Environmental Declaration and Basic Environmental Policies

The Akebono Group has a shared Environmental Declaration and Basic Environmental Policies that govern its efforts to reduce the environmental impact of its business activities and promote development of environmentally considerate products.

Environmental Declaration

Based on our Corporate Mission and Declaration for the 21st Century, we will continue to create new value in the new millennium, contributing to both the Company and the environment. As a global corporate citizen, we will also strive to protect the environment on a global scale and implement ongoing voluntary activities aimed at creating a safe, vibrant society that co-exists in harmony with the environment.

Established 2001

Basic Environmental Policies

1. From the early development and design stages, we will actively pursue initiatives that give consideration to both safety and the environment. We will promote the development of technologies and products that minimize environmental impact.
2. Each and every associate will make ongoing efforts to reduce environmental impact and promote an eco-friendly society by conserving energy and resources, recycling and reducing waste.
3. In addition to complying with environmental laws, regulations and agreements, we will endeavor to enhance our environmental management by establishing voluntary management standards both in Japan and overseas.
4. We will actively disclose information to increase understanding of our environmental initiatives and encourage positive relationships with communities with the aim of creating a better living environment.

Established 2001

Emissions of PRTR Targeted Substances (Fiscal 2017)

Akebono is working to recycle resources and minimize water usage and waste and chemical substance emissions. At the same time, we are taking steps to promote effective use of resources, and striving to achieve manufacturing that can contribute to creation of a recycling society.

PRTR targeted substances 288 tons

Atmosphere

Recycling 37 tons

Removal 125 tons

Products 115 tons

Water bodies 0 tons

Soil 0 tons

*PRTR (Pollutant Release and Transfer Register): A system for understanding, gathering data, and disclosing the amount of target substances that are transferred externally in the form of emissions or waste processing by businesses that manufacture, use, and emit such substances.

Certified as an Excellent Large-Scale Business Facility under Saitama’s Cap-and-Trade Emissions Trading System

Ai-City (Headquarters) in Hanyu, Saitama Prefecture was certified as a Semi-Top-Level Office in the Excellent Large-Scale Business Facility category, under Saitama Prefecture’s cap-and-trade emissions trading system for conducting outstanding measures to reduce the volume of CO₂ emissions. The certificate was issued in April 2017.

To reduce CO₂ emissions associated with business activities, Saitama Prefecture introduced the cap-and-trade emissions trading system from fiscal 2011.

Business sites that implement especially effective initiatives are designated as “Top-Level Office” and “Semi-Top-Level Office.”

For some time now, Akebono has been engaged in energy-saving activities. Among these initiatives, we use power generation facilities that make use of waste heat and waste hot water, make our lighting more efficient by using solar power generation, and make our energy use visible with a building energy management system.
Akebono is working to reduce its environmental and social impact with the cooperation of its suppliers.

Green Purchasing
Akebono introduced its Green Purchasing Guideline in 2005, revising it in 2011. Under the guideline we are considering the environment and CSR from the purchasing stage by working together with suppliers to procure materials, components, and secondary materials that have a low environmental impact. We are also encouraging our suppliers to improve their environmental management performance by recommending activities to acquire external accreditation such as ISO 14001. Going forward, our next challenge is to promote these practices at overseas bases as well.

Green Purchasing
Green purchasing refers to the preferential selection and acquisition of products that cause less negative environmental impact. The scope of products covers materials, secondary materials, office supplies and equipment used in the course of manufacturing. Manufacture of “Green Products” requires the practice of green purchasing.

Initiatives to Reduce Environmental Impact

Substances under Green Purchasing Guidelines
Targeted chemical substances are categorized into three ranks and controlled as follows:

<table>
<thead>
<tr>
<th>Rank</th>
<th>Chemical substances</th>
<th>Examples of control measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Usage prohibited</td>
<td>Substances that are strictly banned from use and production by law and regulation</td>
<td>Prohibit use/draw up plans for abolishment if there is substance in use</td>
</tr>
<tr>
<td>Usage restricted</td>
<td>Substances which are projected to come under legal regulation and substances for which emission regulations are set under existing laws</td>
<td>Conduct research on alternative materials or reduction methods and draw up reduction plan</td>
</tr>
<tr>
<td>Proper management of usage information required</td>
<td>Substances listed in GADSL, that is, substances requiring declaration of usage amount</td>
<td>Ensure proper management of usage information and work toward reduction of usage</td>
</tr>
</tbody>
</table>

Response to Substances of Very High Concern
In cooperation with our suppliers, Akebono performs testing of purchased products to determine if they contain substances of very high concern (SVHC*) or banned substances. The tests are performed on the individual product level and their results are communicated back to the suppliers. We are also promoting labeling of purchased items in line with laws and regulations.

Substances of Very High Concern
A substance may (but not necessarily must) be designated as SVHC if it meets one or more of the following criteria: it is carcinogenic, mutagenic or toxic for reproduction, and in addition is either persistent, bioaccumulative and toxic, or very persistent and very bioaccumulative. Such substances are identified as having probability of causing serious adverse effects to human health or the environment.

