

# 2019 CSR REPORT

ALWAYS FLY TOGETHER

2019CSRレポート

# JAMCO 2019 CSR Report

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## Editorial Policy

This report is produced and made available with the aim of introducing the Jamco Group's\* approach and initiatives for Corporate Social Responsibility (CSR) and for the purpose of further improvement of our CSR promotion through communication with our customers, shareholders, investors, suppliers, employees and other stakeholders.

\* JAMCO Group: Domestic and foreign subsidiaries and affiliates

### Scope of this Report

#### Organizations

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This focus of this report is on Jamco Corporation, its domestic and overseas subsidiaries and affiliates.

#### Period Reported

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April 1, 2018 ~ March 31, 2019, (some information is included for dates outside of this period as )

#### Issue Date

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August, 2019.

### Other

#### Referenced Guidelines

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ISO26000 Guidance on social responsibility

ISO14000 environmental management systems

#### Contact

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## Management's Commitment to CSR

**Treasuring the precious bonds with stakeholders, while setting our sights on further excelling as a sustainable and successful business**



### **JAMCO, a Technology Oriented Company with Samurai Values:**

- **Rising to the eternal challenge of realizing our aspirations.**
- **Bringing joy and satisfaction to our customers and employees.**
- **Striving for coexistence with nature, contributing to a prosperous and progressive society.**

These commitments, championed by JAMCO as the core of our management philosophy, can also be said to manifest the spirit of CSR.

### **Rising to the Eternal Challenge of Realizing our Aspirations**

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Since our establishment, JAMCO has nurtured our business focusing on the aviation industry. This stance is firmly rooted in the conviction that our own aspirations can only be realized hand-in-hand with the ongoing evolution of aviation technology. In keeping with this, JAMCO has steadily expanded the borders of our business along the road to realizing our dreams, with the stage for such activities now showing signs of broadening to an even greater extent. There has been no change or pause, however, in the rock-solid commitment to realizing all aspects of our vision as it pertains to the aviation field.

### **Bringing Joy and Satisfaction to our Customers and Employees**

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At JAMCO, the goal is always to supply products and services of genuine and enduring satisfaction to our customers. Through this avenue, we look forward to our employees likewise sensing joy and fulfillment in their work, continuing to develop and grow both as participating members of the business community and as individual human beings.

To this end, we arrange for necessary education, training and work opportunities, while conveying the "unwritten rules" of what may be referred to as "JAMCO-ism." On the strength of this platform, we believe that JAMCO will continue to grow alongside our employees, while fostering an environment empowering employees to move forward with teamwork and a rich sense of achievement. In this way, JAMCO remains boldly fixed on perennially evolving and shining as a "sincere corporate entity where people come first."

## Striving for Coexistence with Nature, Contributing to a Prosperous and Progressive Society

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JAMCO is proactively engaged in dealing with global environmental issues. This stance encompasses energy-saving measures, “green procurement” programs, extensive waste reduction and recycling efforts, as well as analysis of the chemical substances in the materials and other items we use, and the active promotion of conversion to alternatives for components containing hazardous substances and other enlightened efforts. Going forward, JAMCO pledges to further intensify the push to lower our environmental footprint, in a no-nonsense response to the increasing need to take meaningful countermeasures in the face of environmental challenges.

President and CEO



## Approach to CSR

### Basic CSR Policy

#### Basic CSR Policy

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JAMCO’s CSR policies are rooted in its management philosophy and are defined in the following terms:

- Our commitment to compliance is marked by our “samurai values” in which pride and faithfulness are the cornerstone of our actions as a responsible corporate citizen.
- We pursue growth and happiness for employees as well as provide services and products to meet customer expectations.
- We work to ensure harmony between society and the environment, thereby contributing to a better society.

## Human Rights Policy

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The JAMCO Group, to achieve its management philosophy and maintain sustainable growth, will fulfill its responsibility to respect fundamental human rights by the following.

1. Promote initiatives that respect fundamental human rights based on international standards\*, and contribute to the creation of a sustainable society.
2. Comply with the laws of the countries and regions that we do business in based on international standards.
3. To refrain from acting in ways that have a negative effect on human rights.
4. To take immediate steps to begin the remediation process in cases where our actions have a negative effect on human rights, or where we have had a hand in such an effect.
5. Operate internal and external hotlines for reporting the discovery of negative effects on human rights.
6. Reduce and avoid risks that could result in negative effects on human rights.
7. Promote human rights awareness activities that target all JAMCO Group officers and employees.
8. Require our business partners to respect human rights and to work to avoid doing anything that may have a negative effect on those rights.
9. Disclose information about human rights issues related to our business activities and discuss them with stakeholders as appropriate.

\*"International standards" refers to 'international standards regarding business and human rights' that are represented by the following:

- Universal Declaration of Human Rights & International Covenants on Human Rights (United Nations)
- ILO Declaration on Fundamental Principles & Rights at Work (International Labour Organization/ILO)
- Guiding Principles on Business and Human Rights (United Nations)

## CSR Promotion System

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To meet higher social demands and expectations with respect to promoting CSR, JAMCO established a system to promote CSR activities by forming a CSR Committee in April, 2017.

The CSR Committee manages across the organization and leads company-wide CSR activities. The CSR Committee is comprised of a Chairperson (Executive Officer in charge of Human Resources General Affairs Department) and members from each Department. CSR Committee meetings are regularly held to plan, review CSR promotion activities and disseminate CSR information.



## Summary of CSR Activities for FY2018

In FY2018, as part of its efforts to create a CSR promotion system, JAMCO carried out the following activities to inform all of its employees of the company's CSR commitments:

- Completed training related to human rights that included informing employees of JAMCO's human rights policy.
- Educated officers at JAMCO regarding CSR fundamentals, basic concepts and approaches in order to increase awareness and penetration of the company's CSR commitments.
- Carried out reviews of major outsourced processors in order to ascertain the state of CSR in the supply chain.

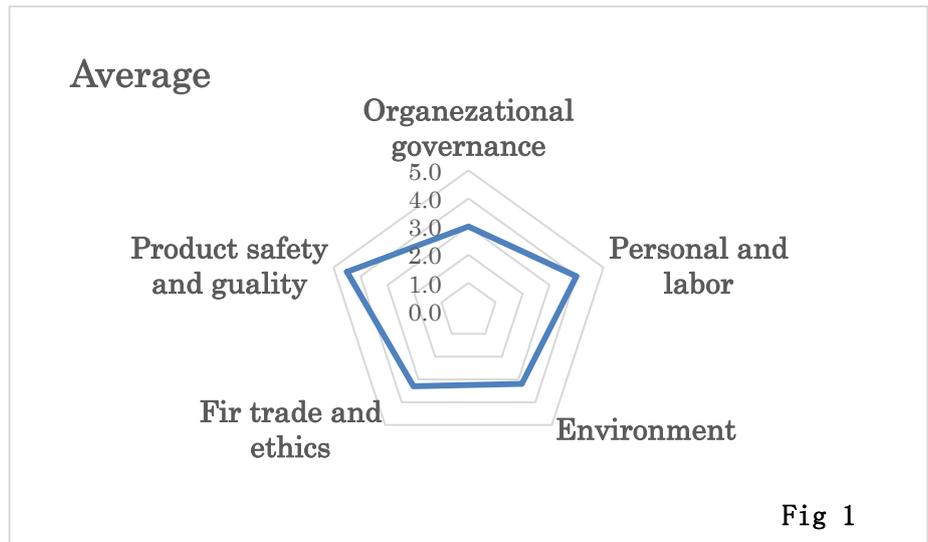
### CSR Activities for FY2018

ISO 26000 Core Subjects	Target	Results
<b>Organizational governance/ Recognition of social responsibility and integration into the whole organization</b>	Well-known and penetration of CSR, including group companies	We carried out CSR education by requiring all company officers to undergo training using e-learning and other methods.
	Enhancement of CSR system including group companies	As part of our group companies CSR activities, Jamco Philippines carried out tree planting and other volunteer activities at local neighborhood facilities.
	Understanding the status of CSR in the supply chain, including our Group companies	We carried out a review of 11 major outsourced processors to determine the state of CSR in the supply chain.  The 11 companies reviewed manufacture key components for our core products, and based on 2017 results, account for 42% of the total amount of transactions made with the 134 suppliers of relevant Business Groups, and are also key partners in terms of quality, delivery times and cost.  The review revealed that: some of these suppliers have a strong awareness regarding CSR and are actively working on such initiatives organizationally; some are CSR-aware but may not be actively carrying out initiatives; and some are not carrying out any CSR initiatives in particular.
<b>Human rights</b>	The implementation of education on human rights, including the well-known human rights policy (Including domestic group companies)	We formulated a human rights policy and informed our employees of it through CSR training. (Refer to "CSR/Approach to CSR/Promoting CSR/Human Rights Policies")
<b>Labor practices</b>	Further promotion of healthy work-life balance	In order to prevent employees from leaving their jobs to rear newborn infants, we worked to create a telecommuting system as a means of support that allows employees to work and raise their children at the same time. We carried out a trial of this system over the course of nearly a year for employees wishing to use it. Having identified and rectified relevant problems and issues, the system went online in April 2019.
<b>Environment</b>	Reduce energy consumption by 1% or more compared to fiscal 2017	To reduce energy consumption, we worked on such initiatives as introducing high-efficiency equipment, shutting off unnecessary lighting, and operating air conditioning equipment in more efficient ways. Despite these efforts, we only reduced our consumption by 0.72%, coming short of our target. Reasons for this include increased workload and intensely hot weather, leading to higher energy consumption.  (Refer to p. 36 for information about FY2018 energy-saving activities and results)

ISO 26000 Core Subjects	Target	Results
<b>Fair business practices</b>	Compliance Code Comprehension	We carried out training regarding the Worker Dispatching Act targeting relevant departments. We also carried out face-to-face training related to general compliance education that targeted all officers at JAMCO and its domestic affiliates and subsidiaries.
<b>Consumer challenge</b>	Provide even safer products and services	As with last year, we continued to promote quality-related meetings and information sharing participated in by all members of the JAMCO Group, including domestic and overseas subsidiaries. The aim of these are to further improve the safety and quality of our products, ensure the safe flight of aircraft, mutually confirm safety and quality information, and detect risks at an early stage. We also carried out compliance education related to quality and worked to raise compliance awareness. However, during the second half of FY2018 we discovered quality issues in our Seats and Interiors Businesses that resulted in a loss of trust.
<b>Participation in and development of communities</b>	Promote regional social contribution activities at each site and group companies of the Company	In the Tachikawa District, we donated emergency food supplies nearing their expiration dates to the non-profit TAMA Food Bank.

