Toyota Industries Report 2013

Year ended March 31, 2013

TOYOTA INDUSTRIES CORPORATION

Corporate Philosophy

(Toyoda Precepts and Basic Philosophy)

Based on the Basic Philosophy that carries on the spirit of founder Sakichi Toyoda, the Toyota Industries Group contributes to the harmonious and sustainable development of society and the Earth.

Founder Sakichi Toyoda

■ Toyoda Precepts

Carrying out the spirit of founder Sakichi Toyoda,

- Always be faithful to your duties, thereby contributing to the Company and to the overall good.
- Always be studious and creative, striving to stay ahead of the times.
- Always be practical and avoid frivolousness.
- Always strive to build a homelike atmosphere at work that is warm and friendly.
- Always have respect for God, and remember to be grateful at all times.

■ Basic Philosophy

[Respect for the Law]

Toyota Industries is determined to comply with the letter and spirit of the law, in Japan and overseas, and to be fair and transparent in all its dealings.

[Respect for Others]

Toyota Industries is respectful of the people, culture, and traditions of each region and country in which it operates. It also works to promote economic growth and prosperity in those regions and countries.

[Respect for the Natural Environment]

Through its corporate activities, Toyota Industries works to contribute to regional living conditions and social prosperity and also strives to offer products and services that are clean, safe, and of high quality.

[Respect for Customers]

Toyota Industries conducts intensive product research and forward-looking development activities to create new value for its customers.

[Respect for Employees]

Toyota Industries nurtures the inventiveness and other abilities of its employees. It seeks to create a climate of cooperation, so that employees and the Company can realize their full potential.

- **Editorial policy** — In aiming to realize a deeper understanding of the Toyota Industries Group among a broad spectrum of stakeholders, the *Annual Report* and *Social and Environmental Report* have been combined into the *Toyota Industries Report* from the fiscal year ended March 31, 2008. In addition to the Toyota Industries Group's management policies, the report provides easy-to-understand information regarding its business, social and environmental activities over the past year as well as its future direction.
- **Period covered by the report** — This report focuses on activities carried out in fiscal 2013 (April 1, 2012 to March 31, 2013), but also includes some information outside this period.
- **Organizations covered in the report** — Toyota Industries Corporation and its consolidated subsidiaries
- **Reference guidelines**
  - Global Reporting Initiative (GRI) *Sustainability Reporting Guidelines* Version 3.1
  - ISO 26000
  - Japan's Ministry of the Environment *Environmental Accounting Guidelines* (2005 Version)
  - Japan's Ministry of the Environment *Environmental Reporting Guidelines* (2012 Version)

Contents

Cautionary Statement with Respect to Forward-Looking Statements

This report contains projections and other forward-looking statements that involve risks and uncertainties. The use of the words "expect," "anticipate," "estimate," "forecast," "plan" and similar expressions is intended to identify such forward-looking statements. Projections and forward-looking statements are based on the current expectations and estimates of the Toyota Industries Group regarding its plans, outlook, strategies and results for the future. All such projections and forward-looking statements are based on management's assumptions and beliefs derived from the information available at the time of producing this report and are not guarantees of future performance. Toyota Industries undertakes no obligation to publicly update or revise any forward-looking statements in this report, whether as a result of new information, future events or otherwise. Therefore, it is advised that you should not rely solely upon these projections and forward-looking statements in making your investment decisions. You should also be aware that certain risks and uncertainties could cause the actual results of Toyota Industries to differ materially from any projections or forward-looking statements discussed in this report. These risks and uncertainties include, but are not limited to, the following: (1) reliance on a small number of customers, (2) product development capabilities, (3) intellectual property rights, (4) quality issues, (5) price competition, (6) reliance on suppliers of raw materials and components, (7) environmental regulations, (8) success or failure of strategic alliances with other companies, (9) exchange rate fluctuations, (10) share price fluctuations, (11) effects of disasters, power blackouts and other incidents, (12) latent risks associated with international activities and (13) retirement benefit liabilities.

Contributing to the Enriched Lifestyles of People Worldwide and the Creation of a Comfortable Society

Toyota Industries wishes to offer products and services that will bring a smile to people's faces in their daily lives. Lift trucks* that support logistics operations around the world. Car air-conditioning compressors* that keep the vehicle interior comfortable. Logistics operations that deliver precious goods with care. Air-jet looms* capable of weaving various fabrics, including textile with exceptionally soft texture. We believe the task of the Toyota Industries Group is to continue to support lives filled with laughter and contribute to the creation of a society where people care about each other.

* World leader in unit sales of lift trucks, car air-conditioning compressors and air-jet looms (Survey by Toyota Industries Corporation)

Outline of Businesses

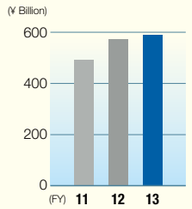
Materials Handling Equipment

The Materials Handling Equipment Segment develops, produces, sells and provides services for a broad range of products, from industrial vehicles centered around a full lineup of lift trucks (0.5- to 43-ton capacities) to materials handling systems. Lift trucks, a mainstay product of this segment, are delivered to customers around the world under the TOYOTA, BT, RAYMOND and CESAB brands through Toyota Material Handling Group.

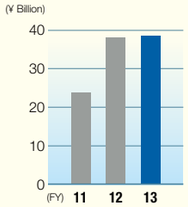
Toyota Industries also strives to provide finely tuned after-sales services, which comprise a crucial aspect of industrial goods, so that customers can always use our products in the best possible condition. For developed countries, we are leveraging well-established sales and service networks to raise the level of after-sales services. For emerging countries, we are not only reinforcing our sales and service networks but also providing service trainer development programs matched to the needs of respective countries and enhancing service training.

[Main Products]
Lift trucks, warehouse trucks, aerial work platforms, automated storage and retrieval systems, automatic guided vehicles

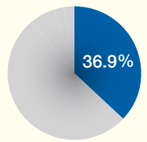
Net Sales



Operating Income



Percentage of Net Sales

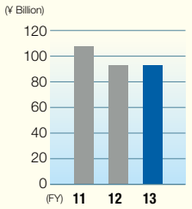


Logistics

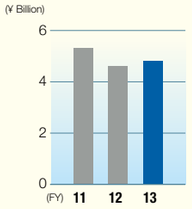
The Logistics Segment is composed of three business pillars: planning, design and operation of distribution centers to help customers reduce their logistics costs; land transportation services that primarily focus on cargo deliveries via trucks; and high value-added services such as cash collection and delivery and cash proceeds management services and data storage and management services.

[Main Services]
Planning, design and operation of distribution centers; land transportation services; cash collection and delivery and cash proceeds management services; data storage, management, collection and delivery services

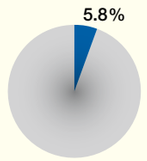
Net Sales



Operating Income



Percentage of Net Sales

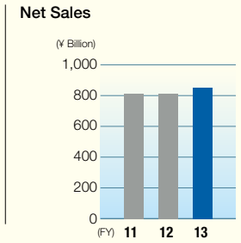


Automobile

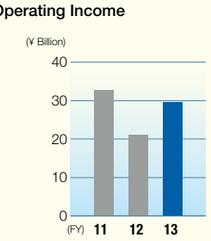
From vehicle assembly to parts production, the Automobile Segment engages in a wide variety of car-related businesses. Leveraging synergies among its business divisions in development and production, the Automobile Segment accounts for 53.2% of consolidated net sales and represents the largest business segment of Toyota Industries.

Vehicle	With its strengths as an industry leader in quality, cost and delivery, the Vehicle Business produces compact to midsize automobiles. **[Main Products]** Vitz (Yaris outside Japan), RAV4, Mark X ZiO
Engine	The Engine Business produces both diesel and gasoline engines. We co-develop diesel engines with Toyota Motor Corporation and possess a comprehensive structure ranging from planning and development to production. **[Main Products]** Diesel engines, gasoline engines
Car Air-Conditioning Compressor	Toyota Industries' car air-conditioning compressors are highly acclaimed in terms of their reliability at high operating speeds and quiet operation in addition to such excellent environmental-related performance features as compactness, weight reduction and fuel efficiency. The Car Air-Conditioning Compressor Business captures the top global share in unit sales*. * Survey by Toyota Industries Corporation **[Main Products]** Fixed-displacement type, variable-displacement type, electric type
Car Electronics	Utilizing power electronics circuitry technology and electric drive system development capabilities, the Car Electronics Business develops and produces electronics products for hybrid vehicles and other electric-powered vehicles. **[Main Products]** PCU direct-cooling devices, DC-DC converters, DC-AC inverters

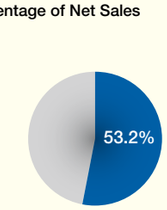
Net Sales



Operating Income



Percentage of Net Sales

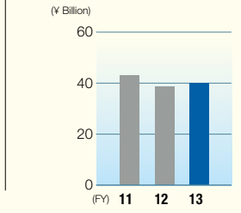


Textile Machinery

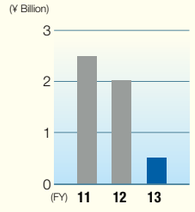
With a history dating back to the invention of an automatic loom by Toyota Industries founder Sakichi Toyoda, the Textile Machinery Business is a world leader in the textile machinery industry backed by an integrated structure that encompasses development, production, sales and service of weaving and spinning machines.

[Main Products]
Air-jet looms, ring spinning frames, roving frames

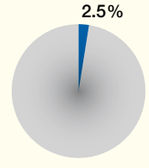
Net Sales



Operating Income



Percentage of Net Sales

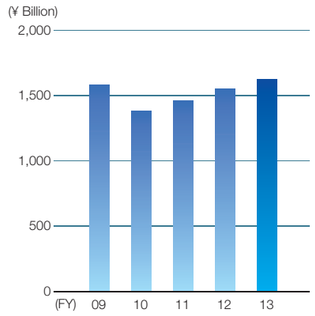


On any given day and any corner of the town, a broad range of Toyota Industries' products and services are making their mark. We will continue to be a company that brings smiles and satisfaction to everyone around the world in the fields of materials handling equipment, automobiles, logistics and textile machinery.

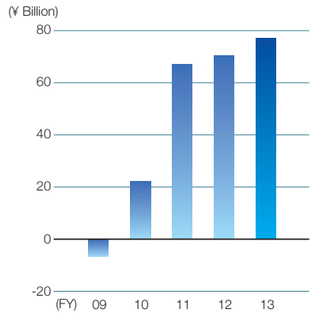
Financial Highlights

	Millions of yen					% change
	2013	2012	2011	2010	2009	2013 vs 2012
For the Year						
Net sales	**1,615,244**	1,543,352	1,479,839	1,377,769	1,584,252	4.7%
Operating income (loss)	**77,098**	70,092	68,798	22,002	(6,621)	10.0
Ordinary income	**86,836**	80,866	73,911	31,756	14,343	7.4
Net income (loss)	**53,119**	58,594	47,205	(26,273)	(32,767)	(9.3)
Research and development expenses	**39,057**	32,070	27,788	26,826	33,646	21.8
Cash dividends per share (yen)	**55.00**	50.00	50.00	30.00	40.00	10.0
At Year-End						
Total assets	**3,243,779**	2,656,984	2,481,452	2,589,246	2,327,432	22.1%
Total net assets	**1,524,933**	1,197,841	1,075,939	1,104,929	977,670	27.3
Number of employees	**47,412**	43,516	40,825	38,903	39,916	9.0

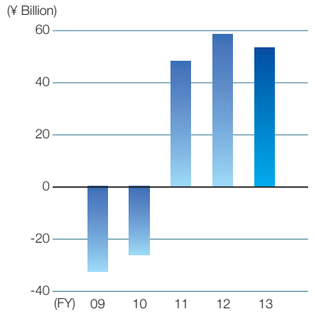
■Net Sales



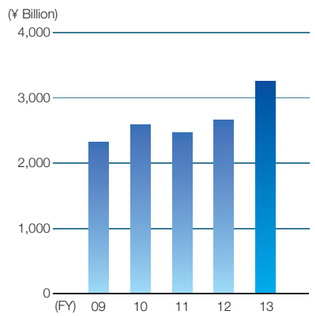
■Operating Income (Loss)



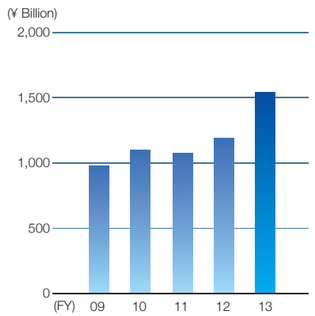
■Net Income (Loss)



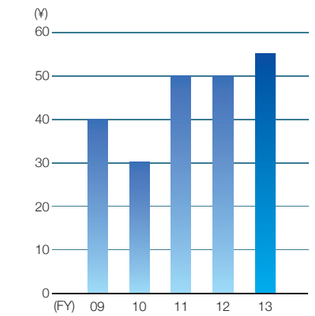
■Total Assets



■Total Net Assets



■Cash Dividends per Share



Top Message

To Our Stakeholders

Chairman Tetsuro Toyoda and President Akira Onishi, who were appointed to their respective positions after the general shareholders' meeting held in June 2013, explain our initiatives that have been implemented to build a firm business foundation as well as our measures to attain growth over the medium to long term.

Tetsuro Toyoda
Chairman

Akira Onishi
President

Establishment of a Foundation for Medium- to Long-Term Growth

Toyota Industries implemented profit improvement activities early on prior to the full-blown global recession that was triggered following the collapse of Lehman Brothers in 2008. We remained committed to improving profits, and just as our efforts began to pay off, we were struck with a series of serious events, including the Great East Japan Earthquake and the flooding in Thailand. The Toyota Industries Group prevailed against these hardships and initiatives undertaken during this period have enabled us to maintain a leaner business structure and gain strengths to generate greater profits.

Together with solidifying our defenses, we have also gone on the offensive to ensure that we capture business opportunities and translate them into business results. We have also been building a strong foothold in each business segment to achieve growth over the medium to long term.

In the Materials Handling Equipment Business, we proceeded with the expansion of our value chain by reinforcing development, production, sales and services operations. Our efforts in the Car Air-Conditioning Compressor Business included setting up an optimum supply structure less vulnerable to the impact of exchange rate fluctuations and enhancing the appeal of our products such as excellent fuel efficiency. In the Vehicle and Engine businesses, our focus has been on achieving an even higher performance in terms of quality, cost and delivery (QCD).

We believe that by steadily promoting these efforts we are on track for sustainable growth.

Additionally, investments were directed toward the establishment of optimum production and supply structures in the Materials Handling Equipment Business and the expansion of global production capacity in the Car Air-Conditioning Compressor Business. With regard to M&As, we are currently promoting an array of strategic alliances for further growth. These include acquiring key dealerships and welcoming Cascade Corporation, a U.S.-based manufacturer of lift truck attachments*, as a consolidated subsidiary. In the Textile Machinery Business, we acquired Uster Technologies AG, a Swiss-based manufacturer of cotton classing and yarn testing instruments. We expect that these measures, which are designed to achieve growth over the medium to long term, will begin to bear fruit in fiscal 2014.

We anticipate that uncertainties will persist in the business environment. As guidelines for achieving medium- to long-term growth, we unveiled our Vision 2020 and Medium-Term Management Plan in the fall of 2011. The Vision 2020 was formulated in line with our desire to contribute to a comfortable society and enriched lifestyles by offering products and services that truly reflect customers' needs in a timely manner.

Under the vision, the "solution" business unit, including materials handling equipment, and the "key components" business unit centered around car air-conditioning

compressors will facilitate global business development and expand our value chain as the driving force for growth and greater profitability of the entire Toyota Industries Group. The "mobility" business unit producing vehicles and engines for Toyota Motor Corporation (TMC) will further increase its strengths in terms of quality and costs to assume the dual role of contributing to enhancing the competitiveness of Toyota cars and supporting Toyota Industries' management foundation.

In order to ensure a leap forward in the future, we have formulated the three "muscular" strategies of "**3Es**," "**Value Chain**" and "**World Market**."

The first strategy focuses on 3Es (**Energy, Environmental protection and Ecological thinking**), which are the keywords in promoting environment-friendly manufacturing.

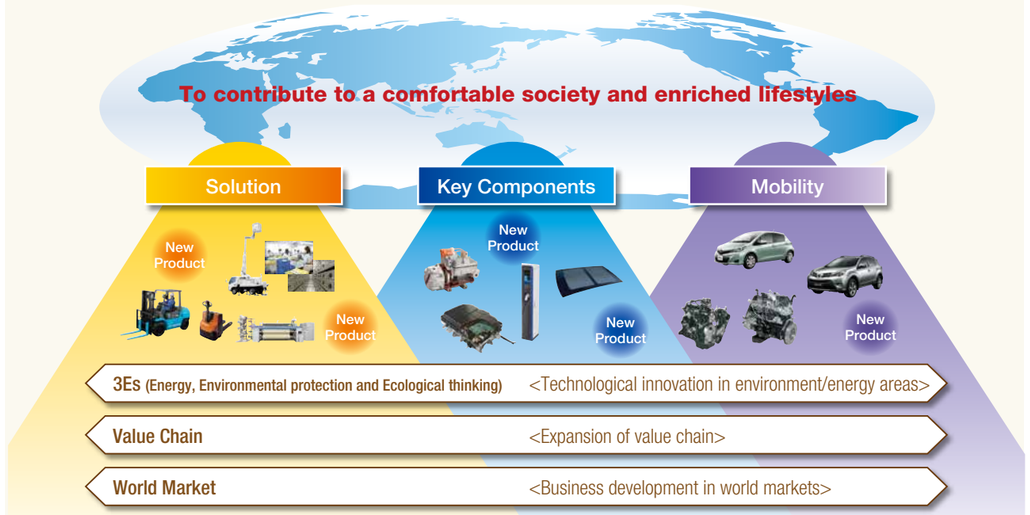
The second strategy concentrates on our **Value Chain**. In businesses such as materials handling equipment, we not only strive to offer high-quality products but also seek to be of service in every aspect of customer relations, for instance, through an after-sales maintenance services structure to ensure our products are continuously used in optimal condition.

Our third strategy, which targets the **World Market**, reflects our desire to extend our geographical coverage to include both developed countries and emerging countries and to deliver our products and services to customers on a truly global scale.

We aim to realize the Vision 2020 by deploying these

Vision 2020

Support industries and social foundations around the world by continuously supplying products/services that anticipate customers' needs in order to contribute to a comfortable society and enriched lifestyles



strategies across the three business units and achieving growth in each business.

* Devices that are attached in place of forks of lift trucks for directly grabbing or rotating goods for enhanced operability and logistics efficiency

Initiatives and Business Results for Fiscal 2013

Overall, fiscal 2013 was marked by a modest economic recovery underpinned by steady economic growth in the United States and Southeast Asia, despite the European debt crisis and the slowing of China's economic growth. For Toyota Industries, fiscal 2013 was the first year of our Medium-Term Management Plan (fiscal 2013 to fiscal 2016), and we promoted various offensive measures concerning production and sales operations in respective businesses. In addition, to realize growth over the medium to long term, we actively engaged in research and development in the fields of environment- and energy-related technologies, including electrification.

In the **Materials Handling Equipment** Business, aggressive sales expansion efforts were undertaken in Europe and the United States through initiatives such as utilizing acquired key dealerships. In emerging countries, we concentrated on bolstering our sales and service capabilities. These efforts enabled us to achieve better year-on-year business results outperforming the market, which remained on par with the previous year. In the face of the persistently weak market in Europe, we made various efforts that included a reduction in production lead time for lift trucks, resulting in successfully obtaining large-fleet orders.

In March 2013, we acquired U.S.-based Cascade Corporation and made the company into a consolidated subsidiary. One of the world's largest manufacturers of lift truck attachments, Cascade is renowned for its excellent capability in responding to customers' diverse needs. By adding their lift truck attachments to our lineup, we expect to expand our business domain, which will enable us to meet a broader range of customers' logistics needs and achieve further growth of the Materials Handling Equipment Business.

Among automobile-related businesses, the **Car Air-Conditioning Compressor** Business recorded an increase in unit sales in North America and Asia, where car

sales showed strong growth. The **Vehicle** Business smoothly launched production of the new RAV4, which underwent a full model change for the first time in seven years. The **Engine** Business posted higher unit sales of diesel engines for TMC's Innovative International Multi-Purpose Vehicle series that specifically targets emerging countries, pushing up overall unit sales to a record high. In addition to sales to TMC, the **Car Electronics** Business expanded sales of products for hybrid vehicles (HVs) and other types of vehicles to other automakers in and outside Japan, thereby making a greater contribution to our overall business performance.

The **Logistics** Business posted net sales on par with the previous fiscal year. Although sales of logistics services declined as a result of the sale of our shares in a subsidiary, sales of land transportation services for automotive parts increased. In the **Textile Machinery** Business, slower economic growth in China, one of our primary markets, resulted in lower sales. Nevertheless, we worked to revitalize the stagnant market by bolstering our sales activities primarily for air-jet looms, which boast the world's top share in unit sales*.

As a result of these efforts, Toyota Industries posted net sales of ¥1,615.2 billion and operating income of ¥77.0 billion in fiscal 2013, exceeding the previous fiscal year's results.

* Survey by Toyota Industries Corporation

Initiatives for Medium- to Long-Term Growth

To attain the goals of our Vision 2020 and corporate growth over the medium to long term, we will further accelerate efforts under the aforementioned three "muscular" strategies of "3Es," "Value Chain" and "World Market."

As for the 3Es strategy, the Materials Handling Equipment Business and automobile-related businesses

are sharing an array of technologies and know-how mutually accumulated over the years. In the future, we will hone these technologies and expertise and leverage them in both business sectors. For our mainstay lift trucks, we intend to further enhance the appeal of our products by improving the performance of our internally manufactured key components such as motors and controllers.

As part of efforts to develop fuel cell lift trucks, we initiated a feasibility test of a newly developed fuel cell lift truck in December 2012 under the Kitakyushu Smart Community Creation Project promoted by Japan's Ministry of Economy, Trade and Industry and other organizations. In the areas of reducing CO_2 emissions and diversifying energy sources, fuel cells are regarded as a new power source option for materials handling equipment.

In the field of internal-combustion lift trucks, we are working to enhance the performance of lift truck engines developed and manufactured by the Engine Division to offer higher fuel efficiency and cleaner emissions in our efforts to develop competitive products that combine the strengths of the Materials Handling Equipment Division and Engine Division. As part of these efforts, 3.5- to 8-ton capacity lift trucks fitted with such new engines were released in North America in April 2013.

In this manner, we will work to improve energy-saving and other environmental features of electric and internal-combustion lift trucks and facilitate the development of fuel cell lift trucks. Our aim is to accelerate the development of eco-conscious products while helping customers achieve higher efficiency in their logistics operations.

One thing we must pay close attention to in the field of automobile-related businesses is the future implementation of increasingly stringent fuel efficiency regulations across the world. In response, the Car Air-Conditioning Compressor Business will concentrate on the development of next-generation models by increasing the product appeal of already highly fuel-efficient variable-displacement type compressors. For emerging countries, emphasis will be placed on the development of models that achieve an optimum balance between performance and prices. With regard to electric compressors for HVs, which allow the air conditioner to run during an idling stop, we will develop more compact models with increased fuel efficiency and expand sales to automakers in and outside Japan, which are actively promoting sales of HVs and other electric-powered vehicles.

To increase our competitiveness in the Car Electronics Business, we will use our expertise gained on Toyota cars to focus on compactness, weight reduction and increased efficiency primarily for HV converters and inverters. Although the ratio of the Car Electronics Business in our total net sales still remains relatively small, we will take advantage of the upward trend in unit sales of electric-powered vehicles and seek to expand the scope of vehicle models fitted with our products. This action should help us achieve growth of this business and contribute to the electrification of vehicles.

The second strategy involving our value chain is of particular importance primarily for the Materials Handling Equipment Business. The business has been establishing a stronger structure by integrating sales channels that separately existed for individual brands in Europe and by acquiring key dealerships in North America. Leveraging this structure, we plan to make efforts to provide customers with finely tuned after-sales services, which comprise a crucial aspect of industrial goods; propose solutions to improve logistics; and enhance financing services. In emerging countries in Asia and other regions, we seek to offer even higher levels of customer service and expand sales through differentiated service quality.

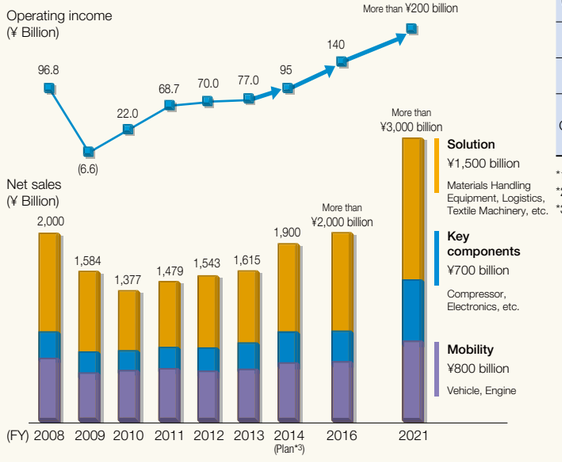
The third strategy is centered on the world market.

Practical training for service instructors of distributors outside Japan

Providing services at a customer's site

■ Targets

- Net sales: More than ¥3,000 billion
- Operating income: More than ¥200 billion (7%)
- ROA*1: 5%
- ROE*1: 10%



■ Management Targets for Fiscal 2016

(¥ Billion)

	FY2013 results	FY2014 plan*3	FY2016 targets
Net sales	1,615	1,900	More than 2,000
Operating income (Operating income ratio)	77 (4.8%)	95 (5.0%)	140 (7.0%)
ROA*1	2.8%	—	5.0%
ROE*1	8.7%	—	10.0%
Capital expenditure	89	100	Approx. 500*2 in total between FY2013 and FY2016

*1: Investment securities are calculated on the basis of their purchase prices.
*2: Includes M&A investments
*3: As of April 26, 2013

The Materials Handling Equipment Business has been strengthening its production, sales and service operations on a global scale. Our latest efforts involved the establishment of a production base in Vietnam in April 2012. This new base manufactures motors, a key component of electric lift trucks, and has already started supplying products to our lift truck production plants worldwide. As motor performance has a significant impact on the overall appeal of our lift trucks, we intend to increase the number of lift truck models fitted with these motors. In Brazil, where market growth is expected in the future, we plan to capture growing demand through the launch of a lift truck production plant in October 2013.

Lift truck production plant in Brazil (scheduled to commence operations in October 2013)

We believe that these initiatives undertaken by the Materials Handling Equipment Business have put us on track to build an unparalleled business structure in the industry. We will continue to adequately respond to changes in the marketplace and seek to realize optimum production and supply structures on a global basis.

In the Car Air-Conditioning Compressor Business, while pushing ahead with production capacity increases at respective bases around the world, we will expand production of variable-displacement type compressors, for which demand is rising in North America in particular, to respond to customers' needs for improved fuel efficiency. In addition, we intend to increase the ratio of locally procured parts at respective overseas production bases to minimize the impact of exchange rate fluctuations.

Initiatives to Enhance *Monozukuri* (Manufacturing) Capabilities

The Japanese manufacturing industry is laden with what is often referred to as the "six burdens," and is facing intense competition. There is a rising concern that manufacturing in Japan may decline in line with the hollowing out of the manufacturing industry, a brain drain of excellent human resources and a loss of employment opportunities. Amid this difficult environment, we are striving to bolster our manufacturing capabilities in Japan even while promoting global business development. We believe that Japan's strengths in manufacturing lie in its ability to bring together the wisdom of every function within an organization, from development, production engineering and manufacturing to sales and services, in order to create excellent products at affordable prices through a process of repeated trial and error and constant improvements. Based on these activities, we will further enhance the manufacturing capabilities of our mother plants in Japan and thereafter transfer these capabilities to our production bases around the world. The following three initiatives are already underway to reinforce our manufacturing operations.

1. Human Resources Development at the Technical Learning Center

Toyota Industries' Technical Learning Center provides education to young engineers and technicians in Japan. Based on the concept of *genchi genbutsu* (go and see for yourself), new employees in engineering fields must first learn the basics of manufacturing through a comprehensive, experience-oriented program that covers everything from planning and designing to actual manufacturing before they are assigned to each workplace. Our education programs for technicians focus on individuals' physical and mental development, skills training and knowledge cultivation. These programs are designed to develop human resources both capable of raising the skill levels of our entire workforce and serving as core staff at production sites. We also participate in national and international skills competitions as one way of passing on our advanced, highly professional skills. Since winning a gold medal in the WorldSkills Competition 2007 for the first time, Toyota Industries' teams have accomplished excellent results each year.

