

Annual Report 1998

THE YOKOHAMA RUBBER CO., LTD.

Year ended March 31, 1998



# *All Roads*

## *Lead to the Customer*

*Whether You're a Consumer or a Shareholder, Our Goal Is Your Satisfaction*

## Profile

**T**he Yokohama Rubber Co., Ltd. (YRC), is one of the world's leading manufacturers of rubber products, offering an extensive range of tire, rubber and adhesive products. Established in 1917, YRC has expanded its worldwide business scope with a lineup of high-technology products meeting consumer needs in the fields of automobiles, civil engineering, construction, marine engineering, aerospace and sporting goods, which have earned the company an excellent reputation. Today, YRC is reinforcing its global structure through production centers in Japan, other countries in Asia and the United States, and through a sales network covering these three regions and Europe with the goal of becoming a corporation that wins the confidence of customers around the world.

## Product Lineup

## TIRE GROUP

Tires and tubes for passenger cars, trucks, buses, small trucks, construction vehicles, industrial vehicles and aircraft



## MULTIPLE BUSINESS GROUP

Conveyor belts, hoses, pneumatic rubber, fenders, marine hoses, rubber bearings, antiseismic rubber materials for buildings, waterproofing agents, adhesives, sealing materials, aircraft lavatory modules, aircraft hoses, aircraft couplings, aircraft fuel cells and water tanks, and sporting goods

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# Financial Highlights

For the years ended March 31, 1998, 1997 and 1996

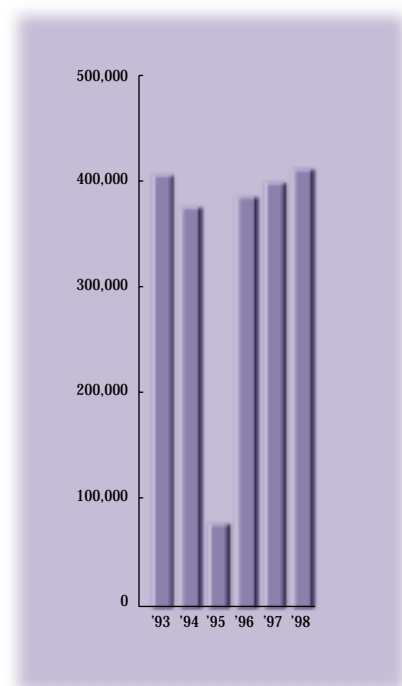
	Millions of yen			Thousands of U.S. dollars
	1998	1997	1996	1998
Net Sales	<b>¥415,397</b>	¥402,652	¥389,304	<b>\$3,146,947</b>
Operating Income	<b>11,702</b>	14,313	15,155	<b>88,652</b>
Income before Income Taxes	<b>5,620</b>	15,326	5,746	<b>42,576</b>
Net Income	<b>873</b>	3,753	563	<b>6,614</b>
Shareholders' Equity	<b>105,478</b>	108,306	97,907	<b>799,076</b>
Total Assets	<b>440,420</b>	420,939	423,749	<b>3,336,515</b>

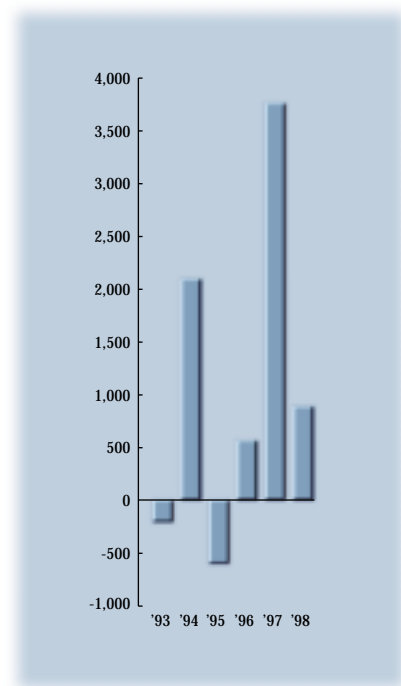
	Yen			U.S. dollars
	1998	1997	1996	1998
Per Share:				
Net Income	<b>¥2.55</b>	¥11.14	¥1.77	<b>\$0.02</b>
Cash Dividends	<b>8.00</b>	8.00	8.00	<b>0.06</b>

Note: The United States dollar amounts in this annual report are given for convenience only and represent translations of Japanese yen at the rate of ¥132.00=US\$1.

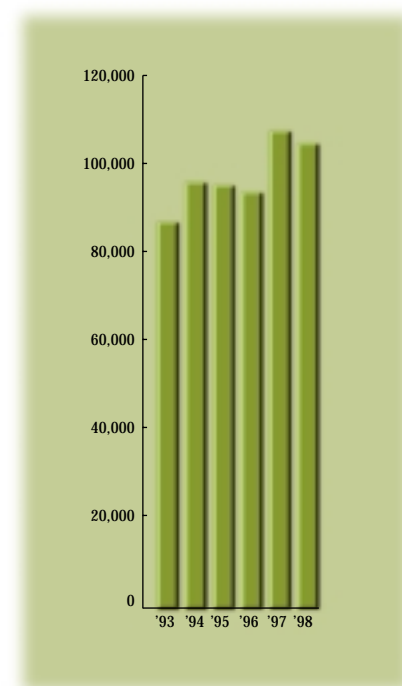
Net Sales (Millions of yen)



Net Income (Loss) (Millions of yen)



Shareholders' Equity (Millions of yen)



# To Our Shareholders



*Kazuo Motoyama (left), Chairman, and Seiji Hagiwara, President*

## **FISCAL 1998 IN REVIEW**

We are pleased to present the Annual Report of the Yokohama Rubber Co., Ltd., and its consolidated subsidiaries (collectively Yokohama) for the fiscal year ended March 31, 1998.