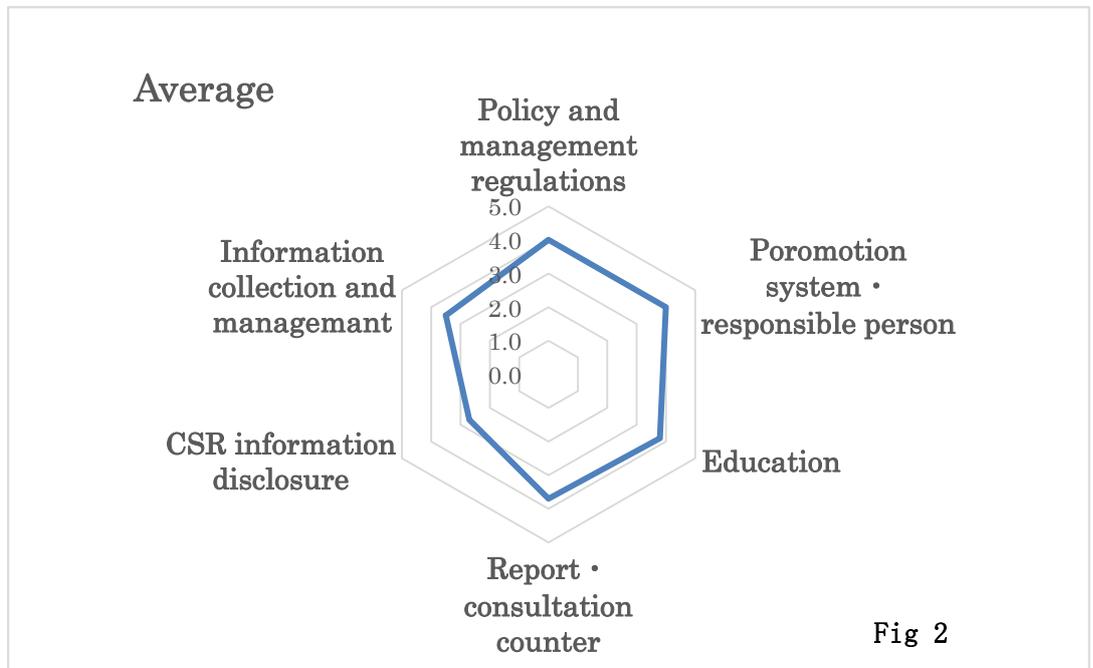
**Summary of Results from Review of Status of CSR at Core Business Division Suppliers**

In order to ascertain the state of CSR at our suppliers, we carried out a review of eleven key outsourced processors that produce components used in the manufacture of our aircraft interiors and seats. The review covered six of the Seven Core Subjects of ISO 26000, excluding Community Involvement and Development (and combining Human Rights and Labor Practices). Despite recognizing irregularities in how the core subjects were assessed, the eleven suppliers generally tended to handle compliance and other fundamental standards that companies are expected to meet in an appropriate manner (see Fig. 1).



We also analyzed the amount of effort each supplier fared in each of the six subjects above by rating their policies, systems, training, points of contact, disclosure, information collection and management using a 5-point scale.

As a result, we determined that while these suppliers possess an awareness of CSR, they have not reached the point where they are disclosing relevant information, showing a lack of understanding of its importance in CSR activities (see Fig. 2).



## CSR Activity Targets for FY2019

In order to further enhance the CSR promotion structure, we set the following primary targets for FY2019 CSR activities to be carried out by JAMCO and the Group companies for ISO 26000's Core Subjects.

ISO26000 Core Subjects	Activity Targets for FY2019
Organizational governance/Recognition of social responsibility and integration into the whole organization	JAMCO, sub tier & suppliers will carry out the following activities: <ul style="list-style-type: none"> <li>• Continue CSR comprehension and awareness activities</li> <li>• Continue to perform CSR reviews</li> <li>• Promote and expand reviews regarding CSR procurement policy in the supply chain</li> <li>• Continue information security training</li> </ul>
Human rights	Continue training related to human rights (includes domestic Group companies)
Labor practices	Further promote a healthy work-life balance: <ul style="list-style-type: none"> <li>• Encourage use of annual paid leave</li> <li>• Encourage use of telecommuting for those raising children</li> <li>• Enforce strict adherence to the monthly 80-hour overtime limit</li> <li>• Encourage hiring of female employees and increase the number of women in assistant managerial positions at 10% or more)</li> <li>• Ascertain and analyze the number of and circumstances surrounding work-related accidents.</li> </ul>
Environment	Reduce energy consumption by 1% or greater compared with FY2018: <ul style="list-style-type: none"> <li>• Reduce greenhouse gas (GHG) emissions</li> <li>• Encourage switching lighting to LED</li> <li>• Ascertain water consumption amounts for each business division and formulate a plan to reduce these amounts</li> <li>• Reduce total waste discharge</li> </ul>
Fair business practices	Compliance code comprehension and adherence Enhancement of Group-wide compliance
Consumer challenge	Improve quality management system/offer even safer products and services Ascertain number of and analyze safety-related defects
Participation in and development of communities	Promote activities by our offices, affiliates and subsidiaries that contribute to local communities

## Corporate Governance

### Basic Policy

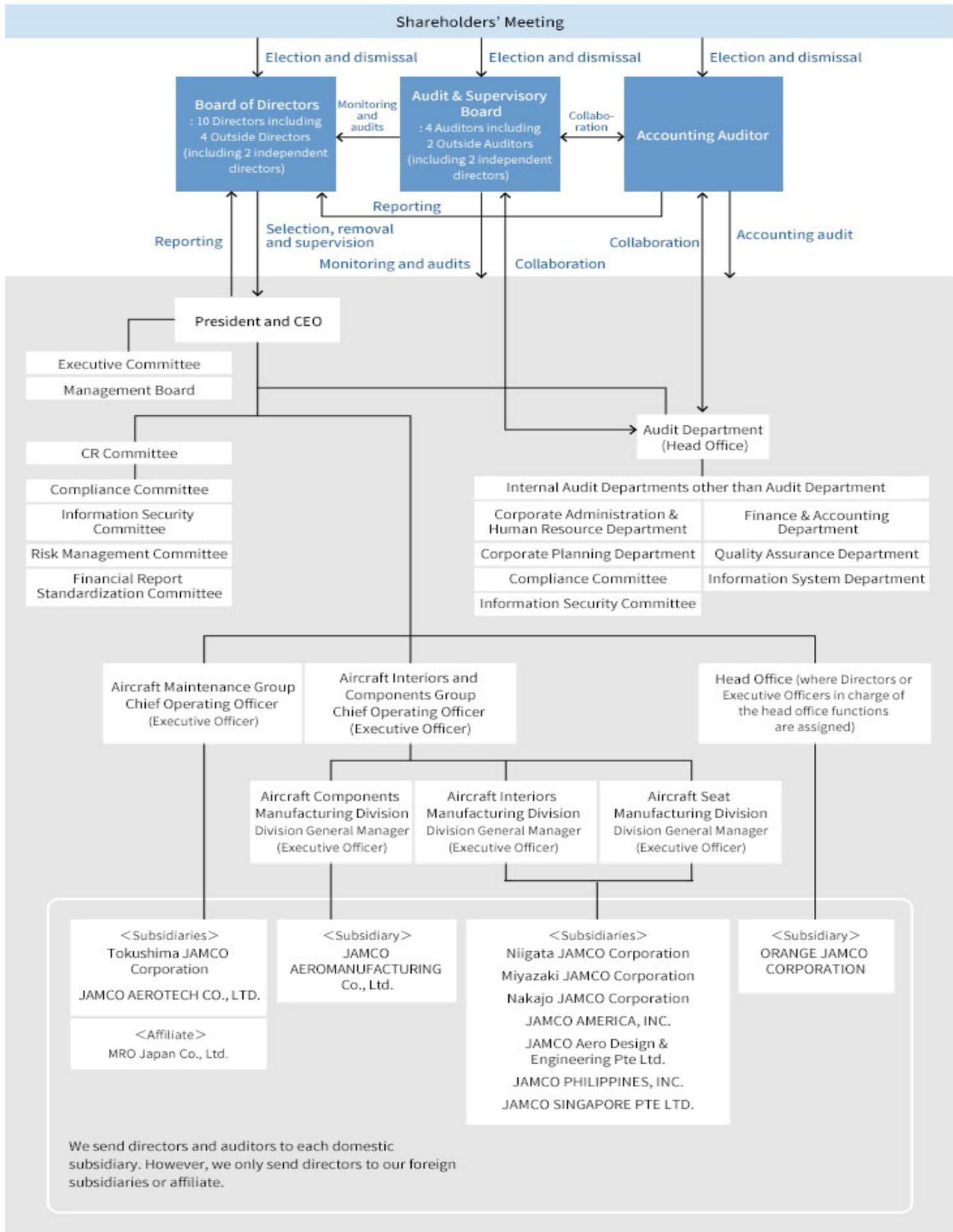
Based on our management philosophy reflected in our commitment “JAMCO, a Technology Oriented Company with Samurai Values,” we place great value on contributing to society and continuing to operate by offering products and services to customers. To put this value into practice, we recognize that our efforts to encourage shareholders, executives and employees to form an efficient coalition, to improve corporate value while compensating stakeholders, and to ensure transparency in management and enhance accountability are fundamental to good corporate governance.

Our Articles of Incorporation provide that there be no more than 15 Directors. They also provide that resolutions to elect or dismiss Directors at a General Meeting of Shareholders shall be passed by a majority of the votes held by shareholders present who hold no less than one-third of the votes of shareholders entitled to exercise their voting rights, and that cumulative voting shall not be used to elect Directors.

Regarding the election of Directors, while believing that those familiar with our operations can make more appropriate decisions and supervise the execution of operations better, we also believe it important to elect Outside Directors familiar with management and the aviation industry to achieve a balanced composition of the Board.

As for compliance, we recognize that it is important not only to comply with applicable laws, regulations, international rules and internal rules and regulations but also to develop a corporate culture that fosters a strong sense of ethics in day-to-day business activities. We have established a “Code of Compliance” and are committed to sharing understanding of the importance of compliance among officers and employees. We have also applied our compliance system to group companies to put compliance management into full practice, thereby fulfilling our corporate social responsibilities.

# Our Corporate Governance Structure



## CSR in Business Activities

### Compliance

The JAMCO Group is committed to responding to stakeholders' expectations and trust through the promotion of compliance management as well as the establishment of sound management control functions and performance of operations. We also have a "Compliance Code" to ensure that each of our officers and employees can comply with laws and regulations, respond to social demands including ethical demands to conduct themselves in a socially acceptable manner.

#### Promotion of Compliance

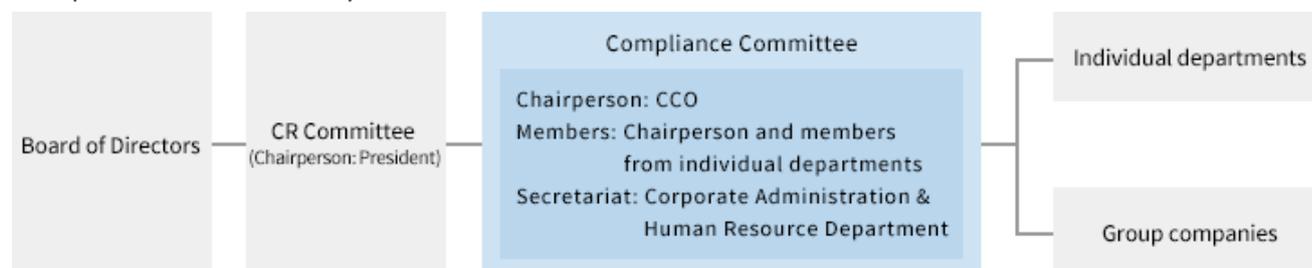
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We have designated a Chief Compliance Officer (CCO) as the person responsible for managing compliance throughout the whole company, and established a Compliance Committee as a compliance management body. Compliance Committee meetings are held regularly, or from time to time as appropriate, and the results of the compliance efforts are reported to the Compliance Risk (CR) Committee and the Board of Directors.

We also seek to instill compliance by regularly providing compliance education to ensure that each of our employees has a better knowledge and understanding of compliance.

In FY2018, we provided face-to-face training for all officers at JAMCO, its affiliates and subsidiaries that included content to improve quality awareness. For entry training aimed at new employees and those recently promoted to the position of chief, assistant manager or manager, we carried out compliance training tailored to the unique characteristics of each.