Training technicians at the Technical Learning Center

2. GTCC Initiative in the Car Air-Conditioning Compressor Business

Our car air-conditioning compressors are widely adopted by major automakers in and outside Japan, and we have responded to growing demand by expanding production on a global basis. As our production expands worldwide, it has become increasingly difficult to maintain a consistent level of manufacturing skills throughout the world. To counter the situation, we established the Global Training Center of Compressor (GTCC) in fiscal 2013 for training manufacturing personnel from production bases around the world at a production base in Japan that serves as a mother plant. The GTCC focuses not just on teaching technical skills but also on instilling our thinking on *monozukuri* based on the Toyota Production System (TPS). This initiative is aimed at honing the strengths of our production bases in Japan that take the lead in Toyota Industries' manufacturing operations, while also having trainees share the skills and knowledge they have gained in Japan with local staff after returning to their home countries. This will in turn raise the level of our skills on a global scale.

GTCC training session

3. Innovation in Production Engineering

Toyota Industries also strives to improve production engineering capabilities through the development of innovative manufacturing methods. Products, no matter how excellent they are, may be copied by other companies once they are released to the market. Production engineering, on the other hand, allows us to maintain and enhance our competitive edge if we keep development results in a "black box" to differentiate ourselves from competitors. Because textile machinery is the origin of our business, we have strong advantages in foundry technologies, which are essential in manufacturing not only textile machinery but also engines, lift trucks and car air-conditioning compressors. In addition to these types of materials processing technologies, we encourage innovation in the field of production engineering, including machining and assembly, to achieve even higher levels of quality and productivity and deliver products with greater appeal to customers.

Spurring Innovation and Accelerating Efforts to Realize the Vision 2020

In order to prevail over ever-intensifying global competition, it is essential that we step up our efforts and engender innovation. For Toyota Industries, the word "innovation" means more than just technological advancements usually seen in the area of development. The word encompasses everything that entails a change that has never occurred before, such as a new combination of existing things or a new way of producing an existing product.

We will spur innovation in our respective fields of operations, from development to services, and accelerate our strategies for growth and qualitative advancement. To this end, we will work to enhance our competitive edge in each of the three business units by taking advantage of our wide range of businesses. At the same time, we will strive to augment horizontal alignment among the business units to create synergies and maximize the comprehensive strengths of the Toyota Industries Group.

By making steady progress in implementing strategies under the Vision 2020 and driving the expansion of the three business units, we aim to achieve overall corporate growth and remain fully committed to contributing to a comfortable society and enriched lifestyles.

In closing, we ask stakeholders for their continued cooperation and support.

Special Feature 1

Toyota Industries' Container Transport AGV System Contributing to Evolution of Port Logistics

Toyota Industries' Container Transport AGV Specifications

Length: 14.3 meters
Width: 2.8 meters
Height: 1.8 meters
Weight: 23.5 tons
Allowable load: 30.5 tons
Maximum speed: 25.0 km/h (20.0 km/h when loaded)
Drive system: Diesel-electric system

The globalization of economic activities and a subsequent rise in cross-border commodity flows have led to a greater volume of containers handled at seaports. Maritime container terminals, which play a major role in supporting growing container traffic, are now required to evolve in many ways to achieve higher efficiency in their container transport operations and improve the work environment. As such, one of the most significant issues is automation. Toyota Industries is making a substantial contribution to the automation of container terminals by leveraging its years of experience in developing automatic guided vehicles (AGVs). This section highlights our container terminal automation system, a unique project originating from Japan, based on an interview with some key project members.

Positions and departments of the four Toyota Industries employees featured in this section are as of March 31, 2013.

Tobishima Container Berth

Necessity of Automation at Container Terminals

■ Higher Efficiency Essential in Enhancing Ports' Competitiveness

Increasingly globalized economic activities have been generating a greater flow of commodities between countries. Accordingly, maritime transport, which serves the crucial role of moving commodities around the world, has been handling an increasing volume of shipping containers, with the world's maritime container traffic in 2010 reaching more than five times the volume in 1990*.

Amid this environment, maritime container terminals not only in Japan but also all over the world have been pressed to reduce the time needed for the loading and unloading of cargo on and off container vessels and increase the efficiency of operations in terminal yards.

* Statistics by the Ministry of Land, Infrastructure, Transport and Tourism

■ Seeking to Improve the Work Environment

In many container terminals, cranes that hoist containers have cabins 40 meters high from the ground, forcing operators to work in a tough environment. They are constantly exposed to ocean winds, intense heat during summer and severe cold in winter and often work late at night. Loading containers onto a trailer truck is also a difficult task, as it requires both the crane and trailer truck to be stationed precisely at specified locations. Both the crane operator and trailer truck driver thus need to have a high level of skills, experience and sometimes a "feel" to perform their respective jobs. Many have been voicing the need for improving their work environment.

In order to achieve higher efficiency and a better work environment, Tobishima Container Berth Co., Ltd. (TCB), the operator of a container terminal within the Port of Nagoya in Aichi Prefecture in Japan, decided to introduce large-sized container transport AGVs to automate operations within maritime container terminals. "The entire team worked toward one goal," says project leader Kazuhiro Suzuki, Assistant General Manager of the Trans System Engineering Office. Looking back on their enthusiasm at that time, he adds, "We channeled our accumulated AGV system technologies and logistics know-how into this project with the determination to contribute to the development and growth of the seaport."

Kazuhiro Suzuki
Assistant General Manager,
Trans System Engineering Office,
Engineering Department,
TOYOTA Material Handling Company

Contributing to Growth by Leveraging Toyota Industries' Strengths

■ Efforts in the Area of Software Development

Building a Total System Covering the Entire Terminal

To raise the competitiveness of the seaport, we leveraged our know-how in the field of commodity flow optimization, which we have cultivated through the development of transport and storage systems for more than 30 years, and our experience in developing AGVs, thereby contributing to greater overall operational efficiency at terminals.

For instance, our container transport AGV system controls the scheduling of AGVs in a Just-In-Time (JIT) manner by working in conjunction with other components of the terminal, such as gantry cranes that transfer containers from a vessel to a transport AGV. At an intersection within the yard, the non-stop control program prevents multiple AGVs from entering the intersection at the same time, saving fuel by eliminating the need to slow down, stop and accelerate again at the intersection, as well as providing better transport performance. After being loaded with containers, our AGVs are capable of selecting the optimum route to the storage yard on their own.

Hiromi Mitoh
General Manager,
Seaport Business Development Group,
Logistics Solutions Project,
TOYOTA Material Handling Company

Hiromi Mitoh, General Manager of the Logistics Solutions Project, emphasizes the significance of the Tobishima project, noting: "Our AGVs operate in coordination with cargo handling equipment and the management system of the entire terminal, enabling JIT operations. This was the world's first initiative of its kind that attempted to realize higher work efficiency."

By systematizing the operation of the entire terminal, we were able to contribute to not only increasing its logistics efficiency but also considerably improving the challenging work environment.

■ Efforts in the Area of Hardware Development

Superior Functionality Based on AGV System Technologies and Know-How

In addition to the software aspect of how to control the entire terminal operation, another important factor of the container transport AGV system is its hardware, namely, the performance of AGVs that actually carry containers. We integrated our various technologies into these AGVs to ensure durability, energy-saving performance and safety in a tough operating environment.

Our AGV is about 14 meters long and weighs more than 50 tons when loaded with a 30-ton container. This huge vehicle is capable of autonomously driving at the maximum speed of 20 kilometers per hour and parking at a designated location with a margin of error of within 2 centimeters. This outstanding level of accuracy was the major enabler of automatic transfer of containers between our AGVs and yard cranes, which helped us make a significant contribution in improving the work environment.

Shinji Katsuda
Group Manager,
Trans System Engineering Office,
Engineering Department,
TOYOTA Material Handling Company

"In addition to ensuring durability against high temperatures in summer, low temperatures in winter, driving rain and gusty sea breezes, we worked to provide better resistance against the impact of a fully loaded container landing on the vehicle, which can exceed 30 G, as well as a high level of safety," says Shinji Katsuda, Group Manager of the Trans System Engineering Office. He recalls, "We also made efforts to respond to the requests of the customer for better energy-saving performance and easier maintenance."

Yasushi Saito of the Trans System Engineering Office also emphasizes their ingenuity in its structure. "A precision computer for controlling the AGV is installed in the middle portion of the vehicle body," he explains. "To install other control devices around this computer, we had to create space by making devices more compact. The designing process involved the continuous fine-tuning of the overall vehicle balance."

Yasushi Saito
Trans System Engineering Office,
Engineering Department,
TOYOTA Material Handling Company

Excellent Environmental Performance

Our container transport AGV is driven by a diesel-electric system, in which an electric motor operates the vehicle using the power generated by the diesel engine. The vehicle is also equipped with a fuel-saving mode that efficiently uses energy by prioritizing when to use and save power depending on the operating status. "We reduced the weight of the vehicle itself and modified its operation system. The result was higher fuel efficiency and less CO_2 and nitrogen oxide (NOx) emissions," says Katsuda proudly.

Multi-Layered Safety Features

We paid particular attention to addressing the customer's concern regarding safe operation of our container transport AGVs at the automated terminal.

Our AGV system provides multi-layered safety features for potential risks. Each AGV is fitted with a laser radar device to detect an obstacle in its moving direction. Its contact-sensing bumper is capable of sensing unexpected falling objects on its path to avert even minimal contact. In addition, the AGV's operation control software program prevents interference with other AGVs in the vicinity by controlling the direction of the AGV's movement as well as links to the crossing gate control that contributes to the prevention of a collision between a trailer truck and an AGV.

■ Receiving 2012 Good Design Gold Award*

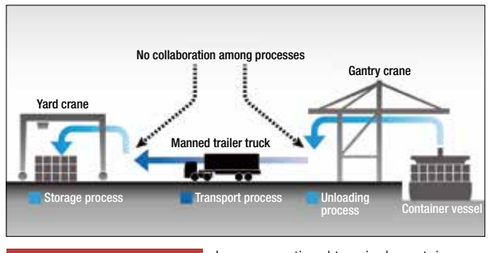
As described previously, Toyota Industries' container transport AGV system effectively combines software (control system) and hardware (AGV itself) to ensure highly efficient container transport operations, excellent environmental performance and safety. In this way, our AGV system assists the entire container terminal, including gantry cranes and trailer trucks, in achieving higher operational efficiency.

These superior features have earned high acclaim, and our AGV system received a 2012 Good Design Gold Award. As one judge noted, it "really is a fusion of product design and social system design, and provides Japan's maritime transport industry with a new, promising means of implementing its growth strategy." Receiving such high praise from a third party gives us a huge boost in confidence, and we are more determined than ever to contribute to customers' businesses in every possible way.

* Highest prize given to a group of 2012 Good Design Award winners, exclusively selected by a panel of judges as having particularly outstanding design

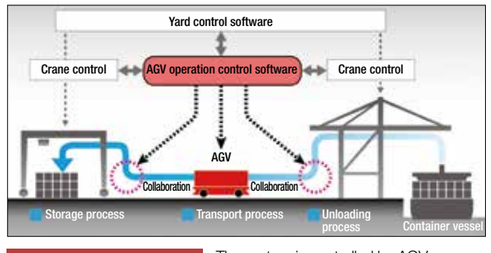
■ Launching AGV System Meticulously Tailored to Customer's Requests

The designing of the vehicle itself involved a number of challenges. We had to achieve a level of durability able to withstand the shock of a container landing on the vehicle while protecting a precision-computer mounted on the body. The vehicle, weighing more than 50 tons, has to run safely at the maximum speed of 20 kilometers per hour and park at a designated location with a margin of error of



Notional Diagram of Conventional Container Terminal

In a conventional terminal, container handling and transport operations are undertaken individually by gantry cranes, manned trailer trucks and yard cranes.



Notional Diagram of Automated Container Terminal

The system is controlled by AGV operation control software and other programs, which optimize the collaboration between AGVs and cranes and improve the container terminal's overall logistics efficiency.

within 2 centimeters. We also developed numerous software programs to ensure safe and efficient automated operation of multiple AGVs and cranes.

Most importantly, however, was conducting careful *genchi genbutsu* (go and see for yourself) checks to verify that both hardware and software function properly in every possible circumstance, the same as in theoretical simulations. "We conducted feasibility tests mainly at night so as not to interfere with TCB's terminal operations," says Mitoh. "We made improvements again and again to increase operational accuracy. Looking back, it was a daunting, time-consuming task. But we worked as one team and were eager to meet the customer's, and ultimately, end users' needs."

With unwavering enthusiasm, Suzuki adds: "A collaborative relationship with TCB and other companies engaging in terminal operations was particularly important. We paid meticulous attention to the customer's requests, finding solutions to issues and building technically feasible measures through in-depth discussions. All project members, including those engaging in manufacturing, banded together as one strong team to develop an operational structure truly needed by the customer from the perspective of a total system that encompasses both hardware and software. Toyota Industries is perhaps the only company that can make this project possible, and this makes me very proud."

■ Expected Growth in Needs and Future Approach

Customers' needs for higher efficiency in seaport logistics operations are expected to steadily increase.

To respond to these needs, we will develop container transport AGV systems that create new values. That will involve combining "human meticulous attention to detail and flexibility" and "precision and stability of machinery" and delivering these systems to customers together with our logistics know-how.

We aim to improve the performance of AGVs themselves and at the same time pursue a coordinated and collaborative approach to enhancing overall system capability. We will continue to dedicate considerable efforts toward this goal in hope that our container transport AGV systems will contribute to better seaport logistics efficiency, and in the end, improve people's lives.

Customer Voice

Masato Kato
President,
Tobishima Container Berth Co., Ltd.

Tobishima Container Berth Co., Ltd. (TCB) is the operator of a new container terminal opened at the end of 2005 as model terminal for a Super Hub Port of the Port of Nagoya. TCB is a joint venture of 10 companies providing maritime, harbor and land transportation services. Its mission is to contribute to the country's economic growth by achieving greater convenience and efficiency and to seek ways to become a win-win terminal for everyone involved.

Our terminal is among the few in the world and the only one in Asia to fully automate its container transport operations. We asked Toyota Industries to develop and install container transport AGVs. The company delivered to us exactly what we have envisioned, that is, AGVs that are not only automated but also capable of working on their own with a human touch. Since their introduction in February 2009, these AGVs have not had any accidents and have gained high acclaim among the companies involved in terminal operations for improving the work environment and the safety of operators working within the terminal.

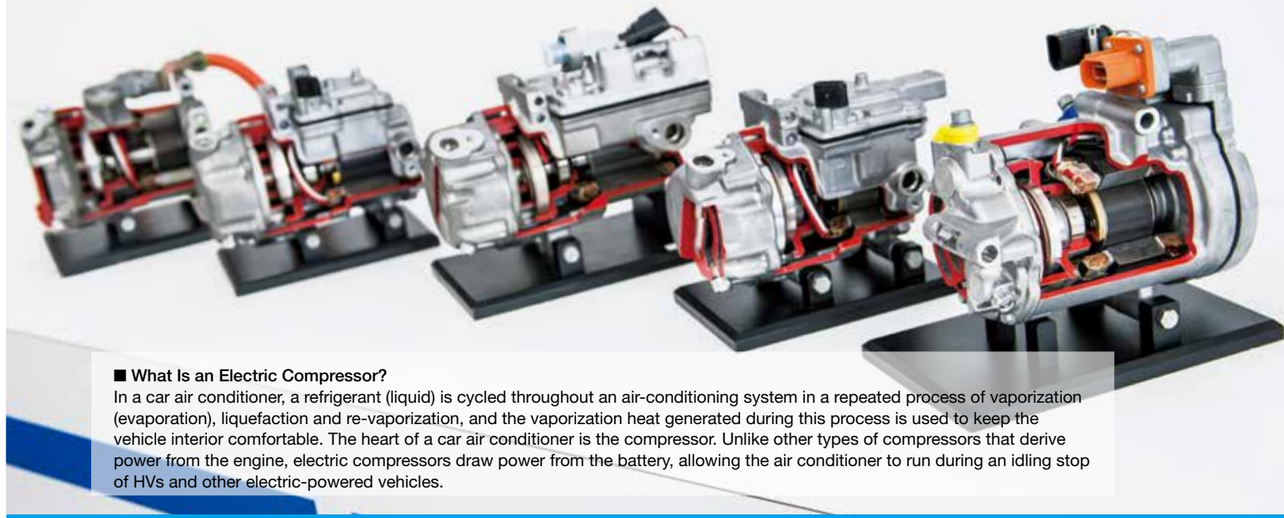
The process of developing, installing and launching these AGVs entailed a myriad of issues to overcome and involved a great deal of effort on the part of Toyota Industries staff. As an individual involved in this project, I witnessed their incredible commitment and hard work. I still remember each one of them, and they have earned our deepest respect and appreciation.

In order to fulfill our aforementioned mission, we have rolled out an initiative to gain an unparalleled level of competitiveness. For us, automation does not end with its introduction into the terminal but marks the beginning of constant efforts for improvement. By defining the meaning and indicators of competitiveness for a seaport, we are working under the belief that to get better we have to change now while carrying out improvement activities on a daily basis. More than a year has passed since we began this initiative, but we still see a lot of seeds for improvement. As the saying goes, "We have to renovate ourselves from day to day." Toyota Industries' team is also providing their support, and we have high expectations for their technological superiority and fully appreciate their willingness to take on any challenge.

We are committed to increasing our competitiveness and evolving into a seaport that makes our customers happy.

Roundtable Discussion
Aiming to Realize Both a Comfortable Vehicle Interior and Energy Savings
—Delivering Electric Compressors to Four Corners of the World—

Electric compressor series



■ What Is an Electric Compressor?
In a car air conditioner, a refrigerant (liquid) is cycled throughout an air-conditioning system in a repeated process of vaporization (evaporation), liquefaction and re-vaporization, and the vaporization heat generated during this process is used to keep the vehicle interior comfortable. The heart of a car air conditioner is the compressor. Unlike other types of compressors that derive power from the engine, electric compressors draw power from the battery, allowing the air conditioner to run during an idling stop of HVs and other electric-powered vehicles.

As a leading manufacturer of car air-conditioning compressors, Toyota Industries develops electric compressors for HVs, PHVs and other electric-powered vehicles that match the needs of customers. We are making ongoing efforts to expand sales of electric compressors not only to Toyota Motor Corporation (TMC) but also to automakers around the world.

In 2012, we commenced sales of the ESA34 electric compressor. In addition to such features as enhanced fuel efficiency and lighter weight, the new compressor makes it easier to mount in vehicles. For this roundtable discussion, four key members of the development project respectively from the development, production engineering, quality assurance and manufacturing departments got together to look back on the three-year collaboration effort and talked about the future of Toyota Industries' electric compressors.

HV: Hybrid vehicle
PHV: Plug-in hybrid vehicle
EV: Electric vehicle

◉ Electric Compressor Series

Vehicle Size	2003	2005	2007	2009	2011	2013	(Year)
Large class			**ES34**  Significantly improved quiet operation for luxury vehicles		**ESA34**  Easier to mount on vehicles by placing inverter on the side		
Medium class		**ES27**  Smaller and lighter through industry-first integration of inverter			**ESA27**  Easier to mount on vehicles by placing inverter on the side		
Compact class	**ES18**  World's first mass-produced electric compressor			**ES14**  Even smaller and lighter			

Receipt of Silver Prize in 2013 Aichi Environmental Awards

Through the serialization of electric compressors, Toyota Industries realized reductions in size and weight as well as higher operational efficiency. In recognition of their contribution to improving fuel efficiency of vehicles and reducing CO_2 emissions, Toyota Industries received the Silver Prize in the 2013 Aichi Environmental Awards.

Ken Suito
Assistant General Manager, Engineering Office No. 3, Engineering Department, Compressor Division

Takayuki Nakase
Group Manager, Electric Assembly Group, Assembly Production Engineering Office, Production Engineering Department, Compressor Division

Masashi Abe
Group Manager, Production Quality Group, Quality Assurance Office No. 2, Quality Assurance Department, Compressor Division

Takashi Watanabe
Supervisor, Assembly Section, Manufacturing Department No. 1, Compressor Division

Positions and departments as of March 31, 2013

Product Strengths Incorporating Technologies, Ingenuity and Teamwork

Suito: Let's look back on the development phase. In the engine room where the car air-conditioning compressor is mounted, many other devices are also installed including the engine. In recent years, more space must be set aside in the engine room to ensure safety in the event of a collision, requiring compressors to be even smaller and lighter. On the other hand, an electric compressor must be equipped with a motor and an inverter that controls the motor's revolutions, which makes the compressor bulkier. To address such issues, we integrated the inverter with the compressor and made the motor smaller. For the ESA34, we changed the placement of the inverter to make it easier to mount the compressor in a vehicle, thereby realizing a more compact, lighter-weight and more highly efficient compressor that fully utilizes Toyota Industries' long-accumulated technologies. One of our strengths, I believe, lies in the fact that we develop and produce motors and inverters in-house.

The ESA34 is also the world's first electric compressor to adopt a mechanism to control inner pressure of the compressor, which contributes to further improving fuel economy.

Abe: This mechanism is effective in attaining significant fuel efficiency, but it is revolutionary in an unprecedented way in other areas as well. Consequently, fully understanding the development concept and functional impact of the compressor was required in all phases from development to manufacturing as well as thoroughly analyzing and taking measures for every potential flaw in each process. That's why the relevant departments got together and conducted meticulous discussions from the earliest phase of the development.

Suito: By gathering all related personnel from the relevant departments from the very first phase of development for these so-called conference room activities and sharing information every step of the way, we were able to not only realize speedier development but also ensure quality and productivity.

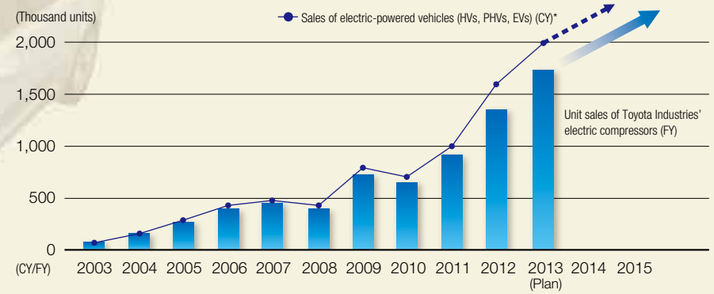
With HVs, the running sound of the compressor tends to be more noticeable than internal-combustion vehicles because the engine stops rotating when the car comes to a stop. That makes quiet compressor operation all the more important, and the ESA34 displays its excellence in terms of quietness. In this aspect as well, we fully leveraged our long-standing technologies for quiet operation required for compressors to be fitted in luxury vehicles.

Car air-conditioning compressors must operate under a variety of difficult conditions, including temperature fluctuations, humidity, dust and vibrations. We believe the trend toward electric-powered vehicles will continue to accelerate, and we are undertaking our work with the pride that it is we who can assure the quality expected of in-vehicle devices because we have been involved in car-related businesses for a very long time.

Nakase: In the production engineering phase, we adopted the shrink-fitting technique, which utilizes the difference between heat-induced expansion and shrinkage to join together two parts made of different metals. This required a process of trial and error under various conditions, including sensitive temperature adjustments as well as the thickness and shape of materials. In the end, we succeeded by making use of the computer simulation system produced internally.

Suito: These efforts led to a fewer number of components, which resulted in a reduction in production processes. I believe it was a significant achievement that we were able to contribute to cutting costs and making the compressor lighter while at the same time attaining better fuel economy.

◉ Electric Compressor Sales



CY: calendar year ended Dec. 31; FY: fiscal year ended March 31 of the following year
* Survey by Toyota Industries Corporation

Launch of Compact Production Line Responsive to Fluctuations in Production Volume

Nakase: In addition to enhanced product appeal, establishing a production structure responsive to fluctuations in demand is equally important in recent years. At Toyota Industries, we launched a more compact production system that is one-third the size of conventional production lines. This was the first endeavor for the Compressor Division. We aimed to halve the production area allocated for each compressor unit and reduce the number of processes. To that end, we made a prototype production line built to actual size and methodically verified the positioning of workers and operation efficiency in a real-time production setting.

Toyota Industries is working to prevent the outflow of manufacturing know-how by internalizing the design and production of such primary facilities as production equipment and inspection devices. In order to realize this compact production line, it was necessary to review the size of equipment and change work processes, but our hard work paid off and we succeeded in creating the production line in-house.

Abe: Actually, obtaining pre-approval from automakers is required when we adopt a new production process or quality assurance method. To do so, we started preparations quite early on.

Nakase: For the creation of this compact production line, we worked together on preparations transcending borders among production engineering, quality assurance, manufacturing and other relevant departments. In this regard, I believe it was an excellent experience for all departments involved because we were able to consolidate tasks and processes while ensuring a high standard of quality.

Watanabe: This compact production line can be applied to the manufacture of non-electric car air-conditioning compressors as well. As such, we are proactively installing the line at production sites outside Japan. In order to handle future fluctuations in global demand, we are confident this production line will exert its potential to the full extent.

Dedicated Initiatives to Ensure High Product Quality

Suito: Currently, companies are globalizing their production activities and standardizing components. That means quality is all the more important. In the Engineering Department, we have been engaging in new development challenges while utilizing technologies accumulated in the development of car air-conditioning compressors for internal-combustion vehicles. I believe each department has been similarly making various efforts to ensure quality.

Watanabe: In the Manufacturing Department, we created and will continue to upgrade a procedures manual that specifies how a single act or omission in a process will have an impact on our customers and engage in daily work accordingly. We also hold a meeting every morning. This involves confirmation of the previous day's issues, no matter how minor they are, and immediate implementation of countermeasures in cooperation with personnel tasked with production engineering, quality assurance and equipment maintenance.

Abe: At the Quality Assurance Department, we faithfully follow the concept of "*jikoutei-kanketsu* (build in quality with ownership)" to incorporate quality in each process to ensure that only the best-quality products are sent to the post-processes. We believe everything we do both on the production floor and in our daily work is based on this premise.

In fact, when it comes to quality, our compressors are highly regarded by automakers not only in Japan but also in the United States and Europe.

High product quality was not the only factor for automakers in choosing our ESA34 electric compressor.

Through a process inspection on the production floor, they also came to appreciate the ingenuity built into the production line, our thinking behind quality assurance and the skill levels of our workers. I feel the trustworthiness of our products is backed up by our track record that our electric compressors are fitted in every single Toyota HV.

Nakase: In the Production Engineering Department, we are striving to create an environment where employees in the Compressor Division and the Electronics Division, which engages in the development of inverters and other components, share the same expertise in our efforts to further ensure product quality.

Abe: In my department, we are trying to raise the overall skill levels of employees through a comprehensive training program spanning from development to manufacture of electric compressors. Carrying out efforts in a holistic way for one project deepens one's knowledge and enables us to gain a broader perspective, which I believe will lead to the growth of our human resources.

Fully Committed to Further Sales Expansion

Suito: Since our mass-produced electric compressors were fitted in Toyota HVs for the first time in the world in 2003, we have broadened our customer base of automakers and increased the number of vehicle models installed with our products, which resulted in unit sales growth all around the world. As we expand sales, however, we must thoroughly meet the more diverse and demanding needs of our customers. For example, there is particularly strong demand for quiet operation among Japanese automakers, while in the United States outstanding operation of car air-conditioning compressors under harsh conditions is expected due to the country's vastness. Meanwhile, Europe is the world's most demanding region for excellent fuel economy. What's more, paying close attention to the heating capabilities of car air conditioners is equally important for HVs, in which the engine stops during an idling stop, as well as for EVs, which are not equipped with an engine in the first place. We are also expected to make use of eco-conscious refrigerant from the standpoint of curbing global warming.

Being the world leader in unit sales of car air-conditioning compressors* entails extensively and accurately understanding and meeting the needs of both automakers and customers who drive their cars.

We will continue to devote our efforts toward developing both hardware and software, working closely with the Electronics Division and manufacturing production equipment internally. Through such comprehensive capabilities, we are confident that we can meet the various needs of automakers while making a range of proposals.

We are determined to realize the continued development of fuel-efficient and high-performance electric compressors and contributing to customers' businesses.

Nakase: In the Production Engineering Department, I believe the launch of this compact production line enabled us to accumulate know-how on how to respond to fluctuations in production units. So that we can more flexibly respond to demand fluctuations on a global basis, we will work to raise the potential of this compact production line and proactively apply the know-how to production lines to be set up in the future in and outside Japan.

Abe: No matter how diversified customer needs become, or no matter how much production units increase, for us quality will always remain our lifeline. I consider it our responsibility to continue meeting the expectation of customers while delivering high quality products.

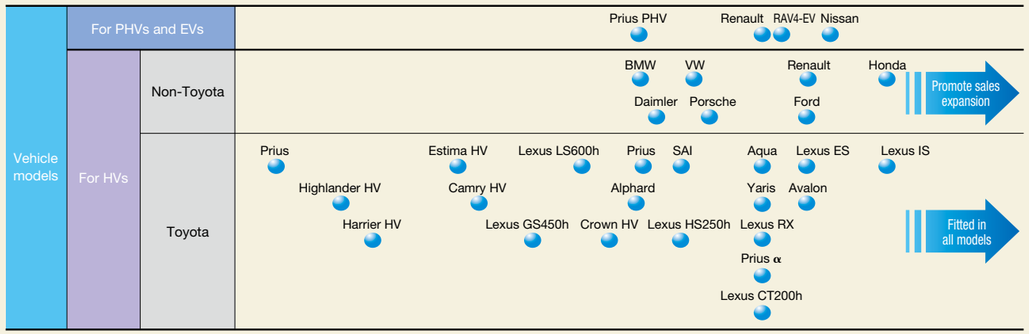
Watanabe: As we expect the manufacture of compressors to keep increasing at production sites around the world, it is of the utmost importance that we maintain the best quality regardless of where compressors are produced. To do so, we are devoting efforts toward the training of human resources for Group companies outside Japan by designating production sites in Japan as mother plants.

