systems, automated lift trucks, etc.)
- High technological capabilities, including those linked to environmental and safety performance
- Production know-how that ensures high levels of quality and production efficiency
- Global, well-developed production, sales and service networks
- An extensive value chain encompassing in-house development and production of engines, motors and other key components; total after-sales services including maintenance and inspections as well as operational management; and sales financing operations offering more options in sales
- No. 1*1 in lift truck unit sales in the world
- A wealth of experience and know-how as well as a global network in the Logistics Solutions Business
- Software development capability to create such systems as a warehouse management system

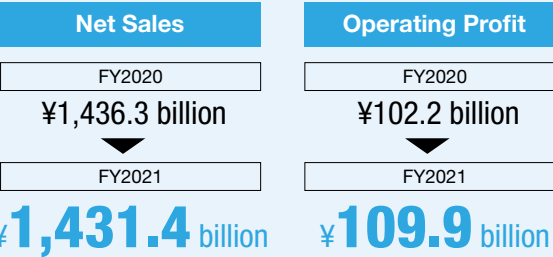
*1: Survey by Toyota Industries Corporation

Opportunities

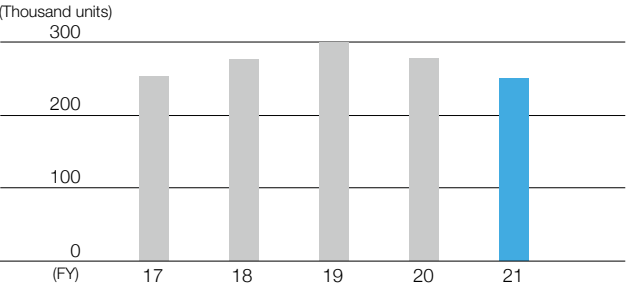
- An expansion of global logistics volume in line with an increase in the world population and economic growth
- Growing need for electric lift trucks and products with high fuel efficiency and low environmental impact following enforcement of more stringent environmental regulations around the world
- Rising need for higher logistics efficiencies prompted mainly by a growth in e-commerce transactions as well as soaring labor costs and labor shortages
- Growing need for automation and labor saving driven by the emerging need for contactless operations due to COVID-19
- Increased recognition that logistics is an essential business

Risks

- Restrained capital investment due mainly to a slowing economy and disasters
- Weaker sales due to intensifying competition
- Change in business environment triggered by an expanding market of low- to mid-priced lift trucks
- Suspension of production caused by supply chain disruptions
- Weaker demand for internal-combustion lift trucks resulting from more stringent environmental regulations
- Emergence of next-generation robotics products as an alternative to lift trucks



Materials Handling Equipment Sales



Business Overview in Fiscal 2021

The lift truck market in 2020 turned downward except for China, where sales continued to increase. Amid this operating climate, Toyota Industries engaged in sales and after-sales service activities matched to respective markets. However, unit sales of lift trucks for fiscal 2021 were down 28,000 units, or 10%, to a total of 250,000 units from the previous fiscal year. Meanwhile, as the need for higher logistics efficiencies in warehouses is getting stronger, underpinned by an expansion of the e-commerce market, Toyota Industries made efforts for reinforcement of the Logistics Solutions Business through collaboration with subsidiaries in the United States and Europe. Net sales in fiscal 2021 were roughly on par with the previous fiscal year at ¥1,431.4 billion.

Business Structure

Toyota Industries' Materials Handling Equipment Business is operated under a two-organization structure: Toyota Material Handling Group (TMHG) responsible for the Lift Truck Business and Toyota Advanced Logistics Group (TALG) engaging in the Logistics Solutions Business. TMHG and TALG collaborate with each other to achieve overall growth of the Materials Handling Equipment Business while reinforcing individual businesses.

Toyota Material Handling Group (TMHG)

Toyota Industries assists customers worldwide in attaining greater logistics efficiencies as a market leader in the materials handling equipment and logistics fields by delivering optimal logistics solutions based on its comprehensive strengths to respond to their specific and ever-changing needs on a global scale.

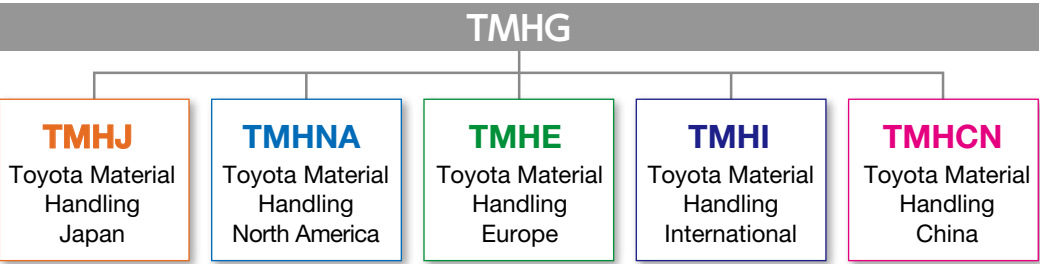
Under the TMHG management structure, we engage in the Lift Truck Business under the TOYOTA, BT, RAYMOND, CESAB and Tailift brands. Mutually utilizing the development and sales strengths of each brand, TMHG is promoting business globally.

We basically carry out product development in three regions, namely Japan, North America and Europe. Based on this structure, we develop and manufacture products in each region, which are matched to the specific local needs and characteristics, and ensure quick product delivery to customers. At the same time, we seek greater product appeal by conducting in-house development and production of such key components as engines and motors,

which greatly influence the performance of lift trucks. In response to the enforcement of stricter environmental regulations and growing eco-consciousness worldwide, we are improving the energy-saving performance and enhancing our electric lift truck lineup. We are also promoting the development of autonomous driving technology as a response to growing needs for greater logistics efficiencies mainly driven by labor shortages.