During the term under review, Japan saw a significant economic slowdown, owing primarily to such factors as an increase in the consumption tax rate initiated in April 1997 and a halt in implementing special income tax reductions, both of which restricted personal consumption. Contracted spending for public works also adversely affected the business environment. Overseas, fiscal 1998 was a year of mixed environments; although the United States continued to enjoy booming business, Asia was hit by currency crises.

Under these circumstances, Yokohama's Tire Group saw a decline in domestic sales of both original equipment (OE) and replacement tires. On the other hand, sales of tires for export soared, supported by the depreciation of the yen. In our Multiple Business (MB) Group, sales grew from the previous year, owing to increases in exports of

industrial products and in sales of products in the aerospace and sports sectors.

As a result, net sales amounted to ¥415,397 million, a rise of 3.2%. Operating income, however, dropped 18.2% to ¥11,702 million, and net income stood at ¥873 million, a decline of 76.7%. The fall in net income was caused by intensified price competition in fiscal 1998 and the absence of extraordinary income from the sale of securities in overseas partners, which was recorded in figures for fiscal 1997.

## **MEASURES FOR RECOVERY**

The business environment will remain difficult in fiscal 1999. The Japanese economy, in particular, is looking at what is considered to be the lowest level of personal consumption since the oil crisis of 1973. Despite these negative factors, however, Yokohama is determined to take measures to increase sales and profits in fiscal 1999.

First of all, in the Japanese market Yokohama will reinforce its status as a leading tire manufacturer by offering replacement tires of superior quality and

distinctiveness. We have been implementing the “Inch-Up” campaign since fiscal 1997 to solidify our reputation as a maker of high-performance products and to raise our status in the market.

Second, we will develop more overseas markets. Demand for tires has been weak since last year in Asia, including Japan, but remains vigorous in North America, Europe and South America. Yokohama increased its tire exports in fiscal 1998 and plans to further expand them by improving its supply structure and sales network. Factors such as the smooth progress of restructuring at Yokohama Tire Corporation (YTC), a U.S. subsidiary, and the commencement of tire production in the Philippines in January 1998 should also contribute to enhancing our market presence overseas. In the MB Group, we will focus efforts on raising our global competitiveness and further expanding overseas markets for our products.

Reducing costs is our third initiative. For the past several years, we have committed ourselves to Total Productive Maintenance (TPM) activities, through which we have realized systems and capabilities to consistently manufacture high-quality products at competitive costs. In fiscal 1999, backed by our achievements in TPM and the improvement of our production methods, we plan to further reduce costs.

We also plan to streamline our management structure to speed up managerial decision-making processes. Further, with an eye toward reducing the outflow of funds, we will conduct in-house many of the diverse operations that have previously been subcontracted to vendors.

#### **TOWARD THE 21ST CENTURY**

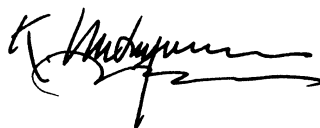
The world is experiencing a period of radical change. Companies in a variety of industries, including the tire industry, have been making vigorous efforts to develop new technologies and reduce costs in order to survive in this period of uncertainty. In these circumstances, Yokohama remains determined to pursue business

objectives centered on its management policies and accumulated technologies.

The foundation of our global strategies is our corporate base in Japan. For our tire business, we have strategically placed production centers in Japan, other parts of Asia and North America to penetrate further into these markets and through vigorous sales activities, into Europe and other regions, as well. Our goal for the tire business is to win a global market share of 5% by the beginning of the 21st century. For our MB operations, we will concentrate on offering distinguished products in the four categories of industry, civil engineering/construction, aerospace products and sporting goods in Asia, North America and other regions. We aim to become a corporation with true strength and responsiveness, underpinned by our two businesses —tire and MB— each cultivating unique products that can only be realized by Yokohama.

The resources to attain these goals are Yokohama’s superior marketing and technological expertise, which form our basis for growing into a truly resilient corporate group that can win the confidence of the international community.

Old social frameworks are being discarded and new structures are emerging. Because Yokohama sees these worldwide changes as an opportunity to grow, we will continue our efforts and expand our business toward the 21st century. Throughout our endeavors, we would like to ask for the continued support and understanding of our shareholders.



Kazuo Motoyama, Chairman



Seiji Hagiwara, President

# *All Roads Lead to the Customer*

*Whether You're a Consumer or a Shareholder,  
Our Goal Is Your Satisfaction*

Yokohama aims to win customer satisfaction by offering high-quality products in a timely and efficient manner with minimum harm to the environment.

In fiscal 1998, we actively developed products of the quality expected of the Yokohama brand, reinforced our global supply structure, expanded our MB operations and streamlined our management structure.

Each of these efforts is producing the desired results. By maximizing customer satisfaction, we aim to make the Yokohama name known all over the world and win a 5% share of the global tire market by the beginning of the next century. We firmly believe such endeavors will foster growth and yield benefits to our shareholders.