Suito: Today, members from each department involved in the development of the new ESA34 electric compressor got together to look back on the creative efforts and talk about the future direction of compressors. I believe this occasion turned out to be a perfect opportunity to share the sense of fulfillment in creating a great product and to further motivate us to continue to offer even better products for our customers.

In step with more widespread use of HVs and EVs, we remain fully committed to helping to provide our customers with an energy-efficient and comfortable driving experience.

* Survey by Toyota Industries Corporation

◉ Vehicles Equipped with Our Electric Compressors



Business Activities

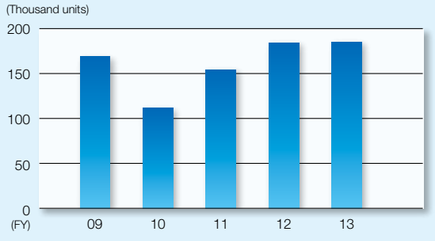
Materials Handling Equipment

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

Business Overview in Fiscal 2013

In the materials handling equipment market, sales remained strong in Japan and North America while growth slowed in Europe, China and some emerging countries. On the whole, sales were on par with the previous year. Amid this environment, Toyota Industries reinforced the development, production and sales structures and rolled out products matched to respective market conditions. Although sales of our mainstay lift trucks outside Japan remained at the previous fiscal year's level, we successfully achieved higher sales in Japan. As a result, unit sales for fiscal 2013 increased slightly to a total of 185,000 units over the previous fiscal year. Net sales rose ¥25.7 billion, or 5%, to ¥596.4 billion.

■ Materials Handling Equipment Sales



Toyota Material Handling Group (TMHG)

As a market leader with extensive knowledge of logistics needs across the world, Toyota Industries provides a full range of lift trucks and other materials handling equipment as well as logistics solutions to customers worldwide.

Under the TMHG management structure, we engage in business under the TOYOTA, BT, RAYMOND and CESAB brands. Mutually utilizing the sales and development strengths of each brand, TMHG is promoting business expansion on a global scale.

Business Activities in Fiscal 2013

Globally, the lift truck market in 2012 remained on par with the previous year. In Japan, we focused on expanding sales in the manufacturing industry, where improved business sentiment has been boosting capital investment, as well as in such industries as transportation, warehousing and construction. In Europe and North America, while striving to capture the diverse needs of customers by rolling out new products and services, we proactively participated in various exhibitions to appeal the excellence of our products and services to a wider audience. Our efforts in emerging countries have been aimed at reinforcing both our production and sales capabilities. As part of these efforts, we have completed construction of a lift truck production plant in Brazil, which is scheduled to start operations in October 2013, and are releasing products manufactured in plants in China to the ALOMA* markets.

In March 2013, we made U.S.-based Cascade Corporation, one of the world's largest manufacturers of lift truck attachments*1, into Toyota Industries' consolidated subsidiary. As the lift truck market primarily in emerging countries continues to expand and logistics needs become increasingly diverse, demand for such attachments is expected to grow. By adding Cascade's attachments to our lineup, we aim to expand our business domain, respond to a broader range of customers' logistics needs and achieve further growth of the Materials Handling Equipment Business.

■ Toyota Material Handling Group Organization Chart

	TMHG				
Region	**Japan**	**North America**	**Europe**	**ALOMA***	**China**
Organization	**TMHJ** Toyota Material Handling Japan	**TMHNA** Toyota Material Handling North America	**TMHE** Toyota Material Handling Europe	**TMHI** Toyota Material Handling International	**TMHCN** Toyota Material Handling China
Brand	TOYOTA	TOYOTA RAYMOND	TOYOTA BT CESAB	TOYOTA BT RAYMOND	TOYOTA BT RAYMOND

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

Lift truck fitted with Cascade attachment

As for the Materials Handling Engineering Business, which is represented by automated storage and retrieval systems and automatic guided vehicles (AGVs), we are committed to meeting a wide range of needs by providing consulting services for customers' logistics-related issues as well as assisting them with installation and operation of equipment. In response to the growing need for greater efficiency in the handling of shipping containers spurred by a rise in port logistics volume, we developed an AGV system for cargo containers*2 based on a pool of technologies we have accumulated in the field of AGVs over the years. The new AGV system is now playing a significant role in increasing operational efficiency and improving the working environment of container terminals at ports.

In the field of aerial work platforms, demand fell in the electric power industry, our principal customer in Japan, as power companies cut back on capital investment. In the leasing and railway industries, however, demand grew in line with such factors as an increase in facility replacement. Accordingly, Aichi Corporation, which possesses the top brand of aerial work platforms in Japan, posted higher sales. Aggressive sales promotion activities also led to a rise in sales outside Japan. On the whole, sales exceeded the previous fiscal year's level.

*1: Devices that are attached in place of forks of lift trucks for directly grabbing or rotating goods for enhanced operability and logistics efficiency

*2: See "Special Feature 1" on pages 16–20.

Japanese Market

No. 1 Market Share*3 in Lift Truck Sales

In 2012, the Japanese lift truck market achieved year-on-year growth as the government's subsidy program for eco cars stimulated an upturn in capital investment in the manufacturing industry, including the transportation equipment sector. Toyota Material Handling Japan (TMHJ) worked to expand sales in the manufacturing industry as well as in such industries as transportation, warehousing, construction and agriculture, forestry and fisheries. As a result, unit sales in fiscal 2013 increased 4% year-on-year to 33,000 units. TMHJ secured a 44.4% share of the Japanese market in 2012, a record high, and maintained its top position*3 for the 47th consecutive year.

*3: Surveys by Japan Industrial Vehicles Association and Toyota Industries Corporation, 2012

Introducing Products Excellent in Environmental Performance and Work Efficiency

Launch of New Electric Lift Trucks

TMHJ released two model changes of electric lift trucks, the GENEO-R in May 2012 and the High Pick Lift in December 2012, for use in indoor logistics sites of a broader range of customers mainly in the mail order, food and warehousing sectors. These models feature significant upgrades, including a completely new drive system, and meet the requirement for longer continuous operation.

GENEO-R

High Pick Lift

Development of Fuel Cell Lift Trucks

In December 2012, TMHJ initiated a feasibility test of its fuel cell lift trucks in Kitakyushu, Fukuoka Prefecture. A fuel cell produces power through a chemical reaction between hydrogen and oxygen in the air and thus emits considerably less CO_2. Because refueling is completed in about three minutes, fuel cell lift trucks operate continuously without the need for recharging or replacing batteries, thereby greatly improving work efficiency compared with electric lift trucks.

Fuel cell lift truck

Initiative Aimed at Upgrading Level of Service

In September 2012, TMHJ held the 1st TMHJ Service Skills Contest aimed at improving the level of service of dealers. Service representatives of the 40 dealers across Japan participated in the contest. Through this event, TMHJ intends to enhance the skills of its service staff, increase their awareness and deliver quality services that bring greater satisfaction to customers.

Service Skills Contest

Kaizen Solutions Based on Logistics Know-How

TMHJ participated in LOGIS-TECH TOKYO 2012, an exhibition held in Tokyo in September 2012. Under the theme of "Bringing Greater Efficiency in Logistics Business," TMHJ presented *kaizen* (continuous improvement) examples for logistics that utilize the Toyota Production System (TPS) and its initiatives in environmental and safety-related fields. The Toyota L&F Customer Center in Chiba Prefecture, which was reopened in the same month after undergoing renovations, showcases optimum logistics know-how to customers in an easy-to-understand manner through upgraded displays and other showroom features.

TMHJ booth at LOGIS-TECH TOKYO 2012

North American Market

Maintaining Top Market Share*

The North American lift truck market remained strong in 2012. Toyota Material Handling North America (TMHNA) remained the market share leader* in fiscal 2013 with combined unit sales of TOYOTA and RAYMOND brands of approximately 59,000 units, which was on par with the previous fiscal year.

Toyota, as a full-line supplier of lift trucks, remained the market share leader* for the 11th consecutive year, and Raymond continued to hold its number one* market share position in narrow aisle electric lift trucks.

* Survey by Crist Information & Research, LLC, 2012

Proactively Launching New Products and Services

Toyota expanded its product offering in fiscal 2013 with a galvanized chassis option and made it available on its walkie rider and electric pallet trucks for customers operating in environments where resistance to rust is vital.

TOYOTA 7HB electric pallet truck with new galvanized chassis option

Also introduced in fiscal 2013, the new RAYMOND 8000 series pallet trucks feature significant increases in material strength that enable these trucks to meet heavy-duty application needs. Features also include enhanced environmental operations through Raymond's Eco-Performance solutions system for space efficiency and fleet optimization solutions, better operability thanks to a roomier operator compartment and reinforced components for reduced wear.

Raymond also fitted its *iWarehouse* fleet management system with new features, which provide warehouse managers with increased visibility of equipment availability and operational conditions on a real-time basis, further increasing customer productivity.

Highly Acclaimed TOYOTA and RAYMOND Brands

In recognition of providing best-in-class products as well as optimum logistics solutions and services, *Plant Engineering* magazine awarded the 2012 Product of the Year gold and silver award in the material handling systems category to TOYOTA's 4-wheel AC electric lift truck and RAYMOND's new 8000 series pallet trucks, respectively.

RAYMOND 8000 series pallet truck

In independent studies of lift truck users*, TOYOTA lift trucks and genuine parts ranked highest in quality, value and safety.

For the fourth year in a row, Toyota was again named a Green Supply Chain Partner by *Inbound Logistics* magazine, chosen in part for its environmentally friendly initiatives and continued dedication to supply chain sustainability.

* Survey by Peerless Media Research Group, 2012

Aiming for Industry-Leading Product Offerings and Customer-Oriented Services

TMHNA will look for further synergies in the coming year to ensure the full power of both the TOYOTA and RAYMOND brands is utilized. TMHNA will continue to offer industry-leading products and total solutions-based offerings enhancing customer efficiency and productivity.

Topics

In 2012, Raymond celebrated its 90th anniversary as an industry leader in optimum warehouse equipment for warehousing and materials handling operations. On this occasion, more than 3,000 employees and community members were invited for an open-house celebration held in October 2012.

Raymond total solutions were showcased at ProMat 2013 in Chicago, Illinois, in January 2013. Raymond's Eco-Performance system was featured in a mock warehouse with RAYMOND lift trucks in operation. Raymond also participated in two ProMat educational sessions, Ecological and Economical Material Handling and Lift Truck Technology Advances Material Handling. It was estimated that over 30,000 people attended the exhibition from across the world.

Raymond booth at ProMat 2013

European Market

Increasing Unit Sales by Grasping Market Trends

The lift truck market in 2012 was marked by greater uncertainty across the European economies, slightly underperforming the previous year. Amid these adverse conditions, Toyota Material Handling Europe (TMHE) engaged in sales expansion activities with a targeted market-to-market strategy while also working to diversify its panel of services and solutions. Nevertheless, TMHE posted sales of 58,000 units, a decline of 2%.

Proactive Sales Expansion Activities and Making Appeals at Exhibitions

In fiscal 2013, TMHE continued its proactive sales expansion activities in the area of logistics solutions. With a high-quality, abundant product lineup and strong sales/service network throughout Europe, TMHE successfully obtained large-fleet orders.

TMHE also attends various exhibitions to pitch its full-line products and excellent servicing capabilities directly to customers. In fiscal 2013, TMHE exhibited at CeMAT RUSSIA 2012 in September under the banner “Innovative Solutions” as well as at LogiMAT 2013, which was held in Germany in February, under the theme of “Innovation Meets Evolution.” At both exhibitions, TMHE appealed its comprehensive capabilities, including a wide range of products, tailor-made service system and logistics solutions.

LogiMAT 2013

Proactively Launching New Products

TMHE unveiled the Traigo 80 electric lift truck, which features excellent energy efficiency and ensures safety, and engaged in sales activities throughout Europe.

TMHE also commenced sales of SpotMe, a warning system for a safe workplace. This system alerts truck drivers of the potential danger of collision with a flashing light when a sensor detects the presence of lift trucks or pedestrians in a specific area, contributing to safety at lift truck operating environments.


SpotMe warning system

Excellent External Recognition

The BT Levio Silent powered pallet truck and the BT Lifter Silent hand pallet truck received the Quiet Mark recognition for their quiet features by the U.K.-based Noise Abatement Society. Defined at below 60 decibels, this level of quietness is considered to allow conversations without having to raise voices.

TMHE production sites in Sweden, France and Italy proactively engage in health and safety management activities. In recognition of risk management education at the production site in Sweden, all three sites were certified in May 2012 with OHSAS 18001, an Occupational Health and Safety Assessment Series, by Bureau Veritas, which is one of the world’s largest third-party inspection and certification organizations.

Initiatives to Expand Market Share

In January 2013, TMHE completed the 1-channel, 2-brand structure* of distributors in primary countries in Europe. In addition to stronger sales and service networks, this structure is designed to expand TMHE’s market share through enhanced appeal of its products and service quality. Therefore, optimum market-to-market logistics solutions and close collaboration with customers will be key success factors to meet diverse needs.

In addition, TMHE works to strengthen its product lineup by launching a counterbalanced lift truck equipped with lithium-ion battery technology as well as to upgrade the Toyota I_Site fleet management solution. In this way and others, TMHE will strive to enhance product appeal both in terms of hardware and software aspects.

* To integrate separately operated sales channels for TOYOTA- and BT-brand lift trucks

ALOMA* and Chinese Markets

Increasing Unit Sales through Proactive Market Development

Toyota Material Handling International (TMHI) covers the ALOMA* markets of Asia, Latin America, Oceania, the Middle East and Africa, while Toyota Material Handling China (TMHCN) covers the Chinese market.

In 2012, TMHI and TMHCN markets registered slower expansion due to the deceleration of growth in emerging countries. However, supported by the continuous efforts by both organizations to develop these markets, annual sales in fiscal 2013 reached 35,000 units, an increase of 3% compared with the previous fiscal year.

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

Reinforcing Production and Sales Operations in Growing Markets

Brazil is the largest industrial vehicle market in Latin America and is expected to grow further; therefore, TMHI has enhanced sales activities and the sales and service networks. The construction of a new production plant was just completed in São Paulo state. In October 2013, the new plant will commence production of internal-combustion lift trucks, for which there is strong market demand.


Production plant in Brazil and completion ceremony

In India, TMHI has been continuously strengthening its sales and service capabilities through Toyota Material Handling India (TMH India) and augmenting sales expansion activities in order to achieve an increase in unit sales.

In China, Toyota Industry (Kunshan) Co., Ltd. (TIK) engages in production of TOYOTA-brand lift trucks. At BT Manufacturing (Foshan) Co., Ltd. (BTMF), production of BT-brand low lift trucks and stackers has commenced in January and June 2012, respectively. In addition, Raymond Manufacturing (Dalian) Co., Ltd. (RMD) has begun manufacturing RAYMOND-brand compact towing tractors in February 2012. On the sales side, Toyota Material Handling (Shanghai) Co., Ltd. (TMHS) has worked to strengthen its marketing capabilities and further enhance its sales and service networks.

In addition, since February 2012 TOYOTA-, BT- and RAYMOND-brand lift trucks produced in China are sold in the ALOMA market in an effort to expand sales by meeting market-specific needs.

Upgrading Product Lineup and Services

In 2013, an upward trend in the demand of lift trucks in the ALOMA and Chinese markets is expected. TMHI and TMHCN will continue to enhance capabilities in terms of providing a full range of excellent lift trucks and services to meet customer expectations.

Topics

The TMHI Distributor Conference held in Yokohama, Japan, in September 2012 was attended by 63 representatives from Toyota, BT and Raymond distributors spanning 32 countries. The conference included the confirmation of the mid- to long-term vision and specific action plans, and a common approach for future directions was confirmed. Also on the agenda were a presentation on policy management at distributors, a tour of the Toyota L&F Customer Center and the awards ceremony for the 2011 TMHI Distributor Award Program. During the conference, participants pledged to work harder to achieve objectives based on the new slogan “Lift Beyond Together.”

TMHI held sales trainer training sessions in Singapore and Dubai in January 2013 and São Paulo in March to reinforce marketing activities and improve customer satisfaction in these countries, with 57 managers from 36 countries participating.

Automobile

In the fields of vehicle assembly, engines, car air-conditioning compressors and car electronics, Toyota Industries offers a lineup of reliable products to meet the expectations and trust of its customers.

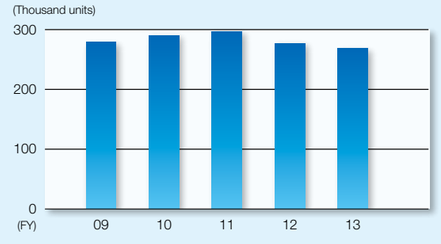
Vehicle

Business Overview in Fiscal 2013

In the automobile industry, the global market grew along with a recovery in the Japanese market backed by the government's subsidy program for eco cars and steady market growth in North America and Asia.

In fiscal 2013, unit production dropped by 9,000 vehicles, or 3%, from the previous fiscal year to 269,000 vehicles. Although sales of Vitz (Yaris outside Japan) declined, sales of the RAV4 increased. Nevertheless, net sales were up ¥2.3 billion, or 1%, to ¥356.7 billion.

■ Vehicle Production



Starting Production of the New RAV4

In December 2012, the Nagakusa Plant in Aichi Prefecture launched production of the new RAV4, a globally strategic model to be sold in more than 170 countries, mainly in the United States and Europe, by Toyota Motor Corporation (TMC). The vehicle's exterior is marked by the distinctive "keen look" front design, which TMC is adopting uniformly in its globally marketed vehicles, as well as a bold style that pursues an excellent level of aerodynamic performance. The new RAV4 utilizes Toyota Industries' technological strengths, including a spindle-type power back door, which can open to an angle preferred by individual users, and was the first ever to be installed in Toyota cars. The vehicle also clears the world's safety standards.

In preparing for production, we paid particular attention to ensuring quality from a customer perspective and developing production lines that can easily adapt to changes in vehicle models and production volume. By engaging in a comprehensive process from development to production, we worked to achieve the level of quality that guarantees even greater customer satisfaction. We also successfully built flexible production lines that are adaptable to changes in vehicle models and unit production in the most compact assembly plant among TMC's automobile body manufacturers.

We also became the first automobile body manufacturer of the Toyota Group to undertake production preparation simultaneously at three plants, including TMC's non-Japan production bases. In close collaboration with TMC, we played a role in ensuring the smooth and simultaneous launch of production at three plants by setting up a system in which plants in and outside Japan shared information on issues and leveraged time differences to efficiently resolve these issues.

New RAV4

Plastic Glazing Panoramic Roof for the Prius α (Prius v in North America and Prius + in Europe)

Toyota Industries engages in production of a panoramic roof made of plastic glazing for the Prius α, a hybrid vehicle marketed by TMC in May 2011. The roof is currently a standard feature of Prius + vehicles marketed in Europe.

This product retains the warp-free, smooth and beautiful surface quality typical of a glass roof yet is approximately 40%* lighter than its glass counterpart, improving vehicle fuel efficiency and thus contributing to the reduction of CO_2 emissions. Toyota Industries will continue to develop attractive new products that leverage the distinctive characteristics of plastic glazing.

* Survey by Toyota Industries Corporation

Enhancing Appeal of the Vitz and RAV4

Since March 2010, Toyota Industries is the sole producer of the Vitz in Japan. With a view to turning the Vitz into a long-selling series, Toyota Industries collaborates with TMC and its dealers to make various suggestions under the banner "Make Our Vitz More Attractive by Ourselves." In the future, we will extend the scope of our activities to include the RAV4 and seek ways to make it more appealing and satisfying to customers worldwide. Under this initiative, we will plan, develop and produce special-edition vehicles that reflect the voices of our customers.

At the same time, we also undertake activities to expand our customer base by enhancing the appeal of the Vitz through our support to motorsports events.

Capturing the win for the third consecutive year in the Japanese Rally Champion sponsored by the Japan Automobile Federation

Highest-Level QCD to Contribute to Production of Attractive Toyota Cars

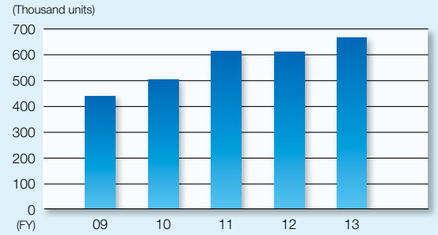
In recognition of Toyota Industries' comprehensive strengths in vehicle quality as well as delivery, cost and safety to be the highest among all Toyota-affiliated automobile body manufacturers, we received from TMC an award for excellence in 2012 under the Toyota Quality Control Award program. In the face of the shrinking automobile market in Japan, we are further strengthening our already superior level of quality, cost and delivery (QCD). We also are working to leverage our ability to quickly start up production and a flexible structure in terms of vehicle models and production volume to contribute to production in Japan of Toyota vehicles.

Engine

Business Overview in Fiscal 2013

Production volume in fiscal 2013 rose 56,000 units, or 9%, over the previous fiscal year to 666,000 units as a result of an increase in production primarily of KD diesel engines. Net sales increased ¥19.6 billion, or 10%, from the previous fiscal year to ¥216.7 billion.

■ Engine Production



Toyota Industries' Diesel Engines Highly Acclaimed by Customers Worldwide

Toyota Industries' diesel engines, fitted in a variety of Toyota vehicles sold around the world, have gained high market recognition for their cleaner emissions, greater fuel efficiency and higher performance. KD diesel engines, for which production started in 2005, are installed in TMC's Innovative International Multi-Purpose Vehicle (IMV) series, and their sales have been achieving steady growth mainly in Asia and Latin America. The V-type 8-cylinder VD diesel engine, which was developed primarily by Toyota Industries, is installed in the Land Cruiser selling particularly well in Australia, Russia and the Middle East.

In 2012, we developed an AD diesel engine with idle-stop capability. This new engine is fitted in the RAV4 marketed in Europe as well as the AURIS, contributing to an improvement in overall fuel efficiency.

AD diesel engine

Developing Competitive Diesel and Gas/Gasoline Engines in Non-Automotive Fields

Toyota Industries' engines are highly renowned for their excellent environmental performance in non-automotive fields as well. These engines are used for a wide variety of applications, including GENEO-HYBRID diesel-powered internal-combustion hybrid lift trucks, and adopted by GHP*1 manufacturers in Japan and CHP*2 manufacturers worldwide.

In 2012, we developed the Toyota 1KD, a new industrial diesel engine equipped with a turbocharger developed in-house. The new engine offers downsized displacement (43%*3 lower than current models), higher fuel efficiency (23%*3 lower rated fuel consumption compared with current models), cleaner emissions and a reduction in size.

We also developed the Toyota 1FS, a new gas/gasoline engine that, just like the Toyota 1KD, realizes the downsizing of displacement (18%*3 lower than current models), higher fuel efficiency (12%*3 lower rated fuel consumption compared with current models, using liquefied petroleum gas) and a reduction in size.

*1: Short for gas heat pump; air conditioner driven by a gas engine
*2: Short for combined heat and power; co-generation system
*3: Survey by Toyota Industries Corporation

Toyota 1KD new industrial diesel engine

Aiming to Bring Satisfaction to More Customers

Toyota Industries has been making efforts to achieve shorter development cycles with improved efficiency. At the same time, we have been carrying out development of next-generation automobile engines that can clear Euro 6 and other stringent emission standards, as well as engines for materials handling equipment and general purposes, featuring greater fuel economy and lower costs.

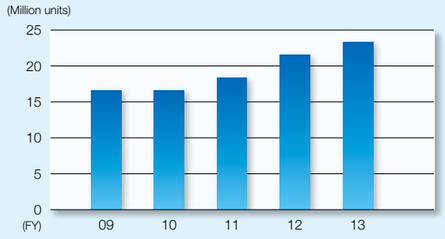
For our general-purpose engines, we will plan, develop and produce a lineup of products matched to customers' needs while actively promoting sales activities.

Car Air-Conditioning Compressor

Business Overview in Fiscal 2013

Unit sales of car air-conditioning compressors increased both in and outside Japan, pushing up overall unit sales by 1.87 million units, or 9%, to 23.42 million units. Net sales rose ¥21.6 billion, or 10%, over the previous fiscal year to ¥228.1 billion.

■ **Compressor Sales**



Development Efforts Based on 3Es (Energy, Environmental Protection and Ecological Thinking)

More stringent fuel economy standards will be enforced in North America, Europe, Japan and China, requiring automobiles to provide extremely high fuel efficiency performance.

Against this backdrop, in the field of car air-conditioning compressors to be fitted in internal-combustion vehicles, the need for fuel-efficient models is increasingly growing for both fixed- and variable-displacement type compressors. In North America, in particular, a shift from a fixed-displacement type to a variable-displacement type is accelerating.

In response, we concentrated on development of a variable-displacement type compressor with considerably greater fuel economy. For products targeting emerging countries, we sought an optimum balance between product performance and prices.

In the field of variable-displacement type compressors, we developed the SES series, which has been adopted by TMC in its latest Corolla, General Motors Company and Daimler AG. The new compressor achieves 10%*1 higher fuel efficiency and a 10%*1 reduction in weight, and we are actively promoting sales to automakers in Japan, the United States and Europe.

Our electric compressors for hybrid vehicles (HVs) and electric vehicles (EVs) are highly renowned for their strong product appeal. Since initially being installed in the second-generation Prius, these electric compressors have been fitted in all of TMC's HVs from the third-generation Prius to the LS600h. We are also promoting sales of our electric compressors to other automakers in and outside Japan, which are now actively engaged in the development of HVs, by offering smaller and more fuel efficient products.

In July 2012, we developed the ESA34 electric compressor*2, which has been installed in HVs of Ford Motor Company and other automakers. The new compressor is 10%*1 lighter and has 10%*1 higher fuel efficiency than conventional models, and a change in its structure makes it easier to mount on vehicles. Appealing these excellent features, we will accelerate our efforts to expand sales to automakers in Japan, the United States and Europe.

*1: Survey by Toyota Industries Corporation
*2: See "Special Feature 2" on pages 21–24.

ESA34 compressor (electric type)

6SES14 compressor (variable-displacement type)

Establishing Optimum Global Production and Supply Structures

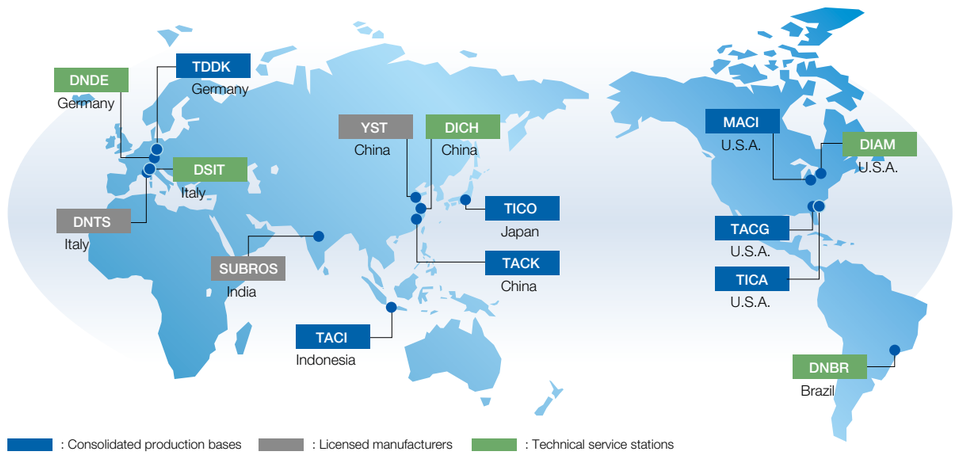
In response to the growing demand for variable-displacement type compressors triggered by the anticipated enforcement of more stringent fuel economy standards, we proceeded with augmenting the production capacities of our production bases in North America. In addition, with the aim of increasing the ratio of local procurement, Toyota Industries Compressor Parts America, Co. (TICA), a consolidated subsidiary newly established in North America to produce car air-conditioning compressor parts, plans to commence production of parts in September 2013.

In Europe, the ASEAN countries and China as well, we are expanding production capacities and increasing the ratio of locally procured parts to accommodate growing demand for car air-conditioning compressors.

To respond to the growing ASEAN automobile markets, in particular, P.T. TD Automotive Compressor Indonesia (TACI), a production base in Indonesia for car air-conditioning compressors, will construct a new plant to further bolster its production capacity.

In line with our increasingly globalized production operations, the Compressor Division established the Global Training Center of Compressor (GTCC) to ensure product quality. This is an initiative aimed at educating manufacturing personnel of our overseas production bases on *monozukuri* (manufacturing) in Japan as well as facilitating the nurturing of Japanese staff who will provide skills guidance at production bases outside Japan. Our plants in Japan are serving as mother plants and taking the lead in and providing support to our manufacturing operations.