#### Compliance Promotion System



\* CR Committee: (Compliance Risk) body which manages internal controls

#### Compliance hotline

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The JAMCO Group has established and operates a compliance hotline (contact point for whistleblowing and consultation queries) with the aim of purifying and rectifying compliance issues promptly. We have established contacts for consultation both internally and externally, and strive to deal with whistleblowing and consultation queries as sincerely and promptly as possible in cooperation with relevant internal departments and external consultants and lawyers. In addition, they are also equipped to handle consultations regarding harassment, human rights and a wide range of other issues. Furthermore, we have formulated rules for the protection of whistleblowers to prevent unfavorable treatment toward them.

## Promotion of Sound Business Transactions

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JAMCO Group clearly defines our initiatives to promote sound business transactions in our Compliance Code. In addition, the “Compliance Handbook” distributed to all officers and employees provides specific policies such as compliance with applicable laws and regulations, prohibition of giving illicit benefits to public officials and prohibition of excessive business entertainment and gift-giving to customers. While striving to ensure that transactions are conducted in an honest, open and fair manner by providing regular compliance education, we are fully committed to maintaining a sound and healthy relationship with the politics and government administration.



Compliance Handbook

### Compliance Code

We at JAMCO Corporation aim to form an enterprise that fulfills its corporate social responsibilities and lives up to the trust of society.

The officers and employees of JAMCO Corporation follow the principles enumerated below at every level and in every function. Together we observe applicable laws, international rules, office routines, and other regulations, and behave properly in accordance with firm ethical standards and a sincere social conscience.

1. To develop and supply products and services with due consideration to safety and quality, and to build a relationship of higher trust with every customer.
2. To actively address environmental issues on our own initiative in accordance with the goals of an independently established basic environmental policy and corporate action plan.
3. To respect the individuality and personality of every employee and to secure a safe and comfortable work environment free from any discrimination, harassment, or other undesirable behaviors.
4. To never commit insider trading (unfair trading of a corporation's stock or other securities) by taking advantage of our access to inside information that we learn with respect to matters handled in the course of assigned work.
5. To aim at bona fide and fair trading and to maintain a sensible and sound relationship with politicians and governmental agencies.
6. To respond to anti-social forces with a resolute stance and to abstain from forming any connections with such forces.
7. To respect the established practices and cultures of individual nations and to maintain cooperative relations with these nations as members of a global corporation.

## Information Security Initiatives

JAMCO Group believes that the implementation and continuous improvement of information security management is vital to perform our corporate social responsibilities. We are committed to operating, monitoring, reviewing, maintaining and continuously improving information security based on the ISMS (Information Security Management System) compliant with ISO/IEC27001:2013 (requirements for information security management).

We also ensure that the handling of personal information is managed thoroughly in accordance with our "Privacy Policy."

### Basic Information Security Policy

Based on the JAMCO Group view that ensuring information security is an essential requirement for fulfilling our social responsibilities, we have established, as described below, an information security management system based on ISO27001 to secure the management of information, and we work on initiatives related to operations, monitoring and continuous improvements.

1. By appointing a person with overall responsibility and establishing a group-wide organization, we have put in place an information security management structure.
2. We ensure that we fulfill operational and legal requirements, as well as discharging our contractual security obligations, and the basic handling of information assets and specific procedures are prescribed in internal rules, allowing us to implement rational management of information according to its level of importance.
3. We are establishing standards and methods for evaluating risk. We are drawing up appropriate measures to avoid or mitigate risks that emerge as a result of these evaluations, and to alleviate any serious impact on to our business from major obstacles or natural disasters that are difficult to avoid or mitigate.
4. Education and training is provided out on a regular basis to ensure that officers and employees act with an appropriate awareness of the importance and the requirements of information security, allowing us to achieve well-balanced and high quality security management.
5. We have established a framework for monitoring and evaluation to continuously ensure the effectiveness of the information security structure, seeking to review and improve appropriate mechanisms with the aim of preventing and forestalling the recurrence of malfunctions and incidents.

## Privacy Policy

We at JAMCO Corporation have established the Privacy Policy summarized below in the belief that it is our social responsibility to properly treat every piece of personal information about you, the customer, in order to fully protect your personal information. We achieve this policy by protecting all pieces of private information throughout the organization.

1. To respect the privacy of our individual customers, to comply with applicable laws and regulations, norms, and internal rules relating to your personal information, and to protect any of your personal information we have in our possession.
2. To use your personal information only within a prescribed scope for business, and to act fairly, appropriately, and within the prescribed scope for business when acquiring or using your personal information or when disclosing your personal information to others.
3. To properly handle your personal information in our possession at all times, and to keep it up to date and maintain its accuracy to the extent required for achieving the purpose of use.
4. To handle your personal information appropriately whenever you submit a claim for disclosure, correction, or suspension of use, or make other requests or otherwise express complaints or make inquiries.
5. To take proper precautions and other safeguards against possible unauthorized access, leakage, misuse, loss, or destruction when we handle your personal information, and to respond appropriately and promptly if and when any problem arise.
6. To regularly audit our approaches for the protection of private information and to continually improve these approaches in response to changing social conditions and environments.

## Business Continuity Plan (BCP) in Case of a Disaster

As a company with CSR values, it is our responsibility to build systems that minimize the impact of any large-scale natural disaster or accident on our management resources, and enable us to continue our business.

JAMCO has formulated a Business Continuity Plan (BCP) and made various commitments such as the establishment of a disaster response system, and the implementation of safety inspections, drills and exercises.

In FY2018 we began a review of the anticipated damages contained in the current BCP and from FY2019 will work to formulate a revised BCP that includes our regional offices and is based on new anticipated damages.

### Basic Business Continuity Policy

JAMCO has formulated a Business Continuity Plan (BCP) based on the following basic principles and is committed to establishing Business Continuity Management (BCM) to ensure, in case of a large-scale disaster or accident, that we can provide products and services as promptly as possible while placing top priority on the safety of our customers and employees and their family members.

1. Place priority on the lives and safety of our customers and employees and their family members
2. Establish a system to prioritize the provision of products and services contributing to the manufacture and safe flight of aircraft
3. Coordinate disaster response efforts with local communities
4. Aim to resume our business activities as soon as possible

### Risk Management

In the event of a crisis, we believe it is important to manage relevant information in an appropriate manner and as outlined by corporate organizational structures. The internal rules for crisis management identify potential risks to the company and, in the event that these risks materialize, they prescribe in-house responses such as the setting up of an emergency headquarters and the management of information, including reporting systems. In addition, with regard to the disclosure of related information outside the company, after analyzing the impact on the business of the emergency, the president or the executive officer in charge of PR & IR shall decide a media response, while timely disclosure to investors concerning the event will be dealt with under the timely disclosure procedures for corporate information.

Moreover, crises at subsidiaries shall be handled in the same way as if they had occurred at the Company itself.

## Special Feature: “CONTRAIL Project” Receives 1<sup>st</sup> Japan Open Innovation Environment Minister’s Award

FY2017

### CONTRAIL Project

Received the Environment Minister’s Award for Global Warming Prevention Activity in the International Contribution Category!



### Atmospheric observation by airliner project “CONTRAIL” receives Japan Open Innovation Environment Minister’s Award.

The CONTRAIL atmospheric observation project, which JAMCO is a participant in, has received the Japan Open Innovation Environment Minister’s Award.

The award is organized by the following: the Cabinet Office; Ministry of Internal Affairs and Communications; Ministry of Education, Culture, Sports, Science and Technology; Ministry of Health, Labour and Welfare; Ministry of Agriculture, Forestry and Fisheries; Ministry of Economy, Trade and Industry, Ministry of Land, Infrastructure, Transport and Tourism; Ministry of the Environment; Keidanren; and the Science Council of Japan.

The Japan Open Innovation Environment Minister’s Award is an awards program established as part of the science, technology and innovation policy being promoted by the Cabinet Office to accelerate Japanese innovation. The program awards original, leading-edge activities that will serve as innovation role models. The 1<sup>st</sup> Prize presented the Prime Minister’s Award and 11 other awards to 14 activities and projects.

The CONTRAIL project is a collaborative effort between industry, academia and government organizations that had no previous relations with each other until the start of its development. The project realized a completely new method of atmospheric observation, the first of its kind anywhere that uses regular passenger flights to enable regular observations on a global scale. This activity was presented with the Environment Minister’s Award for its significant contributions to the Paris Agreement, the UN’s SDGs and global environment research.

The data obtained through CONTRAIL’s atmospheric observations is being made available to the world’s researchers for use in analyzing the mechanisms responsible for global climate change. JAMCO was responsible for the development and manufacture of the observational equipment used in the project, and will continue to the conservation of the global environment through continued participation in CONTRAIL.



## About the CONTRAIL Project

CONTRAIL\* is a collaborative atmospheric observation project between industry, academia and government that aims to shed light on the mechanism of atmospheric changes that bring about global warming.

JAMCO joined the project in 2003, and was responsible for the development of two devices: The Automatic Atmospheric Sampling Device (ASE) and the Continuous Carbon Dioxide Measuring Device (CME). We obtained the Supplemental Type Certificates (STC) required to install them on aircraft from the Japan Civil Aviation Bureau of Ministry of Land, Infrastructure, Transport and Tourism as well as the U.S. Federal Aviation Administration (FAA). Having acquired the STCs, we fitted the devices to a Boeing 777-200ER and 777-300ER that are used by Japan Airlines for regular passenger flights, and they are currently sampling observational atmospheric data on a global scale. The results from the analysis of these observations are distributed worldwide by the National Institute for Environmental Studies as valuable data for use in research related to global warming.

\*CONTRAIL is the acronym for Comprehensive Observation Network For TRace gases by AIrLiner, and has been in use since 2007.

## Three-Dimensional Observation of Greenhouse Gases in the Atmosphere

The objective of the "CONTRAIL Project" is extensive observation of the greenhouse gases which cause global warming. In order to observe precisely where concentrations of greenhouse gases such as carbon dioxide are distributed in the atmosphere, it is very important that we observe not only from the ground but also three-dimensionally using aircraft.

Prior to this project, observation using chartered aircraft was performed in areas such as over Siberia, but if we can observe the atmosphere using a commercial aircraft flying around the world every day, we can collect more frequent and precise data.

Moreover, there are groundbreaking merits to be had such as being able to observe each area of the world on a global scale, and being able to investigate the detailed distribution of greenhouse gases at various altitudes from the surface of the earth to the sky.

## Supporting the Continuation of the Project as an Aviation Industry Professional

Atmospheric observation for research on global warming was started in 1993 by the Meteorological Research Institute, Japan Airlines, JAL Foundation (current JAL Foundation), and was conducting observations with a JAL Boeing 747-200 aircraft on the route between Australia and Narita using a timer and equipment that collects atmospheric samples at regular intervals (flask sampling).

However, around 2002, due to the retirement of the aircraft equipped with the equipment, installation of a new atmospheric observation device was being considered.

In 2003, a new collaborative atmospheric observation research project was launched with industry-academia members from the National Institute for Environmental Studies, Meteorological Research Institute, Tohoku University, Japan Aerospace Exploration Agency, Japan Airlines International (present Japan Airlines), JAL Foundation and JAMCO.

JAMCO was in charge of developing two kinds of new atmospheric observation devices such as ASE (Automatic Atmospheric Sampling Device) and CME (Continuous Carbon Dioxide Measuring Device), and obtaining approval for installing the devices on aircraft. Since 2005 observation activities with these new devices are continuing to be conducted as the "CONTRAIL Project" (the use of the project name began in 2007).