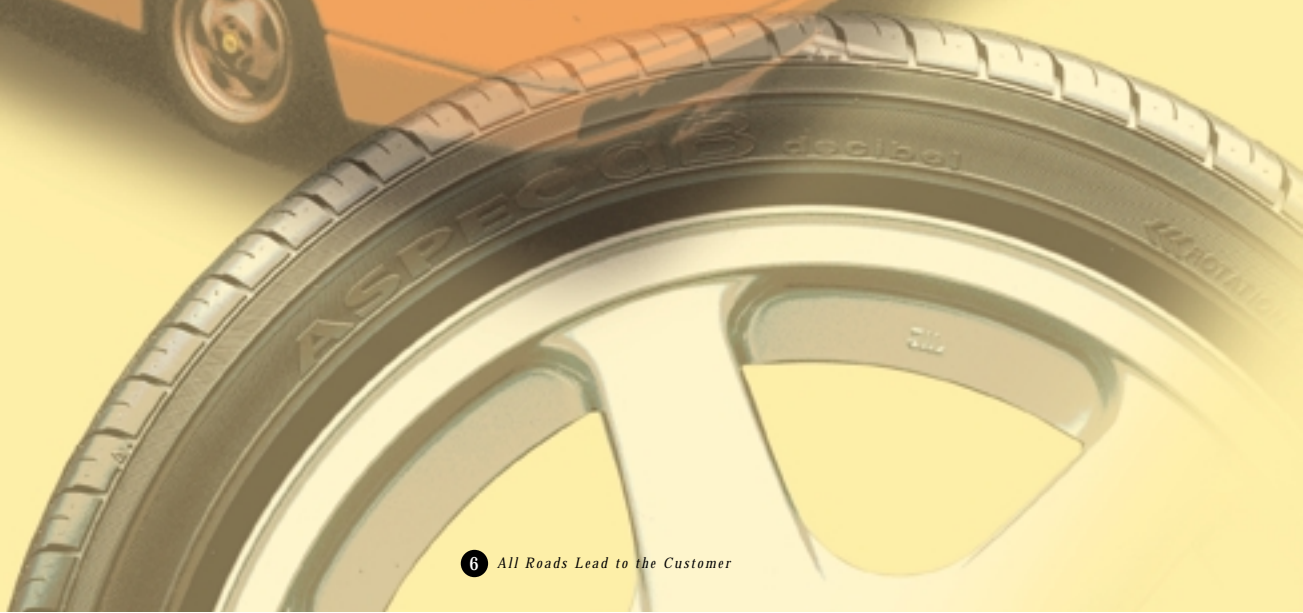
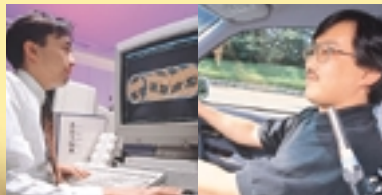


# *Distinctive Products*

We believe that offering distinctive and high-quality products that meet customer needs is a major incentive for customer satisfaction. We always think in terms of what can be done better in order to provide new value to our customers.

One example of this effort is the Inch-Up campaign, which we began last spring for passenger car tires in the Japanese market. The focus of this campaign is to encourage car owners to replace their current tires with Inch-Up tires, which provide improved driving performance, including stability at high speeds. In 1998, we announced Inch-Up tires featuring high performance, low noise and improved riding comfort and thus opened a new domestic tire market for high-class sedans.

High-performance tires must reflect the needs of the times. Today, as the 21st century approaches, tires must above all be safe, quiet and environment-friendly. Yokohama's pledge is to continue offering advanced and original products that win customer loyalty.





# Global Perspective

Ensuring customer satisfaction means consistently delivering the best products in the quantities required and in a timely fashion. As part of our global business strategy of manufacturing products as close as possible to the regions in which they will be used, we are localizing our production activities. Significant progress was made in this effort last year.

In the Tire Group, Yokohama Tire Philippines, Inc. (YTPI), commenced manufacturing tires for passenger cars in January 1998, expanding our supply capacity for the European, Middle Eastern and Asian markets. We also established a tire production company in Vietnam to gain a foothold in that market. In the United States, YTC began manufacturing tires for high-performance passenger cars and recreational vehicles. These facilities, together with GTY Tire Company, which produces tires for trucks and buses, have helped Yokohama increase the ratio of localized production in its total production.

In the MB Group, Yokohama Rubber (Thailand) Co., Ltd., began producing windshield sealant and assembling hydraulic hoses and metal couplings. YH America, Inc., a U.S. affiliate of subsidiary Yokohama Hydrex Co., also started producing windshield sealant in addition to pursuing its existent hose business.

Yokohama will continue reinforcing its production organization in Japan, elsewhere in Asia and in the United States, as well as its sales network in these three regions and Europe, to promptly provide the best products to customers around the world.



# *Innovative Advantage*

The MB Group represents a treasure trove of rubber and adhesive technologies accumulated by Yokohama. Our technological expertise, which allows us to create innovative products, forms the foundation of our efforts to ensure customer satisfaction. In fiscal 1998, by applying these technologies to develop products in new fields, we strove to expand into new markets.

For example, an application of antiseismic rubber bearing technologies led to the commercialization of laminated rubber sheeting for buildings. We also developed the world's first conveyor belt using PROTEX, our special high-elongation polyester belt duck, in a project initiated to prevent products on conveyor belts from becoming trapped between the belt and the pulley and damaged as a result. Customers using this unique conveyor belt have seen significant drops in the number of such accidents. Yokohama also succeeded in developing technologies to produce a new material by blending rubber and plastic; we are currently preparing new products based on this material. For example, many product concepts have been introduced in our sporting goods business, resulting in such hit products as a utility golf club capable of attaining distances equal to wooden clubs, and a driving spoon that can reach distances comparable to drivers.

Precisely because the MB Group's product development opportunities are virtually unlimited, Yokohama will strive to expand its product development capabilities and achieve a high level of satisfaction spanning a wider range of customers.

