



JAL Group Safety Report FY2022



Japan Airlines Co., Ltd.

J-AIR Co., Ltd.

Japan Transocean Air Co., Ltd.

Japan Air Commuter Co., Ltd.

Ryukyu Air Commuter Co., Ltd.

Hokkaido Air System Co., Ltd.

ZIPAIR Tokyo Inc.

SPRING JAPAN Co., Ltd.



JAPAN AIRLINES

The JAL Group Safety Report FY2022 is a safety report prepared by the eight JAL Group airlines in accordance with Article 111, Paragraph 6 of the Civil Aeronautics Act.

Preface

On behalf of the JAL Group, I would like to express our sincere appreciation for your continued support and patronage of the "Wings of the JAL Group."

FY2022 started amid the prolonged Covid-19 pandemic and unstable global conditions. Despite the rapidly changing business environment, we worked with relevant ministries and business partners to steadily build up safety operations on each flight in order to maintain the flow of people, commercial distribution, and the distribution of goods necessary for the social economy and daily life. On the other hand, the shortage of human resources in the airline industry became apparent with the rapid recovery of passenger demands and the increase of the number of flights operated worldwide. We, once again, realized the importance of human resources as the last resort to ensure the safety of our passengers.

In order to make FY2023 a year of recovery and revival in which we will once again recover the valuable factors that were once lost due to the unprecedented crisis of the Covid-19 pandemic, we will take every precaution possible to welcome our customers safely and securely. To do so, it is necessary to constantly increase our awareness towards emerging risks and keep improving initiatives. To achieve the goals of the Medium-term Management Plan, we will work to utilize digital technology and information, develop human resources who ensure safety, and respond to environmental changes.

Safety is the basic foundation for the existence of the JAL Group. It is also essential to make air travel sustainable. Based on our solid safety culture that was cultivated over the years, all JAL employees will work together to ensure safe operations.

AKASAKA Yuji
Representative Director, President
Chief Executive Officer
Chief Safety Officer
Japan Airlines Co., Ltd.



Preface

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Names and Abbreviations of JAL Group Airlines

Japan Airlines Co., Ltd.	: JAL
J-AIR Co., Ltd.	: J-AIR
Japan Transocean Air Co., Ltd.	: JTA
Japan Air Commuter Co., Ltd.	: JAC
Ryukyu Air Commuter Co., Ltd.	: RAC
Hokkaido Air System Co., Ltd.	: HAC
ZIPAIR Tokyo Inc.	: ZIP
SPRING JAPAN Co., Ltd.	: SJO

1. Fundamental Safety Policy

The JAL Group has established the Safety Charter as the fundamental policy for safety under the Corporate Policy. Representing top management's commitment to safety, it is included in the Safety Management Manual and has been reported to the Minister of Land, Infrastructure, Transport and Tourism (MLIT) in accordance with the Civil Aeronautics Act.

All JAL Group employees carry a pledge printed with the Safety Charter and perform their daily duties as professionals in conformance with the Safety Charter.



Safety Charter

Safety: The protection of lives.

This is the commitment and basic foundation of business continuity for the JAL Group. We take to heart our mission and responsibility as safety professionals to ensure a safe operation on every flight with the best of our knowledge, skills, and abilities.

To accomplish this, we will act according to the following principles.

- Stop immediately when safety concern arises.
- Comply with rules and strictly follow standard operating procedures.
- Always check and confirm; never rely on assumptions.
- Promptly communicate information without omission to ensure safety.
- Deal with problems quickly and appropriately without underestimation.

2. Review of FY2022

2.1 Administrative Dispositions and Administrative Guidance

The JAL Group did not receive any Administrative Dispositions^(*) or Administrative Guidance^(*) in FY2022. Please check the [JAL website](#) for the status of responses to past administrative actions and guidance.

^(*) Administrative Disposition: Issued to business operators when MLIT deems it necessary to secure safe transportation. Article 112 (Business Improvement Order), Article 113-2-(3) (Rescission of permission for entrustment of management of business and order to improve management of entrusted business) and Article 119 (Suspension of Business and Cancellation of License) of the Civil Aeronautics Act fall under this category.

^(*) Administrative Guidance: Issued to business operators when requested by MLIT to improve their operations, even in cases that do not apply to an Administrative Disposition. A Business Improvement Advisory and Administrative Warning fall under this category.

	2018	2019	2020	2021	2022
Administrative Dispositions	1	1	0	0	0
Administrative Guidance	3	1	0	0	0

2.2 Aircraft Accidents and Serious Incidents

2.2.1 Aircraft Accidents and Serious Incidents

In FY2022, JAL Group reported three aircraft accidents^(*) and zero serious incidents^(*). Over the past five years, there have been seven aircraft accidents, six of which were caused by aircraft shaking. In light of these circumstances, we are focusing on measures to avoid shaking and prevent injuries from shaking. For details, please refer to **3. Safety Goals** starting on page 11.

^(*) Aircraft accident: A situation arising from the operation of an aircraft and resulting in fatal or serious injury, an aircraft crash, collision, fire, damage to the aircraft during flight requiring major repair, or other situations classified as an aircraft accident by the MLIT.

^(*) Serious incident: An incident not amounting to an aircraft accident, but where a recognized danger of an accident occurring was present, such as a runway excursion, an emergency evacuation or similar incidents, fire or smoke on board, abnormal decompression, encounter with abnormal weather conditions, or other situations classified as a serious incident by MLIT.

	2018	2019	2020	2021	2022
Aircraft Accident	1 (0.003)	1 (0.003)	0 (0.000)	2 (0.008)	3 (0.009)
Serious Incident	2 (0.005)	3 (0.008)	1 (0.006)	1 (0.004)	0 (0.000)
Total	364,234	356,437	181,794	241,006	344,452

(): Number of incidents per 1,000 flights

Aircraft Accidents

Cabin attendant aboard NU036 injured due to turbulence of aircraft

A cabin attendant aboard NU036 (from Naha Airport to Komatsu Airport) operated by JTA on October 3, 2022 sustained a right big toe sesamoid bone of foot fracture on encountering turbulence during cruise. This case was designated as an Aircraft Accident by MLIT on October 7. Japan Transport Safety Board is investigating the cause of the incident. The JAL Group is providing full cooperation with the investigations. None of the passengers or other crew members were injured.

Passenger aboard JL3760 injured upon landing

On November 7, 2022, on flight JL3760 (from Tanegashima Airport to Kagoshima Airport) operated by JAC, a passenger was injured upon landing and was diagnosed with a second lumbar vertebra compression fracture, a serious injury. This case was designated as an Aircraft Accident by MLIT on November 18. None of other passengers or crew members were injured.

Investigations were conducted by the Japan Transport Safety Board, and results were announced on March 30, 2023. According to their report, the probable cause of this accident is that the seated passenger more likely suffered a lumbar compression fracture during landing due to the impact at touchdown. In addition, the weather conditions during landing or the flight operations and aircraft were not contributing factors to the passenger's injury.

Passenger aboard JL687 injured due to turbulence during descent

On January 7, 2023, on flight JL687 (from Tokyo International Airport (Haneda) to Miyazaki Airport), a passenger fractured their rib on encountering turbulence during descent. This case was designated as an Aircraft Accident by MLIT on January 23.

Japan Transport Safety Board is investigating the cause of the incident. The JAL Group is providing full cooperation with the investigations. None of other passengers or crew members were injured.

2.2.2 Aircraft Accidents and Serious Incidents in Previous Years

The following investigation report was released.

Serious Incident

Return to origin after take-off of JL904

Date of occurrence: December 4, 2020

Date of publication: August 25, 2022

(For details, please check the [JAL website](#).)

2.3 Irregular Operations

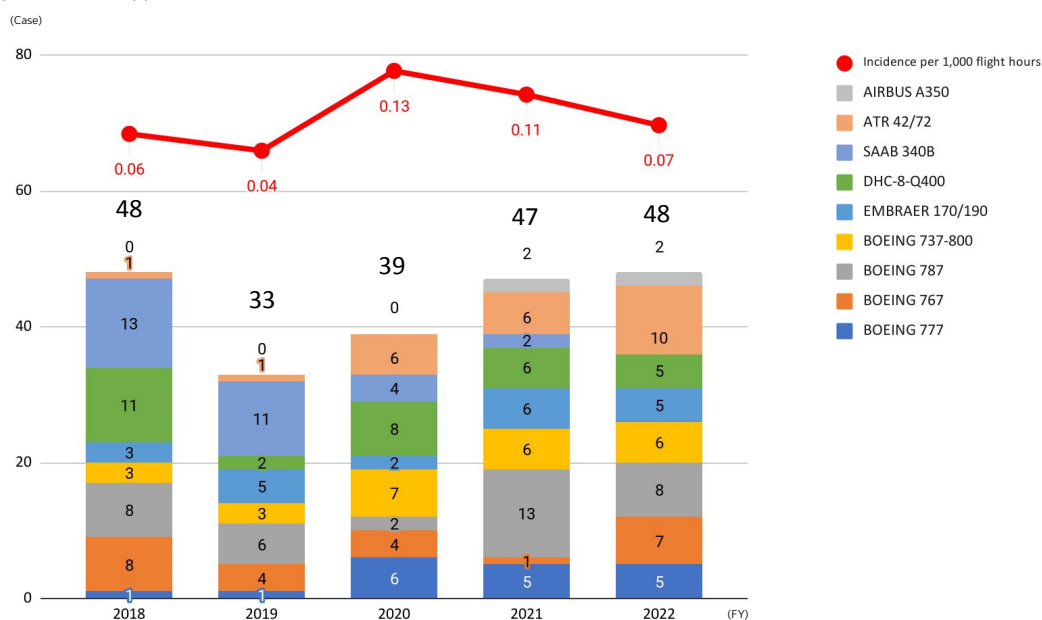
In FY2022, 48 irregular operations^(*) were reported, of which 37 air turn back cases, seven diversions, two runway closures, and two landings requiring priority handling by Air Traffic Control.

Irregular flights are mainly caused by aircraft malfunctions. The incidence rate over the last five years shows that it increased in FY2020 due to a decline in aircraft operations caused by the Covid-19 pandemic, but then declined from FY2021 as a result of efforts to prevent malfunctions by strengthening predictive maintenance.

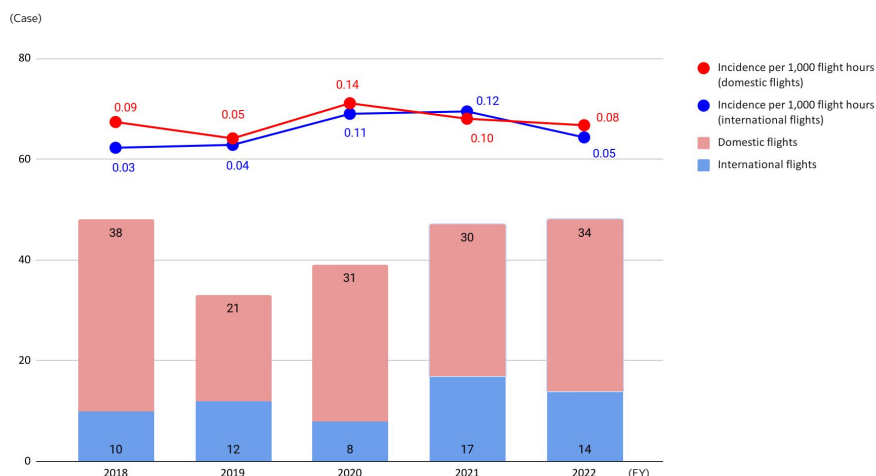
With different aircraft types, the number of irregular operations of the BOEING 767 and the ATR 42/72 has increased. We promptly identified the cause of each occurrence, implemented measures, and re-evaluated the effectiveness of past measures.

^(*) Irregular Operations: A situation in which partial malfunction of multiple aircraft systems occur. Such as when the pilots respond according to the manual and return to the airport to ensure safety, which results in a schedule change including the destination (excluding bird strike, lightning strike, among others.) In general, it is not a situation that immediately affects safety of operations.

