Automotive Business

Business Overview

Comprised of the two categories of automotive bearings and automotive components, the Automotive Business delivers various products that support the three critical elements of automobiles, namely running, turning and stopping.

Automobiles utilize many different types of NSK bearings, including hub unit bearings and needle roller bearings. As automobiles have evolved, automotive bearings have come to demand a greater level of performance, including less friction loss, smaller size, lighter weight, higher speed and less noise. Through more sophisticated automotive bearings, including bearing grease and seals that leverage its core technologies of tribology, materials and numerical simulation, NSK continues to develop products that contribute to the evolution of automobiles.

Meanwhile, in the automotive component field, NSK delivers a wide range of core functional components, including electric power steering (EPS) and automatic transmission (AT) products, as well as ball screws for electric brake boosters. In addition to the primary column-type EPS, the Company is promoting the development of a rack-type EPS to expand its product lineup. AT products are seeing greater demand against the backdrop of improved automobile fuel efficiency and comfort, whereas ball screws are seeing greater demand against the backdrop of improved safety.

Structural changes in automobiles from a technical standpoint, such as power source diversification and the evolution of vehicle dynamics controls geared toward autonomous driving, are currently accelerating. By building on the elemental technologies the Company has accumulated thus far and by developing new technologies, NSK will contribute to technical innovation for automobiles.

Specific Features of the Automotive Business

Customers
- Automakers in Japan and overseas
- Auto component manufacturers in Japan and overseas

Features of Customers and NSK Businesses
- In principle, opportunities to win new orders arise when automakers introduce new vehicle models or undertake a full model change. According to the schedule of each customer’s new vehicle project, NSK cooperates on development after being nominated as a development supplier. Development suppliers are generally also responsible for supplying mass-produced products, and prepare mass production in accordance with the launch schedule for the new vehicle.
- The delivery volume required for a single project has been on the rise as customers employ common platforms and planned production volumes grow.
- NSK’s sales are affected by the sales volumes of the car models on the market. In principle, deliveries are based on the just-in-time system, so inventories are light. However, customers often require that manufacturing take place near the regions of demand, meaning that the local production ratio is relatively high.

NSK’s Competitive Advantages
- Diverse business relationships/customer base among automakers and first-tier auto parts makers
- Global supply capabilities
- Development capabilities/technological response capabilities for advances in automobile functions
- Global management systems to focus on meeting overseas demand

Automotive Bearings

<table>
<thead>
<tr>
<th>Type</th>
<th>Sales</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hub Unit Bearings</td>
<td>¥340.8 billion</td>
<td>29%</td>
</tr>
<tr>
<td>Needle Roller Bearings</td>
<td>¥348.9 billion</td>
<td>20%</td>
</tr>
<tr>
<td>Other</td>
<td>¥51%</td>
<td></td>
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</tbody>
</table>

Automotive Components

<table>
<thead>
<tr>
<th>Type</th>
<th>Sales</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automatic Transmission Components</td>
<td>¥340.8 billion</td>
<td>24%</td>
</tr>
<tr>
<td>Steering Products</td>
<td>¥348.9 billion</td>
<td>76%</td>
</tr>
</tbody>
</table>

* Refer to page P. 15 for information on the shared features of the Industrial Machinery Business and the Automotive Business.
Amarket slowdown and decline in EPS led to lower sales and profits year on year during the year ended March 31, 2019.

In the year ending March 31, 2020, despite a continued slowdown in EPS, NSK aims to achieve growth in bearings and products for the AT that surpasses the markets growth.

The year ended March 31, 2019 saw higher sales of products for automatic transmission (AT) systems and needle roller bearings. On the other hand, sales declined year-on-year as a result of a slowdown in the global automotive market and lower electric power steering (EPS) sales due to the impact of model changes.

Looking at the segment’s results by geographic breakdown, sales in Japan decreased due to lower sales in the EPS business despite robust sales of products for AT systems. In the Americas, sales increased mainly due to solid sales of products for AT systems. In Europe, sales decreased due to lower vehicle production stemming from new exhaust gas emission testing methods (WLTP). Sales in China decreased due to a reactionary decline from special tax incentives for compact cars which ended last year, as well as lower EPS sales. In other Asian countries, overall sales decreased due to the impact of exchange rate fluctuations, although sales in India increased.

As a result, sales in the Automotive Business declined to ¥689,658 million (a year-on-year decrease of 4.7%). Meanwhile, operating income slipped to ¥44,949 million (a year-on-year decrease of 31.9%) and the operating income margin fell to 6.5% as a result of lower volume, higher steel prices and labor costs, and increased technological development expenses targeted at future growth.

Automotive Business demand trends for the year ending March 31, 2020 are expected to remain unclear due to ongoing uncertainty regarding a conclusion to US-China trade friction and the UK’s withdrawal from the European Union. Moreover, although NSK aims to achieve growth in products for AT systems and bearings that surpasses that of the market, given the continued decline in EPS sales due to the impact of model changes, sales are expected to fall to ¥650,000 million (year-on-year decrease of 5.8%), operating income to ¥33,000 million (year-on-year decrease of 26.6%), and the operating income margin to 5.1%.

In this business, the Company will work to expand operations with a focus on products for AT systems, for which demand is expected to continue increasing, and aims to restart growth in the EPS business. Moreover, NSK will contribute to electrification, autonomous driving, and other automobile-related technical innovations by employing existing technologies and new technologies to be developed in the future. NSK will also work to improve profitability by raising productivity and reducing fixed costs.