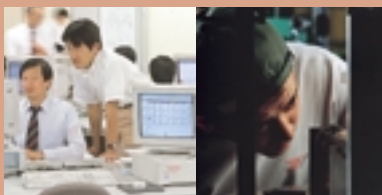


# *Winning Efficiency*

Delivering high-quality, competitively priced products in a timely manner is important to achieving customer satisfaction. Last year, Yokohama made special efforts to improve production and administrative efficiency. We believe these endeavors have turned us into a more effective corporation.

Yokohama has been implementing the TPM program since the early 1990s. The basic concept of this program is that every employee, whether in manufacturing or administrative divisions, will participate in programs to reduce losses and improve equipment and facilities. We made great progress in achieving these goals in our production divisions through 1997. Our administrative divisions are also commencing related activities, which we intend to strengthen in the current year. Furthermore, we have been successful in significantly speeding up administrative tasks by using the computer information network we established in 1996.

Under the theme of QCDE (quality, cost, delivery and environmental protection), Yokohama is determined to offer high-quality products as cost effectively as possible. We believe that such an approach yields the maximum benefits to customers and must be adhered to by every global enterprise.



# Group Highlights at a Glance

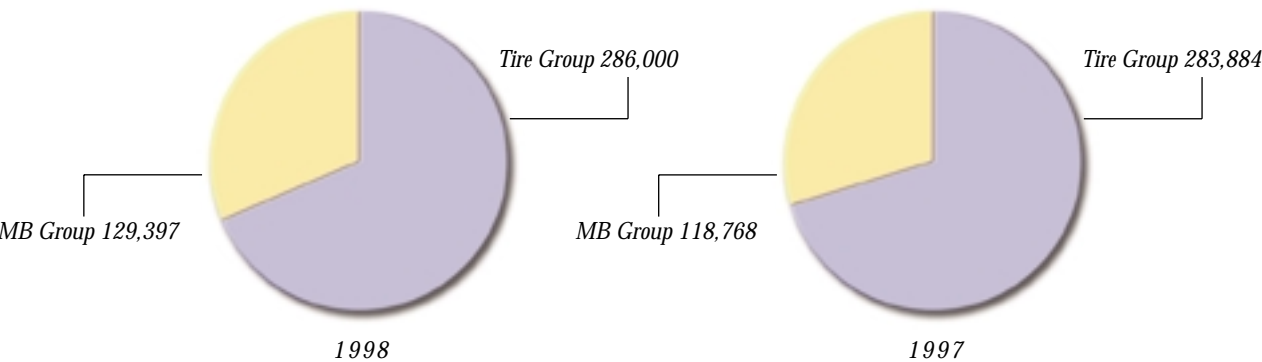
## TIRE GROUP OUTLINE

Net sales of the Tire Group amounted to ¥286,000 million, up 0.7% from fiscal 1997. The weak Japanese economy restricted demand, resulting in a sales decline in both the OE and replacement tire categories. Exports, on the other hand, grew due to active overseas demand and the depreciation of the yen. The restructuring program at YTC began in earnest during the year, helping the subsidiary halve its deficit. In January 1998, YTPI, our new export base in the Philippines, began mass production.

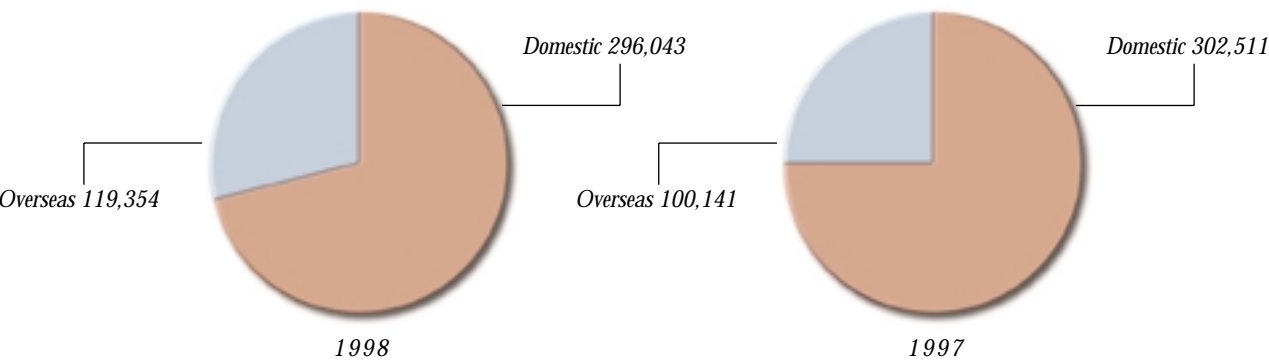
## MB GROUP OUTLINE

The MB Group enjoyed an 8.9% sales increase, to ¥129,397 million. In the domestic market, sales of our industrial products were at about the same level as the previous year, despite the economic slowdown. Exports grew in the weak yen environment, and sales in the aerospace and golf sectors also expanded. In November 1997, Yokohama Rubber (Thailand) commenced operations.

Sales by Group (Millions of yen)



Domestic Sales/Overseas Sales (Millions of yen)





## QUIET AND COMFORTABLE ASPEC dB

ASPEC dB, a new tire for passenger cars, was released in the domestic replacement tire market in March 1998. This tire features lower noise and improved comfort compared with previous products. In 1997, Yokohama started domestic

promotional campaigns for its tires featuring expanded inner diameters and excellent performance. "Comfort Inch-Up" — the slogan we adopted to market the ASPEC dB — is certain to differentiate the Yokohama brand name from the competition.