Incidents by aircraft type



Incidents by domestic and international flights



2.4 Safety Events

2.4.1 Overview

In FY2022, the number of safety events^(*) was 373 events, an increase of 87 from the previous year. The main reason for this increase is that all cases in which the shippers failed to declare the transport of environmental hazardous substances were reported including those in previous years. In FY2022, as a result of our efforts to inform our customers about bringing in disinfectants, we were able to significantly reduce the number of cases that increased since FY2019 due to the pandemic, and this has led to a decrease of incidences. For details, see *2.4.3 Major Cases and Countermeasures* beginning on page 9.

^(*) Safety Events (mandatory occurrence report): Article 111-4 of the Civil Aeronautics Act and Article 221-2-3 and 4 of the Ordinance for Enforcement of the Civil Aeronautics Act mandate reporting to MLIT (This report uses the term Safety Events), and the following situations are applicable. Accidents specified in each item of Article 76 (1) of the Civil Aeronautics Act and situations (serious incident) in Article 76 (2) of the Act do not fall under this category. Generally speaking, they do not immediately lead to an aircraft accident.

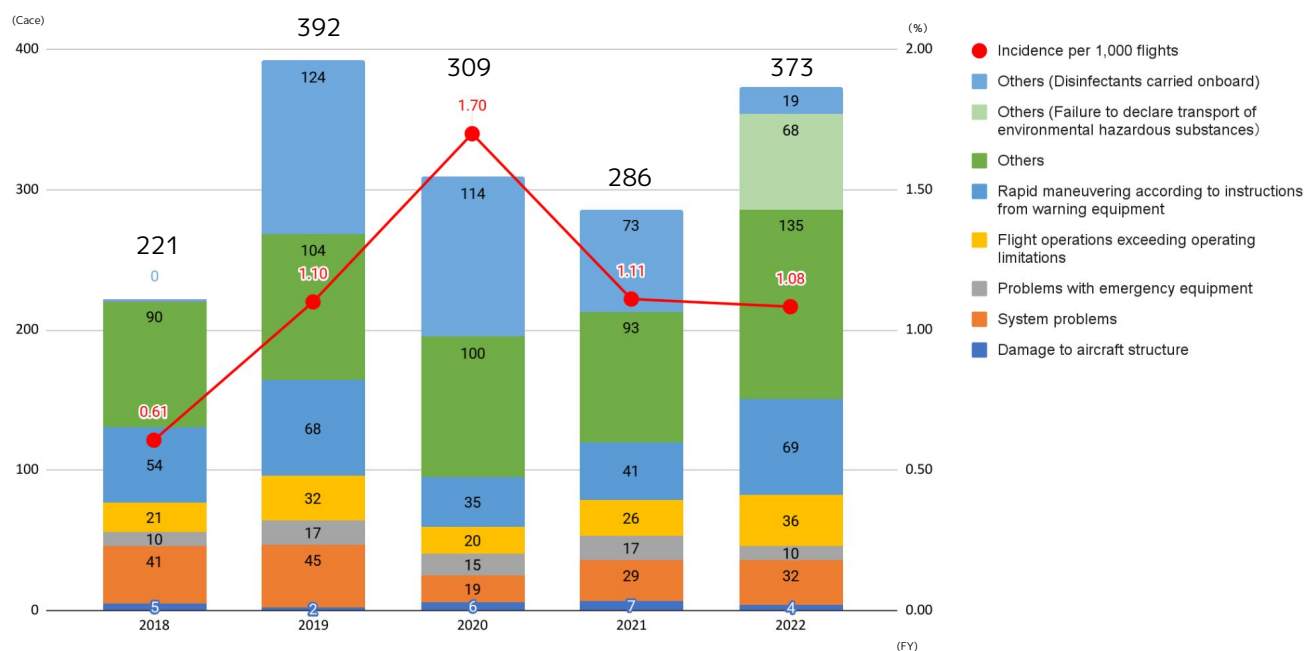
Classification of Safety Events and Examples

- Damage to aircraft structure
- System problems
- Problems with emergency equipment
- Flight operations exceeding operating limitations
- Rapid maneuvering according to instructions from warning equipment
- Others

[Example] Structural problems found during regular maintenance
 [Example] Engine trouble, communications/electric system problems
 [Example] Malfunction of fire and smoke detectors
 [Example] Operations in excessive speeding

[Example] Operation according to instructions from the Traffic alert and Collision Avoidance System (TCAS)
 [Example] Regulations, Parts Departing from Aircraft (PDA), transport of dangerous goods

■ Occurrence of safety problems



【Reference】 Comparison with the rate of safety problems excluding cases of carry-on disinfectants (per 1,000 flights)

	2018	2019	2020	2021	2022
Rate of safety problems	0.61	1.10	1.70	1.11	1.08
Rate of safety problems excluding cases of carrying disinfectants on board ^(*)	0.61	0.75	1.07	0.83	0.83

^(*) Refer to the [JAL website](#) for information on carrying disinfectants on board.

2.4.2 Breakdown

		2022									2021
		JAL	J-AIR	JTA	JAC	RAC	HAC	ZIP	SJO	Total	Total
Aircraft malfunction	Damage to aircraft structure	2	0	0	1	1	0	0	0	4	7
	Damage sustained (except birdstrike and lighting)	0	0	0	0	0	0	0	0	0	1
	Major repair	2	0	0	1	1	0	0	0	4	6
	System problems	11	1	14	4	1	0	1	0	32	29
	Brakedown										
	Engine	6	0	3	1	0	0	0	0	10	6
	Oxygen supply	0	0	0	0	0	0	0	0	0	0
	Navigation system	0	0	0	1	0	0	0	0	1	0
	Landing gear	0	1	0	1	0	0	0	0	2	1
	Fuel system	0	0	0	1	0	0	0	0	1	1
	Others	5	0	11	0	1	0	1	0	18	21
Flight related	Problems with emergency equipment	2	0	5	0	3	0	0	0	10	17
	Flight operations exceeding operating limitations	25	5	0	1	1	0	1	3	36	26
	Rapid maneuvering according to instructions from warning equipment	50	8	5	1	1	0	1	3	69	41
	Brakedown										
	Activation of ACAS	42	8	3	1	0	0	1	1	56	32
Others	Activation of GPWS	6	0	2	0	1	0	0	2	11	6
	Others	2	0	0	0	0	0	0	0	2	3
	Others	192	11	7	1	5	1	5	0	222	166
	Brakedown										
	Operations Manual	6	3	0	1	0	0	2	0	12	22
	Maintenance Manual	8	1	3	0	3	0	0	0	15	21
	Parts Departing from Aircraft	3	0	0	0	0	0	0	0	3	1
	Dangerous goods (excluding disinfectants)	153	4	3	0	2	1	1	0	164	47
	Dangerous goods (disinfectants carried onboard)	16	2	1	0	0	0	0	0	19	73
	Others	6	1	0	0	0	0	2	0	9	2
Total		282	25	31	8	12	1	8	6	373	286

2.4.3 Major Cases and Countermeasures

Major examples of safety problems are as follows.
Number of cases in FY2021 are in brackets.

Aircraft malfunction

The breakdown of safety problems caused by aircraft malfunctions is as follows.

In each case, measures were taken such as structural repair, parts replacement, and maintenance such as operation tests.

【Damage to aircraft structure】 4 cases (7 cases)

Case	FY22	Breakdown	FY21
Major repairs due to cracks or corrosion of structural members discovered during routine maintenance	2	DHC-8: 1, ATR: 1	2
Major repairs due to cracks or corrosion discovered by inspection based on service bulletin, among others.	2	737: 1, 767: 1	4
Damage to structural materials discovered during flight maintenance	0		1

【System problems】 32 cases (29 cases)

Case		FY22	Breakdown	FY21
Engine	Defects of thrust reverser system	5	787: 1, 767: 1, 737: 3	2
	Bird strike	3	A350: 2, 787: 1	4
	Defects of auxiliary power unit	1	737: 1	0
	Defects of the fuel supply	1	ATR: 1	0
Navigation system	Defects of Flight Management System (FMS)	1	ATR: 1	0
Landing gear	Defects of landing gear storage mechanism	2	EMBRAER: 1, ATR: 1	1
Fuel system	Defects to fuel indicator	1	ATR: 1	1
Others	Defects related to door display	5	737: 5	3
	Defects related to aircraft collision prevention device (TCAS) ^(*)	4	737: 4	6
	Defects related to the flight control system	3	787: 1, 737: 2	5
	Defects involving the cockpit window	3	A350: 1, 787: 2	1
	Defects related to the pressurization system	2	787: 1, DHC-8: 1	3
	Defects related to the inflight announcement system	1	737: 1	3

(*) In order to prevent the aircraft from colliding with each other in the air, when it is determined that the aircraft flying around is closer than the specified distance, TCAS Resolution Advisory (RA) notifies the flight crew of the danger and automatically instructs them to ascend. All JAL Group aircraft are equipped with TCAS.

【Problems with emergency equipment】 10 cases (17 cases)

Case	FY22	Breakdown	FY21
Defects related to emergency equipment	6	737: 3, 767: 1, 777: 1, DHC-8: 1	5
Defects related to emergency lighting	2	DHC-8: 2	11
Defects related to emergency escape signal generator	2	737: 2	1

Flight related

The breakdown of flight safety problems is as follows. In response to these cases, we took measures such as rechecking the aircraft, publicizing and announcing the cases.

【Flight operations exceeding operating limitations】 36 cases (26 cases)

Case	FY22	FY21
Exceeding operating limitations	18	14
Exceeding altitude or route deviation from ATC instructions	18	12

【Rapid maneuvering according to instructions from warning equipment】 69 cases (41 cases)

Case	FY22	FY21
TCAS Resolution Advisory (RA) ^{(*)1}	56	32
Ground Proximity Warning System (GPWS) ^{(*)2}	11	6
Returning to the departure airport due to other instrument display abnormalities	2	3

^{(*)1} The TCAS may activate depending on the position and speed of other aircraft even when the aircraft is operated normally according to ATC instructions. It is designed so that appropriate maneuvering by pilots in accordance with TCAS instructions will not cause a safety event. In each of the 56 cases, the pilots responded appropriately to TCAS instructions.

^{(*)2} The GPWS may activate depending on the relationship between the flight path and terrain features. It is designed so that appropriate maneuvering by pilots in accordance with GPWS instructions will not cause a safety event. In each of the 11 cases, the pilots responded appropriately to GPWS instructions. The JAL Group has further developed this equipment and has equipped all its aircraft with Enhanced GPWS (E-GPWS), which memorizes the location of most of the world's terrain and airports, as well as surrounding obstacles.

Other safety problems

The number of shipments of hazardous materials increased by 63 from the previous fiscal year, but the main reason for this increase was the failure to report the transportation of environmental hazardous substances in the past. In response to this incident, we took measures such as notifying customers items that are not allowed on board.

In cases related to maintenance and flight control, safety was confirmed by rechecking the aircraft as necessary, and measures were taken to publicize cases, raise awareness, and review manuals.

【Others】 222 cases (166 cases)

Case	FY22	FY21
Transportation of dangerous goods ^{(*)1}	183	120
Issues related to maintenance ^{(*)2}	15	21
Issues related to flight management ^{(*)3}	12	22
Operation of smoke detector in restroom, among others	5	0
Disconnection of cabin parts	3	0
Dropping of airframe parts	3	1
Other	1	2

^{(*)1} Transportation of dangerous goods: lithium-ion batteries, coolants, insecticides, and disinfectants

^{(*)2} Issues related to the maintenance: maintenance management including maintenance check items, and inspection intervals

^{(*)3} Issues related to flight management: flight management including crew time management, training management, and flight planning

3. Safety Targets

The JAL Group aims to realize JAL VISION 2030, the ideal form of the JAL Group for 2030. To achieve this goal, we have formulated the JAL Group Medium-term Management Plan for FY2021 to FY2025 and are working to achieve the safety targets set based on this plan.