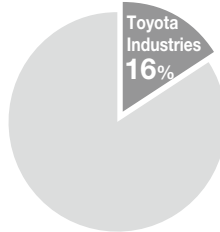
In addition to supplying high-quality products, we consider our strength to be able to support customers throughout our entire value chain that encompasses from providing after-sales services through our extensive networks to offering sales financing operations. On the sales front, we are offering products and logistics improvement solutions optimally matched to individual customers' logistics sites. Simultaneously, we are responding to needs for fleet management that optimizes the operation of multiple lift trucks for customers conducting business globally. In terms of services, we assign experienced and highly skilled personnel and utilize leading-edge information technology (IT) to provide finely tailored services to customers. Our service personnel visit customers on a periodic basis and provide maintenance services to prevent troubles from occurring. When a problem does occur, they swiftly make a visit to the customer and promptly take appropriate action. We are also strengthening our internal sales financing operations mainly in Europe, the United States and other developed countries in order to flexibly respond to customers' diverse needs, including those for fund procurement, in the area of equipment sales. Additionally, TMHG is collaborating with TALG to create synergies between the lift trucks and logistics solutions fields in development and other domains.

Toyota Material Handling Group



The Toyota Material Handling Group possesses several brands such as TOYOTA, BT and RAYMOND and engages in business by dividing the world into five areas: TMHJ (Japan), TMHNA (North America), TMHE (Europe), TMHI (Asia, Australia, etc.) and TMHCN (China).

Toyota Industries' Global Lift Truck Market Share
(Survey by Toyota Industries Corporation, 2020)



World No. 1

Main Products



Electric lift truck



Reach-type electric lift truck



Electric low lift truck



Internal-combustion lift truck



Automated lift truck

Toyota Advanced Logistics Group (TALG)

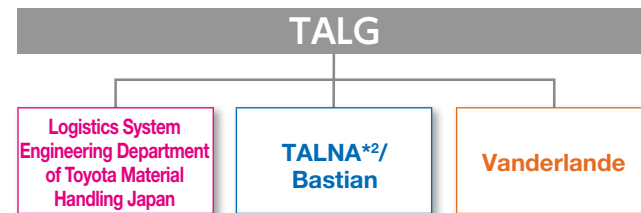
With accelerated expansion of the e-commerce market due in part to the growing need for contactless operations as a result of COVID-19, the need for logistics automation has been on the rise across the world. This has entailed increases in the number and size of distribution centers, which in turn have necessitated solutions for more advanced logistics issues.

Amid this environment, we go a step beyond just providing a broad range of materials handling equipment and associated software programs and are reinforcing our Logistics Solutions Business to more meticulously satisfy each customer's varying needs by leveraging our logistics improvement know-how accumulated to date.

Under the TALG management structure, the Logistics System Engineering Department of Toyota Material Handling Japan, U.S.-based Bastian Solutions LLC and Netherlands-

based Vanderlande Industries Holding B.V. are collaborating with each other in development, sales and other activities to expand business while leveraging their individual strengths.

Toyota Advanced Logistics Group



*2: Toyota Advanced Logistics North America (Holding Company of Bastian)

Under TALG, the Logistics System Engineering Department of Toyota Material Handling Japan, Bastian and Vanderlande work together to promote the Logistics Solutions Business on a global scale while leveraging their individual strengths.

Main Products and Systems



Business Activities in Fiscal 2021

Despite dropping sharply due to COVID-19, the world's lift truck market grew overall in 2020 as evidenced by a recovery trend after bottoming out in the first quarter in China and in the second quarter elsewhere. Over the full year, the market expanded considerably year on year in China, but shrank slightly from the previous year's level in Japan, North America, Europe and other emerging countries. Amid this environment, we worked to enhance the product appeal of our mainstay lift trucks and expand sales. We also strove to offer reliable after-sales services, enhance responsiveness to large-order customers and provide solutions for logistics issues through the introduction of optimally packaged systems.

In the field of lift trucks, we made efforts to increase our product lineup in each region and promoted the development of autonomous driving technology internally and with external organizations. We also worked to reinforce our IT-based services, enhance safety and augment our competitiveness in the environmental field mainly through electrification in order to ensure a more accurate response to individual customers.

With regard to engines to be fitted in the 2021 models of some internal-combustion lift trucks sold in North America, we have not been able to obtain the country's legally mandated engine certification (as of June 30, 2021). Consequently, we suspended the shipment of these models (gasoline/LPG type) in January 2021 and their production in

June 2021. We will work for early resolution of the issue and endeavor to receive certification by continuing to provide relevant information to the U.S. environmental authority.

In the logistics solutions field, we have been fostering cooperation in sales activities by mutually supplying equipment and systems while encouraging each TALG company to leverage its strengths to bolster business. We have also been accelerating coordinated activities as TALG such as promoting collaborative efforts in the planning and development fields. In April 2021, we established a new company, T-Hive B.V., in the Netherlands to develop a seamless control system for Toyota Industries' autonomous vehicles and systems, such as automated guided forklifts (AGF), automated guided vehicles (AGV) and autonomous mobile robots (AMR).

Meanwhile, Aichi Corporation, which possesses the top brand*3 in the field of aerial work platforms in Japan, made efforts to expand sales in the electricity and communications fields, while the market of special-purpose vehicles declined steeply due to restrained capital investment in the leasing industry. As a result, Aichi posted sales of ¥59.3 billion, or ¥0.9 billion, or 2%, over the previous fiscal year.

*3: Survey by Aichi Corporation



Activities of TMHG

Japanese Market

In 2020, while an expansion of the e-commerce market pushed up the demand for lift trucks, customers postponed their capital investment projects due to COVID-19, and the Japanese lift truck market declined overall. Unit sales of Toyota Industries' lift trucks were on par with the previous fiscal year at 45,000 units in fiscal 2021, but still maintained the top position*4 in calendar 2020 for the 55th consecutive year.