## OPERATIONS BEGIN AT YOKOHAMA TIRE PHILIPPINES (YTPI)

YTPI's production plant for passenger car tires was completed within the Clark Special Economic Zone, and mass production began in January 1998. The plant, construction of which commenced in 1996, is scheduled to reach a production capacity

of 5,000 units per day by August 1998. YTPI plans to manufacture 1.2 million tires per year for marketing in the Philippines and export to Europe, Asia and the Middle East.

## NEW SEALING MATERIAL PLANT IN IBARAKI

In the past, Yokohama's sealing materials for construction and automobile use were manufactured exclusively at the Hiratsuka Factory. However, to meet increasing demand for our sealing materials, in the autumn of 1996 we decided to construct a new

facility on the site of our Ibaraki Plant, which previously had mainly produced hydraulic hoses. The new plant was constructed in one year and started operations in July 1997.



From left • A scene from the "Comfort Inch-Up" television commercial. • Inaugural ceremony for YTPI in April 1998. • Opening ceremony for Yokohama Rubber (Thailand) in November 1997. • Demand for our sealing material is active. • The ZOOM-i utility club (left) and ZOOM-f driving spoon.

## YOKOHAMA RUBBER (THAILAND) UP AND RUNNING

Operations at Yokohama Rubber (Thailand) commenced in November 1997. This company was established in 1996 in a move to localize the production of sealing materials used in automobiles and the assembly of hydraulic hoses. The company was also established to better meet the needs of Japanese

automakers and construction machinery manufacturers with production facilities in Asian countries other than Japan. The construction of the company's plant, located on the Eastern Seaboard Industrial Estate in Rayong Province, took one year.

## ZOOM GOLF PRODUCTS A HUGE SUCCESS

Yokohama's ZOOM-i utility club and ZOOM-f driving spoon, which were put on the market last year, have proved to be huge successes. Both contain titanium and tungsten and are designed with a low center of gravity to achieve long distances with high

trajectories. These products first achieved popularity among touring professionals and subsequently have reached such levels of demand that in the latter half of fiscal 1998 production could not keep up with orders.

## VELAREN MATERIAL DEVELOPED

In April 1997, Yokohama developed a new technology to blend rubber and plastic into a new material called VELAREN. This material combines the elasticity of rubber and the malleability of

plastic, making possible light and recyclable products. VELAREN is already employed in our G-PROS/SR water-shielding sheets for civil engineering applications.

# Review of Operations

## TIRE GROUP

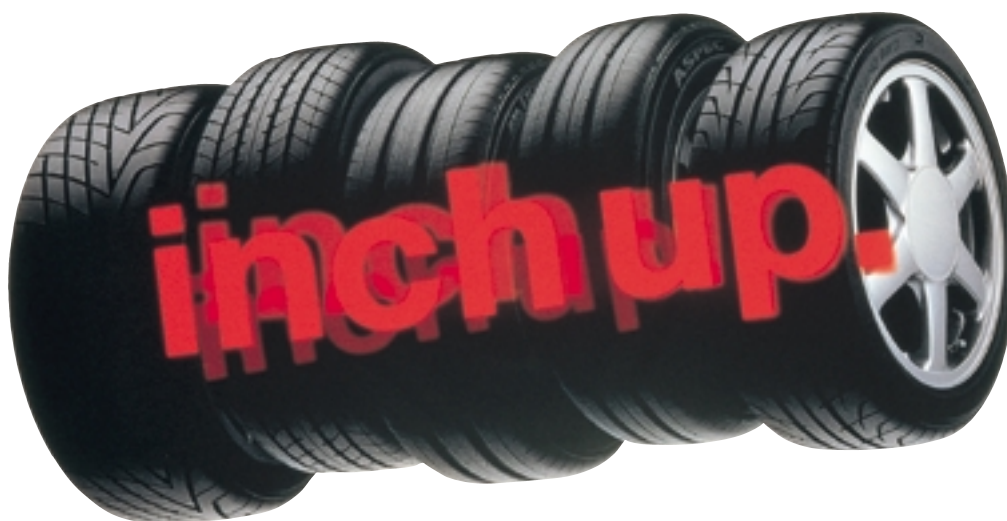
### ORIGINAL EQUIPMENT (OE) TIRES

#### ***Automobile Production Slow in Second Half***

According to the Japan Automobile Manufacturers Association, Inc. (JAMA), domestic automobile production increased year on year in the first half of fiscal 1998 (April 1997–March 1998), supported by strong exports. However, on a unit basis this production dropped significantly in the second half, compared with the same period a year earlier, owing to a major decline in domestic demand. Thus, production for the full fiscal year expanded only 1.5%. In this environment, sales of OE tires in the first half increased in both value and unit terms, but, hit hard by reduced automobile demand, fell in the second half. As a result, sales for the year dipped below the level of the previous year.

#### ***Proposing Products to Customers***

In addition to the drop in automobile production, the OE market is suffering from intense price competition and other factors. To counteract these negative conditions, Yokohama is implementing a proactive sales strategy of proposing products to customers. This type of sales approach aims to increase our sales and market share through the introduction of new products and technologies to automakers and by working with automakers on value analysis and value engineering to recommend Yokohama products for new car models.



*Through the Inch-Up campaign, we have been promoting high-performance replacement tires in the domestic market since 1997.*

### REPLACEMENT TIRES

#### ***Large Drop in Personal Consumption***

The raising of Japan's consumption tax from 3% to 5% in April 1997 and other economic factors severely restricted personal consumption during the fiscal period under review. Further, a series of large-scale financial institution bankruptcies in late 1997 also had the effect of tightening consumers' purse strings. In this environment, although sales of replacement tires grew in the first half of fiscal 1998 in both value and unit terms, they plunged in the second half, causing a year-on-year decrease.