Vision

Accumulate safety layers and realize a safe and secure society as a leading company of safety

Numerical Targets

Zero aircraft accidents and zero serious incidents

Action Targets

1. Use digital technology, expand data collection, deepen analysis, and thoroughly enforce measures

In addition to preventing the recurrence of defects, we will collect a large amount of information from both inside and outside the company to prevent unforeseen and unexpected incidents. We will use digital technology to create a system that can reliably detect the hazards and risks.

[FY2022 Initiatives: 12 page](#)

2. Develop human resources who think and act on the basic foundation of safety

Even if we build a system to keep us safe, the system may not work depending on our consciousness and company culture in each organization. In addition to fostering human resources with a high sense of safety, we will work to foster a company culture in which such human resources can act with safety as their highest priority.

[FY2022 Initiatives: 15 page](#)

3. Prepared for environmental changes affecting aviation together with internal and external parties

Working together internally and externally, we will prepare for unforeseen situations arising from various environmental changes surrounding aviation. With this we will also resolve social issues.

[FY2022 Initiatives: 17 page](#)

3.1 Achievement of FY2022 Safety Targets

Achievement of Numerical Targets

In FY2022 we did not achieve our target as there were three air accidents and zero serious incidents. Please refer to *Aircraft Accidents and Serious Incidents* on page 5 for more information.

Achievement of Action Targets

The following three action targets and 17 related measures were implemented in FY2022. For more information on the initiatives, see below.

1. Use digital technology, expand data collection, deepen analysis, and thoroughly enforce measures

In FY2022, in addition to information obtained from the aircrafts, we made efforts to collect a wide range of information, including weather information, information on crew fatigue, on site nearmiss information, and information from other companies and industries. Furthermore, the collected information was analyzed in detail using digital technologies such as big data analysis technology. With this, efforts were made to prevent unsafe events.

01 Measures to prevent shaking during flight

[Background]

To prevent injuries caused by shaking during flight, it is important for pilots to obtain the latest weather information to avoid turbulence.

[Initiatives and Results]

In order to avoid turbulence during flight, a system was developed to obtain weather information in real time by providing an environment in the cockpit where Wi-Fi can be connected in some aircrafts. Pilots can promptly share the information with cabin attendants, who can take preventive measures against shaking, such as confirming that passengers were seated with their seat belts fastened.

We will continue to make various efforts to reduce injuries caused by shaking during flight.



02 Managing fatigue risk

[Background]

Pilots and cabin attendants are in an environment where fatigue is likely to accumulate due to irregular duty patterns and time differences. Being physically and mentally healthy is an essential for safe flight operations, and the JAL Group is working to manage the risk of crew fatigue.

[Initiatives and Results]

In order to manage fatigue risk for pilots and cabin attendants, we have developed a system to obtain fatigue information and control the risks. Each JAL Group airline collected and managed fatigue reports from crews and analyzed the data using various indicators. Based on the results, we improved crew schedules and other measures to mitigate risks.

We are also considering implementing fatigue assessment software, and will further promote risk management based on the data.

03 Strengthening predictive maintenance

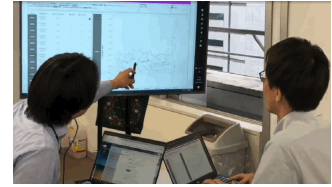
〔Background〕

We are working to prevent and predict problems by using various data obtained from the aircrafts.

〔Initiatives and Results〕

Various data obtained from aircrafts were analyzed using the latest big data analysis technology and AI. The results obtained from the analysis were combined with the knowledge and know-how of the mechanic to improve prediction accuracy.

The results of these efforts are reflected in the reduction of irregular flights. We will promote the further use of digital technology to ensure safe boarding for passengers.



04 Efforts to prevent parts from falling from aircraft



〔Background〕

We are working on using digital technology to prevent parts from falling off from the aircraft.

〔Initiatives and Results〕

We used digital technology to analyze various kinds of data in detail, from the aircraft through the inside of the engine and reinforced parts to prevent from falling. In addition, we conducted vigilant inspections using aircraft hazard maps for each model. As a result of our efforts in combination with the predictive maintenance described above, the total number of falling parts has decreased^(*).

We will continue to provide safe and secure aircrafts.

(*) Parts falling from aircrafts are classified into three levels according to size and weight according to the notification of the Civil Aviation Bureau. "Missing Airframe Parts" in "Other Safety Problems" on page 10 is a summary of the largest classification cases.

05 Use of examples from other companies

〔Background〕

With the development of aviation technology, the number of aircraft malfunction and human errors is decreasing worldwide. In order to prevent the occurrence of unexperienced failures, we are actively collecting information that have occurred at other companies and utilizing it for our own countermeasures.

〔Initiative and Results〕

In order to prevent unforeseen and unexpected incidents, we developed the system to collect information from other companies. We expanded the scope of our efforts by analyzing serious events not only in the airline industry but also in other industries. In addition, we are using safety information collected and evaluated on our internal portal site.

06 Strengthening internal audits

〔Background〕

The JAL Group has been conducting internal audits focusing on confirmation of compliance to ensure that our Safety Management System (SMS) complies with laws and internal regulations.



〔Initiatives and Results〕

In addition to conventional audits, we also made efforts on confirmation of effectiveness to identify risks which may interfere safety management system in the future. Applying confirmation of effectiveness, we identified issues that could not be found in conventional audits, for example improving how to use voluntary reporting system, among others.

We will continue to take action for continuous improvement of SMS by strengthening internal audits.

07 Effective use of safety information



〔Background〕

We collected and visualized a wide range of safety-related information. To prevent unsafe events and manage risks, we analyzed the information from multiple angles to be applied in effective safety measures.

〔Initiatives and Results〕

An information technology system, to analyze large amount of collected information and other awareness from the frontline, was introduced and verified for full-scale operation. By establishing a system using safety indicators to monitor a wide range of situations such as the status of safety activities, the occurrence of aircraft failures, and human errors, we were able to grasp the safety status in a timely manner and implement prompt safety measures.

We are making active use of our evolving information processing technologies to strengthen risk management.

08 Efforts to prevent human errors

〔Background〕

In order to prevent the occurrence of human errors, it is important to identify risks by examining not only the occurrence events and factors, but also the characteristics of the organization that induce errors and the environmental factors behind them.

〔Initiatives and Results〕

We have created a database of human error cases and have started an analysis based on the data. We also promoted efforts to expand the human error analysis method (HFACS) to the entire Group, and provided education on analysis methods at J-AIR and SJO. In addition, since it is essential to improve research skills in order to determine what is behind the occurrence of human errors, a hands-on interview education program was established and a pilot test was conducted.

We will continue to promote these initiatives and strengthen measures against human error.

2. Develop human resources who think and act on the basic foundation of safety

In FY2022, we worked to develop human resources with a high level of safety awareness through the introduction of new education and human resources exchanges in order to establish a company culture in which safety is the top priority. In addition we established group norms and implemented initiatives focusing on physical and mental health.

09 Review of safety-related education

〔Background〕

In order to nurture human resources who think and act with safety as a basic premise, it is important to conduct long-term and continuous education according to their growth stage.

〔Initiatives and Results〕

In addition to safety training for new employees and new managers, we have established training for workplace leaders who have been employed for ten years. This training brings employees together from the field and indirect departments for example Flight Operations, Cabin Attendants, Maintenance, Airport Operations and so forth to acquire the safety knowledge needed as leaders in their workplace and to raise safety awareness through communicating with colleagues from other departments.

Through the training, participants have renewed their determination to protect safety at the ten year mark by seeing safety in a new light. See Safety Training by JAL Group Hierarchy on page 40 for more information, including comments from employees who attended the training.



10 Efforts to develop safety-oriented human resources



〔Background〕

As of March 2023, approximately 99 percent of employees had joined the company after the JL123 accident in Gunma. We will continue to nurture human resources who are safety-oriented even after 38 years since the accident.

〔Initiatives and Results〕

Since FY2021, we have assigned young employees from different departments such as Maintenance and Cabin Attendants to the Safety Promotion Center. These employees are in charge of maintaining the actual site of Osutaka Ridge and operating the Safety Promotion Center, providing them an opportunity to learn more about past accidents. In FY2022, we expanded this assignment to involve new business supporting employees working in the Head Office. After this assignment, the young employees pass down their experiences at the Safety Promotion Center in their original department by relating what they learnt about the past accidents.

In this way, we are working to increase the number of safety-oriented human resources by continuously providing young employees with opportunities to work at the Safety Promotion Center.

11 Ongoing promotion and education

〔Background〕

We continue to conduct promotion and education to nurture human resources and establish a company culture that takes safety as a basic premise.

〔Initiatives and Results〕

Periodical training is provided to all employees to help them connect their work with safety in order to maintain strict group norms against drinking. We conducted promotion and education to practice moderate and appropriate drinking, and organized lectures in cooperation with the The Scheduled Airlines Association of Japan. The results of our internal awareness survey indicate high levels of alcohol awareness have been maintained showing that our continued promotion and education have been successful.

We will continue our efforts on safety awareness and will restructure our safety education system to strive to improve the effectiveness of education.



12 Build a pilot support program

〔Background〕

Mental and physical health are essential to act with safety as a basic premise.

For this reason, we are working to establish a company culture where employees can consult with us with feel at ease.

〔Initiatives and Results〕

The JAL Group has launched the JAL Peer Support Program, a program designed to support the mental and physical health of pilots who work under irregular shifts and other unusual circumstances, by allowing them to express their concerns while remaining anonymous. As a result, the system that enables pilots to attend to their duties accordingly. In the future, we will extend the same support program to pilots in our group companies.



13 Efforts to address organizational issues

〔Background〕

In the event of a glitches and oversights, we analyze not only the immediate factors, such as human errors, but also the underlying factors to find corrective measures. The JAL Group analyzes the problems from various perspectives - from workplace culture and job satisfaction.

〔Initiatives and Results〕

In FY2022, when major changes occurred, such as the COVID-19 pandemic and the expansion of our business scale, to identify the underlying factors, we focused on the organizational structure, inter-departmental synergies, and other factors. As a result, we identified organizational issues such as nurturing human resources and improving the work environment.

The identified problems were set in our FY2023 safety goals as an objective for the entire Group. (See page 18 for our FY2023 safety targets.)

3. Prepared for environmental changes affecting aviation together with internal and external parties

In FY2022, we prepared for various environmental changes and contingencies such as diversifying threats of terrorism and dreadful disasters. For air mobility, a new infrastructure for solving social issues, we created a safety system by utilizing our acquired knowledge and know-how through aviation.

14 Introduction of advanced security inspection equipment

〔Background〕

The JAL Group is strengthening measures against diversifying threats of terrorism by utilizing the state-of-the-art technology.

〔Initiatives and Results〕

We implemented an inspection equipment that uses Computed Tomography (CT), which has a higher detection capability than conventional equipment. This equipment, which generates three dimensional images, we were able to improve the inspection accuracy of personal belongings and reduce the risks of terrorism.

15 Promotion of activities to reduce safety risks

〔Background〕

In an environment that is constantly changing, such as the unstable global situation, it is important to actively collect information not only from within the company but also from outside the company in order to reduce risks related to security.

〔Initiatives and Results〕

In addition to cooperating with security information specialists, we have established a system for recognizing and reducing risks by collecting the latest information on domestic and international security in a timely manner. This includes exchanging opinions on hazards and risks with security personnel from other companies in Japan and overseas.

16 Creating a safe system for air mobility

〔Background〕

Drones and flying cars hold great promise as a new infrastructure for solving social problems and achieve economic growth. The JAL Group is working to build a safety management system that meets the unique challenges of air mobility by utilizing our knowledge and experience in safety management.



〔Initiatives and Results〕

By demonstrating remote-controlled long haul flight of cargo transport, we verified our system to operate drones safely and efficiently.

We will continue to conduct test flights and use the obtained data to establish operating methods, maintenance and inspection, and emergency measures to improve the safety of air mobility.