The diversification of customer needs, heightened on the back of an expansion of the e-commerce market, labor shortages and growing safety and environmental consciousness among companies, has further accelerated amid the COVID-19 pandemic. As the leading manufacturer of materials handling equipment, Toyota Industries has been proactively promoting the development and release of new products that lead to resolving issues facing customers.

As with the automobile industry, where development has been proceeding for cars equipped with advanced safety technologies, the logistics industry is facing a growing need for more widespread use of lift trucks equipped with functions to support safe operations. As a response, in April 2020 we added a safe operation assistance function, which had been available as an option, to our mainstay GENEIO-series internal-combustion lift trucks and gene B-series electric lift trucks as a standard feature. Through a synergistic effect with the System of Active Safety (SAS)*5, a proprietary safety system fitted in our main lift truck models since 1998, we will further help reduce accidents caused by lift trucks.

Needs are also growing for the automation of materials handling equipment to increase the efficiency of logistics operations and make them contactless. In cooperation with All Nippon Airways Co., Ltd., we have carried out a test trial of our autonomous towing tractors to carry baggage at Kyushu-Saga International Airport. The test trial has been a first*6 in Japan to take place in actual airport operations.



Autonomous towing tractor

*4: Survey by Toyota Industries Corporation based on data published by Japan Industrial Vehicles Association

*5: A safety system that helps to prevent the overturning of a lift truck and load spilling. It includes a function to ensure stability while rotating (swing-lock control of rear wheels) and a function to automatically control the angle of the mast when lifting cargo high up (mast tilt control).

*6: This test trial of baggage transportation in actual airport operations was the first of its kind conducted in Japan after the application of the Japanese government's guidelines for autonomous operations within an airport.

North American Market

With a year-on-year decline in the North American lift truck market in 2020, Toyota Industries posted combined unit sales of the TOYOTA and RAYMOND brands of 80,000 units, down 13% from the previous fiscal year, but still remained the market share leader*7 in 2020. Meanwhile,

parts sales and orders for after-sales services remained strong.

In 2020, Toyota celebrated 30 years of manufacturing in the United States, with cumulative total production surpassing 700,000 units. Along with enhancing the product offering with the release of new electric lift trucks and a high-capacity internal-combustion lift truck, Toyota proactively enhanced optional features that are based on ergonomics and serve to increase operability and reliability. In response to the growing need to automate intralogistics, Toyota launched AGFs fitted with the latest navigation system using Light Detection and Ranging (LiDAR) technology. Additionally, efforts related to the After Sales Service Evaluation and Certification (ASEC) program designed to increase the competitiveness of dealers and an initiative to improve operational efficiency in a systematic manner have proceeded steadily and produced positive results.

Raymond has also been active in releasing new products and enhancing functionality to satisfy various customer needs. The product lineup has been enhanced with the release of an electric low lift truck with battery management functionality and an automated lift truck for intralogistics, which boasts improved telematics functionality and utilizes a vision-guided technology of a partner company. Raymond has also started sales of a battery management system using next-generation lithium-ion batteries that have shorter charging time and are more compact and highly functional than conventional lead-acid batteries. Paired with the iWAREHOUSE fleet management system, it will increase the productivity of logistics sites, optimize battery usage and simplify maintenance work, thereby allowing cost reductions throughout the lift truck lifecycle.

We have established a program to provide funding to university research projects with the aim of facilitating the development of next-generation technologies in the materials handling equipment industry. In 2020, we strengthened our collaboration with two universities for respective research projects.

We will continue to leverage the strengths of each brand and reinforce technological development by utilizing automation, telematics and other advanced technologies. In addition, through closer collaboration with the Logistics Solutions Business, we will accurately respond to customers' needs for greater logistics efficiencies.

*7: Survey by Crist Information & Research, LLC, 2020



New AGF



Next-generation lithium-ion battery

■ European Market

Following the previous year, sales in the European lift truck market continued to decrease in 2020. Toyota Industries posted unit sales of 77,000 units in fiscal 2021, down 18% from the previous fiscal year. Conversely, orders for after-sales services and sales of parts remained steady.

In Europe, increases in logistics volume and small cargo delivery as well as a requirement for a shorter delivery time have pushed up the need for increasing the efficiency of logistics operations, mainly those of lift trucks, at distribution centers. As a response, Toyota Industries offers the L_Site fleet management system that connects more than 150,000 lift trucks to a network. Besides lift trucks' operational status, the system collects various information, such as data on impact detection and battery consumption. By analyzing the information and sharing the results with customers, the system not only achieves better lift truck operation and lower costs but also helps to increase safety awareness.



Notional image of Toyota L_Site

In terms of products, we are enhancing the lineup of models equipped with lithium-ion batteries. We are adding these models to low lift trucks and counterbalanced lift trucks in order to meet the diversifying needs of customers. Among internal-combustion lift trucks, a model fitted with our internally developed engine that satisfies the latest EU regulations is highly recognized in the market.



New electric low lift truck

Going forward, we will work to enhance the lineup of models offering excellent environmental performance. At the same time, to help customers achieve higher logistics efficiencies we will respond to the needs for connected and automated lift trucks, which are expected to grow further in the future, by utilizing the latest technologies.

■ ALOMA*⁸ and Chinese Markets

Toyota Industries covers the ALOMA markets of some 60 countries in Asia, Latin America, Oceania, the Middle East and Africa as well as the Chinese market. We are serving these markets with a lineup consisting of TOYOTA, BT, RAYMOND and Tailift brands.

The environment surrounding materials handling equipment in the ALOMA and Chinese markets underwent an unprecedented change in 2020. These markets temporarily turned downward from the previous year due to the rapid spread of COVID-19, but many ALOMA markets already began to recover in the latter half, showing a 96% year-on-year growth over the full term. Similarly, the Chinese market was quick to indicate a dramatic recovery and grew sharply by 137% over the previous year. The diversification of market needs has also accelerated further in the ALOMA and Chinese markets, as seen in strong environmental consciousness among more customers and a growing awareness of logistics costs. Against this backdrop, we have been making various efforts, such as initiating sales of Enelore, a new lithium-ion battery replaceable with lead-acid batteries used in our electrified lift trucks, releasing small electric hand pallet trucks in more countries and promoting the used lift truck business.