■ **Worldwide Bases of Car Air-Conditioning Compressors** (As of March 31, 2013)



Toyota Industries' car air-conditioning compressors are widely adopted by automakers around the world, garnering the No. 1*3 position in global sales.
*3: Survey by Toyota Industries Corporation

Car Electronics

Business Overview in Fiscal 2013

Net sales of car electronics products grew steadily as a result of an increase in the number of models fitted with our products such as the Toyota Prius, Aqua and other HVs as well as the Prius Plug-in Hybrid.

Gaining Experience and Greater Role in Electric-Powered Vehicle Field

Toyota Industries develops and produces electronic components and devices for electric-powered vehicles, including HVs, plug-in hybrid vehicles (PHVs) and EVs. In addition to expanding sales to TMC, we are pursuing business development with automakers in and outside Japan.

Auxiliary Power Source Devices

A DC-DC converter converts the high voltage of HV batteries to a lower voltage level suitable for operating lights, wipers, horns and other auxiliary devices. Since being adopted in the first-generation Prius, we have continuously developed more compact and lighter weight models, and cumulative production hit 5 million units in December 2012.

DC-DC converter fitted in the Aqua

A DC-AC inverter is equipped to use home electric appliances in a vehicle. Since commencing production in 1995, we have achieved cumulative production of 10 million units in March 2013.

We have developed an on-board charger based on our technologies and know-how regarding EV chargers developed in the 1990s. The resulting on-board charger is fitted in the Prius Plug-in Hybrid.

Core Components for Drive Systems

Toyota Industries applied its proprietary direct-cooling method to develop a device with significantly higher cooling performance. We have entered the field of core components for drive systems such as power control units (PCUs) for the third-generation Prius.

In addition to inverters for drive systems utilizing this direct-cooling method, we have developed a powertrain unit for EVs and other core components. For the powertrain unit for EVs, we integrated designs of functional components, such as an inverter, motor and reduction gears, into one package and successfully reduced the size and weight. By integrating hardware with an electronic control unit (ECU), including control software, we are working to increase the added value of the system as a whole.

Powertrain unit for EVs

Charging Infrastructure

Backed by our experience in developing chargers for the RAV4 EV originally released to the market in 1997, we have been making efforts to promote the development of the charging infrastructure jointly with Nitto Kogyo Corporation. In February 2013, our EVC1-IC charging stand became the first product certified under the Product Certification of AC Charging Equipment for EV and PHEV of the Japan Automobile Research Institute, Registration Body (JARI-RB). This certification assures that customers can use our charger safely and with peace of mind.

Charging stand

Accelerating Development Activities to Realize Low-Carbon Society

Demand for environment-friendly products with high energy efficiency is expected to increasingly grow, with the trend toward electrification likely to expand not only for automobiles but also for such non-automotive products as materials handling equipment. Enhancement of the charging infrastructure will also take a greater role in promoting the spread of PHVs and EVs.

Targeting the high-growth, electric-powered vehicle market, we will accelerate development of technologies and products in the fields of auxiliary power source devices, core components and systems for drive systems and charging infrastructure, thereby making a significant contribution to the realization of a low-carbon society.

Logistics

Toyota Industries offers customers highly advanced, efficient logistics services to respond to their diverse needs, including consigned operation of distribution centers; land transportation services; cash collection and delivery and cash proceeds management services; and data storage, management, collection and delivery services.

Business Overview in Fiscal 2013

Although orders for logistics services declined due to selling our shares in the logistics service subsidiary Mail and e Business Logistics Service Co., Ltd. in May 2011, orders for land transportation services for automotive parts increased. As a result, net sales in fiscal 2013 remained on par with the previous fiscal year at ¥93.0 billion.

Planning, Design and Operation of Distribution Centers

Toyota Industries operates distribution centers for various industries and customers. During fiscal 2013, operation of existing distribution centers generated a relatively steady logistics volume. We continued to promote improvement activities at logistics sites based on the thinking embodied in the Toyota Production System (TPS) to enhance the level of services to customers and strengthen our profit structure.

With an aim of optimizing the entire supply chain of each customer, we continued our proactive sales activities by making proposals that leverage the maximum use of the Toyota Industries Group's hardware and software capabilities. As a result, we successfully obtained four new orders for the consigned operation of distribution centers.

Looking ahead, we will continue to facilitate our proactive sales activities for both increasing orders from our existing customers and acquiring new customers in industries having high growth potential.

Land Transportation Services

The Taikoh Transportation Group provides land transportation services under consignment from many automotive parts manufacturers. The group collects finished parts from manufacturers, compiles them by their destination and delivers to automakers "what is needed, when it is needed and in the quantity needed."

In fiscal 2013, although transportation volume in the automobile industry declined temporarily due in part to the discontinuation of the Japanese government's subsidy program for eco cars, an upturn in transportation volume occurred rather quickly, keeping pace with economic recovery in Japan.

Taikoh Transportation Co., Ltd.'s land transportation services

Under these circumstances, we continued our profit improvement activities by promoting efficient cargo transport while aggressively undertaking activities to ensure safe and environment-conscious operations.

While doing so, we have been pushing ahead with the establishment of a flexible business structure adaptable to a shift in automobile production locations within Japan. As part of this effort, we opened the Tohoku Distribution Center in Miyagi Prefecture in October 2012.

We will continue to improve the level of logistics services to our existing customers and further reinforce our sales activities to capture new customers.

Taikoh Transportation's Tohoku Distribution Center

High Value-Added Services Including Cash Collection and Delivery and Cash Proceeds Management and Data Storage, Management, Collection and Delivery

Cash Collection and Delivery and Cash Proceeds Management

Asahi Security Co., Ltd. provides cash collection and delivery and cash proceeds management services throughout Japan on a 24/7 basis to about 2,550 customers mainly in the retail sector, service industries, post offices and financial institutions.

In addition to cash collection and delivery services tailored to each customer's specific needs, Asahi Security offers comprehensive services that include management of gift certificates and accounting operations at customers' retail outlets. Furthermore, the company provides security services integrating the monitoring by security devices and dispatch of security guards on a 24/7 basis.

In September 2012, Asahi Security opened a cash collection and delivery center in Miyakojima Island, Okinawa Prefecture. With 19 cash collection and delivery centers and 10 logistics sites throughout Japan, the company is reinforcing its nationwide service and support networks.

At each business base, Asahi Security conducts regular training on its own as well as emergency training jointly with local police departments in order to provide safe and trusted services to customers.

By providing these comprehensive services, Asahi Security aims to become a unique, distinctive company in the field of cash collection and delivery and cash proceeds management services.

Asahi Security Co., Ltd.'s cash collection and delivery and cash proceeds management services

Data Storage, Management, Collection and Delivery

Wanbishi Archives Co., Ltd. provides support to about 4,000 companies and organizations, including large financial institutions and government agencies, to ensure the security and efficient use of their information assets. Under its robust security structure, Wanbishi Archives offers a comprehensive range of services covering the entire lifecycle of critical information assets, from storage and utilization to destruction. Wanbishi Archives also offers high value-added services in its outsourcing business, such as digitizing paper documents, by being closely involved in customers' business processes.

In the wake of the Great East Japan Earthquake that occurred in 2011, there has been a growing recognition of the need to implement appropriate business continuity management (BCM). Wanbishi Archives offers a range of solutions matched to customers' needs, from selecting documents that are essential in ensuring business continuity and promoting centralized management of information assets to building a structure to securely store and restore backup data.

In addition, Wanbishi Archives is offering cooperation for "Michinoku Shinrokuden," an archiving project led by the International Research Institute of Disaster Science of Tohoku University for compiling information on the 2011 Great East Japan Earthquake, and in October 2012 began to undertake long-term, remote storage of important earthquake records and important data accessible to future generations.

Outside Japan, Wanbishi Archives' subsidiary in China has relocated and upgraded its information management center for achieving greater safety and security. Capitalizing on its experience and know-how accumulated in Japan, Wanbishi Archives provides support to companies and organizations doing business in China to ensure the security and efficient use of their information assets. Through such efforts, Wanbishi Archives is actively pursuing business opportunities in growth markets.

Wanbishi Archives Co., Ltd's data storage, management, collection and delivery services

Textile Machinery

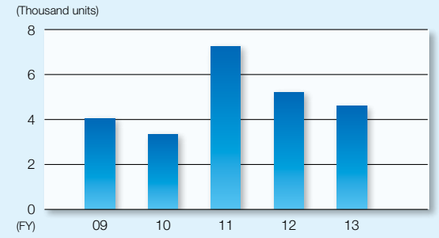
Based on the philosophy of founder Sakichi Toyoda, which reflects his strong commitment to manufacturing, Toyota Industries responds to a broad range of needs with its extensive product lineup, from air-jet looms, for which we enjoy the top global market share*1 in unit sales, to spinning frames and roving frames.

*1: Survey by Toyota Industries Corporation

Business Overview in Fiscal 2013

In the textile machinery field, sluggish market conditions caused unit sales of air-jet looms to decline 600 units, or 11%, from the previous fiscal year to 4,600 units. Net sales, on the other hand, were up ¥1.4 billion, or 4%, over the previous fiscal year to ¥39.9 billion in conjunction with making Swiss-based Uster Technologies AG a Toyota Industries subsidiary in February 2012.

■ Air-Jet Loom Sales



Further Enhancing Product Appeal

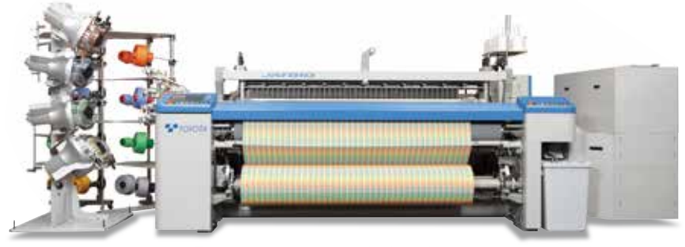
In the field of weaving machinery, we remodeled our widely used JAT710 air-jet loom, which boasts the top global market share in unit sales and is highly recognized by customers for its outstanding performance and reliability. We plan to commence production of a new model, the JAT810, in August 2013. To meet the growing need for higher energy efficiency, the JAT810 is equipped with our newly developed weft yarn inserting system that reduces the amount of air required to carry the weft yarn by 20%*2 compared with the conventional model, offering unparalleled energy-saving performance. Its productivity has also been improved with the introduction of a higher-speed electronic shedding device that enables the weaving of fabrics with complex patterns.

In the field of spinning machinery, Toyota Industries and Truetzschler GmbH & Co. KG, a German manufacturer of spinning machinery founded in 1888, co-developed the TCO 12 comber*3. Combining Toyota Industries' weaving machinery technology and know-how accumulated over the years and Truetzschler's spinning machinery technology and expertise which have earned high acclaim among customers worldwide, the new comber provides improved yarn quality as well as excellent stability during high-speed operation. We are confident that this product will bring greater satisfaction to our customers.

We will also accelerate our R&D activities to create innovative weaving and spinning machinery by leveraging Uster's world-class sensor technology and information processing technology.

*2: Survey by Toyota Industries Corporation
*3: A machine used in the spinning process, which uses a comb-like device to remove short fibers and impurities to improve quality of the resulting yarn

TCO 12 comber



JAT810 air-jet loom equipped with the optionally available electronic shedding device

Participation in ITMA ASIA + CITME 2012 and INDIA ITME 2012

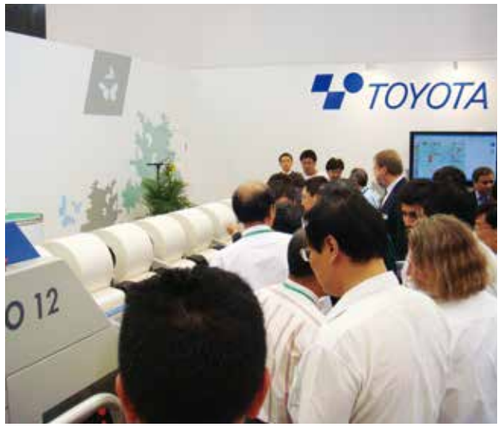
In 2012, Toyota Industries participated in textile machinery trade shows held in China and India, two of the world's largest textile markets.

In June, ITMA ASIA + CITME 2012 was held in Shanghai, China, with 1,283 companies participating from 28 countries and the attendance of more than 92,000 visitors. At this exhibition, we displayed and demonstrated our new JAT810 air-jet loom, the TCO 12 comber jointly developed with Truetzschler and the RX300 high-speed ring spinning frame capable of producing value-added special yarns.

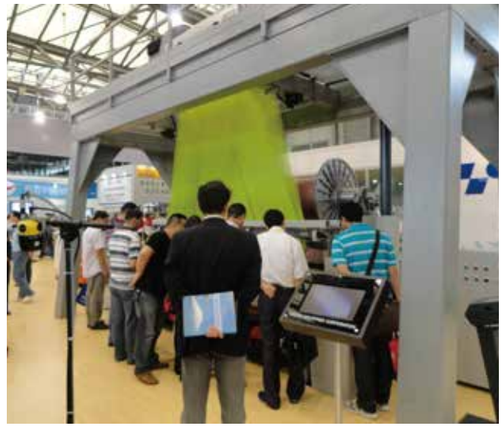
At INDIA ITME 2012 held in Mumbai in December, 773 companies from 27 countries participated and approximately 80,000 visitors attended. We ran a joint booth with Kirloskar Toyota Textile Machinery Pvt. Ltd. (KTTM), a consolidated subsidiary in India, and demonstrated actual operations of Toyota Industries' new JAT810 air-jet loom and KTTM's RXI240 ring spinning frame and FL200 high-speed roving frame.

At both events, we received favorable feedback from many customers mainly from China and India.

We will continue to appeal our excellent technological capabilities and environmental performance in our efforts to earn a higher level of customer trust. We also aim to meet customer expectations by developing textile machinery that produces even higher value-added textile products through the pursuit of advanced technologies and continuous creativity and ingenuity as well as by providing meticulous after-sales services via an enhanced service structure.



ITMA ASIA + CITME 2012


ITMA ASIA + CITME 2012

INDIA ITME 2012

INDIA ITME 2012

Corporate Social Responsibility

CSR Policy

Based on the CSR Policy formulated with the aim of realizing the Basic Philosophy that carries on the spirit of founder Sakichi Toyoda, the Toyota Industries Group contributes to the harmonious and sustainable development of society and the Earth.

Guided by a strong ambition to "contribute to society and the world through *monozukuri* (manufacturing)," Toyota Group founder Sakichi Toyoda devoted himself to "endless creativity, inquisitiveness, and the pursuit of improvement" and made various inventions including the non-stop shuttle-change Toyoda Automatic Loom, Type G. The spirit of Sakichi is enshrined in the Toyoda Precepts, formulated in 1935 and passed down today in our Basic Philosophy, which we established in 1992 and revised in 1998. (See the inside cover of this report for details.)

The business environment surrounding Toyota Industries is continuing to evolve rapidly and dramatically. Regardless of changes in the business environment and values, we remain unchanged in our belief that realizing our Basic Philosophy is the cornerstone of the Toyota Industries Group's corporate social responsibility (CSR). Acting on this belief, in March 2009 we formulated and implemented the Toyota Industries Group CSR Policy, which clarifies our relationships with stakeholders, namely customers, employees, business partners, shareholders and local and global communities.

The CSR Policy is divided into nine areas, and the CSR Committee* confirms and evaluates the implementation status of this policy and promotes CSR activities.

* Chaired by the president, the committee convenes twice per year and consists of directors, managing officers and audit & supervisory board members.

■ **CSR Areas**

Toyota Industries Group CSR Policy (Summary)

Preamble

- We contribute to the harmonious and sustainable development of society and the Earth.
- We comply with local, national, and international laws and regulations as well as the spirit thereof.
- We believe that management interacting with its stakeholders is of considerable importance.
- We expect our business partners to support this initiative and act in accordance with it.

Customers

- Based on our philosophy of "Customer First," we provide innovative, safe, and high-quality products and services.
- We endeavor to protect the personal information of customers and everyone else with whom we are engaged in business, in accordance with the letter and spirit of each country's privacy laws.

Employees

- We respect our employees and encourage personal growth for our employees.
- We support equal employment opportunities and diversity for our employees and do not discriminate against employees.
- We strive to provide fair working conditions and to maintain a safe and healthy working environment for all our employees.
- We respect and honor human rights and do not use or tolerate any form of forced labor or child labor.
- Through communication and dialogue with our employees, we build and share the value of "Mutual Trust and Self-responsibility."
- The management of each company takes leadership in fostering an ethical corporate culture.

Business Partners

- We respect our business partners and work to realize mutual growth based on mutual trust.
- Whenever we seek a new business partner, we are open to any and all candidates, regardless of nationality or size, and evaluate them based on their overall strengths.
- We maintain fair and free competition in accordance with the letter and spirit of each country's competition laws.

Shareholders

- We strive to enhance corporate value for the benefit of our shareholders.
- We provide timely and fair disclosure on our operating results and financial condition.

Global Society/Local Communities

[Environment]

- We strive to develop, establish, and promote technologies enabling the environment and economy to coexist harmoniously. We work to reduce the effect of climate change and preserve biodiversity.

[Community]

- We operate our business so as to earn the trust of respective communities.
- We pursue safer, cleaner technologies that meet the evolving needs of society.
- We do not tolerate bribery and maintain honest and fair relationships with government agencies and public authorities.

[Social Contribution]

- We actively promote and engage in social contribution activities that help strengthen communities and contribute to the enrichment of society.

Corporate Governance

As a global company operating in various countries and regions, Toyota Industries seeks efficient management while maintaining and enhancing the fairness and transparency of its corporate activities.

Basic Perspective of Corporate Governance

Toyota Industries strives to enhance the long-term stability of its corporate value and maintain society's trust by earnestly fulfilling its CSR commitments in accordance with its Basic Philosophy.

To that end, Toyota Industries strives to enhance its corporate governance based on the belief that maintaining and improving management efficiency and the fairness and transparency of its corporate activities is of utmost importance.

Corporate Governance Structure

Implementation Structure

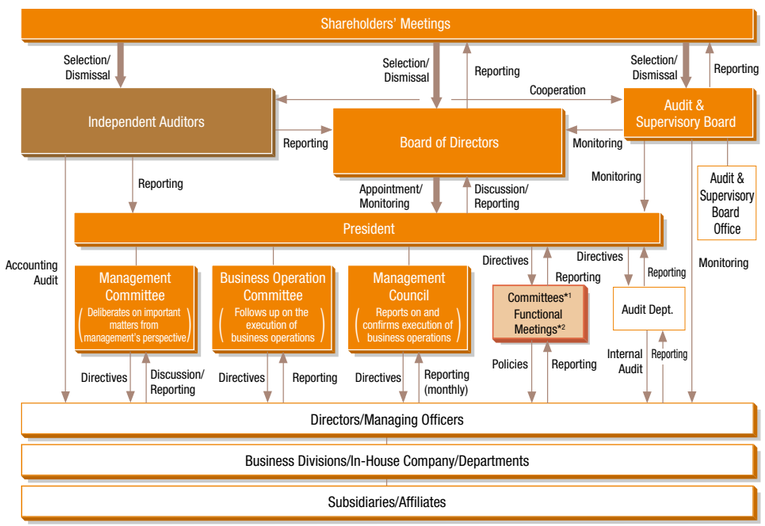
Toyota Industries convenes monthly meetings of the Board of Directors to resolve important management matters and monitor the execution of duties by directors. We also appoint outside directors who are knowledgeable about our business operations. They attend meetings of the Board of Directors and give opinions and ask questions as deemed necessary. Through this supervisory function of outside directors, we ensure the legality and validity of the Board's decisions as well as directors' execution of duties from an objective perspective. The Management Committee, which is composed of directors above the executive vice president level as well as relevant directors, managing officers and audit & supervisory board members, deliberates on a variety of issues concerning important management matters such as corporate vision, management policies, medium-term business strategies and major investments.

Toyota Industries has a divisional organization system, with significant authority delegated to each business division. For especially crucial matters, however, we have established the Business Operation Committee to enable the president to meet with the heads of each business division regularly to monitor and follow the status of their business execution. At meetings of the Management Council, directors, managing officers and audit & supervisory board members convene to report and confirm the monthly status of business operations and share overall deliberations at Board of Directors meetings and other management-related information.

In addition, issues pertaining to human resources, quality, production, procurement and technologies are discussed at the corresponding functional meetings. We have also put in place committees to deliberate on more specific matters, such as CSR, the environment, human resources development and export transaction controls. These functional meetings and committees discuss important matters and action themes in respective areas.

Audit & Supervisory Board System

Toyota Industries has adopted an audit & supervisory board system. Two full-time audit & supervisory board members and three outside audit & supervisory board members attend meetings of the Board of Directors to monitor the execution of duties by directors. At the same



These entities deliberate and follow up on issues in respective areas.

Emergency Profit Improvement Committee
In response to the rapid downturn in our business environment, Toyota Industries has established the Emergency Profit Improvement Committee on December 1, 2008 (renamed the Profit Improvement Committee since June 13, 2013) directly under the president. We have been carrying out profit improvement activities throughout the Company via different subcommittees.

(As of March 31, 2013)

time, meetings of the Audit & Supervisory Board are held once a month to discuss and make decisions on important matters related to auditing. The full-time audit & supervisory board members carry out auditing by attending primary meetings and receiving reports directly from directors. Additionally, we have assigned dedicated personnel, while audit & supervisory board members monitor the legality and efficiency of management through collaboration with independent auditors and the Audit Department.

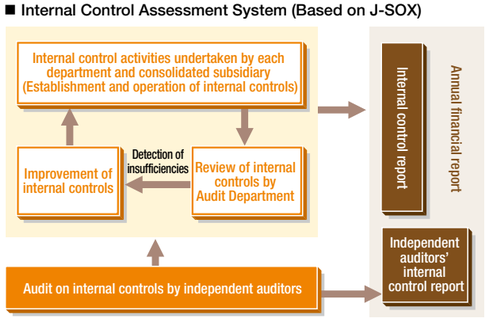
As a publicly listed company, Toyota Industries strives to ensure the fairness and transparency of management. Following the Securities Listing Regulations stipulated respectively by the Tokyo Stock Exchange, Osaka Securities Exchange and Nagoya Stock Exchange, we designated as independent auditors two outside audit & supervisory board members who have no conflicts of interest with our shareholders to further enhance our corporate governance.

Internal Control System

In accordance with the Corporation Law of Japan, in May 2006 Toyota Industries' Board of Directors adopted the Basic Policies for the Establishment of an Internal Control System (Basic Policies) to ensure compliance, risk management as well as the effectiveness and efficiency of business operations after giving consideration to each business segment's annual policies and day-to-day routine management. The CSR Committee, at its meeting held in March, assesses the progress made in implementing the Basic Policies in the year under review and determines actions for the coming year, including reviewing the implementation structure and enhancing day-to-day operational management.

Furthermore, based on the Financial Instruments and Exchange Law (so-called Japanese Sarbanes-Oxley Act (J-SOX)), we have established and appropriately operated an internal control system to maintain the reliability of financial reporting. The system's status and progress are reviewed by the Audit Department and audited by independent auditors. We determine which Toyota Industries Group companies fall within the scope of J-SOX based on the degree of impact on the reliability of financial reporting.

■ Internal Control Assessment System (Based on J-SOX)



We determined that our internal controls over financial reporting as of the end of fiscal 2013 are effective, and accordingly, submitted an Internal Control Report in June 2013. The report was reviewed by independent auditors and judged fair in their Independent Auditors' Report.

Compliance

Four Pillars of Compliance Activities

We believe that compliance means both adhering to laws and regulations and observing ethics and social norms. In order to ensure compliance, it is vital that we raise the awareness of each and every employee.

Under the strong leadership of top management, we promote compliance throughout the Toyota Industries Group, including consolidated subsidiaries in and outside Japan, by formulating a Code of Conduct and thoroughly informing employees together with checking and monitoring compliance.

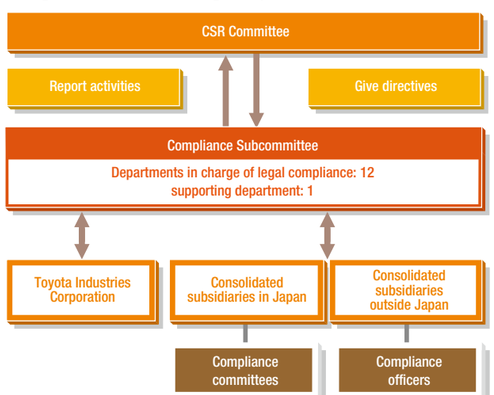
■ Four Pillars of Compliance Activities

Establishment and Reinforcement of Implementation Organization

To promote compliance throughout the Toyota Industries Group, we have established the Compliance Subcommittee (led by executive vice president in charge of administration*) as a subordinate organization to the CSR Committee. Every year, the subcommittee formulates an action policy and conducts follow-up checks on its progress on a quarterly basis.

In fiscal 2013, we worked to strengthen compliance initiatives throughout the entire Toyota Industries Group.

■ Organization for Promoting Compliance



(1) Holding four meetings a year, the Compliance Subcommittee compiled and reviewed cases of law violations within the Toyota Industries Group and measures taken to prevent recurrence as well as worked to improve the level of management by encouraging information sharing among the Group companies.

(2) A compliance committee was set up at the European headquarters for the materials handling equipment business. The committee took the initiative in holding compliance training targeting heads of each subsidiary under the primary control of the regional headquarters in order to strengthen activities throughout Europe.

Compliance training

*As of March 31, 2013

Formulation of Code of Conduct and Dissemination

Toyota Industries has formulated the Code of Conduct, which serves as conduct guidelines that should be observed by employees, and distributed a portable version to every employee.

At consolidated subsidiaries worldwide, compliance officers (outside Japan) and compliance committees (in Japan) take the lead in formulating, delivering to and educating employees on their own Code of Conduct matched to their respective business lines and corporate cultures. Toyota Industries' 32 consolidated subsidiaries in Japan and 57 consolidated subsidiaries outside Japan have already created their own Code of Conduct and have been working to instill an awareness among their employees.

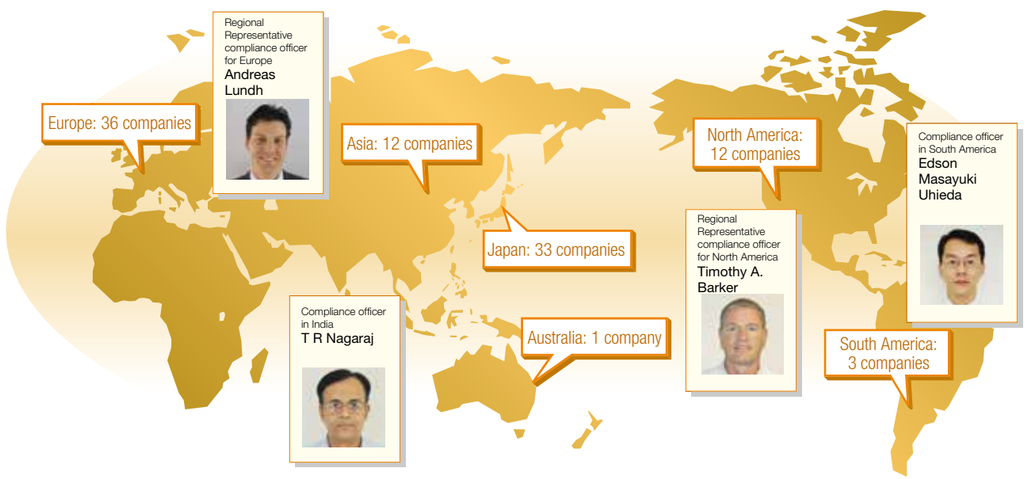
■ Code of Conduct at Various Subsidiaries

Thoroughly Informing Employees about Applicable Laws and Regulations

Toyota Industries provides compliance education to all levels of employees. This includes providing required legal knowledge to employees according to their job ranks or positions, familiarizing them with the emergency procedures that should be followed upon the occurrence of a problem and educating them on risk management. To new or young employees, in particular, we provide easy-to-understand guidance on "what to do" and "what not to do" in order to instill compliance awareness based on laws and corporate ethics, using our Code of Conduct as an instructional material.

In order to provide effective education, we devise

■ Compliance Officers (outside Japan) and Compliance Committees (in Japan) (As of March 31, 2013)



■ Compliance Education Provided

various ways to actively engage employees. For example, lectures are interactive and participatory, featuring group discussions to deepen the level of understanding among participants. We also survey participants' needs (questions and concerns) beforehand and offer lectures in response to these needs, thereby raising the degree of usefulness and satisfaction of compliance education.

In order to cultivate a deeper understanding of compliance among employees, we introduce cases of possible compliance violations in monthly internal newsletters, providing commentaries on problem areas in detail.

■ Internal Newsletters

Checking and Monitoring Compliance

In order to monitor the status of compliance, we request internal departments and our consolidated subsidiaries in and outside Japan to perform a compliance self-assessment.