JAMCO's mission in this project is to support continuation of atmospheric observation as a professional in the airline industry.

Since the observation began, JAMCO has been in charge of refurbishments for implementing installations on new aircraft due to aircraft retirement and the changing of routes, as well as making renovations to improve the functions of observation equipment.



CME (Continuous Carbon Dioxide Measuring Device)



ASE (Automatic Atmospheric Sampling Device)



Maintenance of ASE

Ten years have passed since the start of observation, and obtaining internal parts is becoming difficult. JAMCO is making efforts that will enable the project to continue and develop further. These include improvements that allow alternate parts to be used in place of those difficult to obtain, the development of new observation devices, and research regarding installing these devices on new aircraft, so that observations can be continued in the coming decade.

## Observation Results are Valuable Data used throughout the World

ASE can collect 12 pre-programmed areas of the atmosphere automatically and bring them back to the ground. Then, from the areas collected, the concentrations of carbon dioxide, methane, nitrous oxide, sulfur hexafluoride, carbon monoxide, and hydrogen can be analyzed by the National Institute for Environmental Studies.

This observation data, including the former ASE observations that began in 1993, is the longest, continuous long-term observation recorded for the latitudinal distribution of greenhouse gases in both the northern and southern hemispheres in the world.

In addition, CME can continuously measure and record carbon dioxide concentration with high precision during aircraft ascent, cruise, and descent.

This is the first project in the world to attempt to measure such concentrations of greenhouse gases at a high frequency on a global scale, and to compile the data.

Valuable data from this long-term observation is currently being offered to researchers around the world through the National Institute for Environmental Studies.

Research results utilizing that data are disseminated throughout the world in the form of numerous academic papers and academic presentations.

JAMCO will continue to contribute to research on global warming by backing up stable observations.

#### Related News (Findings & awards)

- March 2019: Project receives the 1<sup>st</sup> Japan Open Innovation Environment Minister's Award
- December 2017: CONTRAIL Project Receives the Environment Minister's Award for Global Warming Prevention Activity in the International Contribution Category
- December 2016: Announcement of Findings From the CONTRAIL Project
- May 2015: CONTRAIL Receives the Special Award of The Grand Prize for the Global Environment Award
- November 2014: Atmospheric Observation Project Participates in Flight Test of Boeing's eco Demonstrator 787
- October 2013: Atmospheric Observation Project CONTRAIL receives Asian Environmental Award
- June 2013: Atmospheric Observation Project CONTRAIL receives Environment Minister's Award as well as Award for Excellence of Environmental Award
- July 2012: Aircraft Begins Flights With Special Atmospheric Observation Project Livery
- June 2007: JAMCO's Keita Goto, Responsible for Development of New Atmospheric Observation Devices, Receives the Japan Aeronautical Engineer Association's Chairman Award.



#### Related Websites

- >National Institute for Environmental Studies (NIES) CONTRAIL Project Website (English)
- >Japan Airlines webpage introducing the CONTRAIL Project

## With our Customers

JAMCO contributes to society by providing products and services which meet customer satisfaction while taking into account that safety and quality comes first.

### Approach to Product Quality

We strive to "Uphold flight safety and enhance quality" in our management policy, and recognize that providing safe and high-quality products to society is the most important foundation of management. Based on this idea, JAMCO will always ensure adequate quality control and product safety in accordance with laws, regulations, standards, specifications, etc. in all life cycles of our products, such as research and development, design, production, maintenance, repair, etc.

### Quality Management System Construction

"The JAMCO Group will provide customers with products and services that assuredly satisfy the quality requirements by giving top priority to quality for pursuing social trust and customer satisfaction." has been decided as the group quality policy. Based on this, we are proactively promoting high-quality products and services that will satisfy our customers by flowing them down into the quality policy of each department.

### Certifications

#### Japan Civil Aviation Bureau (JCAB), Organization Approval

Organization Name	Capability	Approval Reference	Remarks
Aircraft Maintenance Group	Capability of aircraft maintenance and final inspection Capability of aircraft maintenance or modification Capability of aircraft part repair or modification	No. 004	
Aircraft Interiors and Component Group	Capability of manufacturing aircraft parts and conducting the final inspection	No. 094	

#### EASA, Organization Approval

Organization Name	Scope of Approval	Approval Reference	Remarks
Aircraft Maintenance Group	Repair, modification, overhaul and inspection for aircraft components (other than complete engines or APUs)	EASA.145.0560	
Aircraft Interiors and Component Group	Approval of minor change and repair design for aircraft interiors	EASA.21J.170	
	Manufacture and inspection for aircraft interiors Manufacture and inspection for aircraft passenger seats	EASA.21G.004	
	Repair, modification, overhaul and inspection for aircraft components (other than complete engines or APUs)	EASA.145.0087	

## CAAS, Organization Approval

Organization Name	Scope of Approval	Approval Reference	Remarks
Aircraft Interiors and Component Group	Repair, modification and overhaul for aircraft components (other than complete engines or APUs)	AWI/225	
	Manufacture of aircraft interiors	AWI/POA/019	
Niigata JAMCO Corporation	Manufacture of galleys and lavatories	AWI/POA/019	Satellite

## Quality Management System

Aircraft Maintenance Group JIS Q 9100:2016 ( Certification Structure: Campus )

Scope of Certification

- Maintenance and Alteration of Aircraft, and Design and Development of Aircraft Alteration
- Repair and Alteration of Aircraft Accessories
- Design and Development, Production and Maintenance of On-Ground Supporting Equipment for Aircraft

Site Name		Location	Remarks
JAMCO Corporation	Aircraft Maintenance Group	Head Office and Aircraft Maintenance Center	70 aza-Shintaku, Shimonogo, Iwanuma-shi, Miyagi-ken, Japan Central Office
		Narita District (Accessories Maintenance Center)	26 Shinizumi, Narita-shi, Chiba-ken, Japan
		Mitaka District (Marketing & Sales Division and Accessories Maintenance Center)	6-11-25 Osawa, Mitaka-shi, Tokyo, Japan

Aircraft Interiors and Components Group (Aircraft Components)

JIS Q 9100:2016 (Certification Structure: Campus )

Scope of Certification

Design and Development, Manufacture and Servicing (Maintenance and Inspection, Repair, etc.) of Aerospace and Aircraft Components, Aerospace and Aircraft Parts, Ground Service Equipment and Composite Material

Site Name		Location	Remarks
JAMCO Corporation	Aircraft Interiors and Components Group (Aircraft Components)	Chofu District	6-11-25 Osawa, Mitaka-shi, Tokyo, Japan Central Office
		Tachikawa District	1-100 Takamatsu-cho, Tachikawa-shi, Tokyo, Japan Marketing & Sales Division of Aircraft Components
JAMCO Aeromanufacturing Co., Ltd.		7-101-36 Medeshimadai, Natori-shi, Miyagi-ken, Japan	Associated Organization

Aircraft Interiors and Components Group (Aircraft Interiors) JIS Q 9100:2016 (Certification Structure: Campus )

Scope of Certification

Design and Development, Production and Service Provision (Repair) of Airplane Interiors

Site Name			Location	Remarks
JAMCO Corporation	Aircraft Interiors and Components Group (Aircraft Interiors)	Aircraft Interiors and Components Group (Aircraft Interiors)	1-100 Takamatsu-cho, Tachikawa-shi, Tokyo, Japan	Central Office
		Chofu Test Facilities (Mitaka)	6-11-25 Osawa, Mitaka-shi, Tokyo, Japan	
		Nakajo Warehouse (Tainai)	9-125 Shimizu, Tainai-shi, Niigata-ken, Japan	
	Marketing & Sales Division (Aircraft Interiors)	1-100 Takamatsu-cho, Tachikawa-shi, Tokyo, Japan		
Niigata JAMCO Corporation			341-1 Kamitsubone, Tsubone-aza, Murakami-shi, Niigata-ken, Japan	Associated Organization (including Honeycomb Core Manufacturing)
Niigata JAMCO Corporation, No. 2 Facility			945-3 Ueno, Sasaki-aza, Murakami-shi, Niigata-ken, Japan	Associated Organization
Niigata JAMCO Corporation, No. 3 Facility			9-113 Shimizu, Tainai-shi, Niigata-ken, Japan	Associated Organization
Miyazaki JAMCO Corporation			7320 Tanocho-ko, Miyazaki-shi, Miyazaki-ken, Japan	Associated Organization
Miyazaki JAMCO Corporation, No. 2 Facility			8136-7 Tanocho-ko, Miyazaki-shi, Miyazaki-ken, Japan	Associated Organization

## Performance of Quality Assurance Education

We are performing quality assurance education to enhance knowledge and awareness of quality. The main curriculum consists of "Introductory" and "Basic" education on the quality management system for new employees, including those hired year-round, and we perform Human Factors and qualification education etc. from time to time for employees in the production departments.

## Improvement of Customer Satisfaction

At JAMCO, we strive to communicate conscientiously every day in order to reflect customer input into our product quality and service improvements.

### Valuing Our Customers' Opinions

JAMCO exhibits annually at the Aircraft Interiors Expo, which is the world's largest aircraft interiors exhibition aimed primarily at members of the aerospace industry. It serves as a place for business opportunities between the aircraft manufacturers, airlines, suppliers and other industry stakeholders that gather there.

This event is somewhere for us to introduce new product concepts, and it also affords us a valuable opportunity to hear the opinions and requests of the cabin attendants, maintenance personnel and others around the world who actually use our products. We consider the Expo vital to the development of new products and the improvement of our services. The JAMCO Group takes every opportunity, including events like the Expo, to actively communicate with its customers in order to create satisfying products and better services.

For this year's Expo, held April 2-4, 2019, the Group adopted a completely new all-white open booth design which, in addition to the products on display, was well-received by visitors.

Within the booth they were greeted by displays of three of our business-class seat models: Venture, Wing, and Quest, a concept seat unveiled for the first time at the Expo. In addition to being able to view the seats, visitors were also able to try out a head-mounted display that assists with seat maintenance operations. Together with conventional paper manuals, introducing technology like this display reduces the time spent on maintenance and prevents human error by enabling users to quickly and easily understand what parts need to be replaced and the relevant procedures.

Our Quest seats, which made their debut at the Expo, were arranged in a zigzag, or staggered, layout. A characteristic of this layout is that it enables airlines to maintain a high level of passenger comfort while fitting more seats into the same amount of space. JAMCO is also working to differentiate the Quest from other companies' products with features like an electric tilt mechanism in the seat monitor that angles it into a position that makes it easy to view even when the seat is in full-flat mode, as well as maximize legroom. The seat also incorporates features that meet the current trend, such as a door added to its aisle side to ensure passenger privacy.

The Quest seat received positive and favorably reviews by airlines and aircraft manufacturers on its intelligent design, complimentary passenger features as well on its unique options. We obtained a wealth of valuable comments and opinions that will be taken into consideration as we work to bring the seat to market.



Display booth based on white



"Venture"



The seat is in the shape of a "Wing"



Head mount display can confirm parts by image



The first show "Quest"



Monitor to tilt when full flat on the right

## With our Employees

In order to continue to be "a sincere company that respects employees", JAMCO will support the growth of all employees supporting the JAMCO Group, and will promote a workplace environment where employees can actively work.