New Enelore lithium-ion battery

Jointly with dealers, Toyota Industries operates a program to promote sales activities with a focus on logistics improvement solutions and has been making proposals to visualize customers' logistics sites, improve their safety and reduce costs. Through the program, we have been strengthening our relationships of trust with customers and have successfully expanded our business domains.

In the field of after-sales services, we have established a structure to provide swifter and more efficient after-sales services by centrally and digitally managing information on lift trucks owned by customers and their history of repairs. We are putting in place a structure to offer extensive after-sales services by establishing a system to certify dealers' after-sales service facilities and offering programs to train service staff so that customers can use our products with an increased sense of reassurance.

As a total solutions partner capable of satisfying diverse logistics needs, we will make concerted efforts with dealers in each country to undertake various initiatives.

*8: ALOMA is a Toyota Industries term for Asia, Latin America, Oceania, Middle East and Africa.

Activities of TALG

■ Logistics System Engineering Department of Toyota Material Handling Japan

A sharp growth of the e-commerce market in recent years has increased inquiries and orders for large distribution centers. In response, we are striving to provide logistics solutions that cover the entire logistics process, encompassing the systems and equipment of Vanderlande and Bastian.

Logistics automation, in particular, has drawn much attention since a need for contactless operations grew in step with the spread of COVID-19.

In 2020, we put an automated lift truck to practical use in a freezer warehouse for the first time in Japan and launched a feasibility test jointly with Nichirei Logistics Group Inc. Additionally, we have conducted a feasibility test with TRUSCO Nakayama Corporation on the AiR-T autonomous intelligent mobile robot that assists picking operations in distribution centers. At the Aichi Robot Showcase, a project of Aichi Prefecture to promote the implementation of service robots in society, we made proposals on the use of the AiR-T in an office building and at a coffee shop.

In dealing with diversifying customer needs, we have taken a stake in +Automation Inc., a startup company providing a warehouse robotics system subscription service. Through this arrangement, we have been examining new sales methods and have reinforced the lineup of sorting robots used in distribution centers.

■ Bastian

Bastian, mainly operating in the North American market, has been responding to the logistics automation needs of customers in a broad range of fields, including the manufacturing, retail and e-commerce sectors, and receiving an increasing number of orders.

Based on a wealth of know-how accumulated in past projects, Bastian has increased its capabilities for large system development and integration, thereby successfully



Automated lift truck operating in a freezer warehouse



AiR-T



t-SORT sorting robot

receiving orders for a number of large projects in fiscal 2021.

Capitalizing on its strengths in software and other technology development, Bastian has been promoting collaboration with other companies in the Toyota Industries Group. For example, Bastian has received, jointly with Vanderlande, an order for a project of a leading e-commerce operator in North America and started to provide software programs to the Logistics System Engineering Department of TMHJ. In North America, Bastian has also been accelerating its offering of logistics solutions to lift truck users by reinforcing collaboration with dealers of the TOYOTA and RAYMOND brands.

■ Vanderlande

Vanderlande, offering logistics solutions globally, has received many orders from leading companies in various business categories for their projects to establish distribution centers, capturing growing needs prompted by COVID-19 for more advanced logistics in the e-commerce, retail and parcel services sectors. For the warehouse logistics and parcel/postal services businesses, Vanderlande has been accelerating system development respectively optimized for operations of industry's top companies and focused business categories.

In the airport business, amid difficult operating conditions Vanderlande obtained orders for systems for new terminals from existing airport customers as well as long-term servicing contracts based on its long-standing relationships of trust.

Vanderlande is also promoting collaboration to further augment relationships with other companies within the Toyota Industries Group, working together with the Logistics System Engineering Department of TMHJ and Bastian to introduce its systems into the markets in Japan and North America, respectively.



System operating in an e-commerce distribution center



High-speed sorting system used in the e-commerce and apparel sectors



Airport baggage handling system

Automobile

In the fields ranging from vehicle to engines, car air-conditioning compressors and electronics, Toyota Industries continues to meet the expectations and trust of its customers.



Business Characteristics

Strengths

- An agile structure to undertake all aspects from planning and development to production within a plant (Vehicle)
- Highest-level production efficiency and quality among all Toyota-affiliated automobile body manufacturers (Vehicle)
- Know-how on the development and production of diesel engines and turbochargers (Engine)
- Highly efficient production of high-quality gasoline engines, including those for use in hybrid electric vehicles (HEVs) (Engine)
- Excellent product development capability centered around fuel efficiency and car electrification (Car air-conditioning compressor)
- Global top-share*1 products for use in a full range of vehicles, from internal-combustion vehicles to HEVs, plug-in hybrid electric vehicles (PHEVs), battery electric vehicles (BEVs) and fuel cell electric vehicles (FCEVs) (Car air-conditioning compressor)
- *Monozukuri* (manufacturing) using equipment created in-house to produce high-quality products and flexibly accommodate changes in production volume (Car air-conditioning compressor)
- Higher technological capabilities accumulated through the development and production of products for Toyota Motor Corporation (TMC), external sales and internal use (Electronics)
- Development, production and top-level quality of electronic parts and devices for electrified vehicles (Electronics)

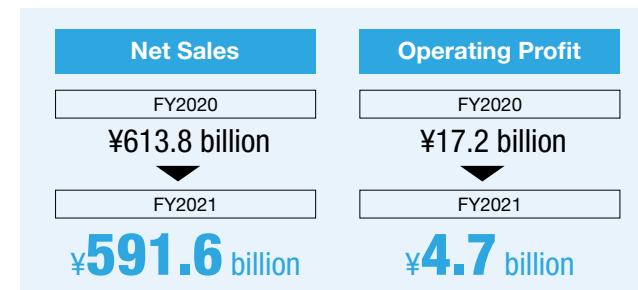
Opportunities

- Increasing needs for fuel-efficient products due to stricter environmental regulations and growing environmental consciousness
- Sales expansion in each sector in line with growth of the automobile market