Toyota Industries' subsidiaries answer a checklist comprised of 60 to 250 items defined for each of the applicable laws. If any of these items are found to be insufficient, each responsible department and respective subsidiaries work together to make improvements.

We also operate a compliance hotline that allows employees and their families to seek advice on compliance-related matters without being exposed to negative consequences, as well as to make adequate responses. This compliance hotline is cited in our Code of Conduct, and we regularly hand out a pamphlet to subsidiaries' employees to inform them of the service.

■ Pamphlet regarding Compliance Hotline

Management of Confidential Information

Basic Perspective

Toyota Industries recognizes that the personal information of customers, employees and business partners as well as information concerning our technologies and sales activities are assets that need to be protected. Acting on this belief, we are making our utmost efforts to safeguard confidential information and strengthen its management as one of the CSR areas.

Implementation Structure

Toyota Industries has set up the Information Security Subcommittee (led by a director in charge of general administration*1) as a subordinate organization to the CSR Committee to promote proper management of confidential information, taking appropriate actions against the leakage of confidential information and complying with the Unfair Competition Prevention Act and the Personal Information Protection Law.

To thoroughly implement the initiatives adopted by the subcommittee, we appoint information security managers*2 and information security administrators*3 at each department. We strive to raise awareness about information security among their staff by holding workplace meetings and conducting self-checks regarding their information security practices.

Examples of such activities include requiring employees to obtain permission when taking their PCs off the premises, taking antitheft measures for PCs, restricting the copying of electronic data on recording media, monitoring email correspondences and regularly reviewing rules for management of confidential information.

In addition, we collaborate with other Toyota Group companies to carry out "All Toyota Confidentiality Management Month" activities in May and October. As part of this effort, we are working to discourage and monitor unauthorized carrying out of PCs and recording media.

Our consolidated subsidiaries in and outside Japan also appoint respective information security managers and information security administrators. We also have formulated common guidelines concerning management of confidential information and follow up on their activities on a periodic basis.

*1: As of March 31, 2013
*2: Head of each department
*3: A person within the department, appointed by the head

■ Poster for Confidentiality Management Month

Risk Management

Basic Perspective

Based on the Basic Policies for the Establishment of an Internal Control System, which was set up by the Board of Directors in May 2006 in compliance with the Corporation Law of Japan, Toyota Industries is working to strengthen regulations and a structure to promote risk management. We regard the following two aspects as the basics of risk management.

(1) Incorporating measures to prevent and reduce potential risks into daily routines and following up on the progress of implementation
(2) Ensuring quick and precise actions to minimize the impact on business and society when a risk becomes apparent

Implementation Structure

Business divisions and other departments at the Head Office develop and promote annual action policies that integrate measures to prevent and control risks related to quality, safety, the environment, personnel, export transactions, disasters and information security. Progress is assessed and followed up by each functional management entity such as the CSR Committee and the Environmental Committee. At the same time, functional departments at the Head Office such as those responsible for quality, safety and the environment formulate rules and regulations from a Group-wide perspective, including consolidated subsidiaries. By confirming and following up on the progress through operational audits and workplace inspections, they provide support for raising the level of risk management at each business division and consolidated subsidiary.

Our *Crisis Response Manual* provides specific examples of significant risks and lays out basic rules for appropriate decisions and actions when a risk becomes evident or a major problem occurs. This manual is distributed to executives and those in managerial positions of Toyota Industries as well as to top management at consolidated subsidiaries as a means of facilitating risk management as the Toyota Industries Group.

■ Crisis Response Manual

Response to a Possible Large-Scale Earthquake

Toyota Industries considers the occurrence of a major earthquake in Japan as one of the most significant risks. To ensure adequate Company-wide response when an earthquake occurs, we define disaster prevention measures in the three areas of mitigation, initial response to be taken immediately after the disaster and restoration of production.

In addition, we focus our disaster prevention measures on the three basic policies of placing maximum priority on human life, placing top priority on the recovery of local communities and ensuring the quickest possible recovery.

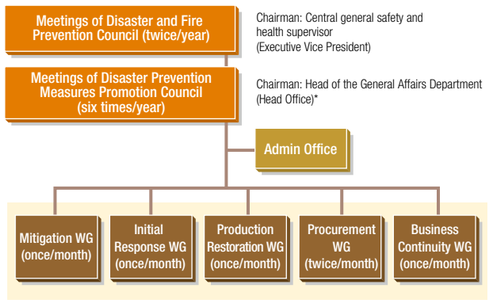
In fiscal 2013, we sought to further strengthen disaster prevention measures, which were revised after reviewing the lessons learned from the Great East Japan Earthquake. Specifically, we upgraded disaster prevention drills at each plant, established a disaster prevention organization that oversees Company-wide initiatives and simulated responses in the event of a disaster.

Implementation Structure

The Disaster and Fire Prevention Council devises overall policies while the Disaster Prevention Measures Promotion Council monitors progress. Specific measures are formulated and implemented by working groups (WGs) consisting of members of the functional departments at the Head Office and representatives from each plant.

So that Toyota Industries can carry on its business activities in the event of a disaster, since November 2012 two new WGs were added that specialize in procurement and business continuity.

■ **Structure for Promoting Disaster Prevention Measures**



*As of March 31, 2013

Primary Measures for Disaster Prevention

1 Mitigation Measures

Activities in this area primarily focus on disaster prevention measures concerning equipment and other devices to protect the lives of employees.

1) Equipment

We developed quake resistance standards for equipment within plants and implemented measures to avoid turning over, falling and sudden sliding of equipment.

2) Buildings

We created a prioritized list of buildings requiring anti-seismic treatment and have been carrying out reinforcement work.

3) Prevention of Secondary Disasters

Through workshop activities, we identify latent risks of secondary disasters, such as fire, in each plant and conduct risk assessment and prioritization.

Workshop activity

2 Initial Response

1) Initial Response Procedures

Placing maximum priority on the protection of human life, we formulated and disseminated initial response procedures to be followed by employees immediately after a disaster.

2) Safety Confirmation System

Since July 2011, we have operated a safety confirmation system to account for employees and their families in case of an earthquake. When an earthquake with a magnitude of 5 or greater occurs, this system automatically sends email messages to employees' cell phones and other devices, to which employees send replies together with information on their safety status.

3) Disaster Drills

(a) Upgrading Disaster Drills

We set up a new disaster prevention organization with clearly defined functions and roles at each plant and base. In addition to conventional disaster drills, we conducted more practical drills centered on transportation and rescue of injured persons.

Drill for rescuing injured persons

Drill for initial firefighting

(b) Drills at Disaster Prevention Response Headquarters

We conducted drills at the disaster prevention response headquarters, which coordinates Company-wide measures in the event of a disaster. We simulated responses assuming a scenario from the occurrence of an earthquake to restoration activities, and reaffirmed response procedures and the division of roles. We seek to elevate the level of our response in both emergency and normal situations.

Drills at the disaster prevention response headquarters

4) Strengthening Activities to Raise Awareness for Disaster Prevention

In July 2012, we invited a consultant to give a lecture on disaster prevention for the members of the Disaster and Fire Prevention Council, including executives, as well as the personnel tasked with disaster prevention activities at consolidated subsidiaries. Through the lecture, participants reviewed Toyota Industries' disaster prevention measures based on the lessons learned from the Great East Japan Earthquake.

Lecture on disaster prevention

We also set up a disaster prevention corner at such company events as Toyota Industries' annual *Aozora Ichiba* cross-organizational exhibition in an effort to share best practices for improvement and a variety of other initiatives undertaken at each Group company as well as the *Shokki Festa*, a festival for promoting interaction with local communities. Through such initiatives, we sought to instill a higher awareness in and encourage each employee to take stronger disaster prevention measures not only at work but also at home.

Aozora Ichiba

Shokki Festa

3 Restoration of Production

To meet the expectations of society and customers in and outside Japan, Toyota Industries has been implementing measures to quickly restore production operations. Starting from fiscal 2011, we have been enhancing function-based initiatives by setting up a Company-wide Production Restoration WG. Since September 2012, the Procurement WG, which makes up the organizational structure for promoting Company-wide disaster prevention measures, has been working on initiatives concerning the supply chain.

1) Initiatives Related to Organization and Personnel Assignments

(a) Organization for Restoration

We continued reviewing our organizational structure for restoring production and clarified the roles and responsibilities of each department. Anticipating emergency situations and a prolonged restoration period, we set up a structure in which two or more responsible persons (leader and co-leader) are appointed at the Head Office and respective departments in each business division.

(b) Responsible Personnel during Restoration

We have established a structure to quickly initiate measures to restore production by selecting trained persons capable of taking the lead in restoration activities and making adequate responses at a place of disaster as well as restoration personnel having appropriate experience, knowledge and skills.

2) Pre-Disaster Mitigation Measures

Each business division carries out Production Restoration WG activities to promote pre-disaster mitigation measures. Members from various departments tasked with restoring production participate to identify latent risks and issues and engage in the following activities.

(a) Infrastructure Restoration

We are reinforcing facilities and equipment for such utilities as electricity, gas and water as well as for information systems, all of which are vital for restoring production, along with undertaking measures for vulnerable spots in wiring and pipework.

(b) Formulating Production Restoration Procedures

We have formulated production restoration procedures for the Company and individual business divisions. The procedures lay out the target timeline for restoring production and clearly define implementation items and time allocation for each item at departments tasked with restoration work.

(c) Production Equipment

Upon clarifying production processes that should be prioritized for restoring production and identifying latent risks and issues, we are considering methods of restoration and making a list of required materials and supplies.

(d) Logistics

We are examining the infrastructures around each plant and review the results to define safe logistics routes.

(e) Backup Logistics Support

We have clarified the division of labor and implementation items among departments tasked with providing production restoration support, including how to obtain food and water, manage work shifts and clarify commuting routes.

Production restoration workshop (identifying risks and contemplating countermeasures)

Relationship with Our Customers

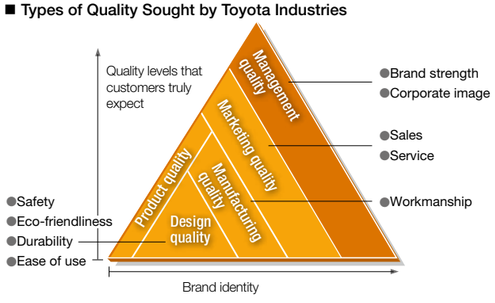
Adhering to a quality first approach, Toyota Industries strives to realize *monozukuri* (manufacturing) that quickly responds to the diverse, ever-changing needs of customers.

"A product should never be sold unless it has been carefully manufactured and has been tested thoroughly and satisfactorily."

Carrying on the spirit of founder Sakichi Toyoda, Toyota Industries strongly believes that quality is the lifeblood of a company. Focusing on quality first and ensuring customer safety and reassurance are our most important responsibilities to our customers and form the basis of our CSR approach.

Toyota Industries strives to maintain and improve the total quality of our corporate activities, which encompasses "product quality," "marketing quality" and "management quality." "Product quality" is embodied in the safety, eco-friendliness, durability, ease of use and workmanship of our products, while "marketing quality" entails excellent sales and service in addition to these attributes and "management quality" further enhances our overall corporate image and brand strength in terms of all of these attributes.

■ Types of Quality Sought by Toyota Industries



Ensuring the Highest Quality

Placing top priority on our "Customer First" philosophy, Toyota Industries undertakes product development that meets customer expectations.

At Toyota Industries, development of a new product entails defining specific goals to incorporate quality in every stage from product planning and design to production preparation, production, sales and after-sales services. We perform a design review (DR), which allows a product to proceed to the next stage only when a responsible business division head examines and approves whether the product has reached the target quality level.

Should a defect occur after the product launch, the quality assurance departments of each business division immediately devise necessary measures. At the same time, a probable cause is identified from both technical and structural aspects, and if deemed necessary, the new product development system itself is reviewed to prevent recurrence in subsequent models.

Activities Based on the Quality Guidelines

Every year, we issue the Quality Guidelines, which identify priority quality implementation items to all production bases in and outside Japan. The progress made in implementing these guidelines is reviewed at the Quality Functional Meeting, which is chaired by the executive vice president in charge of quality control and attended by top management, and through *genchi genbutsu* (go and see for yourself) inspections. Issues raised through these activities are followed up at meetings of the Company-wide Council of Heads of Quality Assurance Departments chaired by a quality control department head.

Aimed at preventing past serious quality issues from recurring, we have standardized implementation items to assure the quality levels throughout Toyota Industries and formulated the Quality Guidelines.

Quality inspection by top management

In fiscal 2013, we carried out activities based on "accurately reflecting customers' expectations for safety and reassurance in our quality assurance system," which is stipulated as one of the priority items under the Quality Guidelines.

Building on the activities we have undertaken to date, we have formulated the Product Risk Assessment Guidelines in order to incorporate measures to minimize risks at the design stage based on the assumption that customers make use of our products in diverse ways, including the predictable improper use. We have also commenced product safety training for developers and designers and sought to raise the level of their skills to ensure these guidelines are properly applied and product risk assessment measures are strengthened even more.

In fiscal 2014, Toyota Industries will steadily implement priority action items defined under the Quality Guidelines in and outside Japan, with the aim of improving the level of customer satisfaction.

Relationship with Our Associates

Our ultimate goal is to create safe and healthy workplaces where each and every associate can exercise their diverse potentials and play active roles.

Building a Safety-Oriented Culture that Aims for Zero Industrial Accidents

In accordance with our fundamental policy of "creating people capable of autonomously maintaining occupational safety and health," Toyota Industries strives to prevent industrial accidents and occupational disorders as well as realize better work environments.

In fiscal 2013, we carried out activities under the following two principal policies.

Create a Foundation for Realizing a Safety-Oriented Culture

As part of associate safety education, we further enhanced and upgraded our safety *dojo* in each plant and conducted training on basic procedures for safe operations.

To eliminate industrial accidents, we worked to further raise safety awareness among associates while making sure they consistently adhere to safe actions in their immediate surroundings, including traffic rules within the company premises. With the cooperation of a third-party auditor, we also reviewed and improved the system, structure and thinking regarding our safety and health activities. Correspondingly, we surveyed the attitudes and actions toward safety among all associates from top executives on down. Thereafter, those in managerial positions conducted repeated and thorough discussions based on the results and issued a declaration of safety, which was disseminated throughout Toyota Industries via safety and health meetings held at all workplaces.

Discussion by those in managerial positions

Promote Fundamental Safety

In fiscal 2013, we focused on reviewing the safety standards for both existing and newly installed machinery and equipment.

With regard to risk assessment, we thoroughly identified and evaluated risks by specifying potential hazards during the equipment design stage and established a system to minimize risk. After taking measures to minimize risks, we stipulated usage rules. In addition, we improved the risk assessment method to avoid overlooking certain risks and a disparity in individual perceptions.

The safety standards also include prerequisites for preventing equipment-induced fires for a higher level of safety and fire protection of machinery and equipment.

Assisting Consolidated Subsidiaries in Achieving High Safety and Health Levels

We have been working with the relevant departments to provide executive training, conduct *genchi genbutsu* inspections and offer guidance to help consolidated subsidiaries in Japan achieve high safety and health levels.

For our consolidated subsidiaries outside Japan, we promote the sharing of such information as industrial accidents, suggest measures to prevent similar accidents, implement cross-deployment of safety *dojos* and provide guidance through *genchi genbutsu* and activity support.

Initiatives for Health Management and Improvement

As a task for the medium term, we are promoting associate health improvement programs to counter risks associated with aging and greater stress.

Specifically, we proactively provide health guidance to prevent lifestyle diseases for persons with metabolic syndrome and actively encourage follow-up after annual health checkups. We also conduct periodic age-based health education for all associates to maintain and promote their health and wellness.

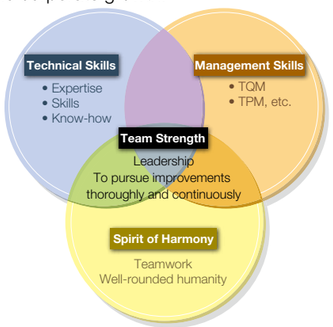
Mental health care activities include providing self-care/line-care education and setting up a health-related hotline. We have also successfully worked to build closer collaboration with external medical institutions and prevent relapses by launching a return-to-work support program for persons on long-term leave and conducting a survey on workplace stress levels.

Health guidance for prevention of lifestyle diseases

Physical fitness measurement conducted during age-based health education

Enhancing Team Strength

Toyota Industries believes that enhancing team strength is vital to forming a dynamic workforce and achieving sustainable corporate growth.



We believe that team strength is made up of “technical skills” that form the basis of manufacturing operations, “management skills” to make maximum use of technical skills and “spirit of harmony” that supports both. While further enhancing our team strength, we are striving to extend and hand it down beyond all business domains, generations and geographic regions.

Technical Skills

We are currently working to enhance the skills of our technical staff primarily by providing training programs at the Technical Learning Center, one of our training facilities, to gain skills to support manufacturing. At the 50th National Skills Competition held in October 2012, the Toyota Industries team won one silver medal and four bronze medals in the categories of “electrical welding,” “mechatronics,” “mechanical engineering design—CAD” and “structural ironsmith,” thereby attaining medals for the 12th consecutive competition. We believe this is the result of our success at raising skill levels throughout our manufacturing operations as well as cultivating top-caliber specialists.

In addition, we teach new associates in engineering fields fundamental knowledge regarding specialized skills through classroom lectures and hands-on training. Based on the concept of *genchi genbutsu*, they must learn the basics of manufacturing through a comprehensive, experience-oriented program that covers all aspects from planning and design to actual production before they are assigned to respective workplaces. Even after being assigned, we provide training programs matched to the needs of each workplace in an effort to raise skill levels.

Management Skills

We conduct work procedures training on problem solving targeting associates in administrative and engineering fields so that they can improve their problem-solving capabilities. This training is also provided at subsidiaries outside Japan in an effort to share our thinking and values regarding work procedures throughout the Toyota Industries Group.

Spirit of Harmony

Toyota Industries is creating a bright, energetic and caring work environment that fosters a dynamic workforce and allows every member to demonstrate his or her capabilities both as an individual and as a team. Throughout the world, we are proactively encouraging communication not only during work hours but also through social gatherings, sports days, summer festivals, Group-wide *ekiden* long-distance relay races and cheer squads for various sports events.


Work procedures training on problem solving

Establishing Work Environments Where Diverse Human Resources Can Play Active Roles

We are implementing a variety of measures to create work environments where a diverse range of human resources can fully exercise their capabilities. These measures include supporting managing both work and family, supporting the employment of persons with disabilities and creating a work environment in which older associates can play active roles.

Support for Managing Both Work and Family

In addition to enhancing systems to help our associates manage both their work and family, we regularly hold exchange meetings and seminars to provide information on diverse ways of working and increase awareness among associates.
In fiscal 2013, we held a seminar on the theme of managing both work and family that facilitates growth for both individuals and organizations.


Seminar on managing both work and family

Employment of Persons with Disabilities

We respect the idea of people with and without disabilities working together and sharing life and work values. Under this basic policy, we continue to employ persons with disabilities every year. They are assigned to a variety of sections and work with other members to perform their designated tasks. In fiscal 2013, the ratio of associates with disabilities on a non-consolidated basis was 2.06%.

Creating a Work Environment for Older Associates

We are making Company-wide efforts to create a work environment in which older associates can play active roles. Specific examples include improving processes to help associates with impaired eyesight as well as providing support for health management.

Relationship with Our Business Partners

Toyota Industries encourages open procurement and seeks co-existence and co-prosperity with our business partners based on mutual trust. We also facilitate environmentally preferable purchasing and CSR-oriented purchasing practices.

Fair Competition Based on an Open Door Policy

We have a fair entry process that allows all potential business partners, regardless of nationality, size and experience, the same opportunity to offer us their products or services through our Website to achieve broad and open procurement.

We comprehensively evaluate our business partners based on quality, price, their adherence to delivery times, technological capabilities and company stability. We also assess their initiatives for safety, the environment and compliance as we strive for the timely and stable procurement of excellent products at lower costs based on fair business transactions.

Co-Existence and Co-Prosperity Based on Mutual Trust

We work hard to realize co-existence and co-prosperity with our business partners based on mutual trust. We hold annual procurement policy meetings and executive seminar for major business partners to gain their understanding and cooperation. In order to consistently procure better products, we also conduct quality and technical skills training programs and safety and health education as well as provide guidance directed toward *kaizen* at business partners’ production sites.

Reducing Environmental Impact through Environmentally Preferable Purchasing

In order to create environmentally friendly products, we aim to procure parts, materials and equipment from business partners that give sufficient consideration to the environment.

In fiscal 2013, we revised our Environmentally Preferable Purchasing Guidelines and issued the 5th edition.

In the latest edition, we added “packaging materials” to the existing category of parts and raw materials. In this way, we are making efforts to prevent prohibited substances of concern from being mixed into our products so that our customers can use them with greater safety and reassurance.

The guidelines also clarify Toyota Industries’ point of view and initiatives regarding the conservation activities for biodiversity, which is gaining importance as part of environmental protection activities, and seeks the understanding of business partners.

Environmentally Preferable Purchasing Guidelines

Localization of Business for Good Corporate Citizenship

In view of increased local production outside Japan, we promote procurement from local business partners in order to contribute to the local community through consolidated subsidiaries.

Disaster Prevention Activities for Possible Major Earthquake

Based on the lessons learned from the Great East Japan Earthquake, we engage in disaster prevention activities in anticipation of a major earthquake in Japan. We are making concerted efforts with business partners to ensure the stable supply of parts and raw materials during the restoration of production.

One such activity in fiscal 2013 included holding disaster prevention seminars as an avenue for providing business partners with an explanation on our initiatives. At the seminar, we requested them to make self-assessments on their disaster prevention activities in accordance with a check sheet.

Based on the results, we are working with business partners to put in place a system to enable quick information gathering and the restoration of production in the event of a disaster.


Disaster prevention seminar for business partners

Relationship with Our Shareholders and Investors

We aim to obtain an appropriate company valuation in stock markets through timely and appropriate information disclosure while promoting good communications with shareholders and investors.

Basic Perspective

Toyota Industries continually carries out timely and appropriate information disclosure for shareholders and investors. In this way, we raise management transparency so that we obtain an appropriate company valuation in stock markets. We provide not only information required under disclosure laws and regulations but also information on our management policy and business activities. Also, we strive to promote communications with shareholders and investors and feed back their comments to executives and relevant business divisions to reflect them in our business activities.

General Shareholders' Meeting

We hold our annual general shareholders' meeting early to avoid the date on which many companies hold their respective shareholders' meetings so that more shareholders can attend.

We are laying the groundwork for further facilitating the exercise of voting rights of our shareholders by allowing them to exercise such rights via the Internet and by joining the electronic voting platform for institutional investors.

We held our 134th General Shareholders' Meeting on June 14, 2012, in which 363 shareholders participated. For the purpose of fostering a better understanding of our business activities, we invited our shareholders for a lift truck plant tour following the general shareholders' meeting.

Investor Relations Activities

For institutional investors and securities analysts, our management conducts briefing sessions to explain our quarterly financial results, including business performance, progress achieved at each business division and future initiatives. In addition to accepting interviews at Toyota Industries' offices and making visits to institutional investors, we also hold plant tours to facilitate a deeper understanding of our manufacturing operations.
To address the needs of institutional investors from outside Japan, we participate in conferences hosted in Japan by securities companies and hold small and individual meetings.

Taking advantage of the Internet as a means of disclosing information in a quick and fair manner, Toyota Industries provides a variety of information via the Investor Relations page. We use RSS feeds (in Japanese) to promptly provide the latest information.

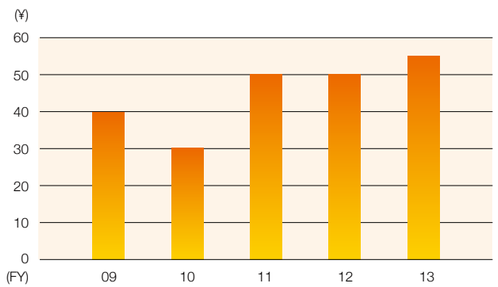
Engine plant tour for institutional investors (December 2012)

Briefing on financial results for fiscal 2013 by the president (May 2013)

Dividend Policy

Toyota Industries regards returning profits to shareholders as one of the most important management policies. Accordingly, we strive to continue paying dividends and meet the expectations of shareholders upon taking into consideration such factors as business results, demand for funds and the payout ratio. For fiscal 2013, Toyota Industries paid annual cash dividends per share of ¥55.0 (interim cash dividend per share of ¥25.0 and year-end cash dividend per share of ¥30.0).

■ Cash Dividends per Share (Annual)



Relationship with Our Local Communities

With a view toward fostering community growth and creating an enriched society, we actively undertake social contribution activities in every region where we do business.

Activities as a Good Corporate Citizen

Based on "Respect for Others" as described in our Basic Philosophy, we strive to fulfill our role as a good corporate citizen in every region where we do business and actively engage in social contribution activities to realize an enriched and healthy society. In our activities, we not only provide cooperation and support through personnel, facilities, funds and know-how but also strive to closely connect with participants. To foster employees' awareness of their ties to society and raise their interest in contributing to society, we promote enlightenment efforts such as sharing information on volunteer activities and providing a venue for volunteer activities that encourage the participation of all employees.

Structure for Promoting Social Contribution Activities

The CSR Committee deliberates on policies of our social contribution activities while the Social Contribution Group within the General Administration Department at the Head Office takes the initiative in carrying out activities.

Three Pillars of Our Social Contribution Activities

Toyota Industries is engaging in various activities in close cooperation with every local community in which we operate, placing particular emphasis on social welfare, youth development and environmental protection.

Social Welfare
To help develop local communities where everyone enjoys an active life, we hold various social welfare events to encourage exchange with persons with disabilities and conduct joint fund-raising programs with our consolidated subsidiaries in Japan.

Youth Development
With the aim of providing opportunities for youth, who will lead the next generation, to learn the importance of *monozukuri* (manufacturing) and the meaning of work through actual experiences, we hold events jointly with Youth Invention Clubs, host work experience activities and conduct environmental education.

Environmental Protection
We carry out a range of environment-related activities, including promoting the use of wood thinned from forests in Japan, conserving forests through employee volunteer programs and engaging in cleanup activities in the community where our plants are located, to contribute to environmental preservation and the development of a sustainable society.

Activity Examples (in Japan)

Mini Concerts at Elementary Schools

In November 2012, we hosted mini concerts at elementary schools in Iwate Prefecture jointly with a non-profit organization (NPO), *Kodomo ni Ongaku wo* ("Bring Music to Children"), as a gesture of encouragement to the children affected by the Great East Japan Earthquake. We hope this activity will nurture children's sensibilities through music by professional players and help them grow into spiritually enriched adults.

Mini concert

Volunteer Activity at Welfare Facility

In September 2012, the Toyota Industries Team Leader Association* at the Nagakusa Plant in Aichi Prefecture, which engages in vehicle assembly operations, visited a day services facility for a volunteer activity that primarily involved talking with elderly persons. Through plant briefings and games, the employees engaged in lively conversations with senior citizens, making it a rewarding day for all participants.

* An autonomous Company-wide organization consisting of young leaders at manufacturing sites, the organization promotes interchanges for self-development and carries out volunteer activities.

Members of Toyota Industries Team Leader Association engaging in conversations with senior citizens

Activity Examples (outside Japan)

India

Donations to Organization for Supporting Persons with Disabilities

Kirloskar Toyota Textile Machinery Pvt. Ltd. (KTTM)
Subsidiary producing automotive parts and textile machinery

In May 2012, KTTM lent its support to the marathon held by the EnAble India* group to promote employment opportunities for persons with disabilities. KTTM donated T-shirts for the event.

* EnAble India is a volunteer group that works to improve the quality of life for persons with disabilities by creating employment opportunities.

Marathon participants

Switzerland

Presentation on Textile Machinery

Toyota Textile Machinery Europe, AG (TTME)
Subsidiary for sales of textile machinery

In May 2012, TTME invited local elementary school students and held a presentation on textile machinery. The children listened to explanations on how raw cotton is transformed into yarn after undergoing various steps (spinning) and how yarn is turned into fabric (weaving). Afterward, they observed an air-jet loom in operation and were amazed by its speed while learning more about the weaving process.

Elementary school children observing an air-jet loom

Romania

Support for Environmental Conservation Activities

Toyota Material Handling Romania s.r.l. (TMHRo)
Subsidiary for sales of lift trucks

In May 2012, TMHRo employees worked with local volunteer groups to support environmental conservation activities promoted in their country and took part in cleanup activities in forests located on the outskirts of Bucharest, the capital city of Romania. In addition to the participation of the employees, the company paid to transport trash from sites and supplied the necessary materials to help make the activities a success.

Employees carrying out cleanup activities

U.S.A.

Fund-Raising Activity for Those in Need

Michigan Automotive Compressor, Inc. (MACI)
Subsidiary producing car air-conditioning compressors

In December 2012, volunteer teams from MACI collected donations for those in need. This activity, which is carried out and commonly seen during the Christmas season at shopping centers and other venues, is one of the many different programs led by The Salvation Army, a non-governmental organization (NGO), in over 100 countries around the world.