#### ***Inch-Up Campaign***

Yokohama's strategy to succeed during the current difficult economic situation is to aggressively offer products that demonstrate our distinctiveness. From this standpoint, since the spring of 1997 we have been engaged in a promotional campaign focusing on our high-performance Inch-Up tires. New products such as the ASPEC dB, which features a quiet and comfortable ride, and the ASPEC MV for mini vans are differentiating Yokohama from competitors. By reinforcing our brand power, we are able to pursue sales activities relatively free from considerations of price competition.

### **Expanding the Yokohama Sales Network**

The structure of the distribution and retail businesses is changing drastically in Japan, and finding the best way to cope with these changes is an important management issue. Yokohama has streamlined its network of tire sales companies to 31 at the end of fiscal 1998, from 37 a year earlier. In the retail sector, we have

been expanding our franchising activities, mainly through subsidiary YFC Co., Ltd. As of March 31, 1998, we operated 135 Grand Slam and 35 Tire Town franchise stores, as well as 30 Tire Garden partner shops. We plan to increase the number of these outlets to 200, 100 and 200, respectively.



*Clockwise from top left • Advertisement for ASPEC MV, a new tire for mini vans. • Yokohama participates in various motor sports events to demonstrate the superiority of its high-performance tires. • This large-scale Tire Town franchise outlet targets the family market. • The AVS S1-Z has proven popular in the European market. • Sales of the A520 tire for passenger cars are growing in Asia.*



### **TIRES FOR EXPORT**

#### **Yen Depreciation Boosts Sales**

The low value of the yen, the booming U.S. economy and recovery in Europe continued to boost tire exports. Encouraged by this growth trend, Yokohama expanded its sales network and marketed a variety of new products, which resulted in strong sales of tires for export.

#### **Reinforcing Europe and Asia**

By region, 27% of the tires exported in fiscal 1998 went to North America, 20% to Europe, 20% to Asia, 15% to the Middle East and 18% to other regions. Among these regions—excluding North America, where localization activities are in progress—we

consider Europe and Asia to be the most promising markets. Our high-performance tires have earned an excellent reputation in Europe; YTP1, our export base in the Philippines, began mass producing these tires to further promote sales. In the summer of 1997, a decline was experienced in countries in the Association of South East Asian Nations (ASEAN), triggered by the currency crisis in Thailand. However, exports to the People's Republic of China (PRC) and Taiwan remained strong. In the long term, Asian economies are expected to return to a high rate of growth, which is why we intend to aggressively expand our sales in the region.

## OFFSHORE PRODUCTION

### ***Raising YTC's Profitability***

YTC increased its sales in fiscal 1998 by focusing marketing efforts on independent dealers and achieved a 15% decrease in manufacturing costs by lowering its material costs, improving the operation ratio in its plant, raising productivity and reducing inventories. We are continuing to implement such programs to raise YTC's profitability. Specifically, we are expanding the company's lineup of high-value-added tires for recreational vehicles (RVs) and passenger cars and improving production equipment and facilities for these products. In addition, we introduced production improvement systems from Japan and raised the efficiency of YTC's distribution system. In fiscal 1999, we plan to bring YTC firmly into the black.

### ***Second Production Center in Asia***

In addition to YTPJ, which began mass production in January 1998, we established Yokohama Tyre Vietnam Company, our second production center in Asia, in November 1997. In its first phase of operation, from June 1998 the new company started producing tires for motorcycles, demand for which is growing sharply in Vietnam. In the second phase, the company will be manufacturing tires for trucks, buses and light trucks. In the future, tires for passenger cars will be added to this lineup.



*From left • In 1998, a Ferrari entered by Team MOMO and equipped with Yokohama tires won the Daytona 24 Hours. • In the United States, YTC manufactures at the Salem Plant in Virginia. • A production line at YTPJ. Executives from this subsidiary were invited to Japan for a year-long training program that focused on quality assurance.*