Risks

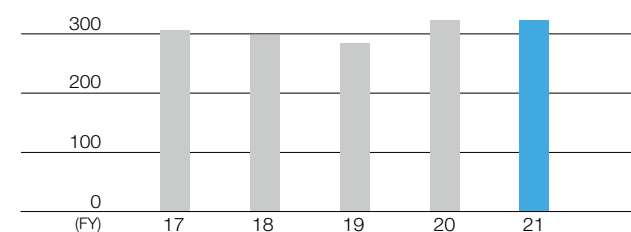
- Shrinking of the automobile market caused by economic slowdown
- Customers becoming less willing to buy fuel-efficient products following less stringent environmental regulations
- A drop in product competitiveness due to the yen's appreciation or a rise in raw material costs
- Suspension of production caused by supply chain disruptions

*1: Survey by Toyota Industries Corporation



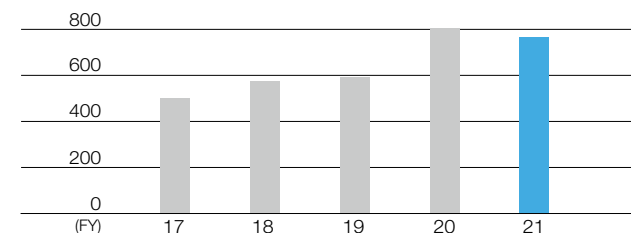
Vehicle Sales

(Thousand units)



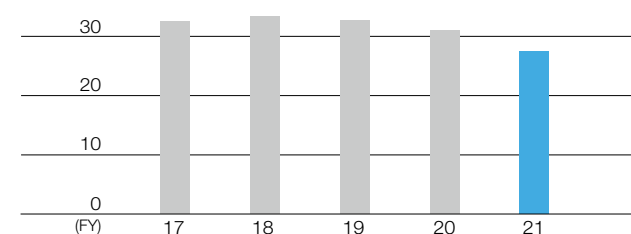
Engine Sales

(Thousand units)



Compressor Sales

(Million units)



Vehicle

Medium-Term Direction of Business

We will contribute to TMC as a development and production base of compact sports utility vehicles (SUV) by leveraging our comprehensive strengths derived from the highest level of safety, environment, quality, cost and delivery (SEQCD) among all Toyota-affiliated automobile body manufacturers and through greater collaboration within the Toyota Industries Group.

Business Overview in Fiscal 2021

In fiscal 2021, sales of the RAV4 posted an increase in Japan, which was offset by a decline in sales elsewhere. As a result, unit sales remained on par with the previous fiscal year at 323,000 units. Net sales decreased by ¥1.6 billion, or 2% year on year, to ¥88.3 billion.

Nagakusa Plant to Initiate Production of a PHEV Model Added to the RAV4 Lineup

For the RAV4, which became the first Toyota vehicle in a decade to receive the Car of the Year Japan 2019-2020 award, a PHEV version was added to the lineup in June 2020, and Toyota Industries' Nagakusa Plant initiated production of the new model. The RAV4 PHV is equipped with a high-capacity, high-output lithium-ion battery, which achieves a driving range of 95 km in the EV mode. The model also realizes powerful acceleration and boasts greater fuel efficiency, thus offering superior environmental performance. Moreover, a system to feed power externally, useful during disasters and for outdoor activities, is a standard feature of the RAV4 PHV.

The Nagakusa Plant is the only plant in Japan to manufacture the RAV4 PHEV. As such, we will continue to help promote car electrification in the future.



RAV4 PHV

HARRIER Designed and Developed by Toyota Industries Selected as Good Design Best 100

The new HARRIER released by TMC in June 2020 was included in the 2020 Good Design Best 100 under the Good Design Award program, receiving high recognition for its exterior and interior designs that are both dynamic and sophisticated, bringing every detail together at a high quality level.

In addition to the design of the vehicle's upper body, Toyota Industries also developed its outer shape and interior.

In order to continue meeting customers' expectations, we will work to strengthen our vehicle planning and development capabilities and ensure quality.



HARRIER selected as Good Design Best 100

Presenting a RAV4 Concept Model at Tokyo Auto Salon 2021

We have been engaging in activities to turn the RAV4, for which Toyota Industries carries out from development to production, into an even more exciting and appealing SUV. As part of these activities, we presented the RAV4 5D*2-ADVENTURE at Tokyo Auto Salon 2021. It is a concept model exclusively created for mountain rescue operations based on a survey on professional-use vehicles running in a harsh environment. In order to reach a destination reliably and safely to start a rescue operation, the model is built from a professional viewpoint and incorporates various equipment and functions to enable driving in mountain areas under rough weather. We intend to utilize the outcome of these activities in future development of the RAV4.

*2: Features five action patterns ("dimensions") of rescue team members, enabled by the vehicle's unique equipment and functions.



RAV4 5D-ADVENTURE

Engine

Medium-Term Direction of Business

In line with the adoption of the Paris Agreement, an international framework to address climate change issues in 2020 and beyond as well as the announcement by some countries to accelerate efforts toward carbon neutrality, there is a growing demand for engines with even greater fuel efficiencies and cleaner emissions. Amid this environment, we aim to contribute to a reduction of CO₂ emissions by meticulously meeting customer needs for diverse engine systems and developing new, globally top-level technologies and products that also respond to car electrification.