Employees collecting donations

Environmental Initiatives

A Biotope to Link People, Nature and the Local Community

—Aiming to Develop an Ecological Network—

A biotope is a microcosm space where various living organisms native to a region can live and thrive in a self-sustainable manner. In September 2012, Toyota Industries turned its idle land into a community-friendly biotope.

In cooperation with an initiative of Aichi prefectural government in Japan to promote the development of ecological networks, we have been working to create an environmental setting that can serve as a node to connect green zones in the surrounding areas with waterways and become a habitat for various living organisms.

We also wish to create a link with the local community by making the biotope accessible to the public. Toyota Industries will also provide environmental education and maintain this biotope jointly with local elementary schools and community members.

The new biotope embraces our vision of creating a new place of interaction among nature, living organisms and people.

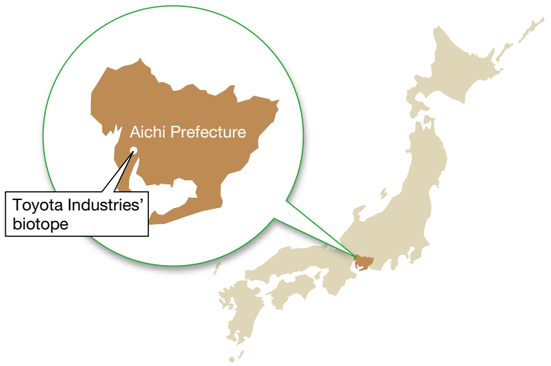



Toyota Industries' Positioning of the Biotope Project

In February 2011, Toyota Industries revised the Global Environmental Commitment and explicitly stipulated in the updated environmental policy that we undertake efforts to protect biodiversity.

Under the Fifth Environmental Action Plan that defines our activities in the medium term, we have been promoting initiatives after carefully identifying the impact of our business activities on biodiversity and setting specific targets accordingly.

The creation of a biotope is one such initiative. We seek to contribute to the protection of biodiversity through collaboration with such organizations as the prefectural government, non-profit organizations (NPOs), local community and expert bodies.

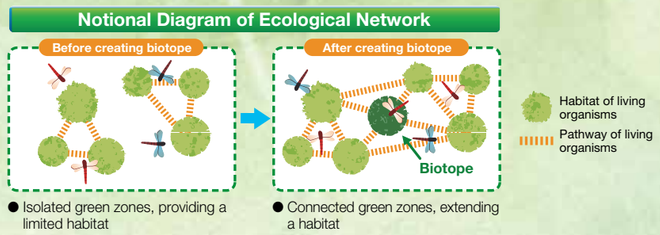


Creating a Biotope That Facilitates Development of an Ecological Network

The Tenth Meeting of the Conference of the Parties to the Convention on Biological Diversity (COP10) in October 2010 took place in Aichi Prefecture. In order to uphold COP10's philosophy of "Living in Harmony with Nature," the prefectural government has since been promoting the development of ecological networks throughout the prefecture as a means of conserving biodiversity. In the Chita Peninsula, where our production sites are located, the Chita Peninsula Ecological Network Council was established in January 2011 with the aim of developing an ecological network through collaboration among organizations and individuals, including the prefectural government, companies, NPOs, expert bodies and students. Taking part in this council, Toyota Industries has been cooperating with other members and carrying out activities to contribute to the formation of an ecological network.

What Is an Ecological Network?

Land development and other activities often divide a natural environment into smaller segments. Developing an ecological network means to connect these isolated segments of green zones and waterways. The resulting network means a larger living space for various living organisms and encourages the protection of biodiversity. (See the illustration on the right.)



Ecological Network Surrounding Target Area

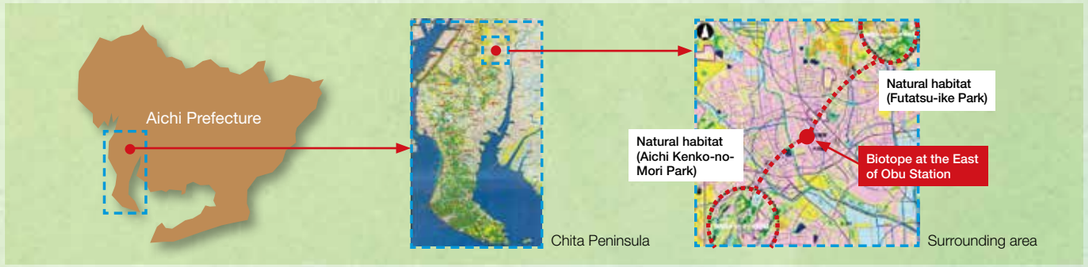
Chita Peninsula

Our biotope, which we named "Biotope at the East of Obu Station," is located in the northern area of the Chita Peninsula in Aichi Prefecture. Unlike the southern region, which remains rich in nature with an abundant variety of living organisms, industrialization and housing development have adversely affected the quantity and quality of greenery in the northern region.

Surrounding Area

There are two large green zones, or natural habitats, in the vicinity. Toyota Industries' biotope can serve as a stepping-stone to link these two green zones.

Our biotope is regarded as being very unique in Japan, as it is located adjacent to the residential area, not within our own corporate factory site, thus providing free access to the premises to everyone.



Message from Stakeholders

Takahito Niwa
Director, Natural Environment Division, Department of the Environment, Aichi Prefecture

Toyota Industries' biotope is not just an ordinary biotope. It is a biotope to connect to the natural environment in the surrounding area, forming an ecological network and regenerating the indigenous ecosystem in front of a railway station located in the proximity of large factories. The biotope will attract dragonflies, birds and children as well as provide a space for people to interact and enjoy nature. It will be a valuable asset shared by all local community members.

Development of an ecological network by a company is an extremely unique, visionary initiative, and we are truly grateful for Toyota Industries' efforts. We will publicize this initiative widely as one of the most outstanding corporate initiatives both in Japan and in the world.

Takaya Iida
College of Business Administration and Information Science, Chubu University

As part of activities under the Life Relay Project*, we planted the region's native trees in the biotope established by Toyota Industries. Some insects and wild birds are already visiting, and we hope this biotope will become a biotically diverse, self-sustainable habitat.

* A project jointly carried out by Aichi Prefecture, NPOs, companies and students with the aim of forming ecological networks by leveraging corporate green zones of the Chita Peninsula as well as developing young environmental leaders

Environmentally Designed Biotope

Our biotope is environmentally designed to the extent possible, from the choice of materials to maintenance and management. The following are a few of such examples.

"Eco-Stones"

We recycled waste generated at our plants, such as dust and scrap, and created eco-stones by applying a smelting reduction process. These stones are used for landscaping and marking the pond and streams.

"Agleaf" (Soil Amelioration)

We collected fallen leaves and branches pruned from trees on our factory premises and recycled them as a tree mulching material*.

* Used to prevent surface soil from being blown away, inhibit growth of weeds and retain soil temperature and humidity to promote growth of plants

Solar Power Generation

Pumps that circulate water within the biotope use electricity naturally generated by solar panels installed on the premises.

Rendering of Our Biotope

We will realize our vision of creating "a biotope to link people, nature and the local community," with the cooperation of community members, the prefectural government and experts.

Together with the Local Community

In designing our biotope, we sought advice from local government officials, experts and members of environmental organizations from the planning phase. We also solicited opinions from local residents via briefing sessions on such matters as ways to utilize this biotope.

During the construction phase, we collaborated with various entities, including a local welfare organization, special needs school and Boy Scout troop, and made wooden benches and released fish into the stream.

We will continue to work together with local community members to maintain and manage this biotope so that it remains an accessible, comfortable place to interact with nature.

Local community briefing session

Local Boy Scout members releasing fish

Hideo Yoshimura
Director, Obu District,
Obu City, Aichi Prefecture

When I heard about this project, my first impression was a corporate park open to the local community. As I listened closer, I realized it was not just a simple park, but a natural habitat based on a clear concept of connecting to the surrounding natural environment and providing a larger space for living organisms. I was drawn to the idea.

This biotope is a place for nature and living things, but we hope to turn the place into a small oasis for people as well, where children play with dragonflies and butterflies and adults come to relax. In doing so, our community will provide necessary support for this project.

Future Direction

The creation of a biotope was the first initiative of its kind ever undertaken by Toyota Industries. Our aim is to nurture a biotope to bring nature and living organisms back to the way they should be and contribute to the conservation of regional biodiversity.

For further expanding an ecological network within the region, we will continue to undertake activities to develop another biotope and ones that follow, with the ultimate goal of forming our own unique ecological network.

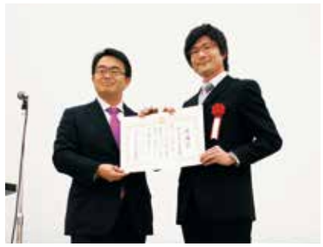
Special Website Opened

http://www.toyota-shokki.co.jp/biotope/ (Japanese)

External Awards

Received a Letter of Appreciation from the Governor of Aichi Prefecture

We received a letter of appreciation from Governor Omura of Aichi Prefecture for our significant contribution to the development of ecological networks within the prefecture through our biotope initiative.



Granted Excellence Prize in 2013 Aichi Environmental Awards

Toyota Industries' biotope is used for activities of the Life Relay Project and has been developed in close collaboration with other organizations participating in the project. Our efforts were highly recognized as an exemplary, forward-thinking project effective in developing ecological networks. The 17 participants, including Toyota Industries and the student executive committee of the project, received an Excellence Prize in the 2013 Aichi Environmental Awards.

Won Biotope Award in the Fifth Biotope Commendation

At the Fifth Biotope Commendation* sponsored by the NPO Japan Biotope Association, Toyota Industries' biotope received the Biotope Award, the program's highest award. The association highly appraised the concept of our biotope, its environment-conscious design and sustainable maintenance and management jointly carried out with the local community.

* A program to award excellent biotopes throughout Japan for the purpose of further encouraging the creation of biotopes and raise public awareness

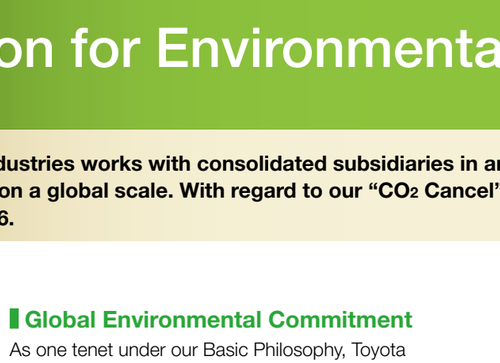
Vision for Environmental Activities

Toyota Industries works with consolidated subsidiaries in and outside Japan to promote environmental activities on a global scale. With regard to our "CO_2 Cancel" initiative, we aim to accomplish its targets in fiscal 2016.

Global Environmental Commitment

As one tenet under our Basic Philosophy, Toyota Industries works to contribute to regional living conditions and social prosperity and also strives to offer products and services that are clean, safe and of high quality. Accordingly, in February 2011, we established the Global Environmental Commitment, a specific environmental action guideline, to be shared and implemented throughout the Toyota Industries Group.

The entire Toyota Industries Group comprising 154 companies in and outside Japan will dedicate concerted efforts to realizing a prosperous life in harmony with the natural environment by carrying out activities aimed at "establishing a low-carbon emission society," "establishing a recycling-based society" and "reducing environmental risk and establishing a society in harmony with nature" as our way of "promoting environmental management."



Notional Diagram of Global Environmental Commitment

Working toward "CO_2 Cancel"

What Is "CO_2 Cancel"?

We have been promoting initiatives under our original concept called "CO_2 Cancel." This refers to our aim to offset CO_2 emissions from production activities by reducing CO_2 emissions via improved product efficiency and other means. We have adopted this approach as a new environmental target under the Fifth Environmental Action Plan and been promoting activities accordingly.

Defining a Target (Timeline)

In fiscal 2013, we used our original parameters to estimate CO_2 reduction volume attained in each of the products we develop (lift trucks, engines, car air-conditioning compressors, car electronics components, textile machinery and others) through such means as improved energy savings and weight reduction.

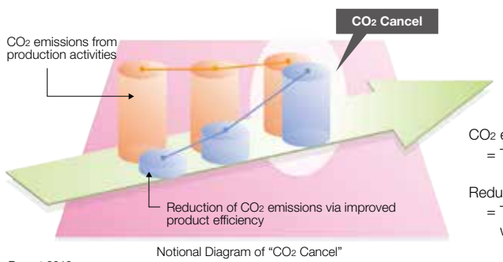
As for CO_2 emissions from production activities, we estimated annual emission volume by taking into account both the CO_2 emissions that naturally increased in line with an expansion of production volume and the CO_2 emissions that declined as a result of CO_2 reduction activities.

We simulated the overall CO_2 emissions volume based on these estimates and specified fiscal 2016 as the target year to accomplish "CO_2 Cancel."

In the years ahead, we will facilitate activities toward achieving this goal.

Steps to Accomplishing "CO_2 Cancel"

1. Establish parameters to calculate CO_2 reduction volume for each product
2. Simulate a timeline to accomplish "CO_2 Cancel"
3. Specify targets (including when to accomplish "CO_2 Cancel")
4. Promote activities to achieve these targets
5. Accomplish "CO_2 Cancel"
6. Define higher targets (e.g., "CO_2 Double Cancel")



Notional Diagram of "CO_2 Cancel"

CO_2 emissions from production activities
= Total CO_2 emissions from Toyota Industries' plants

Reduction of CO_2 emissions via improved product efficiency
= Total reduction in CO_2 emissions attained by major products which are manufactured at Toyota Industries' plants

Structure to Implement Environmental Management

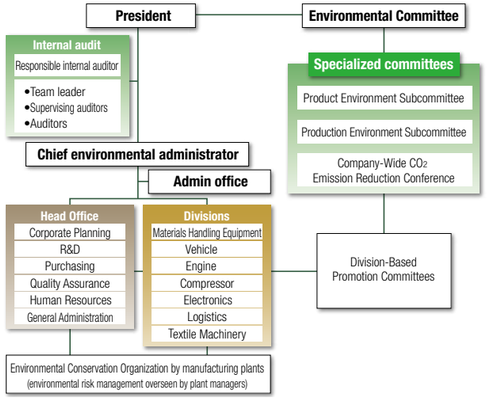
Positioning environmental response as one of its most crucial management issues, Toyota Industries is enhancing its environmentally oriented corporate management on a global basis through the promotion of consolidated environmental management.

Improving Environmental Management System Efficiency

Toyota Industries has positioned environmental response as one of its most crucial management issues. To quickly reflect top management's decisions on business operations, Toyota Industries has established and been operating a Company-wide integrated environmental management system (EMS), with the president at the top.

In fiscal 2011, we initiated the process of consolidating environment-related regulations that had been established separately by each business division. In fiscal 2013, we formulated and started operating an integrated version of regulations related to evaluation of the impact of overall business activities on the environment (evaluation of environmental aspects).

■ Environmental Management Structure



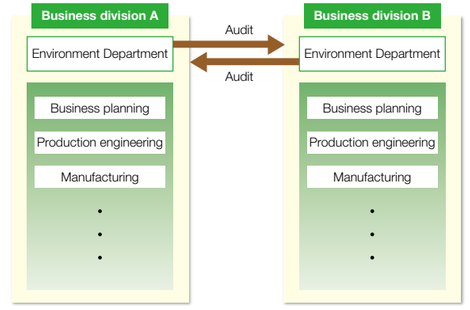
Environmental Audits

Toyota Industries implements annual internal environmental audits as well as external audits carried out by an independent third-party institute.

The external audit conducted in fiscal 2013 revealed five non-conformances. We have already completed measures to correct them and passed on the relevant information to other plants to prevent recurrences.

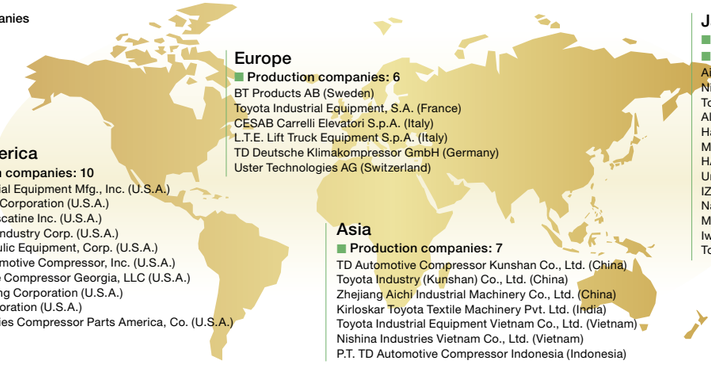
As for internal audits, we introduced a system of conducting mutual audits among business divisions in fiscal 2013. Previously, internal audits of individual business divisions had been led by the Environment Department of the Head Office. Under the new system, the Environment Department of one business division plays a central role in an internal audit of another business division. By adopting this method, we aim to upgrade the overall capabilities of the Environment Department of each business division.

■ System of Mutual Audits



■ Scope of Group-Wide Environmental Management (As of March 31, 2013)

Non-production companies
Japan: 24
Outside Japan: 93



North America
■ Production companies: 10
Toyota Industrial Equipment Mfg., Inc. (U.S.A.)
The Raymond Corporation (U.S.A.)
Raymond-Muscatine Inc. (U.S.A.)
North Vernon Industry Corp. (U.S.A.)
Indiana Hydraulic Equipment, Corp. (U.S.A.)
Michigan Automotive Compressor, Inc. (U.S.A.)
TD Automotive Compressor Georgia, LLC (U.S.A.)
Cullman Casting Corporation (U.S.A.)
Cascade Corporation (U.S.A.)
Toyota Industries Compressor Parts America, Co. (U.S.A.)

Europe
■ Production companies: 6
BT Products AB (Sweden)
Toyota Industrial Equipment, S.A. (France)
CESAB Carrelli Elevatori S.p.A. (Italy)
L.T.E. Lift Truck Equipment S.p.A. (Italy)
TD Deutsche Klimakompressor GmbH (Germany)
Uster Technologies AG (Switzerland)

Asia
■ Production companies: 7
TD Automotive Compressor Kunshan Co., Ltd. (China)
Toyota Industry (Kunshan) Co., Ltd. (China)
Zhejiang Aichi Industrial Machinery Co., Ltd. (China)
Kirloskar Toyota Textile Machinery Pvt. Ltd. (India)
Toyota Industrial Equipment Vietnam Co., Ltd. (Vietnam)
Nishina Industries Vietnam Co., Ltd. (Vietnam)
P.T. TD Automotive Compressor Indonesia (Indonesia)

Japan
■ Non-consolidated: 10 plants
■ Production companies: 13
Aichi Corporation (Saitama)
Nishina Industrial Co., Ltd. (Nagano)
Tokaiseiki Co., Ltd. (Shizuoka)
Altex Co., Ltd. (Shizuoka)
Hara Corporation (Gifu)
Mino Tokyu Co., Ltd. (Gifu)
HANDA Casting Company (Aichi)
Unica Co., Ltd. (Aichi)
IZUMI MACHINE MFG. CO., LTD. (Aichi)
Nagao Kogyo Co., Ltd. (Aichi)
Miduho Industry Co., Ltd. (Aichi)
Iwama Loom Works, Ltd. (Aichi)
Tokyu Co., Ltd. (Aichi)

Fifth Environmental Action Plan

As a result of our strong commitment to the Fifth Environmental Action Plan (fiscal 2012 – fiscal 2016), we successfully achieved the targets set for fiscal 2013. In fiscal 2014, we will continue to facilitate activities to achieve a greater reduction in environmental impact.

Progress in the Fifth Environmental Action Plan

With an eye to realizing a prosperous life in harmony with the natural environment through the establishment of a sustainable society, we have formulated the Fifth Environmental Action Plan for the period from fiscal 2012 to fiscal 2016, promoting activities according to the plan.

In fiscal 2013, we succeeded in achieving all targets defined for the fiscal year under the plan. To reduce environmental impact further, we have also determined targets to be attained by fiscal 2016.

The results up to fiscal 2013 that are listed on pages 64–72 were surveyed by Toyota Industries Corporation.

■ Establishing a Low-Carbon Emission Society

Segments	Action Policies/Specific Actions	Subject	Scope	Control Items	FY2013 Targets Base Year (FY)	FY2013 Targets Targets	FY2013 Achievements Achievements	FY2013 Achievements Evaluation	FY2016 Targets Base Year (FY)	FY2016 Targets Targets
Products	Reduce CO_2 emissions in the market by 10%*1 from major products to be developed during the period covered by the Fifth Plan	*2					**<Automobile-Related Business>** •Developed highly efficient electric compressor •Developed plastic glazing back window **<Materials Handling Equipment Business>** •Developed highly efficient electric lift truck by adopting a regeneration system and other features **<Textile Machinery Business>** •Incorporated IPM*3 motor in ring spinning frames and achieved better energy savings of pneumatic suction cleaning device	○	*2	
	In the Automobile-Related Business, promote electrification and develop technologies and products that will contribute to reduction of CO_2 emissions •Improve energy efficiency of car air conditioners •Develop technologies to respond to electrification of vehicles •Develop technologies to enable weight reduction •Reduce energy loss •Develop new engines In the Materials Handling Equipment Business, develop technologies and products that will contribute to reduction of CO_2 emissions •Improve fuel efficiency of internal-combustion lift trucks •Reduce energy loss in electric-powered lift trucks and improve energy efficiency of functional units In the Textile Machinery Business, develop technologies and products that will contribute to reduction of CO_2 emissions •Reduce energy use through lower air consumption •Reduce power use through lower load from windage loss •Reduce energy loss In the R&D field, develop technologies for energy efficiency •Develop new technologies that contribute to improved energy efficiency in automobiles									
Production	Promote energy reduction and energy conservation through innovative production technologies Reduce greenhouse gas emissions during production processes through energy JIT*4 <Energy-derived emissions> •Promote energy conservation of production facilities •Promote airless/steamless operations •Optimize supply energy •Encourage every employee's participation through visualization of energy loss •Review energy-related strategy <CFCs> •Ensure complete recovery Promoting measures to curb global warming •Promote horizontal deployment of technologies to curb global warming •Strengthen and expand ESCO*5 activities	CO_2 emissions •Energy-derived CO_2 •5 gases*6 •CO_2 from logistics	Non-consolidated	Total emissions	1991	-10% (FY09-13 average)	-17% (FY09-13 average)	○	2006	-18%
			Global	Eco-efficiency*7	2006	1.15	1.28	○	2006	1.27
			Non-consolidated			1.32	1.49	○		1.47
			Consolidated subsidiaries in Japan			1.02	1.29	○	—	—
			Consolidated subsidiaries outside Japan			1.05	1.16	○	—	—
Logistics	Reduce CO_2 emissions through green logistics •Promote modal shift •Reduce the number of transportation vehicles by promoting mixed transport among business divisions	CO_2 from logistics	Non-consolidated	Total emissions	1991	-15%	-38%	○	1991	-20%
				Eco-efficiency	2007	1.06	1.28	○	2007	1.09

■ Establishing a Recycling-Based Society

Segments	Action Policies/Specific Actions	Subject	Scope	Control Items	FY2013 Targets Base Year (FY)	FY2013 Targets Targets	FY2013 Achievements Achievements	FY2013 Achievements Evaluation	FY2016 Targets Base Year (FY)	FY2016 Targets Targets
Products	Implement initiatives to promote 3R (reduce, reuse and recycle) design for effective resource utilization •Reduce use of resources through longer product life •Reduce use of resources through standardization, modularization and reduction of components •Reduce use of resources through weight and size reductions •Promote reuse of components and resources	*2					•Realized more compact inverter for electric compressors	○	*2	
Production	Enhance resource productivity <Packaging materials> •Reduce use of timber-derived packaging materials <Resources> •Reduce the volume of discarded materials by taking action at the source, such as improving yields and other measures •Promote internal reuse	Packaging material volume	Non-consolidated	Eco-efficiency	2007	1.06	4.25	○	2007	1.09
		Waste generation volume	In Japan		2006	1.13	1.28	○	2013	1.01
			Non-consolidated			1.12	1.23	○		1.01
			Consolidated subsidiaries in Japan			1.16	1.45	○	—	—

■ Reducing Environmental Risk and Establishing a Society in Harmony with Nature

Segments	Action Policies/Specific Actions	Subject	Scope	Control Items	FY2013 Targets Base Year (FY)	FY2013 Targets Targets	FY2013 Achievements Achievements	FY2013 Achievements Evaluation	FY2016 Targets Base Year (FY)	FY2016 Targets Targets
Products	Reduce emissions to improve air quality in urban areas in all countries and regions •Develop engines that meet future regulations Manage chemical substances contained in products •Investigate chemical substances contained in products and manage switching over of SVHC*8 and other substances of concern to other substances	*2					•Developed lift truck engines compliant with emissions regulations ahead of schedule •Expanded the scope of substances of concern (started investigating substances of concern contained in supplies)	○	*2	
Production	Further reduce emissions of substances of concern •Reduce emissions of substances of concern mainly from painting processes Minimize environmental risks •Expand the use of a preliminary review system •Reduce risks related to wastewater •Appropriately manage chemical substances based on social conditions •Enhance risk communication with relevant organizations and local residents	VOC*9 emissions	Non-consolidated (automobile body)	Emission volume per unit of production	—	24 (g/m²)	24 (g/m²)	○	—	24 (g/m²)

■ Promoting Environmental Management

Segments	Action Policies/Specific Actions	Subject	Scope	Control Items	FY2013 Targets		FY2013 Achievements	FY2016 Targets	
					Base Year (FY)	Targets	Achievements	Base Year (FY)	Targets
General	Reinforce CO_2 reduction activities for "CO_2 Cancel" •Further reduce CO_2 emitted from production activities in plants •Aim to cancel out CO_2 emissions of Toyota Industries by reducing CO_2 emissions through improved efficiency in newly developed products	*10					•Set the timeline for achievement of "CO_2 Cancel" (Target: FY2016)	*10	
	Augment and promote consolidated environmental management •Build a global environmental management system and promote related activities to: 1) Comply with environment-related laws and reduce environmental risks in each country 2) Achieve the highest-level performance in each country •Aim for efficient and systematic corporate management by integrating and operating environmental management system and quality/safety management systems						•Checked the precision of environmental data at consolidated subsidiaries in Japan and provided support for improvement •Disseminated information regarding plant-related laws and regulations •Confirmed compliance through check sheets		
	Enhance and promote environmental education and enlightenment activities •Develop environmental specialists to lead internal environment-related activities •Strengthen internal environment-related activities and broaden family-friendly initiatives by planning and promoting enlightenment activities that can be carried out at home						•Conducted environmental awareness survey among employees, which scored 3.7 out of 5 points		
	Improve eco-conscious brand image •Reinforce environmental activities according to the contents and results of Survey of Environmental Oriented Management Index to pursue higher brand image						•Won Environment Minister's Award for Global Warming Prevention Activity in recognition of reduction of CO_2 emissions through the introduction of alternative coke products •Won Silver Prize of the Aichi Environmental Awards for serializing electric compressors		
	Augment activities related to protection of biodiversity •Identify the impact of business activities on biodiversity and reinforce initiatives by defining specific goals •Contribute to biodiversity through conservation of forests and protection of rare species						•Revised Environmentally Preferable Purchasing Guidelines that included considerations to biodiversity •Established Biotope at the East of Obu Station		
	Promote sustainable plant activities •Build a plant environment in harmony with nature by promoting energy reduction and energy conservation through innovative production engineering; by reducing energy loss; and by using renewable energy and other means						•Reviewed energy strategy for the medium to long term		

*1: Target products Toyota Industries develops and produces. The CO_2 reduction volume is calculated based on the method Toyota Industries determined using FY2011 levels as the baseline.
*2: Details undisclosed due to confidential information and other reasons
*3: Short for interior permanent magnet, this is a motor with a magnet embedded inside its rotor, offering improved energy savings, high efficiency and high torque.
*4: Just In Time
*5: Short for Energy Service COmpany, ESCO provides comprehensive services related to energy savings and supports energy-efficient activities.
*6: Greenhouse gases other than CO_2, including methane (CH_4), dinitrogen monoxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride (SF_6)
*7: Eco-efficiency = Production efficiency in subject year / Production efficiency in base year
Production efficiency = Production indicator (Net sales or production volume, etc.) / Environmental impact of production activities
*8: Substances of Very High Concern
*9: Volatile Organic Compounds
*10: Specific targets are set separately and progress is disclosed via the Company Website or *Toyota Industries Report* and other media.

Establishing a Low-Carbon Emission Society

We position the establishment of a low-carbon emission society as one of our most crucial environmental tasks. We will work to reduce CO_2 emissions in our global business activities and at the same time accelerate our efforts to develop more environment-friendly products.