17 Disaster preparedness

〔Background〕

In recent years, earthquakes and torrential rain and other severe natural disasters have surfaced. Even in the event of unforeseen situations, it is important for public transportation operators to restore its systems as soon as possible.

〔Initiatives and Results〕

Based on our Disaster Response Regulations, we formulated a plan to ensure our operation continues. As a natural disaster measure, this includes checking our communication systems. To verify the effectiveness of the plan, we conducted a simulation exercise assuming actual earthquakes and other disasters.

3.2 FY2023 Safety Targets

We will continue to work towards achieving the numerical target of *Zero Aircraft Accidents and Serious Incidents* with the following three action targets. We will aim to achieve our action goals by adding measures to address the issues identified in the promotion of the Medium-term Management Plan and tackling the nineteen measures.

1. Use digital technology, expand data collection, deepen analysis, and thoroughly enforce measures

- | | |
|--|---|
| 01 Measures to prevent shaking during flight | 02 Managing fatigue risk |
| 03 Strengthen predictive maintenance | 04 Efforts to prevent parts from falling from aircrafts |
| 05 Use of examples from other companies | 06 Strengthening internal audits |
| 07 Effective use of safety information | 08 Efforts to prevent human errors |



Inspection of engine internal parts to prevent falling of parts

2. Develop human resources who think and act on the basic foundation of safety

- | | |
|---|--|
| 09 Review of safety-related education | 10 Efforts to develop safety-oriented human resources |
| 11 Ongoing promotion and education | 12 Build a pilot support program |
| 13 Efforts to address organizational issues | 14 Establishment of a system for sustainable development of professional human resources |



JAL Peer Support Program allows flight crews to consult anonymously

New

3. Prepared for environmental changes affecting aviation together with internal and external parties

- | | |
|---|---|
| 15 Introduction of advanced security inspection equipment | 16 Promotion of activities to reduce safety risks |
| 17 Creating a safe system for air mobility | 18 Disaster preparedness |
| 19 Creating a safe environment for employees to concentrate on customer service | |



Advanced Security Inspection Facility
JAL SMART SECURITY

New

4. Safety Management System

4.1 Safety Management Policy

Based on our Corporate Policy, the JAL Group has established the Safety Charter as a basic policy for safety, and has established this policy in the Safety Management Manual.

Every employee, from top management to frontline employees, has a correct understanding of the concept and policy of safety management in accordance with the Safety Charter and performs their everyday work accordingly.

4.1.1 Operating Policy of the Safety Management System

The Safety Management System (SMS) is based on four pillars: Safety Policy and Objectives, Safety Risk Management, Safety Assurance, and Safety Promotion. Management declares the safety policy, which is communicated to all Group companies, safety targets are established each fiscal year, and all JAL Group employees including management perform their duties in accordance with the SMS to maintain and enhance flight safety of the entire JAL Group.

Furthermore, to maintain high levels of safety, top management, each division, and Corporate Safety & Safety Division must implement the PDCA cycle regarding safety and link the cycle across organizations to ensure that the SMS functions properly and safety is continuously improved upon.

Management

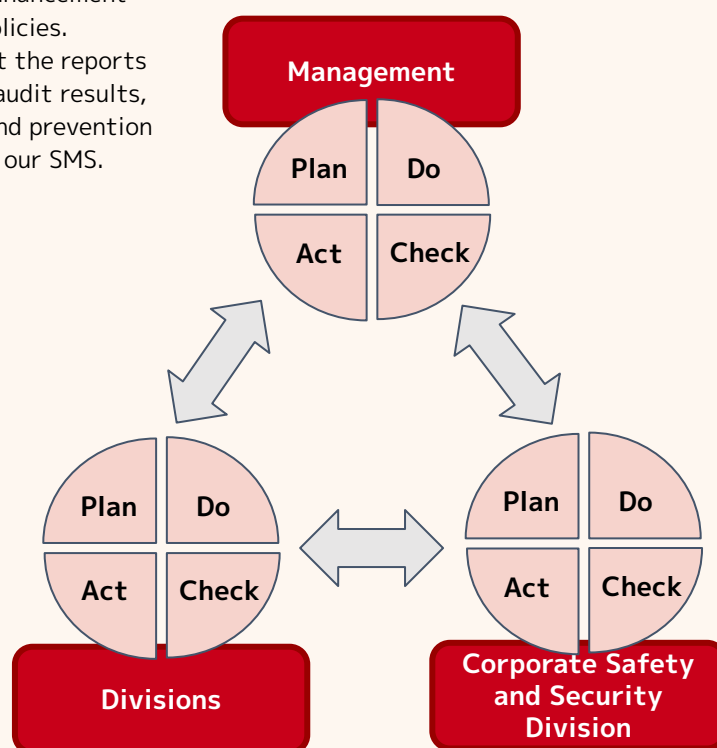
Management receives the reports from the Safety Enhancement Council which established the Safety Management Policies. Management decides and take necessary action about the reports about the safety target achievement status, safety audit results, occurrence of serious accidents and safety events, and prevention or recurrence prevention measures status to operate our SMS.

Divisions

Each division implements our SMS and the status and improvements are reported to the Management and Safety Promotion Department. Each division makes necessary improvements based on the results of PDCA cycle and instructions from Management and Corporate Safety & Safety Division.

Corporate Safety and Security Division

The Corporate Safety and Security Division implements our SMS in all group levels and makes improvements based on instructions from management and status reports from their divisions. It submits reports on SMS implementation and improvement to management, identifies issues facing each division, and gives instructions to correct the situation.



4.1.2 Establishment and Management of Manuals (SMS Documentation)

The JAL Group has established and documented safety regulations and operating standards and procedures in accordance with applicable laws, regulations, and international standards, and has a system in place to ensure that all relevant employees are aware of these matters.

4.2 Safety Management Structure

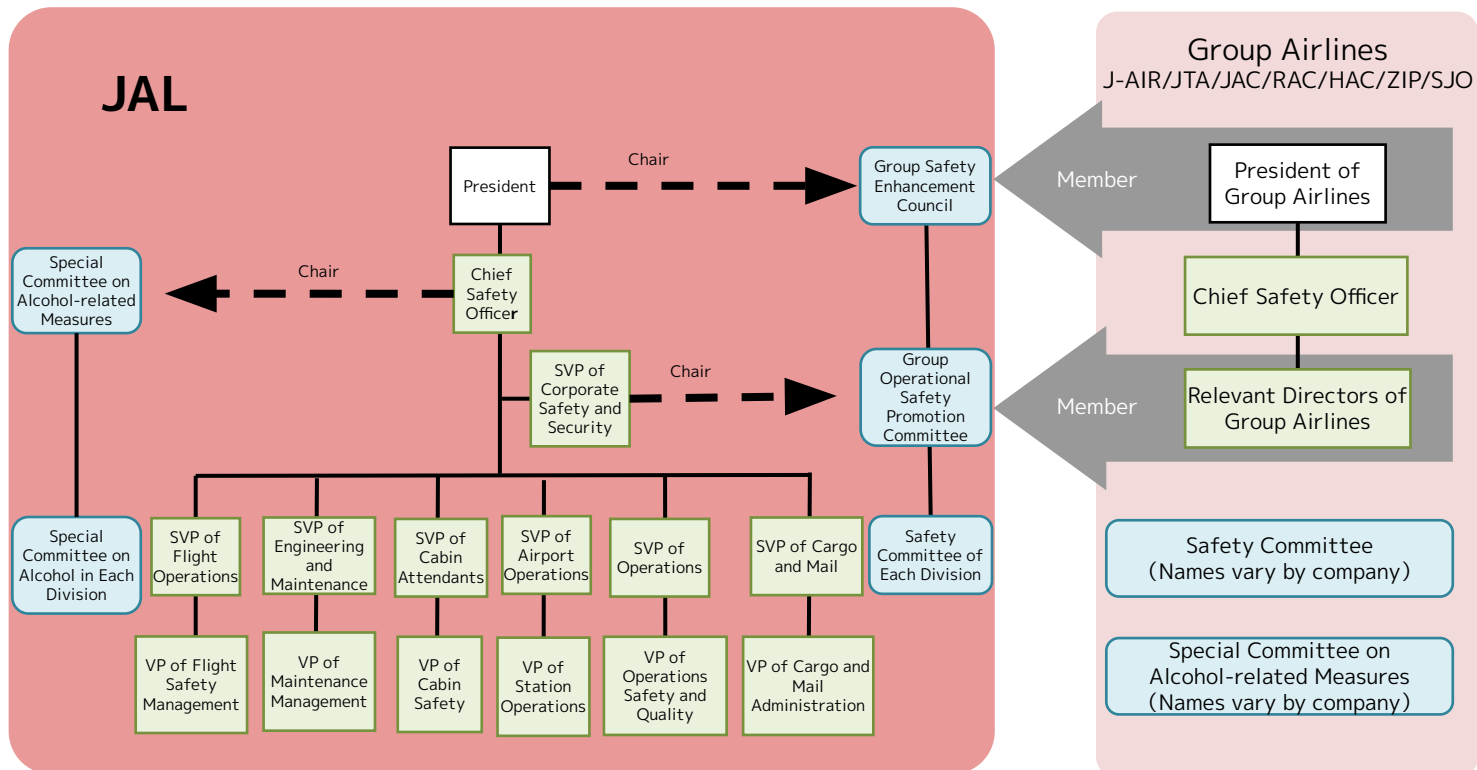
4.2.1 Safety Management Structure

To maintain high and uniformed safety standards throughout the JAL Group, we implement the SMS in accordance with shared policies confirmed by the Group Safety Enhancement Council.

The Group Operational Safety Promotion Committee is a sub-committee for maintaining and strengthening safety coordination between divisions and Group airlines. For more information about each committee, please refer to *Safety Management Structure of Each Group Airline* on page 22.



Group Safety Enhancement Council



Safety Management Structure

4.2.2 President

The President assumes final responsibility for safety in the SMS. The President of each company declares and disseminates safety policies throughout the company and secures the resources necessary for the SMS to function effectively.

4.2.3 Chief Safety Officer

In accordance with Article 103-2 of the Civil Aeronautics Act, each JAL Group airline appoints a person who is responsible and authorized to oversee safety management, make important management decisions on safety policies and safety investments, and report important safety matters to the President (Chief Safety Officer). The Chief Safety Officer is appointed by the President of each company.