Business Overview in Fiscal 2021

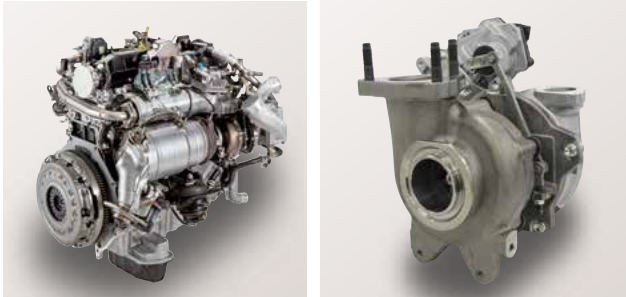
Unit sales in fiscal 2021 totaled 765,000 units, a decrease of 42,000 units, or 5%, from the previous fiscal year due to declines in sales of GD diesel engines and M20A gasoline engines. Thanks to an increase in sales of foundry parts, however, net sales increased by ¥1.4 billion, or 1% year on year, to ¥139.9 billion.

Engines for Automobiles

■ Diesel Engines

Needs for powertrains are becoming diverse depending on the region. The requirement is also growing mainly in emerging countries for diesel engines, which have high fuel efficiency and excellent torque at a low speed, as a power unit suited for SUVs and such commercial vehicles as pickup trucks. Toyota Industries' diesel engines are mounted in a variety of vehicles, including the Toyota Land Cruiser series, the world's renowned full-fledged four-wheel drive (4WD) model, and TMC's Innovative International Multipurpose Vehicle (IMV) series targeting emerging countries. Their high performance and reliability have gained strong market recognition. Currently, our mainstay products are in-line 4-cylinder GD diesel engines and V-type 8-cylinder VD diesel engines. The GD diesel engine is equipped with a turbocharger that provides significantly better performance through the adoption of new technologies, such as a ball bearing-type system.

As a global engine supplier, we will continue to undertake entire operation from development to production and supply diesel engines that can win the heart of customers worldwide.



High-output GD diesel engine and new turbocharger

■ Gasoline Engines

Our Toyota New Global Architecture (TNGA)*3 gasoline engines, namely the 2.5-liter A25A and 2.0-liter M20A, are mainly fitted in the RAV4 and HARRIER, which are achieving robust sales. Developed based on the TNGA concept, these engines offer both excellent driving performance and environmental performance. Responding to the advancement of car electrification, we have also added an HEV version of the A25A engine to our lineup.

In April 2021, we also started production of a turbocharger for gasoline engines mainly fitted in the Lexus RX and Crown. We are working to steadily increase the

number of models equipped with this turbocharger. We will further improve the quality and productivity of our gasoline engines and turbochargers used in these engines and contribute to the creation of "ever-better cars" by TMC.

*3: Development policy and method for vehicle creation based on a modular platform



2.5-liter A25A engine for HEVs

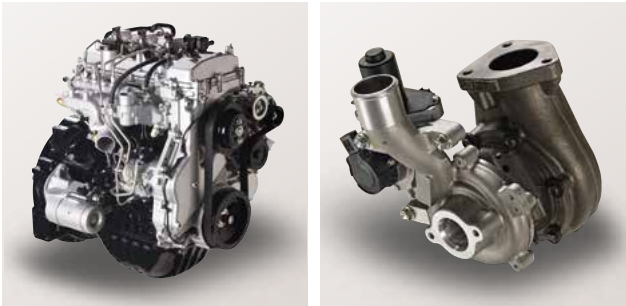
Turbocharger for gasoline engines

Engines for Industrial Fields

Toyota Industries' engines are highly renowned for their reliability and excellent environmental performance in industrial fields as well. These engines are used for a wide variety of applications, including our lift trucks, and adopted by many manufacturers of GHPs*4, CHPs*5, generators and construction machinery. These engines offer downsized displacement compared with conventional models with equivalent output, resulting in higher fuel efficiency, cleaner emissions and a reduction in size.

*4: Short for gas heat pump; air conditioner driven by a gas engine

*5: Short for combined heat and power; co-generation system



Toyota 1ZS diesel engine and turbocharger

TOPIC

Participating in a Verification Test on Engines for River Drainage Pumps

In April 2021, Toyota Industries was selected as an engine manufacturer for a project to develop, introduce and utilize mass product drainage pumps, for which the Ministry of Land, Infrastructure, Transport and Tourism publicly solicited participants. The project aims to demonstrate a new system to operate river drainage pumps, which uses multiple diesel engines of mass-produced vehicles instead of a conventional, dedicated large diesel engine. Toyota Industries' 1GD diesel engine has been approved for the project.

Car Air-Conditioning Compressor

Medium-Term Direction of Business

In the Car Air-Conditioning Compressor Business, we leverage our core compression technology and have become an innovative component supplier amid an expected advancement in car electrification and autonomous technology.

We will further enhance our capability to develop products that offer excellent fuel efficiency, quieter operation, compactness and light weight. At the same time, with the aim of satisfying needs of a broader variety of customers, we will utilize our accumulated technologies to expand our development domain into core components for drive systems.

Business Overview in Fiscal 2021

In fiscal 2021, unit sales of car air-conditioning compressors decreased 3.52 million units, or 11%, from the previous fiscal year to 27.51 million units due mainly to lower sales in North America and Europe. Net sales were down ¥26.6 billion, or 8%, from the previous fiscal year to ¥301.6 billion.

Development Efforts Centered around Fuel Efficiency and Car Electrification

Even though growth in the car air-conditioning compressor market is currently slowing down due to the stagnating automobile market, we expect continued growth over the medium term on the back of expanding automobile sales and an increase in the number of vehicles fitted with an air conditioner. Unit sales of electrified vehicles, in particular, are expected to grow significantly for the foreseeable future as automakers aggressively roll out new models to accommodate stricter fuel efficiency regulations in respective countries and expanding customer needs. Amid this environment, we will further reinforce product development for not only compressors for internal-combustion vehicles, which are still mainstay products as of now, but also compressors for electrified vehicles, for which we anticipate stronger demand.