Initiatives in Production

Akebono is reducing the environmental impact of its production sites and lowering the power consumption of its production facilities

Introduction of Wastewater Treatment and Air Purification Systems
Akebono has introduced wastewater treatment and air purification systems and is carrying out environmentally-friendly production activities.

Iwatsuki Manufacturing upgraded its wastewater treatment system and cleared wastewater standards by a wide margin in fiscal 2017. In fiscal 2018, Akebono plans to introduce a system in Guangzhou, China that reduces total wastewater volume and expects it to meet the standard for heavy metal content in wastewater.

In China, where air pollution is a growing problem, industrial zones in each area apply voluntary standards. In Suzhou, we established a new air cleaning system that uses an electrostatic precipitator and low temperature plasma treatment* and applied voluntary standards that exceed those of the law and regulations. This air cleaning system also helps to deodorize the air.

Purification Systems
Akebono has introduced wastewater treatment and air purification systems and is carrying out environmentally-friendly production activities.

In China, where air pollution is a growing problem, industrial zones in each area apply voluntary standards. In Suzhou, we established a new air cleaning system that uses an electrostatic precipitator and low temperature plasma treatment* and applied voluntary standards that exceed those of the law and regulations. This air cleaning system also helps to deodorize the air.

Proper management of usage information required
Substances listed in GADSL, that is, substances requiring declaration of usage amount
Ensure proper management of usage information and work toward reduction of usage

* Low temperature plasma treatment: Low temperature plasma is air that has around 1% plasmarized (separated into positive ions and electrons) so that it contains plasma ions at room temperature (a few degrees Celsius) and is able to dissolve organic matter.

Developing Young Engineers to Design Environmentally Considerate Facilities
Akebono is looking to develop engineers who will design the facilities of the future by conducting a program for “building a miniature production line for brake manufacturing processes that can be operated by a single motor.” Under the program, a team of young engineers who are within the first five years of their assignment to the production engineering division undertake “miniature line building” concurrently with their ordinary work, undertaking all steps from planning and design to production.

This initiative has been carried out since fiscal 2010. In fiscal 2017, six junior associates produced a miniature manufacturing facility for high performance calipers. The original facility was installed in Hanyu and is the manufacturing facility for producing aluminum opposed type disc brakes for European manufacturers.
Building miniature production lines involves considering the operability of each process as well as the timing coordination over the entire line and so forth. This resulted in various innovations such as reducing the weight of moving parts. Looking ahead, we will develop engineers who will take a birds-eye-view of the entire line and apply their own skills to designing energy-saving, high efficiency facilities.

Associates in charge of truck operation management use the data to give timely instructions to each driver so that they can avoid crowded routes and helps to ensure that drivers are taking breaks as needed. In these ways, Akebono is ensuring safe and environment-friendly truck operations. In addition, the system also enables objective determination and ranking of drivers’ eco-driving by recording data about idling time and sudden acceleration and braking. Through measures such as these, the system can be used to increase motivation for eco-driving and safe driving. Akebono will continue working to save energy and rationalize its distribution operations, ensuring safety while protecting the environment.

Through various efficiency improvement activities, Akebono is helping to improve associate productivity, and lower transportation costs by reducing energy resources.

Akebono promotes energy saving and rationalization in its distribution operations through the truck operation dynamic management system.

Initiatives in Eco-Friendly Driving
The Akebono Group member Alocs Corporation (a logistics solution company) is employing a truck operation dynamic management system. The system utilizes data on individual vehicles gleaned from onboard sensors, such as engine speed, driving speed, acceleration rate and location. This data is automatically transmitted to the headquarters. Associates in charge of truck operation management use the data to give timely instructions to each driver so that they can avoid crowded routes and helps to ensure that drivers are taking breaks as needed. In these ways, Akebono is ensuring safe and environment-friendly truck operations. In addition, the system also enables objective determination and ranking of drivers’ eco-driving by recording data about idling time and sudden acceleration and braking. Through measures such as these, the system can be used to increase motivation for eco-driving and safe driving. Akebono will continue working to save energy and rationalize its distribution operations, ensuring safety while protecting the environment.

Through various efficiency improvement activities, Akebono is helping to improve associate productivity, and lower transportation costs by reducing energy resources.

Alocs Corporation’s control screen that gives driving instructions based on real-time truck position and traffic information

Truck from Alocs Corporation headquarters

Received Honorable Mention for the Cogeneration Grand Prize
In February 2018, at the Cogeneration Grand Prize 2017 sponsored by the Cogeneration Foundation (Advanced Cogeneration and Energy Utilization Center Japan), Akebono received an Honorable Mention (in the Industry Category) for “Improving efficiency and reducing greenhouse gas emissions through cogeneration systems”.

Since the introduction of cogeneration in 2011, Akebono has been building systems to reduce CO₂ emissions by improving overall efficiency with the goal of daily capacity utilization, cutting electric power supply to the outside during peak hours, contributing to the electric power business by combining the introduction of advanced equipment that utilizes waste heat with renewable energy, as well as consistently raising gas engine power generation efficiency and improving waste heat utilization efficiency. Akebono also received the Excellence Award at the Cogeneration Grand Prize 2013, this time receiving its second award. To fulfill its corporate social responsibility, Akebono views global environmental problems as one of its most important management challenges and is working more comprehensively on environmental conservation activities from a global perspective.