Car Air-Conditioning Compressor Business — Establishing a Global Presence with Advanced Technologies

The production of car air-conditioning compressors is a key strategic business not only of the Automobile Segment but also of Toyota Industries itself. Making full use of our cuttingedge technologies, we develop and manufacture products attuned to customer needs, leading the global car air-conditioning compressor market.

Technological Superiority Beating the Competition

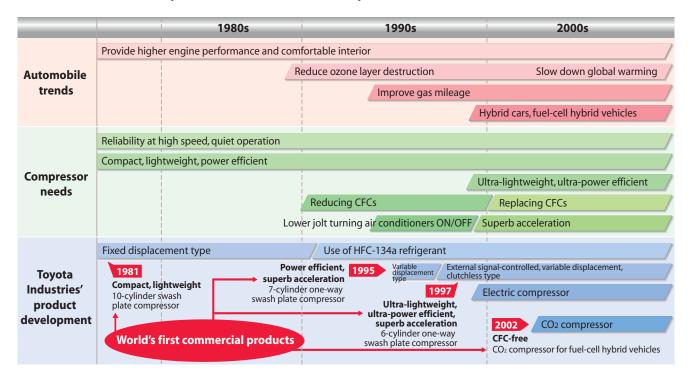
With technology and overall quality that competitors cannot match, Toyota Industries' car air-conditioning compressors are the preferred choice not only of Toyota Motor Corporation ("TMC") but also of many of the world's major car manufacturers.

Toyota Industries' Car Air-Conditioning Compressor Business has made an important contribution to innovation in the automobile field. We anticipate changes in market needs accurately and develop products to meet those needs ahead



of competitors. For example, in the 1980s we launched our compact, lightweight 10-cylinder compressor with swash plate and fixed displacement, which is extremely reliable at high operating speeds. In the 1990s, in response to increased

Automobile Trends and Toyota Industries' Product Development





environmental concerns, we launched a one-way swash plate compressor with continuous variable displacement, which increases fuel efficiency by reducing the load on the engine. In the late 1990s, we introduced a clutchless type one-way swash plate compressor with continuous variable displacement, which senses changes in external ambience such as ambient temperature and engine acceleration, offering both excellent acceleration and lower energy consumption.

In the near future, electric vehicles are expected to become more popular, leading to increased demand for electric compressors. Toyota Industries is undertaking substantial research and development in this field. To protect the ozone layer and slow down global warming, we developed jointly with DENSO Corporation ("DENSO") a car air-conditioning compressor that uses CO₂, instead of hydrofluorocarbon (HFC), as a refrigerant. This compressor is incorporated in the fuel-cell hybrid vehicles developed by TMC, which were delivered to the Japanese government in December 2002. Toyota Industries is currently engaged in the research and development of a CO₂ compressor for more common, enginedriven vehicles.

Strong Global Presence

We hold a leading share in the global car air-conditioning compressor market, producing more than 15 million units a year at our facilities around the world.

Over the years, Toyota Industries has globalized its production, establishing a tri-polar production network with bases in all the major automobile markets, i.e., Europe, the U.S. and Japan. We also license production in Asia (excluding Japan) and South America. Local production allows the manufacture of products that accurately reflect local needs, while at the same time reducing shipment costs and exchange rate risks. Local procurement is increasing, and will continue to increase for the foreseeable future.

Our U.S. production base, Michigan Automotive Compressor, Inc. ("MACI")*, produced over 5.4 million swash plate compressors with fixed displacement in 2002. Our European production base, TD Deutsche Klimakompressor GmbH ("TDDK")*, produced approximately 0.7 million swash plate compressors with variable displacement in 2002.

In fiscal 2003, Toyota Industries was the leading player in the Japanese market, supplying more than 5 million units to major car manufacturers, including TMC. The total supplied to American automakers and Japanese manufacturers producing in North America was over 5.5 million units (including exports from Japan and local production), mainly

fixed displacement compressors.

In Europe, Toyota Industries supplied over 4.6 million units (including exports from Japan and local production), including variable displacement compressors for luxury cars and compact variable displacement compressors for smaller cars. Despite uncertain prospects for automobile sales triggered by an economic slowdown in the U.S., our mediumterm focus is on North America and Europe. In North America, we will seek new orders aggressively. In Europe, the potential for higher sales is vast as the proportion of cars fitted with car air-conditioners is expected to keep increasing for the foreseeable future. In Europe, we will vigorously cultivate new customers by rapidly developing and launching products closely tailored to local needs, such as the compact variable displacement compressor.

All our car air-conditioning compressors are supplied to DENSO, which then sells them to major automakers worldwide. Our compressors are also incorporated in DENSO's car air-conditioning systems.

Entering the Aftermarket

In July 2001, Toyota Industries established ACTIS Manufacturing, Ltd. LLC ("ACTIS") in Grapevine, Texas, as a joint venture with DENSO and Toyota Tsusho Corporation. ACTIS, a remanufacturer of car air-conditioning compressors for the North American market, started production in March 2002. The company was created to cope with the rising demand for remanufactured compressors, itself a response to social and environmental needs for more efficient utilization of automotive part resources. Making full use of our long-accumulated know-how in production technologies and quality control, ACTIS intends to reinforce competitiveness in the North American aftermarket for remanufactured compressors. ACTIS expects sales of 100,000 units in 2003 and 120,000 units in 2004.

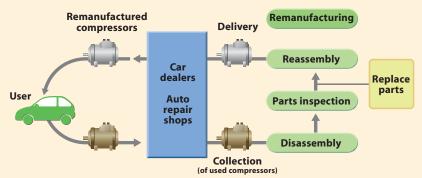
In February 2002, TDDK also commenced the remanufacture of car air-conditioning compressors in the European market.

Remanufactured Car Air-Conditioning Compressors

In the U.S. and Europe, demand is increasing for reconditioned or remanufactured components, reflecting social and environmental needs for more efficient utilization of automotive part resources. In response to this trend, ACTIS in North America and TDDK in Europe have begun remanufacturing car air-conditioning

compressors. The two companies disassemble used compressors collected from the market, replace worn parts with new ones, then reassemble the units.

Toyota Industries is committed to making a contribution to resource conservation by increasing the number of remanufactured products it sells in the future.



Used compressors are collected from car dealers and auto repair shops, then remanufactured at ACTIS and TDDK for resale.

^{*} MACI and TDDK are joint ventures with DENSO. As of March 31, 2003, Toyota Industries held 60% and 65%, respectively, of the shares of these companies. The fiscal years of MACI and TDDK, unlike that of Toyota Industries, run from January 1 to December 31.