■ More Compressors with High Fuel Efficiency to Receive Off-Cycle Credits

More stringent fuel efficiency standards have been enforced across the world, pushing the need for higher fuel efficiency both for internal-combustion vehicles and electrified vehicles. In the United States, our SES series for internal-combustion vehicles became the industry's first compressor to be approved under the country's off-cycle credits program. The program gives off-cycle credits to technologies that can effectively improve fuel efficiency. Since receiving the first*6 accreditation, we have acquired credits for our compressors for electrified vehicles as well, and the number of models equipped with these compressors has been growing.

■ Strengths of Toyota Industries' Electric Compressors

CSR Material Issue

Since launching the world's first*6 mass production of electric compressors in 2003, our products have been used in HEVs, PHEVs, BEVs and FCEVs of Toyota, Ford, Daimler, Honda, Nissan and other automobile brands. We have been undertaking efforts to further increase the appeal of these compressors based on our technology and know-how accumulated through the development of a broad range of models. Among various electrified vehicles, BEVs in particular are facing the growing need for higher electric efficiency while a heater is turned on as well as for cooling heat-emitting key components, such as batteries. In response, we have been developing and manufacturing high-capacity types by leveraging our strengths represented by high efficiency and reliability.

In addition to enhancing product appeal, we plan to further reinforce our capability to support automakers, for example, by proposing solutions to issues related to an automobile as a whole, and ultimately expand sales.

*6: Survey by Toyota Industries Corporation

	Our Strengths in Electric Type	Our Initiatives
Common to all electric compressors	Broad product lineup	Applicable to a variety of vehicle models from compact to luxury cars
	Higher efficiency in power consumption / Lower noise / Less vibration	Design with our patented technology while ensuring product quality and performance in mass production by leveraging precise machining/assembly technology
	Support capability to automakers	Proposal of problem solutions to automakers
Electric compressors for BEVs	Prevention of radio disturbance on home electrical appliances while charging BEVs	Improvement of inverter performance achieving lower electromagnetic noise
	Improving electric efficiency while a heater is turned on	Development of high-efficiency compressors for heat pump air conditioning system
	Cooling such devices as batteries	Expanding our business field to driving components with reliability

■ Utilizing Compression Technology to Extend Our Role into the Field of Core Components for Drive Systems

CSR Material Issue

Going a step beyond the cooling functionality of car air-conditioning compressors, we have utilized our compression technology accumulated to date to develop and manufacture air compressors, which take in and compress air to efficiently supply the oxygen necessary to generate power, as well as hydrogen circulation pumps. We aim to play a role in realizing a hydrogen-based society by contributing to an improvement in the performance of FCEVs through the development of these components.

TOPIC

The new MIRAI FCEV released by TMC in December 2020 uses an air compressor and hydrogen circulation pump newly developed by Toyota Industries. The air compressor is the world's first*⁷ mass-produced product to adopt a centrifugal method using a movable roller-type traction drive unit. Not only does the product achieve a 24% compression efficiency improvement, 35% weight reduction and 45% size reduction compared with the previous model but it also contributes to the higher output of the new MIRAI. The hydrogen circulation pump adopted a new seal structure that offers better corrosion resistance. This makes it possible to change the material used for the pump from stainless steel to aluminum, thereby realizing a 41% weight reduction.

*⁷: Survey by Toyota Industries Corporation



Oxygen-supplying air compressor

Hydrogen circulation pump

Production-Related Strengths Underpinning Quality and Performance

High-precision machining and assembly technologies are essential in realizing high quality and the superior performance of products. Toyota Industries realizes high-speed and high-precision machining by leveraging its know-how accumulated through responding to the stringent demands of automakers worldwide and by developing devices from processing machines to associated cutting tools in-house.

Establishing Stronger Global Production and Supply Structures

In step with the move toward more stringent fuel efficiency regulations and car electrification, the car air-conditioning compressor market is expected to witness fluctuations in demand for compressors both for internal-combustion vehicles and electrified vehicles. In response, we are building a production structure less vulnerable to changes in production volume through such measures as automating our plants to save labor, designing mixed lines that enable the production of a wide variety of products and creating a framework to increase production capacities in a phased manner.

Meanwhile, we expect the rapid spread of electrified vehicles in China driven by the country's new energy vehicles (NEV) regulation*⁸. Accordingly, we will make sure to capture booming demand by promoting the local production of electric compressors. We have already initiated local production at TD Automotive Compressor Kunshan Co., Ltd. (TACK) in March 2020 and at Yantai Shougang TD Automotive Compressor Co., Ltd. (YST) in June 2021.

*⁸: Regulation in China mandating automakers to produce a certain percentage of BEVs and other new energy vehicles

Worldwide Bases of Car Air-Conditioning Compressors (As of March 31, 2021)



Toyota Industries' car air-conditioning compressors are widely adopted by automakers around the world, garnering the No. 1*⁹ position in global sales.

*⁹: Survey by Toyota Industries Corporation

Electronics

Medium-Term Direction of Business

Car electrification is steadily progressing in keeping with the enforcement of more stringent environmental regulations and growing energy-saving consciousness among customers. The Electronics Division will contribute to car electrification in a broad range of fields, from offering on-board power source devices to improving social infrastructure through the provision of charging stands and systems to feed electricity externally.

Business Overview in Fiscal 2021

Net sales of electronics products expanded, primarily supported by sales of on-board chargers for PHEVs and BEVs.

Contributing to Car Electrification

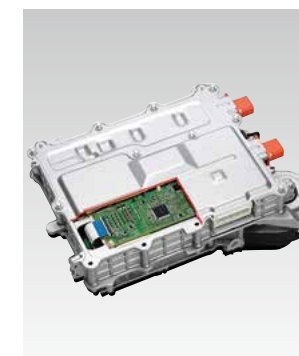
Toyota Industries develops and manufactures on-board power source devices, including DC-DC converters, on-board chargers and AC inverters, and charging stands. We sell these products mainly to TMC and other automakers across the world.