### Employee Composition of JAMCO

#### Number of Employees

	Group Total	JAMCO
Regular employees	3,177	1,214
Temporary employees	244	107
Total Employees	3,421	1,321

As of March 31<sup>st</sup>, 2019

#### Full-Time Employees

Average Age	42.7 years old
Average Years of Service	17.3 years
Average Annual Salary	6,973 thousand yen/year
New Graduates Hired	36

As of March 31<sup>st</sup>, 2019

### Human Resources Development Initiatives

Each and every JAMCO employee is able to work with pride and high technology in day-to-day business activities, and we are actively promoting the development of human resources in order to provide ever higher quality products and services to our customers.

Our human resources training system provides opportunities for career education and skill improvement through new employee education, band (occupational type) education, and training by age. This is performed by the Corporate Administration & Human Resource Department, and various types of professional education including quality management is performed by each assigned Department.

In addition, we have organized self-development support systems such as an overseas and domestic language training system, a qualification acquisition incentive system, etc., and we support the growth of our employees in many ways.

## Respect for Human Rights

The JAMCO Group has established a Compliance Code which states "We will endeavor to secure a safe and comfortable work environment without discrimination or harassment, while respecting individual character and personality", and prescribes a fundamental stance of respect for human rights.

We regularly perform in-house education to promote human rights awareness to both executives and employees.

In order to actively fulfill its responsibilities as a company that develops business globally, in the future we plan to promote initiatives such as group-wide human rights education/self-development programs taking global human rights issues into consideration.

## Promotion of Diversity in the Workplace

The JAMCO Group will contribute to the Group's sustainable growth and creation of a better society by promoting diversity of human resources, setting up a workplace environment where employees with various backgrounds can play an active role.

### General Employer Action Plan

To create an environment where all employees can manage both work and childcare, and can demonstrate their abilities to the fullest. Also, to support the development of the next generation, and to promote activities by female employees, we have formulated the following action plan:

1) Next Generation Development Support (Planned period: April 1st, 2015 ~ March 31st, 2020)

Plan Goal 1: Put in place a system to rehire employees who left for childbirth or child-rearing

Goal 2: Put in place a telecommuting system

Goal 3: Development of a robust childcare welfare service and assistance

2) Female Activity Promotion (Planned period: April 1st, 2016 ~ March 31st, 2021)

Plan Goals : Increase the percentage of female assistant managers to 10 percent or more.

## Female Activity Promotion

As of FY 2018, there are 7 female managers in JAMCO (2.6% of management positions as a whole). In order to promote the appointment of managers, we believe that it is necessary to appoint female assistant managers as managerial candidates, and "Female Activity Promotion" has been set as a goal in the General Employer Action Plan.

### Transition of female assistant managers based on the Female Activity Promotion Plan

	FY 2016	FY 2017	FY 2018
# of Female Assistant Managers	8	6	13
% of Female Assistant Managers	4.2	3.9	6.1

## Employment of Persons with Disabilities

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The JAMCO Group is continually working to create employment and promote the success of people with disabilities.

At Group companies, we are making efforts to develop workplace environments where people with disabilities can easily work together. We also actively promote employment at Orange JAMCO Corporation (wholly-owned by JAMCO, 32 employees as of March 2019), a special subsidiary\* established in 1999, which entrusts supplementary work within the JAMCO facilities.

As of March 2019, the JAMCO employment rate for people with disabilities was 2.85%, exceeding the statutory employment rate of 2.2%.



## Retiree Re-employment System

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At JAMCO, employees who have reached the compulsory retirement age of 60 who wish to be re-employed, and who satisfy the requirements such as employment regulations, may continue to be employed as a re-employed temporary employee up to the age of 65.

In addition, if both the company and the employee so desire, the agreement may be renewed beyond the age of 65.

JAMCO would prepare an environment where the employee can work flexibly, making use of knowledge and experience, and able to choose a shorter working time according to their wishes.

In FY2018 there are 16 re-employed employees, and the re-employment rate is 73%.

## Promotion of Work-Life Balance

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We have established various systems to promote the work-life balance of our employees in order to create a workplace environment where our diverse human resources can work vigorously and rewardingly, and maximize their abilities.

As part of creating a comfortable working environment that deals with such issues as returning to work after childcare leave and children being put on long waiting lists to enter nursery schools, we are also taking the following steps in addition to promoting workstyle reform.

In order to make it easier for employees to enroll their children in nursery school, JAMCO became a tenant company at Fuji Akatombo Nursery School, a privately-run day care center opened by Tachihi Holdings, which also manages the land the company's Head Office and Aircraft Interiors and Components Business Groups' buildings are located on. In doing so, JAMCO employees are now given priority when enrolling their children at the school.

In addition to this our telecommuting system came online in April FY2019 after a trial run and other preparations were made in FY2018.

JAMCO will continue to evaluate and promote the creation of a comfortable work environment together with its employees.

## Main Work-Life Balance Support Systems and Usage Results (FY2018 )

System	Outline	Male	Female
Maternity Leave	6 weeks prior to and 8 weeks after childbirth for a total of 14 weeks.	-	8
Time of Birth Leave	4 days leave available for use.	20	-
Childcare Leave	Until the child is 1 year and 6 months old (up to a maximum of the first March 31 <sup>st</sup> when the child is 2 years old) .	5	13
Reduced Working Hours for Childcare	Until the first March 31st when the child is 12 years old working hours can be reduced by two hours per day.	3	13
Childcare Leave	5 days leave available per child per year for the school events, etc. of children up to 12years old.(10 days for 2 children,15 days for 3 children)	106	26
Family care leave	5 days available per year for family care.	1	0
Family care leave	A maximum of 93 days available per year for family care.	0	0

\* Other work-life balance support programs such as Childcare Flexible Work Hours, Overtime Duty Exemption, Late-Night Overtime Exemption, Childcare Leave Returnee Support Program (promoted by the government), Family Care Assistance Leave, etc. are also available.

\* Available to full-time employees, part-time employees and contract employees.

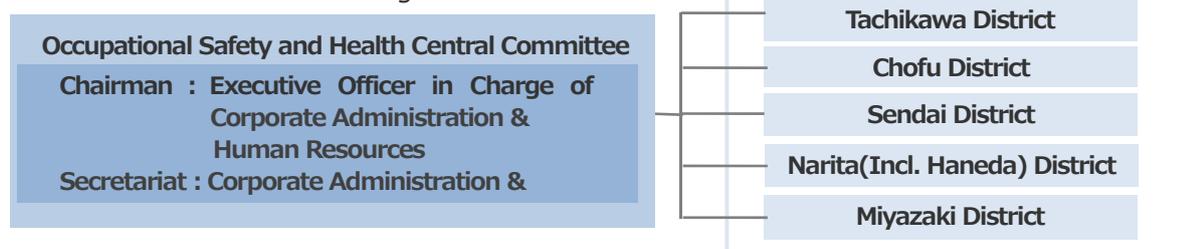
## Occupational Safety and Health

Occupational safety is the most important foundation of our business and a duty to society. JAMCO's basic policy is to comply with relevant laws and regulations concerning occupational safety and to realize a safe and comfortable workplace environment by closely cooperating with executives, employees and organizations.

JAMCO has established a district safety and health committee for each district under the Central Safety and Health Committee, which is chaired by the executive officer in charge of Corporate Administration & Human Resources, and is working on an organizational basis. We are also working to raise employee safety awareness every day, such as by implementing safety and health education for employees at work sites.

### Occupational Safety and Health

#### Management Structure



\* In JAMCO, the people in charge of safety and health at each district (supervisors of safety and health managers, safety managers, health managers, safety and health promoters and industrial physicians) are all assigned according to the number of employees.

\* JAMCO assigns a dedicated operations chief as stipulated in the Occupational Safety and Sanitation Law of each district.

### For Employee Health

In addition to performing mental health education for all employees as a measure to protect the health of employees, JAMCO has a mandatory physical health examination, and accepts health consultations by telephone (JAMCO Family Consultation 24).

## With our Business Partners

The JAMCO Group is always striving to build fair and sound relationships with our business partners, keeping in mind to deal honestly so that we can expand our partnerships further.

### CSR Procurement Policy

#### CSR Procurement Policy

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The JAMCO Group will promote CSR-aware procurement activities. We will also require our business partners to observe this policy.

1. Building Sound Business Relationships
  - Maintain healthy business relations with our partners by placing value on relationships built on mutual understanding and trust.
  - Adhere to fair and appropriate terms in all of our transactions.
  - Encourage transactions that value corporate social responsibility, evaluating the financial condition, technological strengths, corporate stance and other aspects of our business partners.
2. Fair Selection of Business Partners and Appropriate Procurement
  - Select business partners based on objective purchasing standards such as quality, price, and delivery time, using fair judgement to do so.
3. Elimination of Questionable Relationships
  - To carry out transactions that are fair and just, and will not accept personal remunerations or commissions related to work, nor accept hospitality or gifts that exceed socially accepted bounds.
4. Compliance & Ethics
  - Comply with the laws and ordinances of the countries and regions that we perform transactions in.
  - Observe industry standards and trends, and carry out transactions in alignment.
  - Comply with the parental enterprise responsibilities set out in the Act against Delay in Payment of Subcontract Proceeds, Etc. to Subcontractors, and will not carry out unfair business practices that are prohibited as an abuse of a superior bargaining position as established in the Antimonopoly Act.
  - Withhold confidential terms of transactions to outside parties not involved with the transactions.
  - Withhold information and intellectual assets provided to us without the consent of the party providing them.
  - Ensure supply chain transparency and carry out responsible procurement with regard to conflict minerals.
5. Green Procurement
  - Promote green procurement and carry out transactions that give adequate consideration to environmental and resource conservation.
6. Respect for Human Rights and Occupational Safety and Health
  - Respect basic human rights while promoting procurement activities that give adequate consideration to working environments, occupational safety and health.

## Building Sound Business Relationships

It is the JAMCO Group's desire to build fair and healthy business relationships with our business partners, to develop together, and to be a good partner in contributing to society.

Needless to say we are complying with all laws and ordinances, and are dealing honestly with our business partners. To promote fair and transparent transactions we have made our guidelines clear in a "Compliance Handbook", which has been distributed to all of our officers and employees.

Furthermore, as a global corporation with subsidiaries and affiliates abroad, we naturally comply with international rules and respect the culture and customs of each country as well as strive to build relationships of mutual trust with our business partners.

## Promoting CSR together with our Business Partners

JAMCO has been promoting procurement that adheres to social norms in accordance with the laws and ordinances of each country and region.

However, in response to growing social demands in recent years, we think that it is necessary to work with our business partners on CSR and to fulfill our responsibilities to society more actively.

This fiscal year we will share our newly formulated CSR procurement policies with our group companies and cooperate with our business partners to promote initiatives throughout the supply chain.

## Responding to Conflict Minerals

Tantalum, tin, tungsten and gold are 4 minerals (conflict minerals) produced by the Democratic Republic of the Congo and surrounding countries, and the funding of armed insurgents causing atrocities in these countries with these minerals has become an international problem. So as to not facilitate conflicts in those areas, JAMCO declares we do not use materials recognized as conflict minerals, and we are responding appropriately to requests for reviews and reports on conflict mineral regulations from customers.

We are also requesting suppliers of raw materials related to these four kinds of minerals to submit a pledge that the materials we purchase not to contain conflict minerals.

## Promotion of Green Procurement

In order to continuously address environmental concerns in all corporate activities and reduce environmental burdens in the life cycle of products being produced and sold, JAMCO has established "Green Procurement Standards" by which we are committed to procuring materials and products with minimal environmental impact.

## With our Shareholders and Investors

We will strive to disclose information and return profits in a timely and appropriate manner and through thorough communication comply with the expectations of our shareholders and investors.