Summary

CO_2 Emissions (Production Activities)

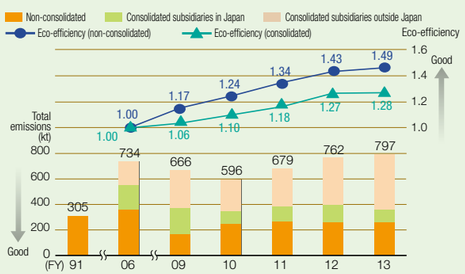
FY2013 Targets	FY2013 Results
Total emissions (non-consolidated)	
10% reduction *FY09–13 average (vs FY91 level)	→ 17% reduction
Eco-efficiency (global)	
1.15 (FY06 = 1.00)	→ 1.28

Under the Fifth Plan, we set out to achieve a target of reducing total non-consolidated CO_2 emissions from production activities by 10% in fiscal 2013 compared with the fiscal 1991 level. We successfully reached this target as a result of our steady, ongoing efforts, including activities to save power during summer and reduce peak power load, which started in fiscal 2012, as well as activities to visualize energy loss in fiscal 2013. Globally, our target was to achieve eco-efficiency of 1.15 (using fiscal 2006 as the base year), and we attained a significantly better result than the defined target. We will make steady progress toward a new target set for fiscal 2016.

Our product development activities are based on the keywords of 3Es (energy, environmental protection and ecological thinking), and we focus on developing products that meet the need for increased energy savings, electrification and weight reduction. In this area, we are currently working toward a target of attaining a 10% reduction in CO_2 emissions from primary products by fiscal 2016 compared with the fiscal 2011 level.

Initiatives for Establishment of a Low-Carbon Emission Society

■ CO_2 Emissions (Non-consolidated/Consolidated subsidiaries in and outside Japan)



New High-Precision Combined Machine to Reduce CO_2

The Compressor Division has been working to develop more compact production lines for electric compressors since fiscal 2010 to improve the efficiency of manufacturing processes and reduce CO_2 emissions.

In fiscal 2013, we promoted improvement activities to reduce CO_2 emitted during the parts machining process by 30%, or approximately 110 tons. With the leadership of the Production Engineering Department, the division collaborated with relevant departments and an external equipment manufacturer and developed a high-precision combined machine that can reduce the overall size of production lines. The machine eliminates unnecessary processes and attains significantly higher energy-saving performance, thereby reducing CO_2 emissions by approximately 140 tons. The machine is also capable of unprecedented higher precision processing, which contributes to quieter operation of electric compressors.

In addition to electric compressors, the new high-precision combined machine can be used in the machining line of conventional car air-conditioning compressors for internal-combustion vehicles. We installed this machine at Michigan Automotive Compressor, Inc. (MACI) in the United States and TD Deutsche Klimakompressor GmbH (TDDK) in Germany by the end of fiscal 2013. Consequently, we reduced annual CO_2 emissions of the entire Toyota Industries Group by roughly 600 tons.

Based on these outstanding achievements, this project won the Most Outstanding Practice Award in fiscal 2013 under our internal award program to recognize excellent environmental improvement activities.

Haruyuki Ito
Group Manager, Machining Production Engineering Office, Production Engineering Department, Compressor Division

Position and department as of March 31, 2013

In developing this high-precision combined machine, we first needed to clarify the structure of our conventional general-purpose equipment. Then, to establish an original production method, we added various improvements to this machine, which is one type of manufacturing equipment, and applied the world's first engineering technology.

As our future activity, we aim for improved durability and higher precision of this machine and will work to enhance efficiency of the machining process for other components.

Certification of Environmentally Friendly Product

Toyota Industries has been proactively promoting development and design of eco-conscious products. To certify products with exceptionally outstanding environmental performance, we launched the Environmentally Friendly Product Certification System in fiscal 2007. Up to fiscal 2012, nine products have obtained certification under this system. In fiscal 2013, we certified another three as environmentally friendly products, as described below.

ESA34 (Electric Compressor)

Energy efficiency

Approx. **10%** higher*1

*1: Compared with the previous model by using in-house testing patterns

Points contributing to less environmental impact

- The ESA34 achieves higher efficiency through the adoption of a new mechanism. Energy efficiency has been improved by approximately 10% compared with the previous model.
- The use of a smaller inverter, a modification of structural layout, a change in parts composition and a fewer number of fastening locations made the ESA34 approximately 10% lighter than the previous model.

High Pick Lift (Electric Lift Truck)

Uptime

Approx. **80%** longer*2

*2: 1.0-ton model (operating in S mode) compared with the previous model

Points contributing to less environmental impact

- In place of a DC motor used in the previous model, we adopted our newly developed, high-powered, highly efficient AC motor for both cargo handling and driving.
- Various regeneration systems run when the operator lowers the fork, releases the accelerator, applies brake control or performs a switchback maneuver, thus recovering energy very efficiently.

E-shed (Electronic Shedding Device for Air-Jet Looms)

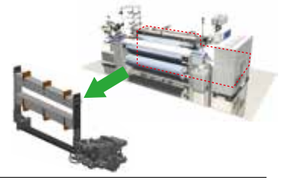
Power consumption

Approx. **22%** reduction*3

*3: Compared with the previous model (operating at 800 rpm)

Points contributing to less environmental impact

- The new electronic shedding device, which allows the weaving of complex-patterned fabrics, recovers energy generated in the deceleration process. By upgrading the previous model, the E-shed device allows increased energy recovery and contributes to reduced power consumption.



Received the Environment Minister's Award for Global Warming Prevention Activity

In fiscal 2011, we rolled out an initiative to reduce CO_2 emitted from the cast iron melting process*4 by replacing coal coke with such substitutes as biocoke*5. In recognition of this effort, we received the 2012 Environment Minister's Award for Global Warming Prevention Activity in the Countermeasure Technology Introduction and Dissemination Category. This award is given to individuals or organizations every year to commend their exceptional achievements in curbing global warming.

Our efforts will continue to focus on further reducing CO_2 emissions by increasing the ratio of biocoke used in the melting process and seeking other fuel substitutes.

*4: For more details, see page 66 of the *Toyota Industries Report 2012*.

*5: A solid, plant-derived biofuel produced by heating and compressing biomass such as wood chips from thinned trees or tea grounds thrown away by beverage manufacturers

Awards ceremony

Establishing a Recycling-Based Society

With a view to contributing to the establishment of a recycling-based society, we have dedicated considerable efforts to reducing waste generation volume and achieved results that greatly exceeded the targets laid out in the Fifth Environmental Action Plan.

Summary

Waste Generation Volume (Production Activities)

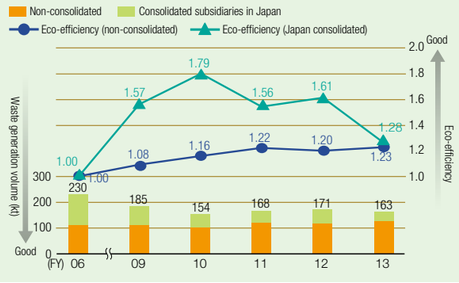
FY2013 Targets	FY2013 Results
Eco-efficiency (non-consolidated) 1.12 (FY06 = 1.00)	→ 1.23
Eco-efficiency (non-consolidated & consolidated subsidiaries in Japan) 1.13 (FY06 = 1.00)	→ 1.28

Our fiscal 2013 eco-efficiency targets in the area of waste generation volume under the Fifth Plan were 1.12 on a non-consolidated basis and 1.13 for Toyota Industries and its consolidated subsidiaries in Japan (fiscal 2006 as the base year). Since fiscal 2010, personnel in charge of waste-related matters in each plant and their counterparts in the Purchasing Department of the Head Office have been holding meetings to exchange information on waste, share the information on waste reduction efforts at each plant and consider joint reduction efforts among plants. We also support waste reduction activities of our consolidated subsidiaries in and outside Japan by actively sharing best practices throughout the Group.

In fiscal 2013, liquidation of one consolidated subsidiary in Japan resulted in a lower eco-efficiency than in the previous fiscal year. Regardless, we successfully achieved fiscal 2013 targets set under the Fifth Plan, both for Toyota Industries on a non-consolidated basis and for Toyota Industries and its consolidated subsidiaries in Japan.

Initiatives for Establishing a Recycling-Based Society

■ Waste Generation Volume
(Non-consolidated/Consolidated subsidiaries in Japan)

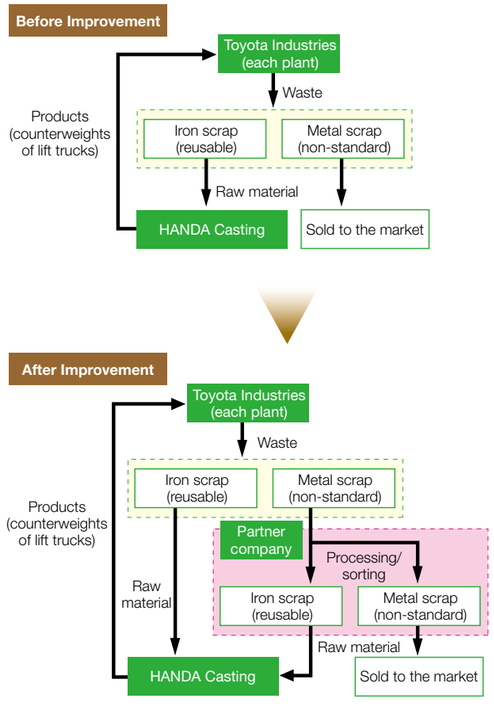


Effective Recycling of Metal Resources within Toyota Industries Group

In July 2012, we started an initiative to reuse waste metal scrap generated internally, which we previously sold to the market, to the maximum extent possible as a raw material to produce parts for our products.

Among waste generated by our plants, iron scrap has already been reused as a foundry raw material by HANDA Casting Company, a consolidated subsidiary in Japan producing foundry parts for lift trucks. Other types of metal waste, such as oil-containing debris, large-sized scrap from press processing and mixed metal scrap of non-iron metals, were not recyclable and were sold to the market.

For such metal resources, in fiscal 2013 one partner company of Toyota Industries began to undertake such processes as briquetting as well as shredding and sorting by hand, effectively increasing the amount of reusable metal scrap. We now recycle approximately 1,400 more tons of waste annually within the Toyota Industries Group.



Reducing Environmental Risk and Establishing a Society in Harmony with Nature

We have been striving to reduce emissions of substances of concern by implementing thorough management of chemical substances in product development and production activities.

Summary

VOC Emissions (Production Activities)

FY2013 Targets	FY2013 Results
Emissions per unit of production (non-consolidated/automobile body)	
24 g/m²	24 g/m²

Under the Fifth Plan, we set a target to attain emission volume per unit of production below 24 g/m² for volatile organic compounds (VOCs) from the vehicle body painting process and undertook activities accordingly. Solvents contained in paint are a major source of VOC emissions. Thus, our efforts have been focusing on increasing the recovery rate of thinner, a solvent, and improving coating efficiency through optimization of spray nozzles' discharge pressure and amount. These ongoing efforts helped us achieve the fiscal 2013 target.

Eliminating Adverse Environmental Impact due to Outsourced Work

In order to prevent adverse environmental impact caused by work activities of subcontractors ("outsourced work"), we conduct a check on whether their particular activities cause any impact on the environment by requiring them to submit an application form for construction operation in advance.

In fiscal 2013, we started conducting environmental patrols for outsourced work undertaken during a long holiday period when our environmental personnel are not available. We are reinforcing our efforts to prevent adverse environmental impact by conducting an environmental inspection on each venue of outsourced work.

Main Check Items

- Are effluents from outsourced work released directly into gutters?
- Do subcontractors check vehicle oil leakage before moving their vehicles?
- Is there leakage or spillage of oil, chemical agents, detergents or organic solvents on the floor or road surface (including green zones and soil)?

Soil and Groundwater Pollution Countermeasures

Toyota Industries carries out surveys and purification of soil and groundwater contaminated from the past use of trichloroethylene. We regularly report the survey results to local government authorities and provide information at local community meetings. As measures to prevent pollution from substances covered by the Soil Contamination Countermeasures Law as well as from grease and oils, we have drilled observation wells at all plants to conduct regular checks.

■ Trichloroethylene Readings

Plant	FY2009	FY2010	FY2011	FY2012	FY2013
Kariya Plant	0.67	0.67	0.41	0.38	0.26
Kyowa Plant	0.72	0.34	0.41	0.48	0.33

Weighted average concentration in groundwater (mg/l)

Status of Compliance with Environmental Laws

In January 2013, there was one incident at the Kariya Plant (Aichi Prefecture), in which the biochemical oxygen demand (BOD) level of effluents exceeded standard values stipulated under the prefectural ordinance.

According to the survey results, the incident was caused by an excessive amount of methanol mixed into a wastewater treatment tank to reduce the amount of nitrogen. We have reported this incident to the relevant authorities and already completed corrective measures along with subsequent confirmations to verify there are no recurrences.

Following the incident, Toyota Industries held a Company-wide countermeasure meeting to ensure the prevention of similar incidents within the Company. Measures implemented at the Kariya Plant were presented at the meeting, and participants shared information concerning the incident and discussed measures that should be applied by other plants.

There was another instance in which effluents from the plant exceeded standard values at one consolidated subsidiary within the Toyota Industries Group. This incident has been reported to the relevant authorities, and corrective measures have already been completed by the subsidiary concerned. Subsequent confirmations have also been made to ensure that there are no recurrences. In the future, we will promote information sharing among Group companies and bolster measures to prevent environmental risks.

We will also continue to augment Group-wide efforts to minimize environmental impact by conducting contingency training for emergency situations and other proactive measures.

Environmental Management

Toyota Industries promotes the development of human resources capable of taking voluntary initiatives toward the achievement of targets specified under the Fifth Environmental Action Plan.

Summary

Among the targets specified under the Fifth Plan, the focus of our activities in fiscal 2013 was on the development of human resources capable of taking voluntary environmental initiatives as well as on conservation of biodiversity. As for human resources development, we solicited employee engagement through the use of our internal eco-point system, which was introduced in fiscal 2012 with the aim of raising environmental awareness among employees, while encouraging wall greening activities at each plant. For this project, employees participated in the planting of seedlings and can observe growth records on the Intranet. In the area of conservation of biodiversity, we created a biotope designed to facilitate the development of an ecological network. (See pages 58–61 for more details.)

Wall greening at the Kyowa Plant (Aichi Prefecture)

Topic

A New Eco-Conscious Office Building Constructed by TOYOTA L&F Hyogo Co., Ltd.

In January 2012, TOYOTA L&F Hyogo Co., Ltd., a consolidated subsidiary in Japan that engages in sales and servicing of materials handling equipment, constructed a new environment-conscious office building in Nishinomiya-shi, Hyogo Prefecture. The new building integrates leading-edge energy- and power-saving technologies and know-how into its design.

The company installed solar panels and wind power generation systems on the premises to provide a portion of electricity used within the building. All common spaces, such as corridors, are equipped with energy-efficient LED lighting. At the parking lot, there are charging stands for plug-in hybrid vehicles, to which electricity is fed from the solar panels mounted on the car park roof.

In the service workshop, various measures have been adopted to reduce the use of lighting during daytime. Transparent shutters and skylights let in natural light from outside.

New office building

Service workshop

Hideji Saito
President,
TOYOTA L&F Hyogo Co., Ltd.

What customers demand most in materials handling equipment are environmental performance and safety. Lift trucks available on the market now range from internal-combustion, electric and hybrid types to even more environmentally conscious fuel cell lift trucks. As our company engages in sales and servicing of such equipment, we have always felt that we should think about the environment in our everyday operations. This strong belief is reflected in the design of our new office building. The new building serves to convey the significance of taking environmental action both to employees and customers visiting our building to participate in experience-based safety *dojo* or lift truck training sessions. We will remain environmentally committed both internally and externally.

Environmental Impact Flow and Environmental Accounting

In this section, we provide an overall picture of environmental impact resulting from our global business activities and report the results of environmental accounting (environmental conservation cost, environmental conservation benefits and economic benefits of environmental conservation initiatives).

Environmental Impact Flow

INPUT

■Energy [consolidated]		
Total consumption	10,046	TJ*1
Electricity	1,061,323	MWh
City gas	70,742	km³N
LPG	4,309	t
Petroleum products	4,848	kl
Coal products	6,571	t
LNG	3,259	t

*1: Terajoule is a unit used to measure heat. 1 TJ = 10^{12} joules

■Raw Materials [consolidated]		
Raw material consumption	638,269	t
■Water [consolidated]		
Water consumption	4,007	km³
■Chemical Substances [Japan consolidated]		
PRTR law*2 designated substances	1,400	t

*2: Short for Pollutant Release and Transfer Register, the PRTR law is a scheme whereby businesses measure the release and transfer of PRTR designated pollutants and report their performance to the government. The government then compiles this data and releases it to the public.

Environmental Impact Flow

R&D/Design

Procurement

Production

Transportation/ Sales

Usage

Recovery/ Recycling

OUTPUT

■Into the Air [consolidated]		
CO_2	755,395	t-CO_2
Greenhouse gases other than CO_2	4,500	t-CO_2
CO_2 from logistics	37,243	t-CO_2
SOx (Sulfur oxides)	568	kg
NOx (Nitrogen oxides)	144	t
VOC (Volatile organic compounds)	1,582	t
■Chemical Substances [Japan consolidated]		
Emissions/transfers of PRTR law designated substances	599	t
■Waste [consolidated]		
Waste generation	99,677	t
■Into Waterways [Japan consolidated]		
Water pollutants	27	t
Discharge of treated wastewater	2,243	km³

Environmental Accounting and On-Site Verification

Fiscal 2013 Environmental Accounting*3

Scope of data collection: Toyota Industries Corporation
(April 1, 2012 – March 31, 2013)
TIBC Corporation*4
(April 1, 2012 – June 30, 2012)

*3: Environmental accounting data is collected in compliance with the Ministry of the Environment's *Environmental Accounting Guidelines 2005 Edition*.
*4: TIBC Corporation was excluded from the scope of consolidation in July 2012 and subsequently dissolved in January 2013.

■ **Environmental Conservation Cost** (Millions of yen)

Category		FY2013 Investment	FY2013 Expenses	FY2012 Investment	FY2012 Expenses
Business area costs	Pollution prevention costs	516	771	257	1,028
	Global environmental conservation costs	113	3,168	345	3,264
	Resource recycling costs	10	570	32	721
Upstream/downstream costs		2	80	–	49
Management costs		14	1,219	263	1,231
Research and development costs		0	1,872	3	1,260
Social contribution activity costs		–	6	–	8
Environmental remediation costs		37	21	3	9
Total		692	7,707	903	7,570
		8,399		8,473	

■ **Environmental Conservation Benefits**

Environmental Impact	Comparison with Previous Fiscal Year
CO_2	17,809 t decrease
Generation of waste products	14,648 t decrease
Water	320,808 m³ decrease

■ **Economic Benefits of Environmental Conservation Initiatives** (Millions of yen)

Item	Details	Amount
Revenue	Returns from sale of recycled waste products	3,347
Cost reduction	Energy cost reductions	626
	Cost reduction by resource savings (including reductions in amount of water use and wastewater treatment costs)	227
Total		4,200

On-Site Verification

Every year, Toyota Industries Head Office's Plant Engineering & Environment Department takes the initiative in conducting on-site verification of the accuracy and consistency of environmental data included in the *Toyota Industries Report*. The results for fiscal 2013 are as follows.

On-Site Verification Sites

Toyota Industries Corporation
- Kariya Plant (Textile machinery, compressors)
  Nagakusa Plant (Vehicles)

Consolidated subsidiaries in Japan
- HANDA Casting Company, Altex Co., Ltd.
  Nagao Kogyo Co., Ltd.

Items to be Verified

1. Adequacy of the scope of data collection; validity of data collection and calculation methods; validity of internal verification
2. Trustworthiness and accuracy of collected/calculated data as well as data reported to the Head Office; accuracy of methods reported to the Head Office

Results

1. The verified sites retained original data (evidence) for all statistics, which were confirmed valid as were the scope and method of data collection.
2. All discrepancies found during verification have been corrected after respective causes have been identified.
3. Considerations of improvements will be made for data collected using complex collection methods that may result in calculation errors.

Financial Section / Corporate Information

Note:
For details on the consolidated financial statements, please refer to the separate publication, which is also posted on the following Website:
www.toyota-industries.com

Consolidated Eleven-Year Summary

Toyota Industries Corporation
Years ended March 31

	Millions of yen										
	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003
For The Year											
Net sales	**¥1,615,244**	¥1,543,352	¥1,479,839	¥1,377,769	¥1,584,252	¥2,000,536	¥1,878,398	¥1,505,955	¥1,241,538	¥1,164,378	¥1,069,218
Operating income (loss)	**77,098**	70,092	68,798	22,002	(6,621)	96,853	89,954	64,040	53,120	52,631	52,477
Ordinary income	**86,836**	80,866	73,911	31,756	14,343	126,488	108,484	80,635	70,912	58,970	51,375
Net income (loss)	**53,119**	58,594	47,205	(26,273)	(32,767)	80,460	59,468	47,077	43,357	33,623	21,933
Investment in tangible assets	**¥ 89,459**	¥ 58,404	¥ 38,254	¥ 26,963	¥ 104,495	¥ 104,205	¥ 129,023	¥ 130,121	¥ 111,321	¥ 65,651	¥ 69,607
Depreciation	**57,954**	59,830	62,372	73,238	87,219	83,744	74,449	64,423	51,277	49,264	45,939
Research and development expenses	**39,057**	32,070	27,788	26,826	33,646	36,750	34,548	31,166	30,051	29,562	29,705
Per share of common stock (yen):											
Net income (loss) per share—basic	**¥ 170.36**	¥ 188.02	¥ 151.51	¥ (84.33)	¥ (105.16)	¥ 257.50	¥ 189.88	¥ 146.16	¥ 135.09	¥ 108.04	¥ 70.19
Net income per share—diluted	**170.35**	—	—	—	—	257.43	189.66	146.02	135.03	101.97	62.90
Total net assets per share	**4,719.66**	3,662.26	3,300.17	3,390.02	2,987.16	4,483.32	5,612.11	5,044.45	3,504.80	3,199.69	2,522.52
Cash dividends per share	**55.00**	50.00	50.00	30.00	40.00	60.00	50.00	38.00	32.00	24.00	22.00
At Year-End											
Total assets	**¥3,243,779**	¥2,656,984	¥2,481,452	¥2,589,246	¥2,327,432	¥2,965,585	¥3,585,857	¥3,245,341	¥2,326,824	¥2,011,995	¥1,650,391
Total net assets	**1,524,933**	1,197,841	1,075,939	1,104,929	977,670	1,453,996	1,810,483	1,611,227	1,115,747	1,016,763	738,867
Common stock	**80,462**	80,462	80,462	80,462	80,462	80,462	80,462	80,462	80,462	80,462	68,046
Number of shares outstanding (excluding treasury stock) (thousands)	**312,207**	311,687	311,564	311,570	311,577	311,589	312,075	319,320	318,237	317,666	292,777
Cash Flows											
Net cash provided by operating activities	**¥ 151,299**	¥ 101,718	¥ 153,661	¥ 203,452	¥ 65,768	¥ 188,805	¥ 177,467	¥ 131,784	¥ 100,095	¥ 92,406	¥ 103,183
Net cash used in investing activities	**(274,210)**	(9,403)	(187,574)	(36,855)	(114,217)	(138,789)	(164,446)	(205,013)	(128,230)	(92,667)	(95,120)
Net cash provided by (used in) financing activities	**7,050**	10,279	(85,728)	(38,230)	120,971	(33,992)	(19,749)	85,172	50,020	(56,015)	57,775
Cash and cash equivalents at end of year	**179,359**	296,811	195,566	317,590	188,011	121,284	108,569	112,596	100,535	77,212	136,929
Indices											
Return on equity (ROE) (%)	**4.1**	5.4	4.5	(2.6)	(2.8)	5.1	3.5	3.5	4.1	3.8	2.7
Return on assets (ROA) (%)	**1.8**	2.3	1.9	(1.1)	(1.2)	2.5	1.7	1.7	2.0	1.8	1.3
Operating profit margin (%)	**4.8**	4.5	4.6	1.6	(0.4)	4.8	4.8	4.3	4.3	4.5	4.9
Equity ratio (%)	**45.4**	43.0	41.4	40.8	40.0	47.1	48.8	49.7	48.0	50.5	44.8
EBITDA (millions of yen)	**¥ 155,234**	¥ 161,876	¥ 150,481	¥ 90,521	¥ 71,608	¥ 222,125	¥ 191,007	¥ 150,674	¥ 128,381	¥ 113,676	¥ 95,472
Number of employees	**47,412**	43,516	40,825	38,903	39,916	39,528	36,096	32,977	30,990	27,431	25,030

1. Net income (loss) per share is computed based on the average number of shares for each year.
2. ROE and ROA are computed based on the average total net assets and total assets, respectively, for each year.
   Investment securities are stated at market value.
3. Operating profit margin = Operating income (loss) / Net sales
4. Equity ratio = (Total net assets – Subscription rights to shares – Minority interests) / Total assets
5. EBITDA = Income before income taxes + Interest expenses – Interest and dividends income + Depreciation and amortization

Consolidated Balance Sheets

Toyota Industries Corporation
As of March 31, 2013 and 2012

	Millions of yen	
	2013	2012
Assets		
Current assets:		
Cash and deposits	**¥ 230,348**	¥ 223,854
Cash deposits for cash collection and deposit services	**49,981**	50,856
Trade notes and accounts receivable	**215,799**	195,391
Lease investment assets	**41,964**	36,570
Short-term investments	**33,047**	92,249
Merchandise and finished goods	**66,670**	48,183
Work in process	**35,088**	33,727
Raw materials and supplies	**40,762**	34,536
Deferred tax assets	**23,836**	20,368
Other current assets	**46,222**	36,358
Allowance for doubtful accounts	**(3,204)**	(2,740)
Total current assets	**780,517**	769,356
Fixed assets:		
Property, plant and equipment:		
Buildings and structures	**365,308**	354,136
Accumulated depreciation	**(226,436)**	(212,723)
Buildings and structures, net	**138,871**	141,412
Machinery, equipment and vehicles	**864,534**	790,804
Accumulated depreciation	**(646,319)**	(610,658)
Machinery, equipment and vehicles, net	**218,214**	180,146
Tools, furniture and fixtures	**135,525**	116,495
Accumulated depreciation	**(105,024)**	(92,047)
Tools, furniture and fixtures, net	**30,500**	24,448
Land	**118,244**	116,526
Construction in progress	**43,982**	18,519
Total property, plant and equipment	**549,814**	481,053
Intangible assets:		
Goodwill	**122,003**	68,824
Other intangible assets	**46,045**	37,952
Total intangible assets	**168,049**	106,777
Investments and other assets:		
Investment securities	**1,598,437**	1,177,591
Deferred tax assets	**12,304**	10,758
Lease investment assets	**93,572**	76,566
Other investments and other assets	**41,231**	35,034
Allowance for doubtful accounts	**(148)**	(152)
Total investments and other assets	**1,745,398**	1,299,798
Total fixed assets	**2,463,262**	1,887,628
Total assets	**¥3,243,779**	¥2,656,984

	Millions of yen	
	2013	2012
Liabilities		
Current liabilities:		
Trade notes and accounts payable	**¥ 180,146**	¥ 168,465
Short-term loans payable	**183,920**	110,212
Commercial paper	**30,224**	12,897
Current portion of bonds	**4,499**	54,105
Lease obligations	**44,851**	37,619
Accounts payable—other	**17,623**	18,169
Accrued income taxes	**15,958**	12,510
Deferred tax liabilities	**2,923**	3
Allowance for bonuses to directors and audit & supervisory board members	**570**	525
Other current obligations	**178,378**	165,018
Total current liabilities	**659,095**	579,527
Long-term liabilities:		
Bonds payable	**213,584**	187,238
Long-term loans payable	**236,318**	249,183
Lease obligations	**101,883**	85,754
Deferred tax liabilities	**440,356**	297,304
Allowance for retirement benefits	**52,779**	48,973
Other long-term liabilities	**14,829**	11,160
Total long-term liabilities	**1,059,750**	879,615
Total liabilities	**1,718,846**	1,459,142
Net Assets		
Shareholders' equity:		
Capital stock		
Authorized — 1,100,000,000 shares		
Issued — 325,840,640 shares as of March 31, 2013	**80,462**	80,462
325,840,640 shares as of March 31, 2012		
Capital surplus	**105,898**	106,128
Retained earnings	**492,578**	455,042
Treasury stock	**(48,405)**	(50,266)
13,632,854 shares as of March 31, 2013		
14,153,619 shares as of March 31, 2012		
Total shareholders' equity	**630,534**	591,367
Accumulated other comprehensive income:		
Valuation difference on available-for-sale securities	**830,054**	565,007
Deferred gains or losses on hedges	**(237)**	(131)
Foreign currency translation adjustment	**13,163**	(14,763)
Total accumulated other comprehensive income	**842,980**	550,112
Subscription rights to shares	**1,478**	2,310
Minority interests	**49,939**	54,051
Total net assets	**1,524,933**	1,197,841
Total liabilities and net assets	**¥3,243,779**	¥2,656,984