A DC-DC converter converts the high voltage of on-board batteries into a lower voltage level to supply power to standard electrical devices such as lights and wipers. Our DC-DC converters are fitted in the Prius, Aqua and other major electrified vehicles. By utilizing such technologies as the world's first thick copper substrate*¹⁰, we have reduced the product volume and weight.

An on-board charger converts AC voltage from the power grid into DC voltage in vehicles and is necessary for charging PHEVs and BEVs, for which the market is expected to expand in the future. We offer chargers compatible with a wide range of voltages to enable their use in various parts of the world.



DC-DC converter



On-board charger

In addition, we have been contributing to car electrification also in terms of infrastructure by developing public charging stands for PHEVs and BEVs.

*¹⁰: Survey by Toyota Industries Corporation



Charging stand for PHEVs and BEVs

Helping to Increase the Competitiveness of Our Electrified Products

We will leverage our technology and know-how cultivated in the development of vehicle power source devices to engage in the development of electronic components in other businesses as well, such as materials handling equipment and textile machinery, and to increase the appeal of our products. Through these efforts, we intend to spur greater synergistic effects among our businesses in moving ahead with electrification.

Use of an Electrified Vehicle as a Power Source during a Disaster

CSR Material Issue

In recent years, there has been a growing public attention to the use of high-capacity batteries of electrified vehicles as a power source. The 1.5-kW type AC inverter, in particular, can operate appliances that require more power, such as rice cookers and hot plates, and has drawn much attention as an emergency power source in a disaster in addition to camping, outdoor events and other applications.

In July 2020, we conducted a disaster prevention drill using the power source functionality of an AC inverter, which is fitted in the RAV4 PHV manufactured at the Nagakusa Plant. During the drill, we used the AC inverter to power multiple electric appliances simultaneously, such as a radio, TV, notebook PC, smartphone charger, lighting device, electric fan, refrigerator, heater and hot-water pot, and verified its usefulness as a power source.



Disaster prevention drill using AC inverter's power source functionality

Textile Machinery

Carrying on the philosophy of founder Sakichi Toyoda, which reflects his strong commitment to manufacturing, Toyota Industries responds to a broad range of needs with its extensive product lineup, from air-jet looms, for which we enjoy the world-leading market share* in unit sales, to ring spinning frames and roving frames.

Link to
product
details



* Survey by Toyota Industries Corporation

Business Characteristics

Strengths

- Broad product lineup both in the spinning and weaving machinery fields
- World-leading market share* in unit sales of air-jet looms
- Global, well-developed service network
- Ability to develop products that excel in reliability, energy-saving performance and versatility

Opportunities

- A rise in textile demand in line with an increase in the world population
- Further increasing applications in industrial textile products
- Increasing need for high-quality and highly functional yarn and textile products, following the economic growth of emerging countries

Risks

- Changes in each government's policies concerning promotion of the country's textile industry
- Weaker sales due to intensifying competition
- A decline in capital investment due to economic slowdown and raw cotton and/or yarn price fluctuations

Medium-Term Direction of Business

With growing environmental consciousness worldwide, needs are expected to increase further for textile machinery offering superior environmental performance. Toyota Industries' products are highly acclaimed by customers for their excellent reliability and productivity as well as energy-saving performance. We will continue to develop energy-saving and other innovative technologies and seek to achieve further growth and evolution as a leading manufacturer of textile machinery.

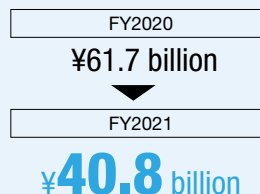
Business Overview in Fiscal 2021

On the whole, the environment surrounding the textile machinery market continued to be difficult. Unit sales of air-jet looms decreased 2,100 units, or 31% year on year, to 4,700 units. Combined with a decrease in sales of quality measurement instruments for fiber, yarn and fabric, net sales were down ¥20.9 billion, or 34%, from the previous fiscal year to ¥40.8 billion.

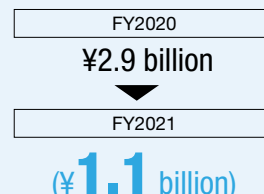
Growing Needs for Air-Jet Looms

Toyota Industries' air-jet looms are adopted by customers in China, India and many other countries. Produced fabrics are used broadly for towels, shirts and other clothing purposes

Net Sales

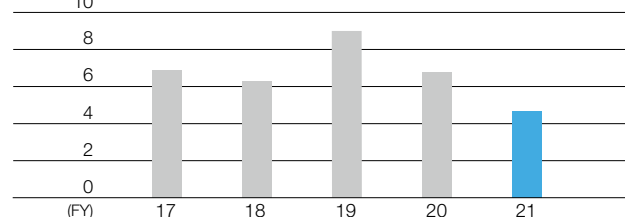


Operating Profit



Air-Jet Loom Sales

(Thousand units)



as well as in industrial products such as vehicle airbags. Recently, the need has been on the rise for fabrics such as woven glass fiber for use in smartphone substrates, and it is anticipated that applications for air-jet looms will expand further.

MOSAIC Yarn Spinning Device Receiving an Award at the National Commendation for Invention

Our MOSAIC yarn spinning device, offered as an option to the RX300 high-speed ring spinning frame, received the Minister of Economy, Trade and Industry Award at the 2020 National Commendation for Invention. The award recognized the device's ability to flexibly change the mixing ratio of two different types of roving materials in one yarn and to completely switch over between the two types, such as by chopping and reconnecting the roving materials. The resulting MOSAIC yarns enable unconventional, diverse fabric designs, helping to create a new market in the textile industry, mainly in the apparel field.

Yarn made using the MOSAIC yarn spinning device



A complete switchover between two colors (types) is possible with varying thickness.

The gradation of two colors (types) is possible via a gradual switchover.

<Reference: Normal yarn>

Consistent thickness and twisting



Product sample made with MOSAIC yarn