The Chief Safety Officer of each JAL Group airline is as follows. (April 1, 2022 to March 31, 2023)

Company	Chief Safety Officer		Term of Office
Japan Airlines	Representative Director, President Chief Executive Officer of the JAL Group AKASAKA Yuji		
J-AIR	Managing Director	KURONO Kotaro	April 1, 2020 to March 31, 2023
Japan Transocean Air	Director, Managing Executive Officer	OSHIRO Yoshinobu	
Japan Air Commuter	Director	TOMITA Shinobu	
Ryukyu Air Commuter	Managing Director	KOMURO Toshinobu	April 1, 2019 to June 16, 2022
	Director	KONO Toshiyuki	June 17, 2022 –
Hokkaido Air System	Executive Officer	YOSHIDA Satoshi	April 1, 2022 to May 31, 2022
	Executive Officer	SAITO Kazuyuki	June 1, 2022
ZIPAIR Tokyo	Director	YOSHIZAWA Kenichi	
SPRING JAPAN	Director, Executive Vice President	SHIN Toshinori	September 1, 2019 to June 30, 2022
	Director	KAMIYA Hiroshi	July 1, 2022

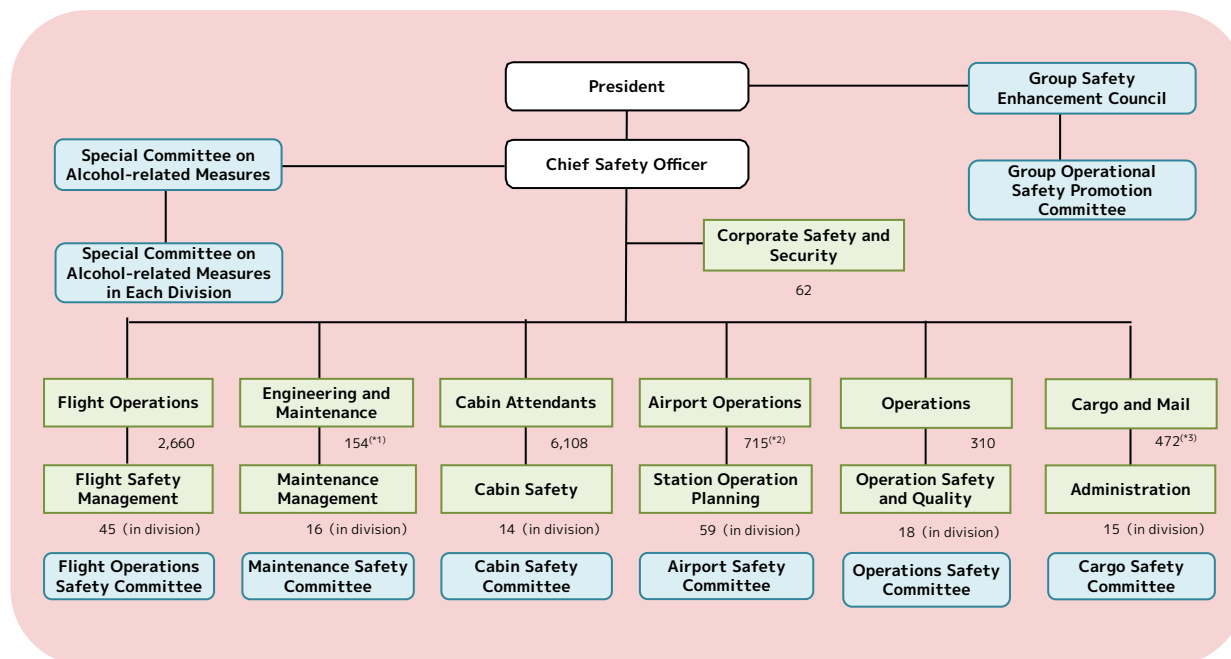
4.2.4 Safety Management Structure of Each Group Airline

Organizations and employees: as of March 2023 (excluding employees on leave)



4.2.4.1 Japan Airlines

4.2.4.1.1 Safety management structure



(*) The Engineering and Maintenance Division has 4,278 employees including JAL Engineering employees.
(Refer to page 31 and 32 for details of Outsourcing of Aircraft Maintenance.)

(*) The Airport Operations Division has 9,113 employees including employees of 11 JAL Group companies such as JAL SKY and JAL Ground Service.

(*) The Cargo and Mail Division has 1,437 employees including employees of five Group companies such as JAL Cargo Service.

4.2.4.1.2 Number of pilots, maintenance engineers, qualified maintenance engineers, cabin attendants, and dispatchers

	Number of employees	Organization	Remarks
Pilots	2,334	Flight Operations	
Maintenance engineers	119 ^(*)	Engineering and Maintenance	Includes 100 qualified maintenance engineers ^(*)
Cabin attendants	6,120	Cabin Attendants	
Dispatchers	82 ^(*)	Operations	

(*) There are 2,999 employees engaged in maintenance including JAL Engineering employees, of which 1,748 are qualified maintenance engineers.

(*) National qualifications of maintenance engineers are First Class Aircraft Maintenance Technician, First Class Aircraft Line Maintenance Technician and Aircraft Overhaul Technician.

(*) There are 82 dispatchers including employees of JAL SKY.

4.2.4.1.3 Safety management organizations

Corporate Safety and Security Division

The Corporate Safety and Security Division is responsible for overseeing safety enhancement of Japan Airlines and the JAL Group.

Flight Operations, Engineering and Maintenance, Cabin Attendants, Airport Operations, Operations, Cargo and Mail Divisions

The executive officers of production divisions chair the safety committee of their respective division, make overall judgment and decisions on operations affecting safety under their command, and report to the President and the Chief Safety Officer of the company.

General Affairs Division

The General Affairs Division has established Disaster Handling Regulations to mitigate and prevent the spread of damage, maintain business activities, and resume operations as quickly as possible after a disaster. It provides disaster prevention and response measures to ensure the safety of our employees, passengers, visitors, and directors, and preserve JAL Group assets in the event of a natural disaster such as fires, explosions, wind, flood and snow damage, earthquakes and tsunami triggered by an earthquake, volcanic eruption, and other abnormal phenomena.

4.2.4.1.4 Safety committees

The JAL Group has established various safety committees to allow us to understand the status of daily operations and make necessary improvements based on information of events, in coordination with each function and organization.

Group Safety Enhancement Council

The Group Safety Enhancement Council has been established to ensure flight safety and promote safety management in accordance with the JAL Group Corporate Policy. It is composed of the President (Chair), the Chief Safety Officer, executive officers appointed by the President, and Presidents of Group airlines.

Group Operational Safety Promotion Committee

The Group Operational Safety Promotion Committee, a sub-committee of the Group Safety Enhancement Council, has been established to improve safe air transport and safety of the JAL Group by maintaining and strengthening coordination of safety between divisions and Group airlines. It is composed of the Vice President of JAL's Corporate Safety and Security (Chair), Vice Presidents of JAL safety management departments appointed by the Chair, and the Chief Safety Officer or executive officer in charge of safety of each Group airline.

Special Committee on Alcohol-related Measures

The committee has been established to manage alcohol-related risks of pilots, cabin attendants, maintenance engineers, dispatchers, and drivers in the airport. It is composed of JAL's Chief Safety Officer (Chair), Senior Vice President of Corporate Safety and Security, executive officers of Flight Operations, Cabin Attendants, Engineering and Maintenance, Airport Operations, Operations, and Cargo and Mail, and other members.

Special Committee on Alcohol-related Measures in Each Division

The committees in each division, which are sub-committees of the above Special Committee on Alcohol-related Measures, have been established to gather and analyze information and monitor measures established in each production division. It is chaired by the executive officer of each division and composed of the division's safety managing department and related departments, and Corporate Safety and Security.

Safety Committee of Each Division

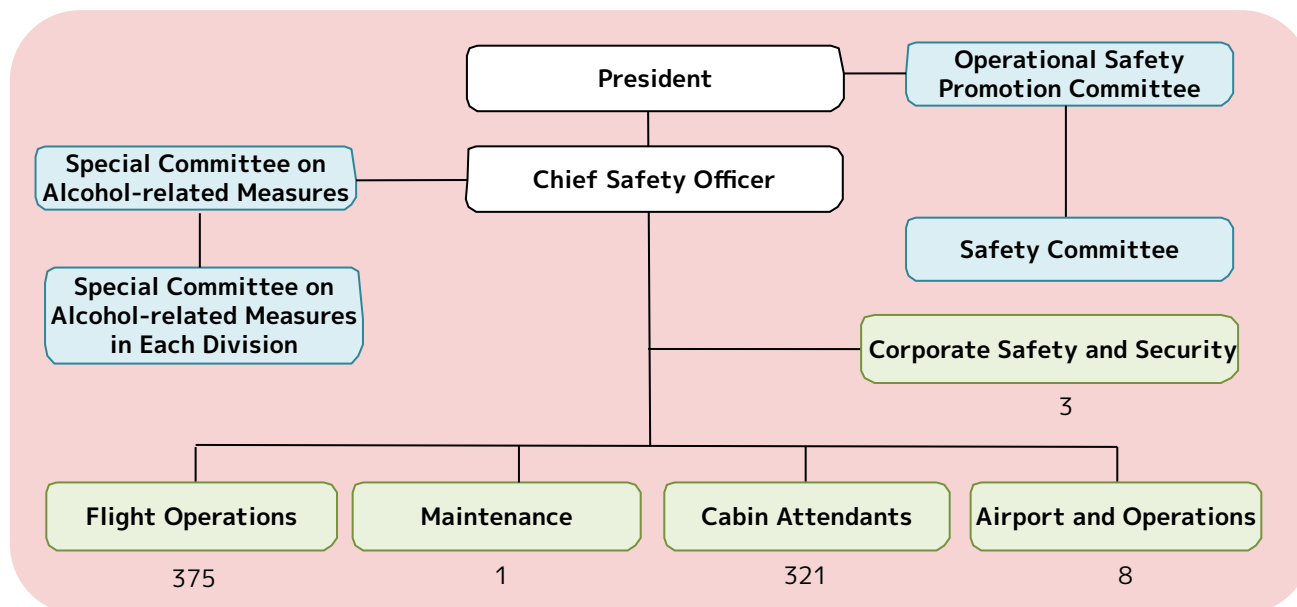
(Flight Operations Safety Committee, Engineering and Maintenance Safety Committee, Cabin Safety Committee, Airport Safety Committee, Operations Safety Committee, and Cargo Safety Committee)

These committees have been established to strengthen coordination of safety and decide safety policies of the production division.



4.2.4.2 J-AIR

4.2.4.2.1 Safety management structure



4.2.4.2.2 Number of pilots, maintenance engineers, qualified maintenance engineers, cabin attendants and dispatchers

	Number of employees	Organization	Remarks
Pilots	333	Flight Operations	
Cabin attendants	318	Cabin Attendants	
Dispatchers	42	Airport and Operations	Shared with JAL

(*) From April 2016, maintenance management has been outsourced to JAL Engineering.

4.2.4.2.3 Safety management organization

The Safety Promotion Department is responsible for safety management of the company.

4.2.4.2.4 Safety committees

Operational Safety Promotion Committee

The committee is composed of the President (Chair), the Chief Safety Officer, directors, and the executive officers in charge of safety management. It drafts proposals, plans, coordinates, and provides recommendations and advice on flight safety. The President and the executive officer in charge of safety attend safety meetings of JAL, where they maintain close coordination and share information, and disseminate the information to all employees of the company.

Safety Committee

The Safety Committee, which is a sub-committee of the Operational Safety Promotion Committee, is composed of employees of each division. It establishes and promotes safety enhancement measures through coordination between divisions.

Special Committee on Alcohol-related Measures

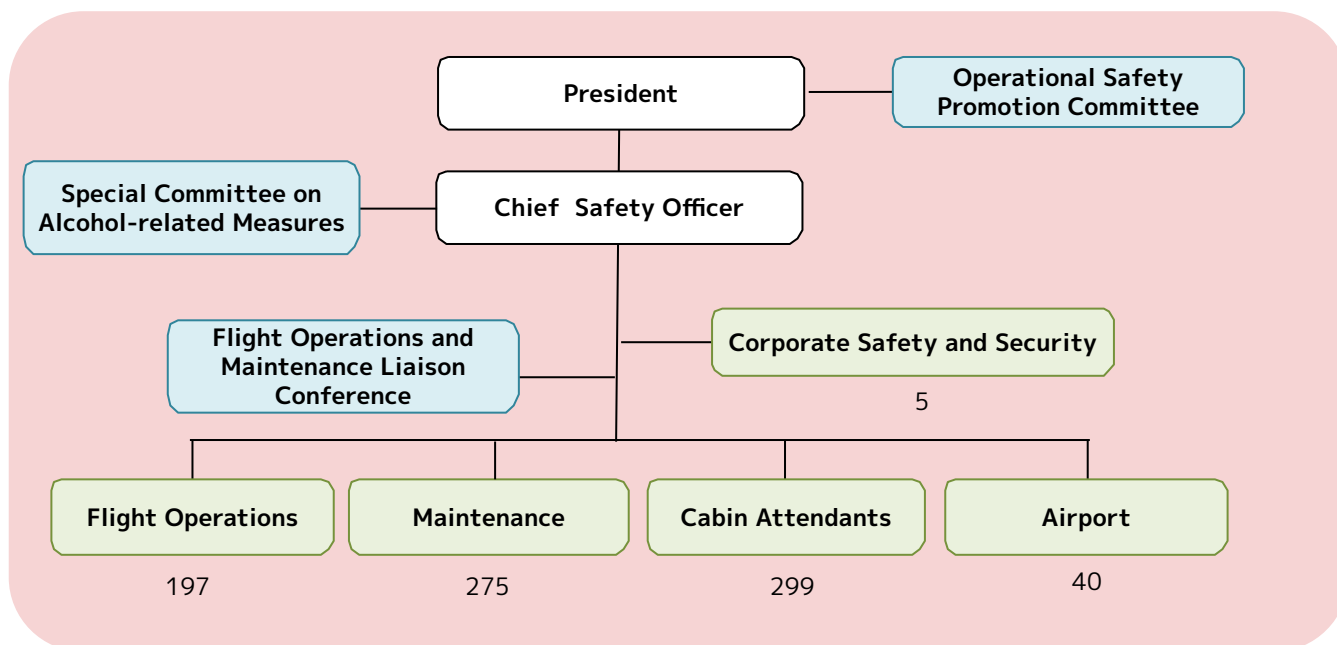
The committee is operated under the responsibility and authority of the Chief Safety Officer in order to take an organization-wide systematic approach towards the prevention of alcohol-related incidents as part of efforts to rebuild alcohol consumption measures.