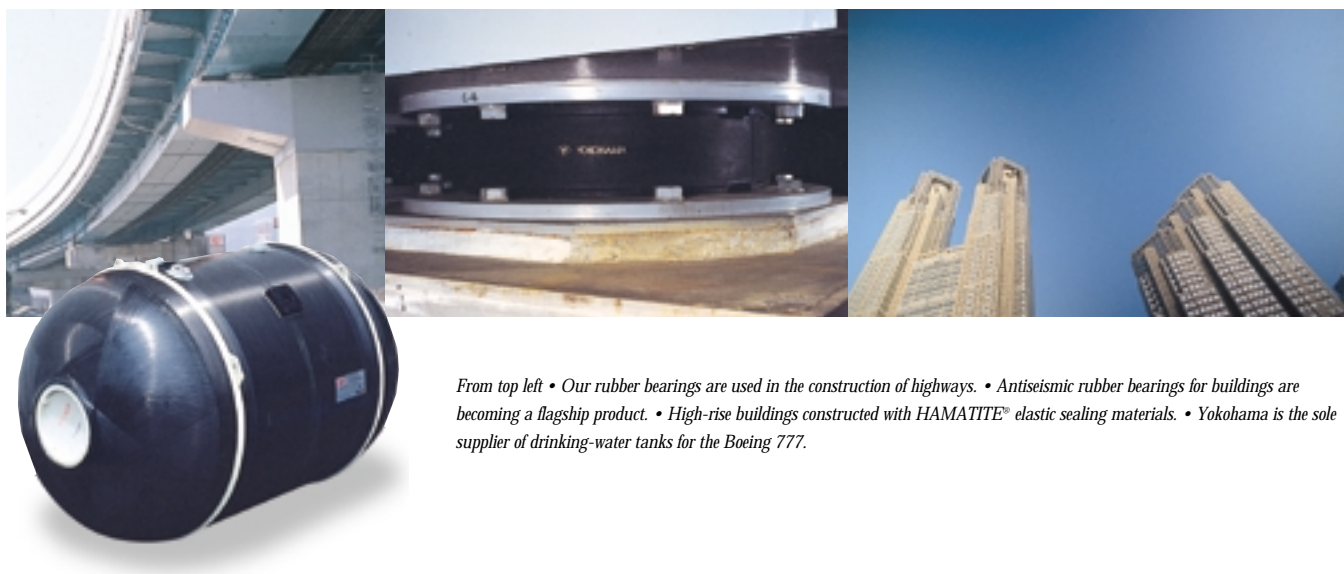


## INDUSTRIAL, CIVIL ENGINEERING AND HAMATITE® PRODUCTS

### ***Emphasizing Construction and Civil Engineering***

In the industrial sector, Yokohama's primary products include conveyor belts for the steel and cement industries and hoses for construction machinery and automobile applications. For the civil engineering sector, we offer products such as antiseismic rubber bearings for bridges. In our HAMATITE® business, we supply sealing materials for buildings and automobiles. In market development during the period under review, we emphasized the construction and civil engineering sectors. Sales to these sectors were strong in the first half of fiscal 1998 but slid in the second

half, as public works projects decreased and housing starts fell significantly. Under these conditions, sales for the fiscal year as a whole were at approximately the same level as the previous year. Other new products include antiseismic rubber bearings for buildings, which we released in the spring of 1997. These products have become popular in recent years as protection against damage from earthquakes; sales contributed greatly to revenue in the second half of fiscal 1998, making the bearings one of Yokohama's flagship products.



*From top left • Our rubber bearings are used in the construction of highways. • Antiseismic rubber bearings for buildings are becoming a flagship product. • High-rise buildings constructed with HAMATITE® elastic sealing materials. • Yokohama is the sole supplier of drinking-water tanks for the Boeing 777.*

## AEROSPACE PRODUCTS

### ***Strong Demand from Boeing***

Sales in the aerospace sector grew steadily in fiscal 1998, owing to demand from The Boeing Company for lavatory modules and drinking-water tanks used in passenger airplanes. Orders from domestic aircraft manufacturers for composite material products

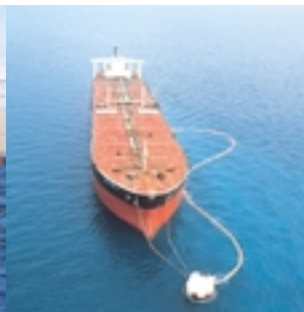
also contributed to expanded sales. Yokohama is the sole supplier of drinking-water tanks used in Boeing 737, 747, 757 and 767 aircraft. In addition, in April 1997 we successfully concluded a contract to provide these products for Boeing 777s.

## SPORTS PRODUCTS

### ***Sales Robust despite a Sluggish Market***

Although sluggish personal consumption adversely affected the golf products market in Japan, Yokohama's distinctive products helped us achieve significant sales growth. Demand rose for

products in our PRGR brand, including drivers and iron clubs, as well as caddy bags and shirts offering excellent air permeability. Our biggest hits were in the PRGR ZOOM series of utility clubs and driving spoons.



*Clockwise from top left • Brian Watts, a professional golfer contracted under the PRGR name. • Exports of fenders, marine hoses and conveyor belts are showing significant growth. • YH America, based in the state of Kentucky, began producing windshield sealant in June 1998.*



## EXPORTS AND OFFSHORE PRODUCTION

### ***Strategic Marketing Supports Export Growth***

In fiscal 1998, Yokohama focused on expanding exports by increasing its sales to existing customers, successfully winning large-scale contracts based on its strategic business proposals and implementing other schemes. The low value of the yen supported these activities. As a result, although Asian demand slipped in the second half of the fiscal year following currency crises in the ASEAN region, Yokohama's overall exports grew significantly. Products that contributed to this success include pneumatic rubber fenders, marine hoses and conveyor belts.

### ***Localization in North America and Asia***

In recent years, Yokohama has been expanding offshore production of its hoses and HAMATITE® products to more effectively meet the needs of Japanese auto and construction

machinery makers with facilities in overseas locations. In North America, where SAS Rubber has been manufacturing automobile hoses and YH America has been assembling hoses and couplings, we decided to commence production of windshield sealant. Our new plant for this product, located on the premises of YH America, went into operation in June 1998. In Asia, we have invested in Taiwan's Shieh Chi Industrial Company, to which we have been transferring technologies to produce hydraulic hoses. In addition, Yokohama Rubber (Thailand) began producing windshield sealant and assembling hoses and couplings in November 1997. Although ASEAN economies are currently experiencing a downturn, we plan to fortify our production in the region because we see it as a promising market in the 21st century.