### Disclosure of IR Information

JAMCO places great importance on timeliness, fairness, accuracy, and continuity in disclosing corporate information such as management strategy and financial information. Based on this, JAMCO establishes regulations concerning information management and disclosure, properly conducts disclosures based on laws and ordinances, and is working to ensure transparent and fair disclosures of financial information and non-financial information. In addition, we have established an IR web-site on the JAMCO corporate site and are working to disclose investment information in a timely and accurate manner.

### Communication with Shareholders and Investors

JAMCO recognizes the importance of disclosing information in a timely and appropriate manner in order to secure the rights and equality of our shareholders while cultivating a better understanding of our company. Accordingly, in addition to issuing annual general meeting of shareholders and financial reports, we also hold financial results briefings twice a year for securities analysts and institutional investors, and explain the business results and management policies, etc. JAMCO is also actively engaged in communication with shareholders and investors through various external activities.

#### Results of IR Activities in FY2018

Type of IR Activity	Frequency of Activity
Financial Results Briefing	2 times (2nd Quarter Financial Results Briefing, Fiscal Year-End Financial Results Briefing)
Small Meeting	4 times
Individual Meeting	36 times
Factory Tour for Institutional Investors	1 time
Company Briefing for Individual Investors	2 times



Financial Results Briefing



Company Briefing for Individual Investors

### Policy of Shareholder Return

JAMCO is performing efficient management based on basic management policies and individual company policies, and is making stable and continuous returns for shareholders by improving profitability.

Preparing for unforeseen circumstances due to business risks and other factors, and taking into consideration the funds necessary for future capital investment, it is essential to retain internal reserves for continued growth, but we believe that maintaining this balance will lead to profits for all shareholders.

## With the Local Community

The JAMCO Group, which operates in various domestic and overseas regions, aims to be a trusted company, treasuring relationships with local communities.

## Social Contribution Activities by JAMCO

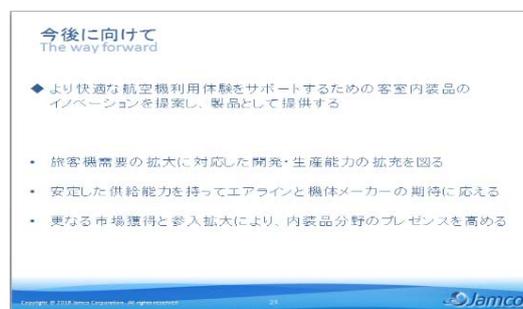
JAMCO promotes various social contribution activities such as interaction with local residents, education / academic support, and joint research and development through collaboration with overseas companies.

## Lecturing at Japan International Aerospace Exhibition 2018 Tokyo

At the request of the Society of Japanese Aerospace Companies (SJAC), JAMCO gave a lecture entitled “Future Prospects of Commercial Aircraft Interiors Industry” at the Japan International Aerospace Exhibition 2018 Tokyo held at Tokyo Big Sight on November 28-30, 2018.



After an introduction of JAMCO and a summary of its interior products, the lecture presented the prospects for the cabin interior products market over the next twenty years in light of the increase in demand for air travel and passenger aircraft. It covered how the company has dealt with changes in both needs and the market up to the present, while also touching on such topics as capturing market share in new areas and the challenges involved in entering new markets. The lecture closed by highlighting the company's desire to continue making contributions to the aerospace industry by innovating and commercializing cabin interior products that provide passengers with added comfort.



## Donating Empty Contact Lens Cases to the Eyecity Eco Project

In FY 2018, JAMCO donated empty contact lens cases to the Eyecity Eco Project, an initiative promoted by eyecare company HOYA Corporation, and in which JAMCO is a participant.

As part of the project, HOYA's Eyecity chain of contact lens stores collect and recycle disposable contact lens cases, which helps to reduce CO2 emissions. In addition, all compensation obtained from recycling the cases is donated to the Japan Eye Bank Association.

JAMCO started participating in this activity in September 2018 and has since been collecting empty cases from all of its Group companies. This year the company was able to donate 3.3 kg worth of empty contact lens cases to HOYA.



JAMCO will continue to promote this activity, which will contribute to society and protecting the environment.  
<https://www.eyecity.jp/eco/ecopartners/company/>

## Providing Stockpiled Emergency Supplies

As part of its disaster preparedness measures, JAMCO stockpiles emergency provisions (food and water).

In FY2018, some of these items were nearing their expiration dates, while still being well within their storage periods. JAMCO provided the following provisions to the non-profit TAMA Food Bank to help support those who could use the food before the expiration date is reached.

September 2018: 1,500 servings of processed quick-cooking rice

February 2019: 4,300 servings of processed quick-cooking rice



## Cosponsoring BOEING Charity Event

JAMCO was a cosponsor of the BOEING Classic Charity Challenge charity event. The event donates funds to the U.S.' Benaroya Research Institute, one of only a few organizations in the world devoted to deciphering the immune system.



### BOEING CLASSIC BENEFICIARY

Benaroya Research Institute at Virginia Mason (BRI) is one of the few research institutes in the world dedicated to decoding the immune system to eliminate autoimmune and immune system diseases – such as rheumatoid arthritis, type 1 diabetes, multiple sclerosis – and immune system diseases – like allergy and asthma. At BRI, scientists aren't focused on eliminating one or two autoimmune diseases. Instead, they're taking on all 80 – plus other immune system diseases.

Because causes of these diseases are connected, so is the way BRI is fighting them. Researchers apply breakthroughs they make against one disease to progress against others. Through collaboration and cooperation between researchers, across clinical trials and with other institutions, they connect laboratory research to clinical trials and translate discoveries to real-life applications. As a world leader in scientific innovation, BRI strives to go beyond eliminating these diseases to preventing them from ever taking hold.

BRI's discoveries are also having significant impact on people living with these diseases today—by improving how to predict disease onset, decrease disease progression and make therapies safer and more effective.

Since 2010, the Benaroya Research Institute has been the primary beneficiary of the proceeds from the Boeing Classic.

In just eight years, the Boeing Classic has raised nearly \$4 million to support the Innovation Fund at BRI. This fund provides crucial start-up monies for novel, cutting-edge ideas which have led to scientific breakthroughs. Recently, BRI researchers received support from the Innovation Fund to make an important allergy discovery that was awarded \$2.2 million from the National Institutes of Health. This helped lead to the paradigm-shifting discovery of one cell that drives all allergies - providing hope for better diagnosis and new treatments.



### Benaroya Research Institute Scientists Uncover New Strategy for Stopping Breast Cancer

Scientists at BRI made a discovery that opens the door to a potentially game-changing way to stop breast cancer tumors from growing and spreading. Researchers pinpointed how a protein called thymic stromal lymphopoietin (TSLP) helps breast cancer tumors survive and grow. Even more significant, the research showed that blocking TSLP can significantly inhibit the growth of breast tumors and halt metastasis to the lungs. The study, published in the latest issue of Nature Immunology, has the potential to save lives worldwide.



### Boeing Classic Support to Benaroya Research Institute Can and Will Make a Difference

BRI needs community support to continue its crucial work of decoding the immune system to eliminate disease and improve peoples' lives. To learn more visit [BenaroyaResearch.org](http://BenaroyaResearch.org).

**THANK YOU!**

Boeing Classic | Boeing Classic.com  
Benaroya Research Institute at Virginia Mason | BenaroyaResearch.com

Visit the Benaroya Research Institute 's website for more information:

<https://www.benaroyaresearch.org/what-is-bri/about-the-institute/virginia-mason-medical-center/>

## JAMCO Philippines Joins in Planting Trees at Local School

Every year, JAMCO Philippines, Inc. carries out voluntary tree planting activities at schools and in the community surrounding its factory.

In March 2019, employees planted 10 mango tree seedlings and 15 guava tree seedlings at a school near the company's factory.



## For the Global Environment

JAMCO is proactively addressing global environmental issues and conservation activities through one of the company's management philosophy commitments: "To coexist with nature and contribute to the creation of a prosperous society".

### Environmental Initiatives

JAMCO performs energy saving measures, green procurement, reduction and recycling of waste materials, investigations into chemical compositions of materials used, and promotes the use of alternate materials for those containing hazardous substances. In the Aircraft Components Manufacturing Division (Mitaka) and the headquarters (Tachikawa No. 4 building), we have acquired environmental management system certifications by certification and registration bodies and are continuously working to maintain them.

We will continue working to further reduce our environmental impact as the importance of efforts to address global environmental issues increases further.

### History of Activity

In July 1998, we established a basic environmental philosophy as our declaration on the global environment, set out environmental corporate action guidelines, started systematic environmental conservation activities, and in September 1999 we established our "Environmental Regulations".

The head office at that time, the Chofu Head Office District (Chofu Site), took the lead of the entire company by developing activities, and in February 2000 we received our ISO 14001 certification.

In April 2001 we completely revised our "Environmental Regulations" and started company-wide deployment of environmental conservation activities.

In July 2010, we established a new "Environmental Operation Standard (EOS)" and began taking measures so that even sites that do not have ISO 14000 certification can tackle environmental conservation activities conforming to this certification.

### Basic Environmental Philosophy / Environmental corporate action guidelines

#### Basic Environmental Philosophy

Global environmental conservation for the survival of human beings is a common desire throughout the entire world.

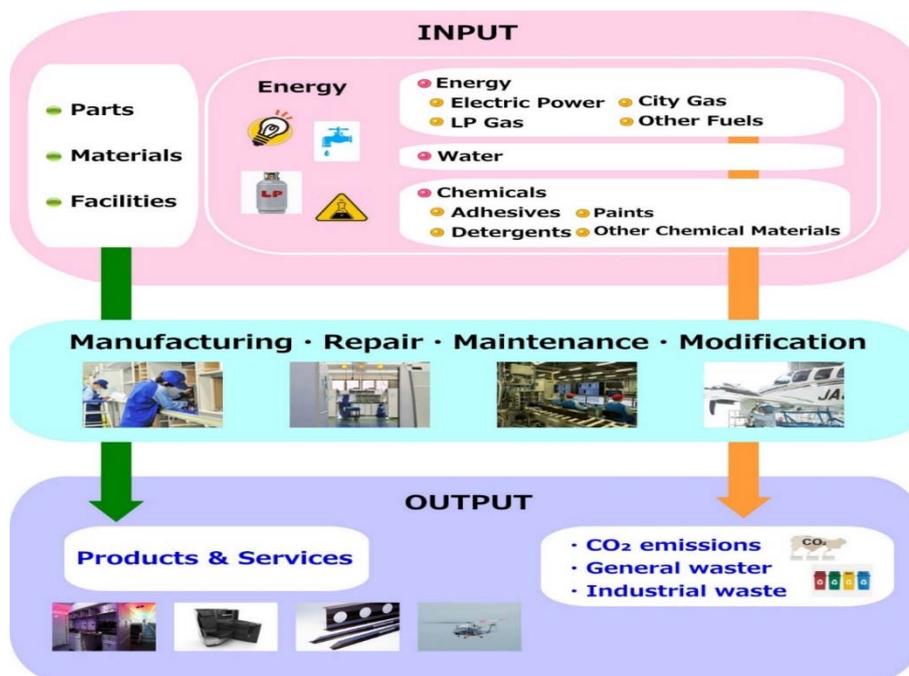
As a company operating globally, the JAMCO Group positions global environmental issues as one of the most important management issues, and we will contribute widely to society conducting corporate activities as a company that is friendly to the global environment and is capable of coexisting with richness.