4.2.4.3 Japan Transocean Air



4.2.4.3.1 Safety management structure



4.2.4.3.2 Number of pilots, maintenance engineers, qualified maintenance engineers, cabin attendants, and dispatchers

	Number of employees	Organization	Remarks
Pilots	158	Flight Operations	
Maintenance engineers	180	Maintenance	Of these, 113 employees are qualified for maintenance engineer
Cabin attendants	286	Cabin Attendants	
Dispatchers	21	Airport	Operations Control

4.2.4.3.3 Safety management organization

The Safety Promotion Department is responsible for safety management of the company.

4.2.4.3.4 Safety committees

Operational Safety Promotion Committee

The committee is composed of the President (Chair), the Chief Safety Officer, directors, and the executive officers in charge of safety management. It plans, coordinates, and provides advice on all matters relating to safe aircraft operations and aviation security from the company's perspective, and promotes overall safety measures. The President and executive officer in charge of safety attend safety meetings of JAL, where they maintain close coordination and share information, and disseminate the information to all employees of the company.

Flight Operations and Maintenance Liaison Conference

The conference is chaired by an officer appointed by the President and the members are officers in charge of Flight Operations, Maintenance and other division. They share information, promote communication and mutual understanding, and strengthen coordination between the two divisions to contribute to flight safety.

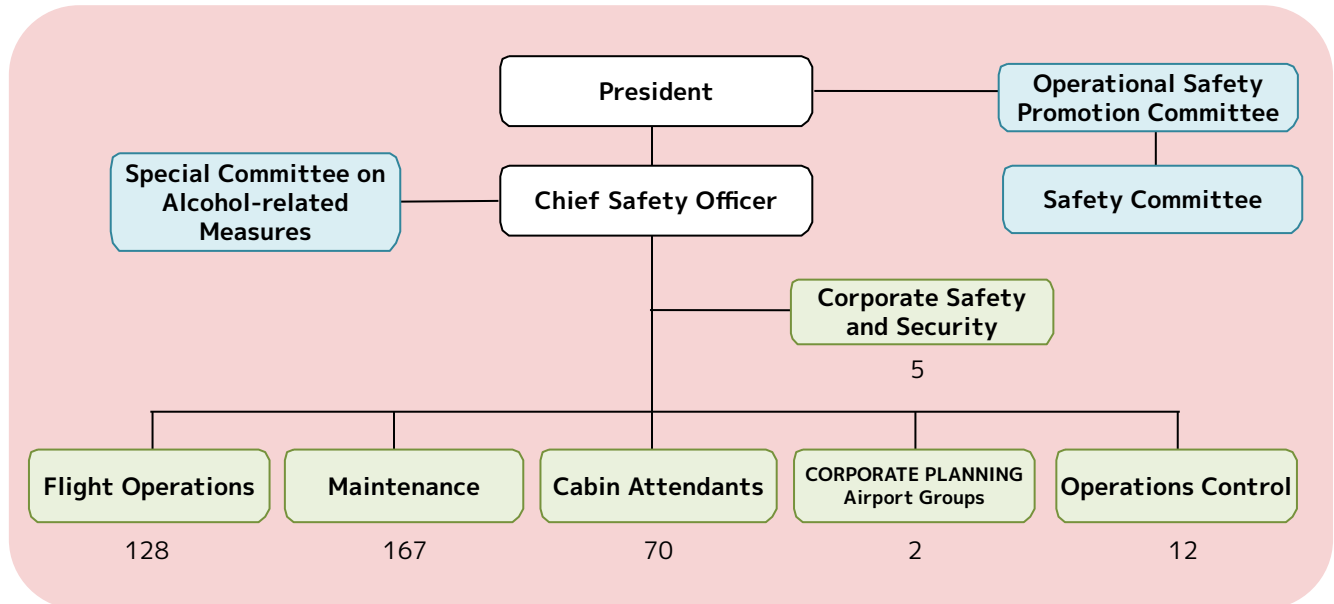
Special Committee on Alcohol-related Measures

The committee is operated under the responsibility and authority of the Chief Safety Officer in order to take an organization-wide systematic approach towards the prevention of alcohol-related incidents as part of efforts to rebuild alcohol consumption measures.



4.2.4.4. Japan Air Commuter

4.2.4.4.1 Safety management structure



4.2.4.4.2 Number of pilots, maintenance engineers, qualified maintenance engineers, cabin attendants, and dispatchers

	Number of employees	Organization	Remarks
Pilots	98	Flight Operations	
Maintenance engineers	115	Maintenance	Of these, 80 employees are qualified for maintenance engineer
Cabin attendants	70	Cabin Attendants	
Dispatchers	12	Operations Control	

4.2.4.4.3 Safety management organization

The Safety Promotion Department is responsible for safety management of the company.

4.2.4.4.4 Safety committees

Operational Safety Promotion Committee

The committee is composed of the President (Chair), the Chief Safety Officer, directors and leaders of organizations engaged in safety. It plans, coordinates and provides recommendations and advice on flight safety. The President and executive officer in charge of safety attend safety meetings of JAL, where they maintain close coordination and share information, and disseminate the information to all employees of the company.

Safety Committee

The committee, which is a sub-committee of the Operational Safety Promotion Committee, is composed of employees of each division. It promotes communication between divisions, and drafts proposals, coordinates and promotes safety enhancement measures.

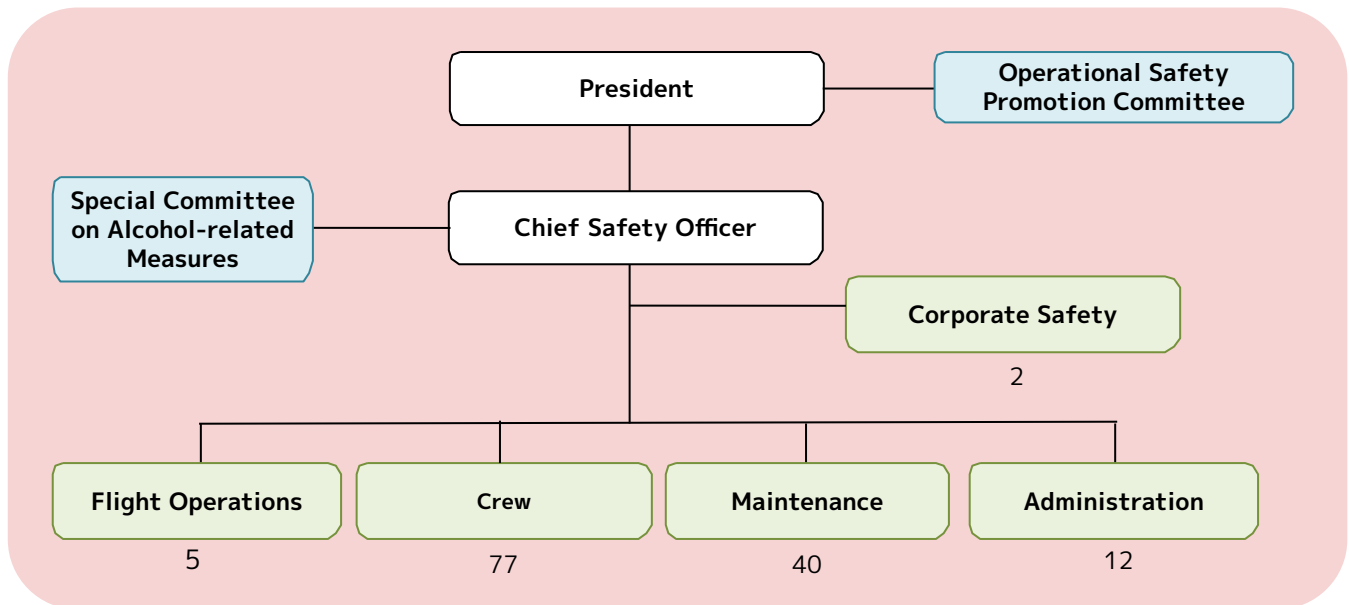
Special Committee on Alcohol-related Measures

The committee is operated under the responsibility and authority of the Chief Safety Officer in order to take an organization-wide systematic approach towards the prevention of alcohol-related incidents as part of efforts to rebuild alcohol consumption measures.



4.2.4.5. Ryukyu Air Commuter

4.2.4.5.1 Safety management structure



4.2.4.5.2 Number of pilots, maintenance engineers, qualified maintenance engineers, cabin attendants, and dispatchers

	Number of employees	Organization	Remarks
Pilots	46	Crew	
Maintenance engineers	20	Maintenance	Of these, 14 employees are qualified for maintenance engineer
Cabin attendants	24	Crew	
Dispatchers	21	Flight Operations	Shared with JTA

4.2.4.5.3 Safety management organization

The Safety Promotion Department is responsible for safety management of the company.

4.2.4.5.4 Safety committees

Operational Safety Promotion Committee

The committee is composed of the President (Chair), the Chief Safety Officer, directors, and members appointed by the President. It drafts proposals, coordinates, and provides recommendations and advice on flight safety. The President and executive officer in charge of safety attend safety meetings of JAL and JTA, where they maintain close coordination and share information, and disseminate the information to all employees of the company.

Special Committee on Alcohol-related Measures

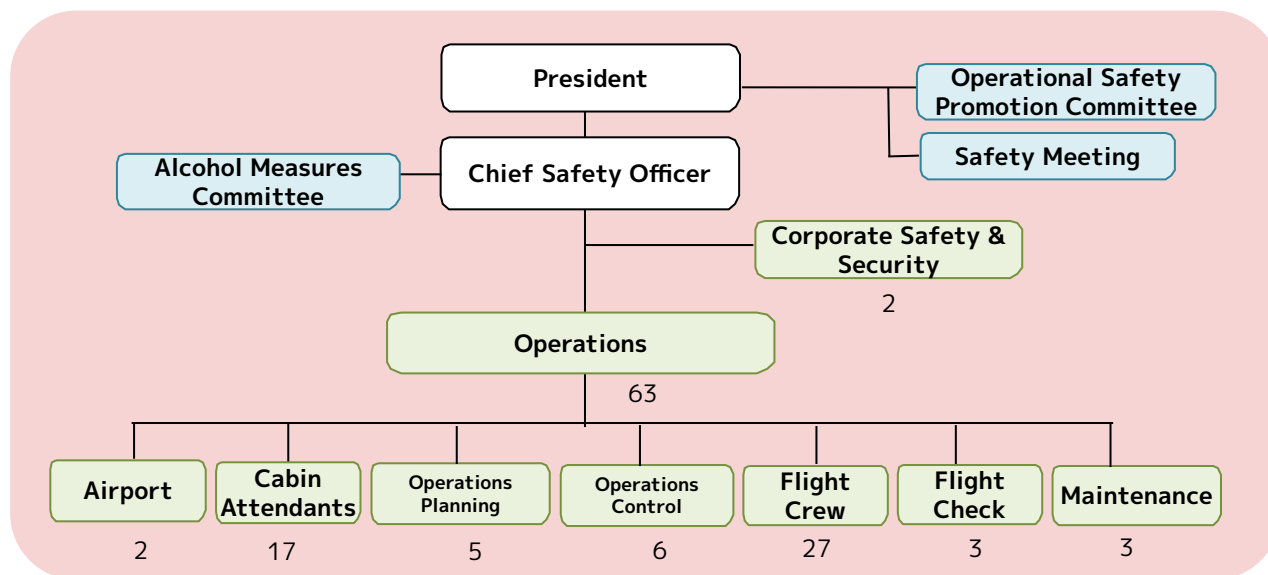
The committee is operated under the responsibility and authority of the Chief Safety Officer in order to take an organization-wide systematic approach towards the prevention of alcohol-related incidents as part of efforts to rebuild alcohol consumption measures.