# The Yokohama Rubber Group

*The Yokohama Rubber Group is composed of 61 consolidated subsidiaries, 150 nonconsolidated subsidiaries and 66 affiliates, including eight companies to which the equity method of accounting is applicable. Our consolidated subsidiaries include 28 domestic sales companies of tires, nine domestic sales companies of industrial products, 10 overseas subsidiaries and 14 other domestic companies.*

## ● DOMESTIC TIRE SALES COMPANIES

These companies supply Yokohama tires to retail shops and transport companies. As Japan's retail system for tires is undergoing changes in accordance with market expansion and the emergence of large-scale automobile products stores, Yokohama has been restructuring these sales companies with the goal of raising management efficiency to cope with market change.

## ● DOMESTIC INDUSTRIAL PRODUCTS SALES COMPANIES

MB-related products are distributed through these companies to steel and cement manufacturing plants and construction sites across Japan. MB products are by nature highly specialized, and many are custom-made. Thus, each sales company emphasizes employee training in high-level technological skills and encourages frequent information exchanges with customers.

## ● OVERSEAS SUBSIDIARIES

YTC, located in America, is our largest overseas subsidiary. It was established in 1992 following a merger between YTC — then a sales company — and Mohawk Rubber Company; Yokohama acquired all of the shares of the company in 1989. Based in California and operating a plant in Virginia, YTC markets Yokohama products through a nationwide network of sales and distribution centers. Currently, the company manufactures tires for passenger cars and light trucks. Production capacity is now 7.5 million units per year, a figure we plan to raise to 8.5 million units by the end of December 1998.

## ● OTHER DOMESTIC COMPANIES

Our largest subsidiary in Japan is Yokohama Hydrex, which began as a joint venture between Yokohama and a U.S. company in 1973. Yokohama discontinued the joint venture contract in 1996 to reestablish the company as a wholly owned subsidiary. Yokohama Hydrex is now a leading company in the industry, manufacturing and assembling hydraulic hoses for the construction machinery and automotive sectors in Japan. It is also increasing its overseas market share by localizing production. The company has been assembling hoses in the United States and from last year began hose-assembly operations in Thailand.

## Consolidated Subsidiaries

### DOMESTIC TIRE SALES COMPANIES

Twenty-eight companies

### DOMESTIC INDUSTRIAL PRODUCTS SALES COMPANIES

Nine companies

### OVERSEAS SUBSIDIARIES

Yokohama Tire Corporation  
Yokohama Tyre Australia Pty., Ltd.  
Yokohama Reifen GmbH and seven other companies

### OTHER DOMESTIC COMPANIES

Yokohama Hydrex Co. (Manufacture and sales of industrial products)  
Hamagomu Engineering Ltd. (Manufacture and sales of equipment and plant)  
Hamagomu Real Estate Co., Ltd. (Real estate business)  
Hamagomu Aicom Inc. (Information processing)  
Japan Power Brake Inc. (Manufacture and sales of disk brakes)  
and nine other companies

# Environmental Protection

*QCDE, the abbreviation for quality, cost, delivery and environmental protection, is Yokohama’s theme for total technological advancement. We believe that companies that can not meet high standards in these four areas will not be able to compete in the global market in the future. Environmental protection, in particular, is an issue that will demand the attention of all global corporate citizens in the 21st century. At Yokohama, we take this issue seriously, as shown by the variety of environmental protection initiatives that we began implementing in the early 1990s.*

## PROGRESS BEING MADE

In 1992, Yokohama established its Environmental Conservation Department to implement environment-related programs throughout its operations. In the following year, we drew up our Environmental Action Plan, which outlines concrete measures to protect the ozone layer, prevent global warming and reduce our industrial waste. As a result of this plan, we attained our goal of eliminating chlorofluorocarbons (CFCs) and trichloroethane from our manufacturing processes in 1995 and 1996, respectively. In 1996, we also reduced our levels of carbon dioxide emissions, which are believed to be the chief cause of global warming, and industrial waste by 7.9% and 43%, respectively, from 1991 levels.

## NEW ACTION PLAN

Based on these achievements, we decided to compile a new action plan in 1998 to further promote in-house environmental protection efforts. The focus of this plan is the reduction of our burden on the environment and the strengthening of our organizational efforts to this end. To reduce the environmental burden of our operations, we committed ourselves to lowering the overall amount of industrial waste we produce, reducing the

final volume of industrial waste to be processed, cutting carbon dioxide and organic solvent emissions and completely eliminating CFC substitutes. The goals for our organizational efforts include earning ISO 14001 environmental management certification for our six plants in Japan by 1999. (See the list below.)

## A VARIETY OF MEASURES

We are devising specific measures to attain the goals of our new action plan. For example, for our tires we adopted Life Cycle Assessment, which quantitatively evaluates a product’s environmental impact from the materials procurement and production stages through to usage, disposal and recycling. This assessment is now being applied in our product development. We are also considering the recycling of scrap tires from our plants by processing them into rubber powder. Other efforts being planned include the introduction of cogeneration systems to significantly reduce carbon dioxide emissions, the promotion of environment-friendly materials under a “green procurement” plan and employee education in environmental matters.

### GOALS OF THE NEW ACTION PLAN

- 1. Industrial waste  
To be reduced by 30% from the 1996 level by the end of the year 2000
- 2. Industrial waste processing  
To be reduced by 50% from the 1996 level by the end of the year 2000
- 3. Carbon dioxide emissions  
To be returned to the 1990 level by the year 2000
- 4. CFC substitutes  
To be eliminated completely by the year 2005

### 5. Organic solvent discharge

To be reduced by 30% from the 1995 level by the end of the year 2000

### 6. ISO 14001 certification schedule

Mishima Plant	June 1998
Mie Plant	December 1998
Shinshiro Plant	October 1999
Onomichi Plant	December 1999
Ibaraki Plant	December 1999
Hiratsuka Factory	December 1999