## Environmental Corporate Action Guidelines

- (1) Nature conservation  
In our product development, production and service activities, we will strive to protect the environments of our regions, and the globe.
- (2) Effective utilization of resources  
To seek efficient usage and reuse of resources, and the application of products with less environmental impact in the development, production and service.
- (3) Compliance with environmental laws and regulations  
Comply with the environmental laws and regulations of national and local governments.
- (4) Environmental conservation system  
Following the basic philosophy and this guideline, we will formulate environmental policies throughout the entire company and each site, establish an environmental conservation system, periodically review, and maintain and improve the system.
- (5) Promotion of environmental conservation activities  
Promote educational and awareness activities so that all stakeholders are informed of the basic philosophy and this guideline, and all of them understand and act.
- (6) Displaying environmental conservation activities  
Display our basic philosophy and this guidance both inside and outside of the company.

## JAMCO's Business Activities Related to the Environment

JAMCO specializes in the field of aircraft and are engaged in the manufacture and repair of aircraft interior products and components, maintenance and modification of aircraft and aircraft equipment. The figure below shows the relationship between our business activities and the environment. In conducting our business, we consume a lot of resources and discharge various substances. In order to reduce the environmental burden on both input and output, we strive to quantitatively grasp the environmental burden.



## Environmental Conservation Activities Promotion System

### Company-wide Promotion System

JAMCO engages in environmental conservation activities having put in place a system for promoting these activities together with an environmental management system (EMS). The company's President serves as Chief Environmental Management Officer and is responsible for supervising our environmental conservation activities, while the Executive Officer in Charge of Corporate Administration & Human Resources, serving as the chairperson of the Global Environmental Committee, is in charge of driving these activities and carrying out environmental management reviews.

We have established specific sites within each district to perform environmental conservation activities as an integrated unit, with the site's Environmental Committee promoting these activities in an organized manner. Each site sets individual environmental targets based on JAMCO's Environmental Basic Philosophy and Environmental Corporate Action Guidelines as objectives to achieve during the financial year. The sites work on continuous improvements related to the targets by systematically promoting environmental conservation activities and checking their progress through internal environmental audits. Sites that have received ISO certification undergo conformity assessments through periodic reviews by a certification body to determine whether their ISO 14001-based EMS is being operated properly and if continual improvements are being made.



- Sites with ISO Certification: Aircraft Equipment Manufacturing Division (Including the Aircraft Interiors and Components Group Engineering Department, Manufacturing Engineering and Quality Assurance Departments, and Components Group located in Mitaka), Head Office (Building 4 Tachikawa: Secretarial Office, Audit Department, Human Resources General Affairs Department, Accounting Finance Department, Quality Assurance Department, Information Systems Department)
- Tachikawa site: Aircraft Interiors and Components Group (Head Office Corporate Planning Department and Mitaka representative of the Technology Division technology management unit structure analysis group, including the interior equipment technology, First Section, 3rd Design Group)
- Nakajo site: aircraft interiors and equipment Division aircraft interior components manufacturing division purchasing supply section supply Nakajo group
- Narita Site: Aircraft Maintenance Division Parts Maintenance Factory (Including Business Promotion Office, Sales Department and Parts Maintenance Factory of Aircraft Maintenance Division located in Mitaka)
- Haneda Site: Aircraft Maintenance Division Parts Maintenance Factory Equipment Group (located in Haneda)
- Sendai Site: Aircraft Maintenance Division Aircraft Maintenance Factory (Including Technology Development Office and Quality Control Office)
- Miyazaki Site: Aircraft Maintenance Division Aircraft Maintenance Factory Miyazaki Office

\* The Chubu site was closed in September 2017, and the Obihiro site was closed in December 2017.

## Global Environmental Committee

The Global Environmental Committee has a variety of responsibilities at each site that include performing management reviews on site activities, environmental target and objective achievements, internal environmental audit implementation, and the corrective and preventative actions being taken there. At the same time the Committee also reports on and reviews changes in legal and customer requirements. The Global Environmental Committee Secretariat devotes its efforts to the education of employees in relation to environmental conservation. In addition, it gathers and disseminates information to enable the efficient and effective implementation and improvement of environmental activities Group-wide.

## Environmental Audit System

In order to improve environmental conservation activities, internal and external audits are carried out periodically to confirm whether the activities are being performed appropriately in conformance with associated requirements, and if they are being maintained in an effective manner.

The internal environmental auditing team is made up of internal auditors who fulfill qualification requirements that are determined by internal regulations. Internal environmental audits follow an audit plan and check sheet. We focus on on-site audits that verify the consistency between administrative procedures and how activities are being performed. We link this to improvements in activities by gathering together the results of each audit into individual reports and requesting that corrective action be taken for non-compliant items. Every financial year we summarize the results of the internal audits and reflect them in the management review.

## Major Initiatives

At JAMCO, we are working on environmental conservation activities through various initiatives within our business activities.

### Promotion of Environmental Conservation Activities

Environmental conservation activities throughout the year are summarized by management review, and issues are reviewed for improvement.

For the important action items decided through the review, each site continuously performs the PDCA cycle: Environmental objectives/targets/implementation plans/measures (Plan), implementation of measures (Do), confirmation and implementation result reports on the achievement of environmental objectives/targets (Check) and management review (Action). Through such continuous efforts, in response to various movements and changes in the environment, we are encouraging environmental awareness of our company.

### Management of Environmental Impact Assessment and Regulatory Compliance

We extract the aspects of our business activities that affect the environment, and in particular those items requiring improvements or special control under environmental laws and regulations are deemed to be significant environmental aspects.

Areas which require adherence to laws and regulations, such as “emergency situations” and “wastewater”, independent standards are established and periodic checks are made to strengthen control measures.

## Management of Chemical Substances

Chemical substances used in our business activities are regulated by laws and regulations depending on their properties and degree of risk or hazardousness, etc. Regarding substances with a particularly high degree of risk, we set up management procedures in the internal regulations and control them appropriately, to ensure stability of contents and accurate inventory. In addition, workers actually handling chemical substances possess the necessary qualifications and are working properly in accordance with the management procedures.

## Energy Management

We are striving to reduce energy consumption by establishing management standards to streamline energy use (for air conditioning equipment, lighting equipment, etc.) in our company regulations.

## Reduction of Waste and Recycle Rate Improvement

Jamco has implemented initiatives to reduce waste based on the 3R (Reduce, Reuse, Recycle) idea.

### (1) Thorough Separation Control

Invested in facilities that thoroughly sort and collect waste by the type of material, and converting metals and paper (copy paper, cardboard, newspapers, etc.) to valuable resources, etc.

Additionally we are working on reducing and recycling other kinds of manufacturing waste.

### (2) Recycle Rate Improvement

Increased the types of items which can be recycled, via material recycling and thermal recycling, additionally by investigating and consulting with waste disposal contractors.

### (3) Proper Waste Management

Conduct frequent on-site surveys and collect information from waste disposal contractors to confirm that the disposal of waste products is being carried out appropriately, which includes ascertainment of waste disposal processes, control of manifests and other records, and certificate renewal.

### (4) Storage Conditions of Equipment Containing PCBs

Properly manage PCB (polychlorinated biphenyl) in accordance with the "PCB Special Measures Law". With the disposal of the last 57 fluorescent lamp ballasts stored at the Chofu site in December 2016, we completed disposal of all PCB containing equipment in storage.

PCB (polychlorinated biphenyl) disposed of by Jamco to date per the Waste Disposal Law is as follows:

- In July 2013, 1 each 3-phase transformer, which used PCB-containing insulating oil, stored at the Tachikawa site
- In April 2014, 479 each PCB-containing fluorescent lamp ballasts stored at the Sendai site
- In March 2016, 2 each switches, which used PCB-containing insulating oil, stored at the Chofu site
- In December 2016, 57 each PCB-containing fluorescent lamp ballasts stored at the Chofu site

As mentioned above, all PCB wastes stored at our company have been disposed of safely in accordance with the law.

## Results of FY2018 Activities

### Energy-saving Initiatives

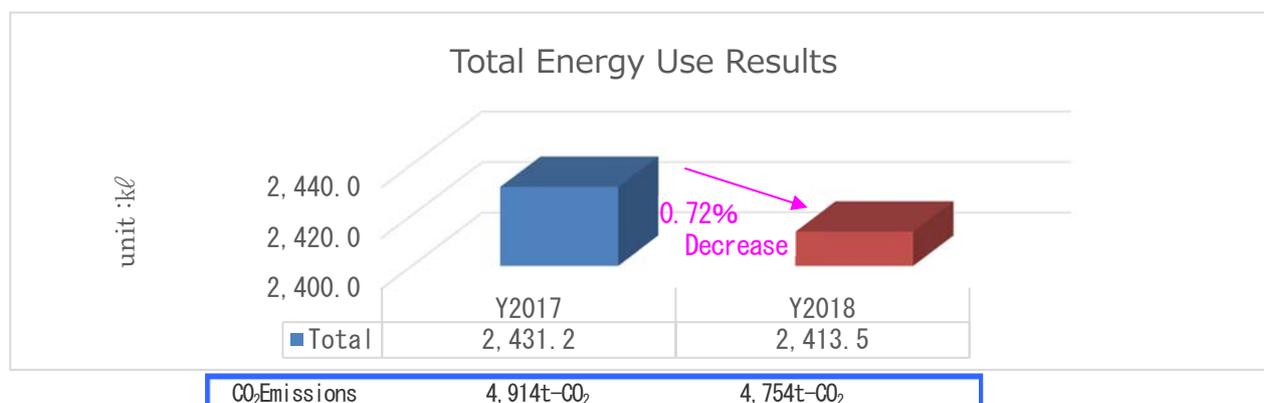
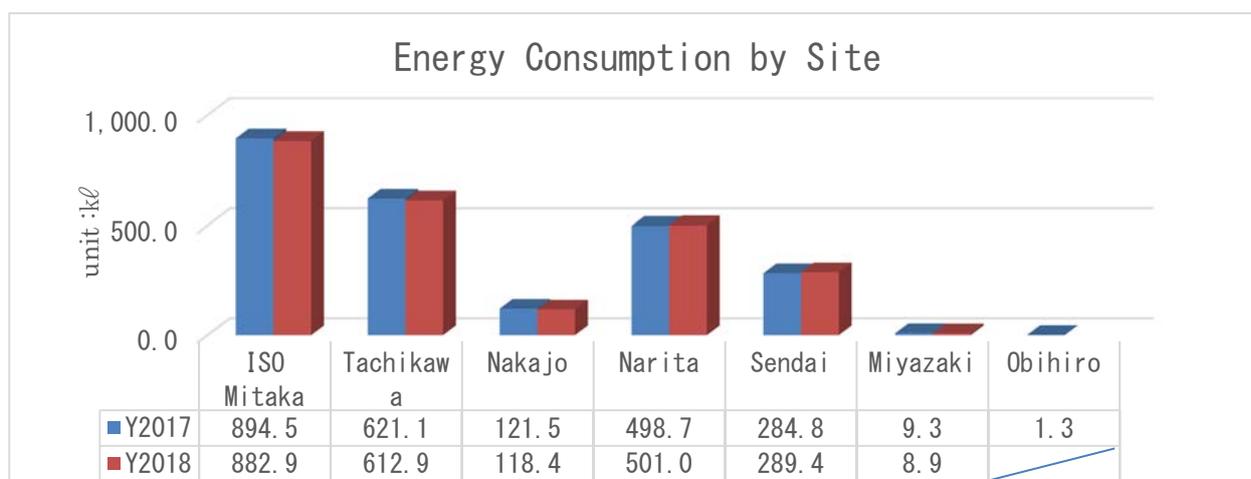
#### <FY2018 Company-wide>

Objective: Reduce energy consumption

"Electricity, city gas, LP gas, type A fuel oil, gasoline, diesel fuel, kerosene"

Target: Reduce energy consumption by 1% or more compared with FY2017

We are working to reduce our energy consumption by driving energy conservation and efficiency in our production processes, and by reducing fuel consumption through such means as using inverters in our production equipment, air conditioning systems, lighting fixtures and air compressor



During the past year we worked to reduce energy consumption at each site by introducing high-efficiency air conditioning equipment and operating it in an energy-saving manner, in addition to switching to LED lighting and limiting the usage of certain lights in areas in which natural light illumination is sufficient.