4.2.4.6 Hokkaido Air System



4.2.4.6.1 Safety management structure



4.2.4.6.2 Number of pilots, maintenance engineers, qualified maintenance engineers, cabin attendants, and dispatchers

	Number of employees	Organization	Remarks
Pilots	29	Flight Crews	
Cabin attendants	17	Cabin Attendants	
Dispatchers	6	Operations Control	

(*) Since November 2007, duties of the general safety manager have been delegated to JAC.

4.2.4.6.3 Safety management organization

The Safety Promotion Department is responsible for safety management of the company.

4.2.4.6.4 Safety committees

Operational Safety Promotion Committee

The committee is composed of the President (Chair), executive officers from all divisions, and members appointed by executive officers. It plans, drafts proposals, coordinates, and provides recommendations and advice on flight safety. The President and executive officer in charge of safety attend safety meetings of JAL, where they maintain close coordination and share information, and disseminate the information to all employees of the company.

Safety Meeting

The committee, composed of the Safety Promotion Department and staff in charge of safety of frontline divisions, has been established to drive the SMS from the frontline perspective.

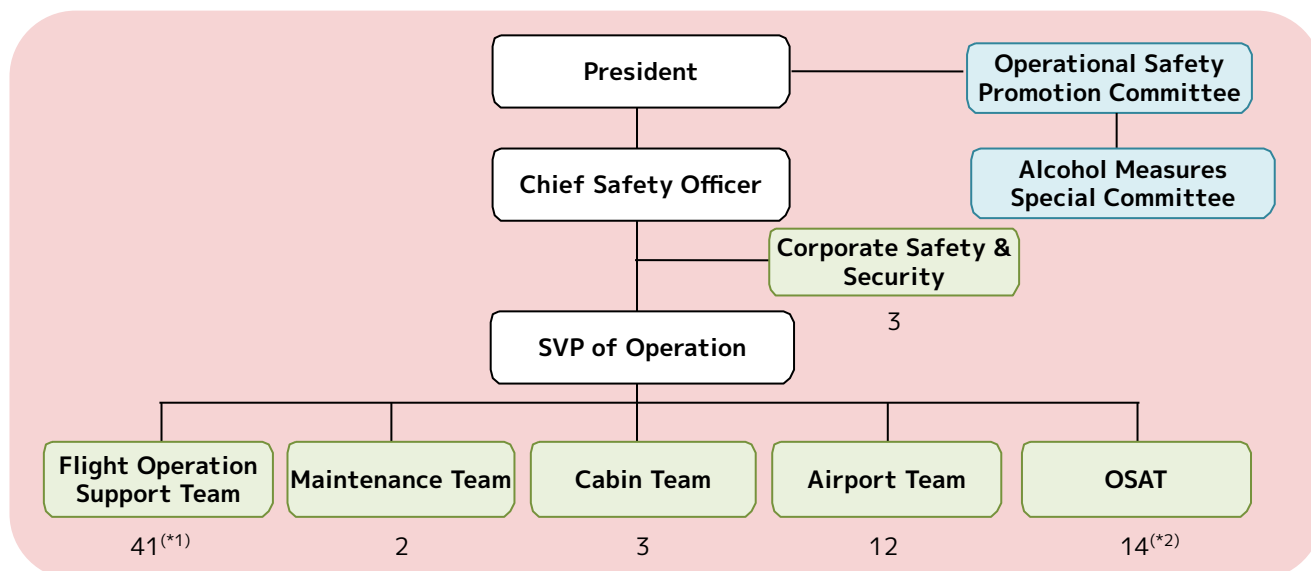
Alcohol Measures Committee

The committee is operated under the responsibility and authority of the Chief Safety Officer in order to take an organization-wide systematic approach towards the prevention of alcohol-related incidents as part of efforts to rebuild alcohol consumption measures.

4.2.4.7 ZIPAIR Tokyo



4.2.4.7.1 Safety management structure



(*)Including 36 dispatchers shared with Japan Airlines

(*)OSAT : Operation Support & Action Team

4.2.4.7.2 Number of pilots, maintenance engineers, qualified maintenance engineers, cabin attendants, and dispatchers

	Number of employees	Organization	Remarks
Pilots	120	Flight Operations Team	
Cabin attendants	298	Passenger Operations team	
Dispatchers	36	Flight Operation Support Team	Shared with JAL

(*) Since December 2019, maintenance management has been outsourced to JAL Engineering.

4.2.4.7.3 Safety management organization

The Safety Promotion Department is responsible for safety management of the company.

4.2.4.7.4 Safety committees

Operational Safety Promotion Committee

The committee is composed of the President (Chair), directors including the Chief Safety Officer, the executive officer in charge of safety management, and the Vice Presidents of General Affairs, and Planning and Marketing. It plans, drafts proposals, coordinates, and provides recommendations and advice on flight safety and aviation security. The President and executive officer in charge of safety attend safety meetings of JAL, where they maintain close coordination and share information, and disseminate the information to all employees of the company.

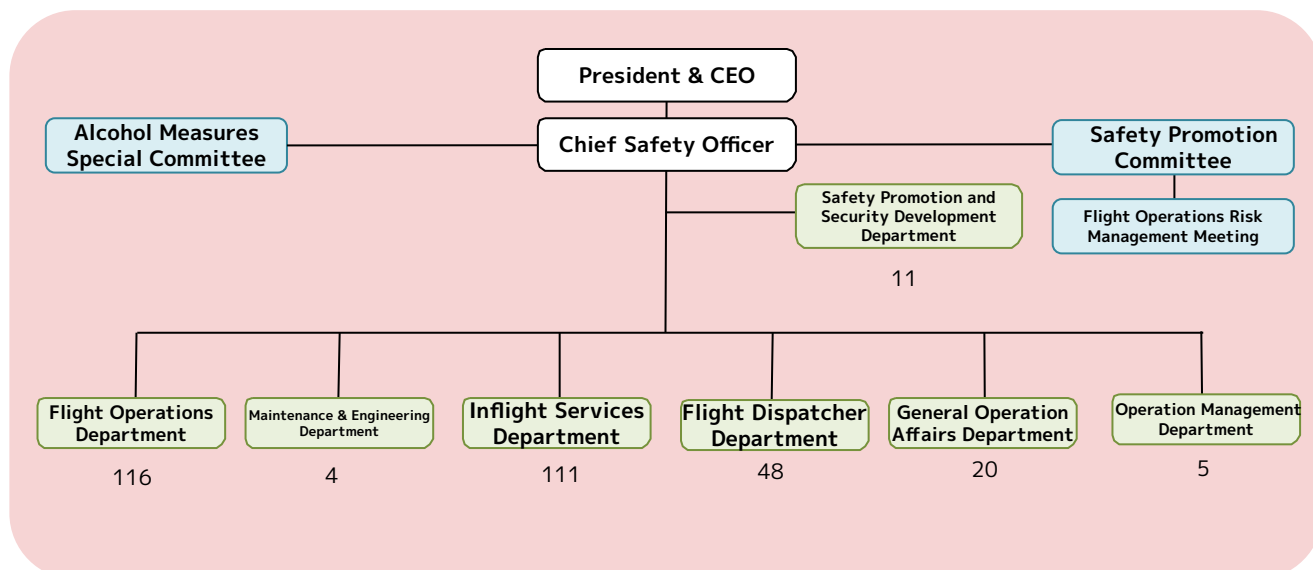
Alcohol Measures Special Committee

The committee is operated under the responsibility and authority of the Chief Safety Officer in order to take an organization-wide systematic approach towards the prevention of alcohol-related incidents as part of efforts to rebuild alcohol consumption measures.



4.2.4.8 SPRING JAPAN

4.2.4.8.1 Safety management structure



4.2.4.8.2 Number of pilots, maintenance engineers, qualified maintenance engineers, cabin attendants, and dispatchers

	Number of employees	Organization	Remarks
Pilots	90	Flight Operations Department	
Cabin attendants	103	Inflight Services Department	
Dispatchers	11	General Operation Affairs Department	

(*) Maintenance management has been outsourced to JAL Engineering.

4.2.4.8.3 Safety management organization

The Safety Promotion Department is responsible for safety management of the company.

4.2.4.8.4 Safety committees

Operational Safety Promotion Committee

The committee is composed of the Chief Safety Officer (Chair), the President, members specified in the Safety Management Manual, and the Secretariat. It plans, drafts proposal, coordinates and provides recommendations and advice on flight safety and aviation security. In addition, the President, and relevant executive offices and employees attend safety meetings of JAL, where they maintain close coordination and share information, and disseminate the information to all employees of the company.

Flight Operations Risk Management Meeting

The meeting, which is subordinate to the Safety Promotion Committee, analyzes and shares safety information across the organization and reports to the Safety Promotion Committee.

Safety Promotion Meetings within Production Divisions

These meetings are held within each production department to review safety management practices within the department and provide feedback. The results are reported to the Safety Promotion Committee through the Flight Operations Risk Management Meeting.

Alcohol Measures Special Committee

The committee is operated under the responsibility and authority of the Chief Safety Officer to ensure company-wide management of alcohol consumption measures, information gathering and analysis, and implementation and monitoring of measures.

4.2.5 Aircraft Maintenance Outsourcing

4.2.5.1 Outsourcing of aircraft maintenance management

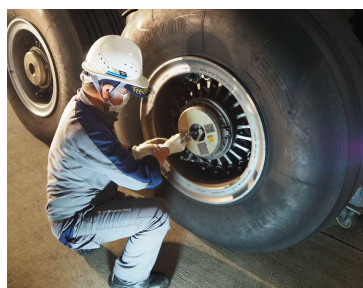
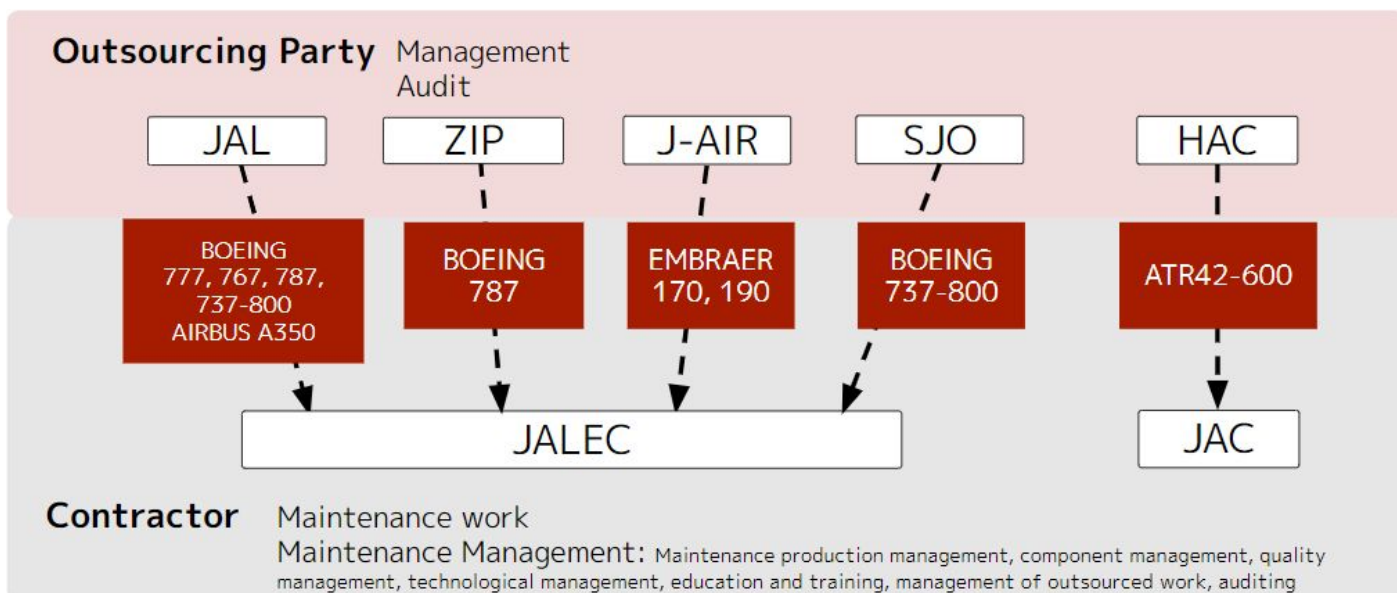
Pursuant to Article 113 Clause 2 of the Civil Aeronautics Act concerning the outsourcing of aircraft maintenance management^(*), the JAL Group partially outsources maintenance and maintenance management of JAL Group-owned aircraft to JAL Engineering and Japan Air Commuter. Maintenance services are provided according to the safety standards of the outsourcing party.