Consolidated Statements of Income

Toyota Industries Corporation
For the years ended March 31, 2013 and 2012

	Millions of yen	
	2013	2012
Net sales	**¥1,615,244**	¥1,543,352
Cost of sales	**1,347,238**	1,301,617
Gross profit	**268,006**	241,734
Selling, general and administrative expenses:		
Sales commissions	**12,240**	10,003
Salaries and allowances	**74,452**	68,176
Retirement benefit expenses	**1,739**	1,977
Depreciation	**8,076**	5,951
Research and development expenses	**32,203**	25,348
Others	**62,196**	60,184
Total selling, general and administrative expenses	**190,908**	171,641
Operating income	**77,098**	70,092
Non-operating income:		
Interest income	**9,071**	9,070
Dividends income	**21,084**	17,933
Gain on sales of marketable securities	**784**	1,159
Equity in net earnings of affiliated companies	**825**	—
Other non-operating income	**5,277**	6,545
Total non-operating income	**37,043**	34,709
Non-operating expenses:		
Interest expenses	**14,508**	16,046
Loss on disposal of fixed assets	**1,006**	1,035
Equity in net losses of affiliated companies	**—**	490
Other non-operating expenses	**11,789**	6,363
Total non-operating expenses	**27,304**	23,936
Ordinary income	**86,836**	80,866
Extraordinary income:		
Gain on step acquisitions	**—**	4,599
Total extraordinary income	**—**	4,599
Extraordinary losses:		
Loss on liquidation of subsidiaries and affiliates	**6,710**	—
Total extraordinary losses	**6,710**	—
Income before income taxes and minority interests	**80,126**	85,465
Income taxes—current	**27,345**	23,382
Income taxes—deferred	**(493)**	1,311
Total income taxes	**26,851**	24,693
Income before minority interests	**53,275**	60,771
Minority interests in income	**155**	2,177
Net income	**¥ 53,119**	¥ 58,594

	Yen	
Net income per share—basic	**¥ 170.36**	¥ 188.02
Net income per share—diluted	**170.35**	—
Net assets per share	**4,719.66**	3,662.26
Cash dividends per share	**55.00**	50.00

Consolidated Statements of Comprehensive Income

Toyota Industries Corporation
For the years ended March 31, 2013 and 2012

	Millions of yen	
	2013	2012
Income before minority interests	**¥ 53,275**	¥ 60,771
Other comprehensive income:		
Valuation difference on available-for-sale securities	**265,277**	76,752
Deferred gains or losses on hedges	**(106)**	(177)
Foreign currency translation adjustment	**30,444**	(6,820)
Share of other comprehensive income of associates accounted for using equity method	**392**	(216)
Total other comprehensive income	**296,008**	69,537
Comprehensive income	**349,283**	130,308
Profit attributable to:		
Owners of the parent	**345,988**	128,457
Minority interests	**3,295**	1,850

Consolidated Statements of Changes in Net Assets

Toyota Industries Corporation
For the years ended March 31, 2013 and 2012

	Millions of yen	
	2013	2012
Shareholders' equity		
Capital stock		
Balance at the beginning of current period	**¥ 80,462**	¥ 80,462
Balance at the end of current period	**80,462**	80,462
Capital surplus		
Balance at the beginning of current period	**106,128**	106,179
Changes of items during the period		
Disposal of treasury stock	**(230)**	(50)
Total changes of items during the period	**(230)**	(50)
Balance at the end of current period	**105,898**	106,128
Retained earnings		
Balance at the beginning of current period	**455,042**	412,029
Changes of items during the period		
Dividends from surplus	**(15,584)**	(15,581)
Net income	**53,119**	58,594
Total changes of items during the period	**37,535**	43,013
Balance at the end of current period	**492,578**	455,042
Treasury stock		
Balance at the beginning of current period	**(50,266)**	(50,703)
Changes of items during the period		
Repurchase of treasury stock	**(109)**	(5)
Disposal of treasury stock	**1,971**	441
Total changes of items during the period	**1,861**	436
Balance at the end of current period	**(48,405)**	(50,266)
Total shareholders' equity		
Balance at the beginning of current period	**591,367**	547,968
Changes of items during the period		
Dividends from surplus	**(15,584)**	(15,581)
Net income	**53,119**	58,594
Repurchase of treasury stock	**(109)**	(5)
Disposal of treasury stock	**1,741**	391
Total changes of items during the period	**39,166**	43,399
Balance at the end of current period	**630,534**	591,367
Accumulated other comprehensive income		
Valuation difference on available-for-sale securities		
Balance at the beginning of current period	**565,007**	488,277
Changes of items during the period		
Net changes of items other than shareholders' equity	**265,047**	76,729
Total changes of items during the period	**265,047**	76,729
Balance at the end of current period	**830,054**	565,007

	Millions of yen	
	2013	2012
Deferred gains or losses on hedges		
Balance at the beginning of current period	**¥ (131)**	¥ 46
Changes of items during the period		
Net changes of items other than shareholders' equity	**(106)**	(177)
Total changes of items during the period	**(106)**	(177)
Balance at the end of current period	**(237)**	(131)
Foreign currency translation adjustment		
Balance at the beginning of current period	**(14,763)**	(8,075)
Changes of items during the period		
Net changes of items other than shareholders' equity	**27,927**	(6,688)
Total changes of items during the period	**27,927**	(6,688)
Balance at the end of current period	**13,163**	(14,763)
Total accumulated other comprehensive income		
Balance at the beginning of current period	**550,112**	480,248
Changes of items during the period		
Net changes of items other than shareholders' equity	**292,868**	69,863
Total changes of items during the period	**292,868**	69,863
Balance at the end of current period	**842,980**	550,112
Subscription rights to shares		
Balance at the beginning of current period	**2,310**	2,132
Changes of items during the period		
Net changes of items other than shareholders' equity	**(832)**	178
Total changes of items during the period	**(832)**	178
Balance at the end of current period	**1,478**	2,310
Minority interests		
Balance at the beginning of current period	**54,051**	45,589
Changes of items during the period		
Net changes of items other than shareholders' equity	**(4,111)**	8,461
Total changes of items during the period	**(4,111)**	8,461
Balance at the end of current period	**49,939**	54,051
Total net assets		
Balance at the beginning of current period	**1,197,841**	1,075,939
Changes of items during the period		
Dividends from surplus	**(15,584)**	(15,581)
Net income	**53,119**	58,594
Repurchase of treasury stock	**(109)**	(5)
Disposal of treasury stock	**1,741**	391
Net changes of items other than shareholders' equity	**287,924**	78,503
Total changes of items during the period	**327,091**	121,902
Balance at the end of current period	**¥1,524,933**	¥1,197,841

Consolidated Statements of Cash Flows

Toyota Industries Corporation
For the years ended March 31, 2013 and 2012

	Millions of yen	
	2013	2012
Cash flows from operating activities:		
Income before income taxes and minority interests	**¥ 80,126**	¥ 85,465
Depreciation and amortization	**90,756**	87,368
Impairment loss	**4,516**	—
Increase (decrease) in allowance for doubtful accounts	**26**	(159)
Interest and dividends income	**(30,156)**	(27,004)
Interest expenses	**14,508**	16,046
Equity in net (earnings) losses of affiliates	**(825)**	490
(Increase) decrease in receivables	**(475)**	(47,043)
(Increase) decrease in inventories	**(6,041)**	(13,897)
Increase (decrease) in payables	**2,929**	25,307
Others, net	**4,981**	(5,357)
Subtotal	**160,346**	121,216
Interest and dividends income received	**30,181**	26,992
Interest expenses paid	**(14,688)**	(15,940)
Income taxes (paid) refunded	**(24,540)**	(30,549)
Net cash provided by operating activities	**151,299**	101,718
Cash flows from investing activities:		
Payments for purchases of property, plant and equipment	**(112,430)**	(76,638)
Proceeds from sales of property, plant and equipment	**8,137**	8,408
Payments for purchases of investment securities	**(14,679)**	(1,924)
Proceeds from sales of investment securities	**987**	1,720
Payments for acquisition of subsidiaries' stock resulting in change in scope of consolidation	**(68,503)**	(5,568)
Payments for sales of subsidiaries' stock resulting in change in scope of consolidation	**(505)**	—
Proceeds from sales of subsidiaries' stock resulting in change in scope of consolidation	**—**	1,228
Payments for loans made	**(13)**	(27)
Proceeds from collections of loans	**275**	374
Net (increase) decrease in time deposits	**(64,435)**	70,161
Others, net	**(23,043)**	(7,137)
Net cash used in investing activities	**(274,210)**	(9,403)
Cash flows from financing activities:		
Increase (decrease) in short-term loans payable	**51,786**	27,636
Proceeds from long-term loans payable	**45,425**	50,482
Repayments of long-term loans payable	**(49,382)**	(49,342)
Proceeds from issuance of bonds	**30,000**	35,604
Repayments of bonds	**(54,125)**	(30,761)
Payments for repurchase of treasury stocks	**(109)**	(5)
Cash dividends paid	**(15,584)**	(15,581)
Cash dividends paid to minority shareholders	**(435)**	(478)
Proceeds from payment by minority shareholders	**1,899**	1,220
Others, net	**(2,423)**	(8,495)
Net cash provided by financing activities	**7,050**	10,279
Translation adjustments of cash and cash equivalents	**(1,591)**	(1,348)
Net increase (decrease) in cash and cash equivalents	**(117,451)**	101,244
Cash and cash equivalents at beginning of period	**296,811**	195,566
Cash and cash equivalents at end of period	**¥ 179,359**	¥ 296,811

Board of Directors, Audit & Supervisory Board Members and Managing Officers (As of June 13, 2013)

Board of Directors

Chairman
Tetsuro Toyoda

Vice Chairman
Kazunori Yoshida

President
Akira Onishi

Executive Vice President
Chiaki Yamaguchi

Executive Vice President
Kazue Sasaki

Executive Vice President
Hirotaka Morishita

Senior Managing Directors

Shinya Furukawa
Masaharu Suzuki
Norio Sasaki
Toshifumi Ogawa

Directors

Masafumi Kato
Toshifumi Onishi
Takaki Ogawa
Kan Otsuka
Fujio Cho

Audit & Supervisory Board Members

Full-Time Audit & Supervisory Board Members

Shigetaka Yoshida
Kakuo Ishikawa

Audit & Supervisory Board Members

Katsuaki Watanabe
Toshio Mita
Hans-Juergen Marx

Managing Officers

Senior Managing Officers

Kohei Nozaki
Taku Yamamoto
Keiichi Fukunaga
Hiroaki Asai
Hirooki Fujiwara

Managing Officers

Yukihisa Tsuchimoto
Takashi Ito
Toshiya Yamagishi
Junichi Harada
Mikihiko Okamoto
Yasuhiro Murata
Yojiro Mizuno
Masahiro Kawaguchi
Susumu Toyoda
Yuji Ishizaki
Keizo Hara
Kiyotsugu Kurimoto
Masafumi Kunito
Toshihiko Shimizu
Koichi Ito
Yasushi Kawai
Hiroaki Kayukawa
Kazuyuki Yamaguchi

Major Consolidated Subsidiaries (As of March 31, 2013)

*Including indirect investment

Segment	Company Name	Location	Business Activities	Ownership Ratio* (%)
Japan				
Materials Handling Equipment	TOYOTA L&F Akita Co., Ltd.	Akita-shi, Akita	Sales and servicing of materials handling equipment	100.0
	Aichi Corporation	Ageo-shi, Saitama	Production of aerial work platforms	52.2
	TOYOTA L&F Fukui Co., Ltd.	Fukui-shi, Fukui	Sales and servicing of materials handling equipment	100.0
	TOYOTA L&F Tokyo Co., Ltd.	Shinagawa-ku, Tokyo	Sales and servicing of materials handling equipment	100.0
	Nishina Industrial Co., Ltd.	Nagano-shi, Nagano	Production of materials handling equipment and construction machinery parts	97.5
	TOYOTA L&F Shizuoka Co., Ltd.	Shizuoka-shi, Shizuoka	Sales and servicing of materials handling equipment	100.0
	HANDA Casting Company	Handa-shi, Aichi	Production of foundry parts	100.0
	Unica Co., Ltd.	Kiyosu-shi, Aichi	Production of in-house transporters	100.0
	TOYOTA L&F Hyogo Co., Ltd.	Nishinomiya-shi, Hyogo	Sales and servicing of materials handling equipment	100.0
Automobile	Tokaiseiki Co., Ltd.	Iwata-shi, Shizuoka	Production of compressor and engine parts	100.0
	Altex Co., Ltd.	Hamamatsu-shi, Shizuoka	Production of compressor parts	100.0
	IZUMI MACHINE MFG. CO., LTD.	Obu-shi, Aichi	Production of specialized machine tools, friction welding machines, automotive parts	100.0
	Nagao Kogyo Co., Ltd.	Nagoya-shi, Aichi	Production of compressor, materials handling equipment and weaving machinery parts	100.0
	Miduho Industry Co., Ltd.	Nagoya-shi, Aichi	Production of automotive, compressor and materials handling equipment parts	100.0
	Iwama Loom Works, Ltd.	Oguchi-cho, Niwa-gun, Aichi	Production of compressor parts	100.0
	Tokyu Co., Ltd.	Oguchi-cho, Niwa-gun, Aichi	Production of compressor parts and industrial machinery	100.0
Logistics	KTL Co., Ltd.	Koto-ku, Tokyo	Management and operation of distribution centers	50.5
	Wanbishi Archives Co., Ltd.	Minato-ku, Tokyo	Data storage, management, collection and delivery services	100.0
	Asahi Security Co., Ltd.	Minato-ku, Tokyo	Cash collection and delivery and cash proceeds management	100.0
	Advanced Logistics Solutions Co., Ltd.	Obu-shi, Aichi	Planning, design and operation of distribution centers	100.0
	Taikoh Transportation Co., Ltd.	Kariya-shi, Aichi	Land transportation services	53.1
Textile Machinery	Hara Corporation	Ikeda-cho, Ibi-gun, Gifu	Production of textile machinery and materials handling equipment parts	100.0
Others	ELETT CORPORATION	Chiyoda-ku, Tokyo	Production of motors and inverters for industrial machinery	60.0
	SKM CORPORATION	Kariya-shi, Aichi	Total construction management, security management, civil engineering/construction design work and real estate management	100.0
	Sun Staff, Inc.	Kariya-shi, Aichi	Personnel placement, contract office staffing	100.0
	Sun Valley Inc.	Kariya-shi, Aichi	Sales of goods, travel agency, organizing and running of events	100.0
	Shine's Co., Ltd.	Kariya-shi, Aichi	Management and operation of employee clubs	100.0
	Toyota Industries Well Support Corporation	Kariya-shi, Aichi	Planning and operation of benefit programs; administrative processing services for payroll accounting, etc.	100.0
	Toyoda High System, Incorporated	Kariya-shi, Aichi	Planning, development, formulation and operation of information infrastructure and systems	100.0
	Sun River Co., Ltd.	Suita-shi, Osaka	Sports facilities, real estate lease, restaurant management	100.0

*Including indirect investment

Segment	Country	Company Name	Location	Business Activities	Ownership Ratio* (%)
North America					
Materials Handling Equipment	U.S.A.	Cascade Corporation	Portland, Oregon	Production of materials handling equipment parts	100.0
		Indiana Hydraulic Equipment, Corp.	Franklin, Indiana	Production of materials handling equipment parts	100.0
		Industrial Components and Attachments, Inc.	Portland, Oregon	Holding company for materials handling equipment business in the U.S.A.	100.0
		North Vernon Industry Corp.	North Vernon, Indiana	Production of materials handling equipment parts	100.0
		Raymond-Muscatine Inc.	Muscatine, Iowa	Production of materials handling equipment	100.0
		The Raymond Corporation	Greene, New York	Production of materials handling equipment	100.0
		Toyota Industrial Equipment Mfg., Inc.	Columbus, Indiana	Production of materials handling equipment	100.0
		Toyota Material Handling North America, Inc.	Columbus, Indiana	North American headquarters for materials handling equipment business	100.0
		Toyota Material Handling, U.S.A., Inc.	Irvine, California	Sales of materials handling equipment	100.0
	Canada	G. N. Johnston Equipment Co., Ltd.	Mississauga, Ontario	Sales and servicing of materials handling equipment	100.0
Automobile	U.S.A.	Michigan Automotive Compressor, Inc.	Parma, Michigan	Production of compressors	60.0
		TD Automotive Compressor Georgia, LLC	Pendergrass, Georgia	Production of compressors	77.4
		Toyota Industries Compressor Parts America, Co.	Pendergrass, Georgia	Production of compressor parts	100.0
Textile Machinery	U.S.A.	Toyoda Textile Machinery, Inc.	Charlotte, North Carolina	Sales and servicing of textile machinery	100.0
Others	U.S.A.	Toyota Industries North America, Inc.	Columbus, Indiana	Holding company in the U.S.A.	100.0

*Including indirect investment

Segment	Country	Company Name	Location	Business Activities	Ownership Ratio* (%)
Europe					
Materials Handling Equipment	Sweden	BT Products AB	Mjölby	Production of materials handling equipment	100.0
		Toyota Industries Europe AB	Mjölby	Holding company for materials handling equipment business in Europe	100.0
		Toyota Material Handling Europe AB	Mjölby	European headquarters for materials handling equipment business	100.0
		Toyota Material Handling Sweden AB	Bromma	Sales and servicing of materials handling equipment	100.0
	Norway	Toyota Material Handling Norway AS	Trondheim	Sales and servicing of materials handling equipment	100.0
	Finland	Toyota Material Handling Finland OY	Vantaa	Sales and servicing of materials handling equipment	100.0
	Latvia	Toyota Material Handling Baltic SIA.	Riga	Sales and servicing of materials handling equipment	100.0
	Poland	Toyota Material Handling Polska Sp. z o.o.	Pruszków	Sales and servicing of materials handling equipment	100.0
	Denmark	Toyota Material Handling Danmark A/S	Slangerup	Sales and servicing of materials handling equipment	100.0
	U.K.	Toyota Material Handling UK Limited	Slough, Berkshire	Sales and servicing of materials handling equipment	100.0
	Germany	Toyota Material Handling Deutschland GmbH	Langenhagen	Sales and servicing of materials handling equipment	100.0
	France	Toyota Industrial Equipment, S.A.	Ancenis	Production of materials handling equipment	100.0
		Toyota Material Handling France SAS	Marne La Vallée	Sales and servicing of materials handling equipment	100.0
	Belgium	Toyota Material Handling Europe Brussels NV/SA	Brussels	Sales and marketing of materials handling equipment	100.0
		Toyota Material Handling Belgium NV/SA	Wilrijk	Sales and servicing of materials handling equipment	100.0
	Netherlands	Toyota Material Handling Nederland B.V.	Ede	Sales and servicing of materials handling equipment	100.0
	Spain	Toyota Material Handling España, S.A.	Barberá del Vallés	Sales and servicing of materials handling equipment	100.0
	Austria	Toyota Material Handling Austria GmbH	Wiener Neudorf	Sales and servicing of materials handling equipment	100.0
	Czech Republic	Toyota Material Handling CZ s.r.o.	Rudna	Sales and servicing of materials handling equipment	100.0
	Slovakia	Toyota Material Handling Slovensko s.r.o.	Bratislava	Sales and servicing of materials handling equipment	100.0
	Hungary	Toyota Material Handling Hungary Kft.	Budapest	Sales and servicing of materials handling equipment	100.0
	Romania	Toyota Material Handling Romania s.r.l.	Bucharest	Sales and servicing of materials handling equipment	100.0
	Switzerland	Toyota Material Handling Schweiz AG	Zürich	Sales and servicing of materials handling equipment	50.0
	Italy	CESAB Carrelli Elevatori S.p.A.	Bologna	Production of materials handling equipment	100.0
		Toyota Material Handling Italia S.r.l.	Bologna	Sales and servicing of materials handling equipment	100.0
	Greece	Toyota Material Handling Greece SA	Markopoulo, Attica	Sales and servicing of materials handling equipment	100.0
Automobile	Germany	TD Deutsche Klimakompressor GmbH	Bernsdorf	Production of compressors	65.0
Textile Machinery	Switzerland	Toyota Textile Machinery Europe, AG	Uster	Sales and servicing of textile machinery	100.0
		Uster Technologies AG	Uster	Production of yarn quality measurement instruments and cotton classing instruments	100.0
Others	Sweden	Toyota Industries Finance International AB	Mjölby	Funding, loan, other financial services	100.0
Others					
Materials Handling Equipment	India	Toyota Material Handling India Pvt. Ltd.	Delhi	Sales and servicing of materials handling equipment	75.0
	Vietnam	Toyota Industrial Equipment Vietnam Co., Ltd.	Hung Yen	Production of materials handling equipment parts	90.0
	Australia	Toyota Material Handling Australia Pty Limited	New South Wales	Sales and servicing of materials handling equipment	100.0
	China	BT Manufacturing (Foshan) Co., Ltd.	Foshan, Guandong	Production of materials handling equipment	100.0
		Raymond Manufacturing (Dalian) Co., Ltd.	Dalian, Liaoning	Production of materials handling equipment	100.0
		Toyota Material Handling (Shanghai) Co., Ltd.	Shanghai	Sales of materials handling equipment	75.0
	Brazil	Toyota Material Handling Mercosur Indústria e Comércio de Equipamentos Ltda	São Paulo	Sales and servicing of materials handling equipment	100.0
Automobile	India	Kirloskar Toyota Textile Machinery Pvt. Ltd.	Bangalore	Production of textile machinery and automotive parts	95.1
	Indonesia	P.T. TD Automotive Compressor Indonesia	Bekasi	Production of compressors	50.1
	China	Toyota Industry (Kunshan) Co., Ltd.	Kunshan, Jiangsu	Production of automotive parts and materials handling equipment, etc.	63.7
		TD Automotive Compressor Kunshan Co., Ltd.	Kunshan, Jiangsu	Production of compressors	59.5
Logistics	China	Toyota Industries Trading & Logistics (China) Co., Ltd.	Shanghai	Import/export, Chinese domestic distribution, operation of distribution centers	100.0
Textile Machinery	China	Toyota Textile Machinery (Shanghai) Co., Ltd.	Shanghai	Installation and servicing of textile machinery	100.0
	Brazil	Toyota Máquinas Têxteis Brasil Ltda	São Paulo	Sales and servicing of textile machinery	100.0

Affiliates Accounted for by the Equity Method

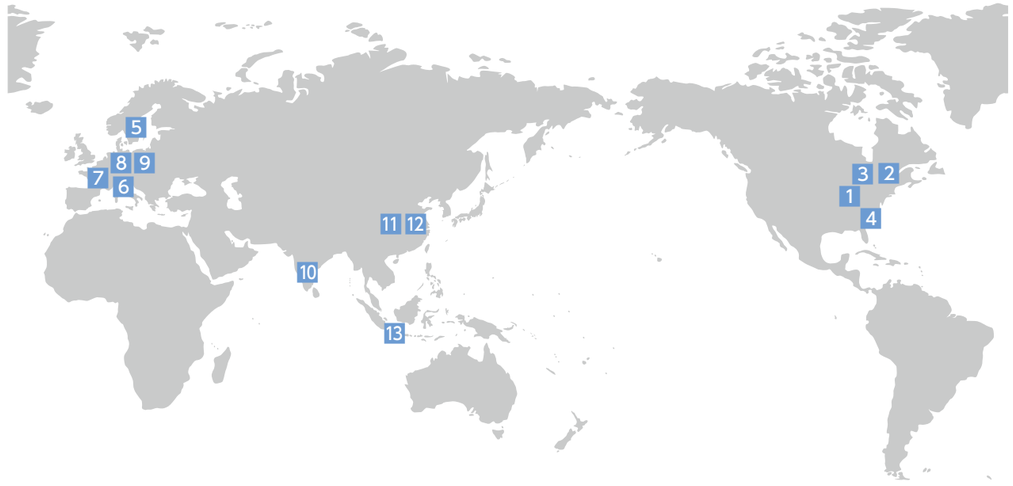
Materials Handling Equipment	Japan	TOYOTA L&F Kinki Co., Ltd.	Osaka-shi, Osaka	Sales and servicing of materials handling equipment	33.8
Automobile	Poland	Toyota Motor Industries Poland Sp. z o.o.	Jelcz-Laskowice	Production of diesel engines	40.0

Major Production Bases (As of March 31, 2013)

Major Plants (Parent Company)

Plant	Location	Main Products	Start of Operations
Kariya Plant	Kariya-shi, Aichi	Textile machinery, compressors	1927
Obu Plant	Obu-shi, Aichi	Parts for compressors	1944
Kyowa Plant	Obu-shi, Aichi	Electronic equipment, automotive press dies, production facilities, engine parts	1953
Nagakusa Plant	Obu-shi, Aichi	Vehicles	1967
Takahama Plant	Takahama-shi, Aichi	Materials handling equipment, materials handling systems	1970
Hekinan Plant	Hekinan-shi, Aichi	Diesel engines, gasoline engines	1982
Higashichita Plant	Handa-shi, Aichi	Foundry parts, diesel engines	2000
Higashiura Plant	Higashiura-cho, Chita-gun, Aichi	Parts for compressors	2002
Anjo Plant	Anjo-shi, Aichi	Electronic equipment	2007

Major Plants (Outside Japan)



Company Name	Country	Location	Main Products	Year of Foundation
1 Toyota Industrial Equipment Mfg., Inc.	U.S.A.	Columbus, Indiana	Materials handling equipment	1988
2 The Raymond Corporation	U.S.A.	Greene, New York	Materials handling equipment	1922
3 Michigan Automotive Compressor, Inc.	U.S.A.	Parma, Michigan	Compressors	1989
4 TD Automotive Compressor Georgia, LLC	U.S.A.	Pendergrass, Georgia	Compressors	2004
5 BT Products AB	Sweden	Mjölby	Materials handling equipment	1946
6 CESAB Carrelli Elevatori S.p.A.	Italy	Bologna	Materials handling equipment	1942
7 Toyota Industrial Equipment, S.A.	France	Ancenis	Materials handling equipment	1995
8 TD Deutsche Klimakompressor GmbH	Germany	Bernsdorf	Compressors	1998
9 Toyota Motor Industries Poland Sp. z o.o.	Poland	Jelcz-Laskowice	Diesel engines	2002
10 Kirloskar Toyota Textile Machinery Pvt. Ltd.	India	Bangalore	Automotive parts, textile machinery	1995
11 Toyota Industry (Kunshan) Co., Ltd.	China	Kunshan, Jiangsu	Automotive parts, materials handling equipment, etc.	1994
12 TD Automotive Compressor Kunshan Co., Ltd.	China	Kunshan, Jiangsu	Compressors	2005
13 P.T. TD Automotive Compressor Indonesia	Indonesia	Bekasi	Compressors	2011

Investor Information (As of March 31, 2013)

Corporate Head Office
TOYOTA INDUSTRIES CORPORATION
2-1, Toyoda-cho, Kariya-shi, Aichi, 448-8671, Japan
Telephone: +81-(0)566-22-2511
Facsimile: +81-(0)566-27-5650

Date of Establishment
November 18, 1926

Common Stock
No par value
Authorized: 1,100,000,000 shares
Issued: 325,840,640 shares

Capital Stock
80,462 million yen

Stock Exchange Listings
Tokyo, Osaka and Nagoya (Ticker Code: 6201)

Number of Shareholders
20,275

Independent Accountant
PricewaterhouseCoopers Aarata
Sumitomo Fudosan Shiodome Hamarikyu Bldg.
8-21-1 Ginza, Chuo-ku, Tokyo, 104-0061, Japan

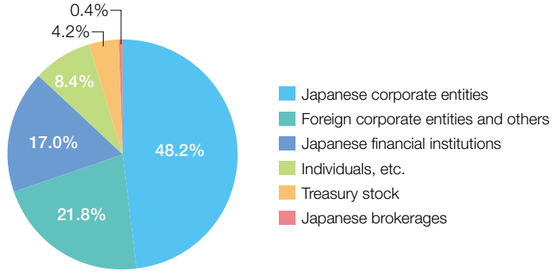
Transfer Agent
Special Account Management Institution
Mitsubishi UFJ Trust and Banking Corporation
1-4-5, Marunouchi, Chiyoda-ku, Tokyo, 100-8212, Japan

Major Shareholders (Top 10)

Name	Number of Shares Held (Thousands)	Percentage of Total Shares in Issue (%)
Toyota Motor Corporation	76,600	23.51
DENSO Corporation	29,647	9.10
Towa Real Estate Co., Ltd.	15,697	4.82
Toyota Tsusho Corporation	15,294	4.69
The Master Trust Bank of Japan, Ltd. (Trust Account)	9,677	2.97
Nippon Life Insurance Company	6,735	2.07
Aisin Seiki Co., Ltd.	6,578	2.02
Japan Trustee Services Bank, Ltd. (Trust Account)	6,352	1.95
Toyota Industries Corporation Employee Ownership Program	5,416	1.66
State Street Bank Client Omnibus OM04	4,192	1.29
Total	176,193	54.07

Notes: 1. Toyota Industries Corporation also holds 13,632 thousand shares of treasury stock but is excluded from the above list.
2. Shares held for the purpose of trust services of respective banks are as follows:
The Master Trust Bank of Japan, Ltd. (Trust Account) 9,677 (Thousands)
Japan Trustee Services Bank, Ltd. (Trust Account) 6,352 (Thousands)

Distribution of Shares



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