Despite this, we did not reach our target of 1% or greater reduction; we were only able to reduce our energy consumption by 0.72% in FY2018 compared to FY2017. This was mainly due to a rise in usage of the boiler used to heat the hangar at our Sendai site due to increased workload, which led to more consumption of Type-A heavy fuel oil; and increased usage of air conditioning at our Narita site due to severe heat, resulting in greater electricity consumption (see following table for measures for reducing energy consumption in place at each site). We lowered our CO<sub>2</sub> emissions in FY2018 to 4,754t, a 3.25% reduction compared to FY2017's 4,914t.

## Energy Reduction Measure Implementation Status

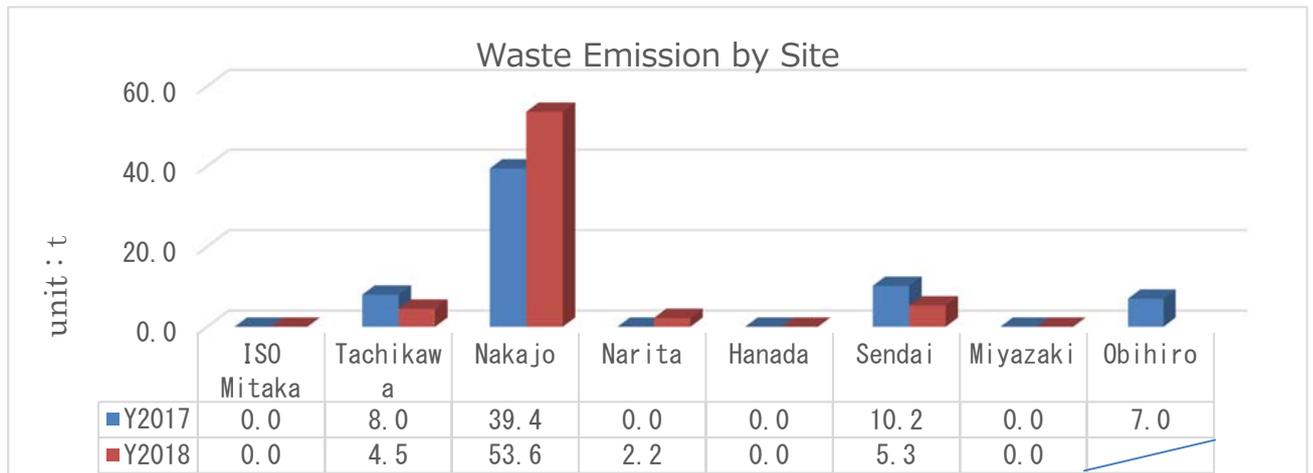
Measures Taken (Including operations)		Mitaka Site	Tachikawa Site	Sendai Site	Narita Site	Haneda Site	Miyazaki Site	Nakajo Site
Transformers	Integration abolition	○	■			■		■
	Introduction of high efficiency-type equipment	○	●			■		■
Air Compressors	Stopped night operations by installing an evaporator		○		○	■		■
	Reduction of discharge pressure	○				■		■
	Introduction of energy-saving equipment (Inverter type)	○			○	■		■
Air conditioning systems	Strict observance of temperature setting (28 ° C in summer, 20 ° C in winter)	●	●	●	●	●	●	●
	Regular filter cleaning	●	●	●	●	●	●	●
	Introduction of energy-saving equipment (inverter type, heat pump type)	●	●	○	●		○	○
Lighting	Frequent turn out (Such as during breaks)	●	●	●	●	●	●	●
	Cleaning of lighting equipment	●	●	●	●	●	●	●
	Curtailed use of fluorescent lights	○	○		○		○	○
	Introduction of high-efficiency lighting equipment	●	○	●	●	■		○
Production equipment	Application of heat insulating paint to heating furnace	○	■	■	■	■	■	■
Lifting Equipment	Number of elevator cars changed		○	■		■	■	■
Other	Turning off OA equipment when not in use	●	●	●	●	●	●	●
	Demand meter settings	○	○		○	■		■
	Introduction of fuel-efficient automobiles	○	○	○				
	Reduction of the number of vending machines	○				■	○	■
	Man-hour reduction	●	●	●	●	●	●	●

●	Measure taken
○	Maintenance item
■	Not applicable

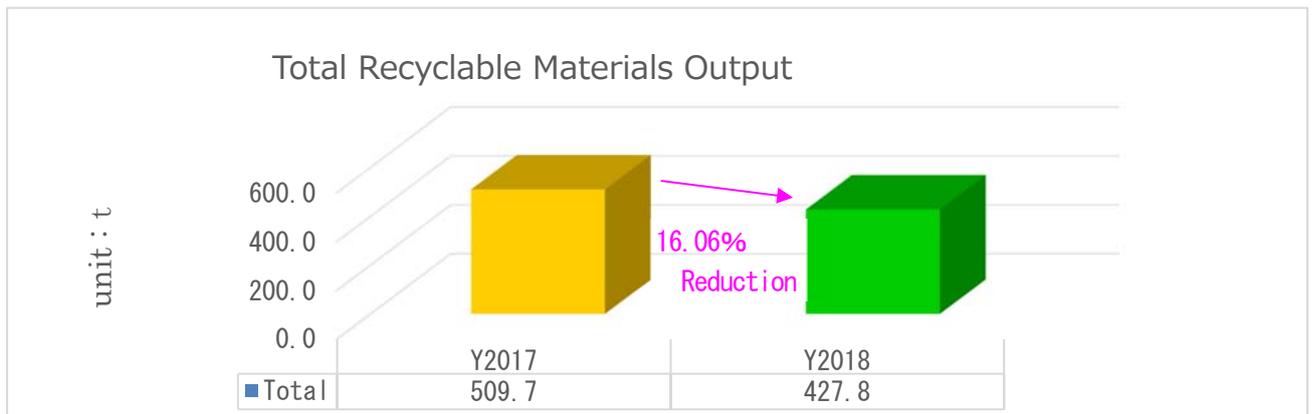
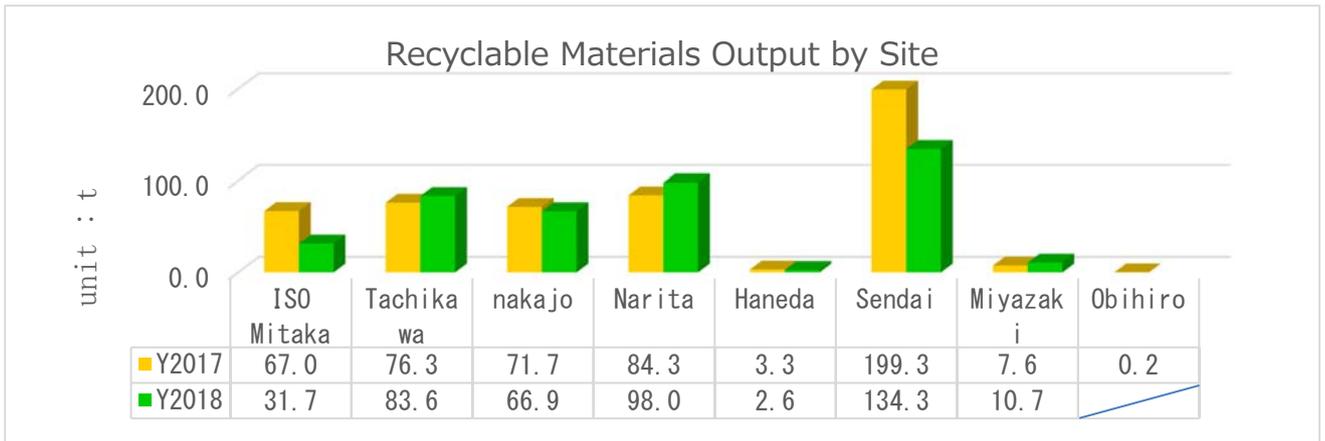
## Waste Material Reduction & Recycling Initiatives

As part of our efforts to reduce waste, we are working to reuse, reduce and recycle waste materials created as part of our business activities, separating them into three categories: waste (non-industrial and industrial waste to be disposed of in landfills), recyclable materials (non-industrial and industrial waste to be recycled), and valuable materials.

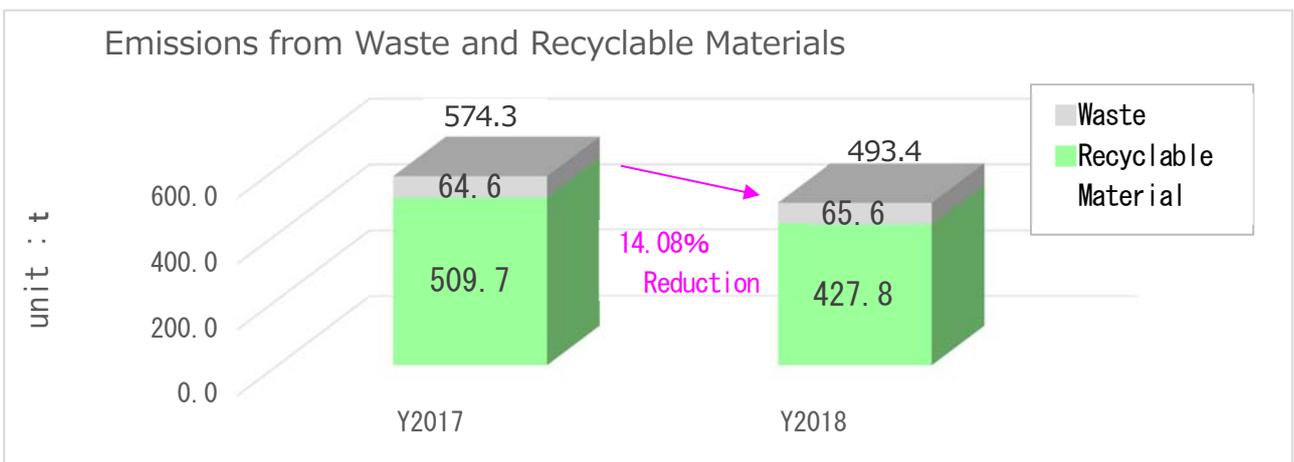
Given below are the amounts of waste and recyclables output in FY2018.



While concerted efforts were implemented to reduce waste output by converting a portion of waste to valuable materials, we failed to achieve any reductions and our total waste discharge (Group-wide) for FY2018 increased 1.55% compared with FY2017. The main reason for this was due to the disposal of approximately 10t of unnecessary inventory as waste at our Nakajo site.



The total amount of recyclable materials output in FY2018 reduced by 16.06% compared with FY2017. This was due to reduced usage of recyclable paint stripper and alkaline detergents used in the painting of aircraft fuselages at our Sendai site as a result of less painting work.



	Y2017	Y2018
Total Emission ( t )	574.3	493.4

We reduced our total output of both waste and recyclable materials in FY2018 by 14.08% compared with FY2017 primarily due to less painting work performed at the Sendai site.