^(*) Outsourcing of aircraft maintenance management: To outsource overall aircraft maintenance management including the authority to direct and supervise maintenance work. All maintenance work and management of aircraft maintenance work (production management, component management, technological management, education and training, management of outsourcing, auditing) outsourced to the contractor is performed according to the business plan of the outsourcing party.



Tools used for maintenance work

Outsourcing Party	Contractor	Aircraft
Japan Airlines	JAL Engineering	BOEING 777/BOEING 767/ BOEING 787/BOEING 737-800/AIRBUS A350
ZIPAIR Tokyo		BOEING 787
J-AIR		EMBRAER 170/EMBRAER 190
SPRING JAPAN		BOEING 737-800
Hokkaido Air System	Japan Air Commuter	ATR42-600



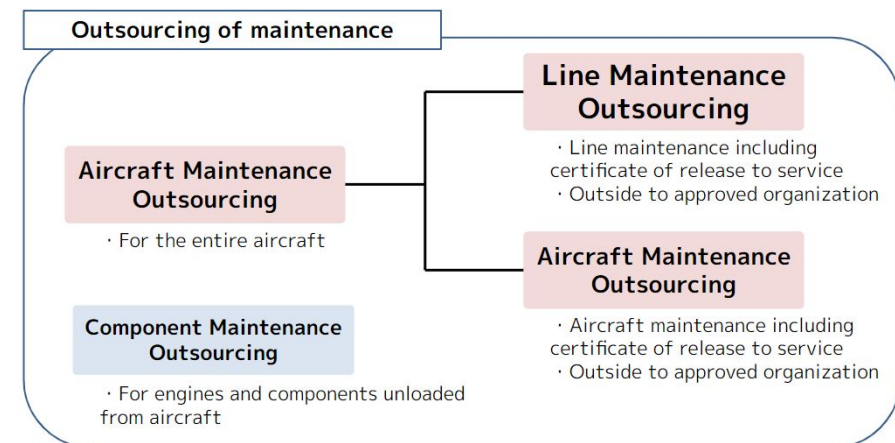
Maintenance work
by JAL Engineering

When maintenance management is outsourced to a JAL Group company, the person responsible for management of the outsourcing party supervises everyday work and conducts an annual quality audit. The contractor also assigns a person responsible for management, who closely exchanges information with the outsourcing party and ensures that maintenance work and maintenance management are performed appropriately. In this way, the JAL Group airlines coordinate to improve safety and quality even when maintenance management is outsourced.

4.2.5.2 Outsourcing of maintenance work

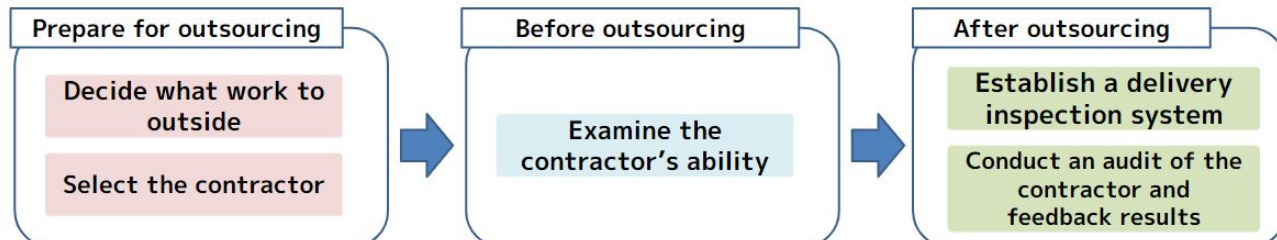
In addition to outsourcing of aircraft maintenance management described in the preceding Section 4.2.5.1, the JAL Group provides outsourced maintenance services for companies within and outside the JAL Group.

4.2.5.2.1 Details of outsourcing



4.2.5.2.2 Management of outsourced work

When outsourcing aircraft maintenance, we select a contractor with experience as a service provider that has been approved by MLIT and evaluate whether they satisfy standards set by the company. Even after outsourcing maintenance, we conduct a delivery inspection of each maintenance task as a quality control check and regularly audit the contractor, as necessary, to confirm that they have maintained their maintenance standards.



4.2.5.2.3 Main contractors

Contractors (Aircraft Maintenance)		Contractors (Component Maintenance)
Line Maintenance	Aircraft Maintenance	
<ul style="list-style-type: none"> · JAL Engineering · Japan Transocean Air · Japan Air Commuter · Lufthansa Technik · United Airlines · American Airlines · Air Canada · Hong Kong Aircraft Engineering · ST Engineering Aerospace Services · KLM Royal Dutch Airlines · British Airways · Taikoo (Xiamen) Aircraft Engineering · Shanghai Taikoo Aircraft Engineering Services · Lufthansa 	<ul style="list-style-type: none"> · Japan Transocean Air · ST Engineering Aerospace Services · Taikoo (Xiamen) Aircraft Engineering · ST Engineering Aerospace Services (Guangzhou) Aviation Services · Boeing · Airbus 	<ul style="list-style-type: none"> · JAL Engineering · All Nippon Airways · General Electric · Eagle Services Asia · Mitsubishi Heavy Industries Aero Engines · Jamco · Domestic and international contractors and manufacturers such as SR Technics

4.3 Implementation of Safety Management System

We implement the Safety Management System (SMS) in accordance with the safety management policy to ensure that the SMS functions smoothly.

4.3.1 Safety Information Gathering and Dissemination

We gather a wide range of information from reports on unsafe behavior and acts, the flight data analysis program, crew fatigue risk management program, and alcohol risk management program, and use it to prevent safety events. Since FY2021, we established a management policy on crew fatigue risk and made efforts to gather further information.

Fatigue Risk Management Program

In order to contribute to the improvement of flight safety and quality, we gather data to manage fatigue-related risks among pilots and cabin crew and take appropriate corrective action based on the gathered data.

(Fatigue Risk Management Policy)

We acknowledge that fatigue is a present symptom in cockpit and cabin crew duties, and therefore, we manage fatigue-related risks and make efforts to mitigate the risks in order to improve flight safety. JAL's fatigue risk management program applies to all flights operated by the company. It is based on scientific and historical data and is driven by continuous risk management. Fatigue risk management is only possible when the company and crew responsibly fulfill their respective duties.

The collected information is disseminated to JAL Group employees in internal documents to prevent the recurrence of unsafe events and to raise safety awareness.

The main media for sharing safety information are as follows:

- Corporate Safety, an internal document providing the JAL Group's internal safety policy
- Safety webpage of JAL website
- Safety webpage of our intranet
- Safety magazine *FLIGHT SAFETY*



Safety webpage of JAL website

4.3.2 Safety Risk Management

The JAL Group manages safety risks through the following step-by-step process, establishes measures to ensure safety, and deals with accidents and events appropriately.

Identify hazards

Utilizing gathered information on unsafe conditions and unsafe events, we identify hazards and real or hidden risk factors with the potential to cause or contribute to an aircraft accident or serious incident. All safety events within the JAL Group are managed and shared in a common JAL Safety Database (JSD).

We have established an environment that facilitates and encourages reports from staff on unsafe behavior they have experienced or unsafe conditions they have found, and the resulting events (safety events).

Assess risk for identification of the main risks

We determine the severity of consequences and the probability of occurrence, assess the acceptability of the risk level and examine the need to take action. Multiple risks are prioritized, as necessary, to know which ones are most urgent.

In addition to risk assessment by departments where risks have emerged, the Corporate Safety and Security Division assesses hazards within the Group using Event Risk Classification (ERC) to detect potential risks as early as possible.

■Risk assessment by Event Risk Classification (ERC)

Events are assessed from the viewpoint of the likelihood of hazardous events and the effectiveness of current control mechanisms (safety barriers) in order to strengthen proactive prevention of accidents. We also monitor the trend of concentration and frequency of events by scoring the risks and plotting them in each field for a certain period of time. When the cumulative score exceeds the threshold, we identify the safety issue and take mitigation measures, as necessary.

Effectiveness of current systems in preventing accidents

Effective	Limited	Minimal	Not Effective
50	102	502	2500
10	21	101	500
2	4	20	100
1			

Risk assessment matrix

Severity of the accident

Establish measures

Each department establishes and implements measures to eliminate each hazard so that high priority risks are reduced to a tolerable level.

■Causal analysis by Human Factors Analysis and Classification System (HFACS)

In order to reduce human error, we analyze not only unsafe behavior but also a wide range of factors such as procedures, working environments and organizational impacts, and take measures against underlying risk factors. We also statistically analyze the identified factors and address potential organizational issues to proactively prevent human error.

Monitor and review

We set up and monitor Safety Performance Indicators (SPI) on risk mitigation measures and assess their effectiveness. If the risk level is determined not to be acceptable, additional measures are established and implemented to ensure that the safety management system functions effectively.

Example of risk identified by ERC and mitigation measures

Unsafe event

On the A350, the storage door in the kitchen opened and the garbage can inside fell forward.

Identify hazard

It was found that when the aircraft tilted forward during landing, the storage door would open if the latch was not locked.

Assess risk

There was possible that injury could occur to passengers and the crew.

Establish measures

Attention was called to the crew about the way to push the latch and how the angle should look.

Monitor and review

No such cases occurred after the measures were implemented.

**4.3.3 Disaster Measures**

As natural disasters have become more frequent and severe, affecting social and economic activities including everyday life, it has become imperative for transport business operators to improve their preparedness for disasters to reduce and prevent the spread of damage, maintain business activities, and resume operations as quickly as possible. Under these circumstances, the JAL Group has established the JAL Group Disaster Handling Regulations and has built a framework to prevent and reduce damage by strengthening preparedness.

4.3.4 Internal Audits

The JAL Group conducted internal audits in accordance with safety management regulations to confirm that the safety management system complies with laws and internal regulations and that the system is properly operated and functioning effectively. In addition, the IOSA^(*) registered companies, JAL, J-AIR, and JTA, have conducted internal audits based on IATA requirements to ensure compliance with the standards set by IATA (IOSA standards).

(*)IOSA (IATA Operational Safety Audit): An international safety audit program established by IATA to confirm that the safety management system of an airline is functioning effectively.

4.3.5 Management Review

The JAL Group conducts management reviews of policies, plans, and various information at the Group Safety Committee chaired by the President, with the aim of ensuring that top management regularly and continuously evaluates the effective functioning of the safety management system and directs improvement as necessary.

4.3.6 Management of Change

Expansion and downsizing of organizations or changes to facilities, systems, processes and procedures due to internal and external changes in the environment may unintentionally create new hazards or affect existing risk mitigation measures. The JAL Group has established a process of Management of Change to ensure that safety risks associated with change are addressed.

4.3.7 Third-Party Assessments

4.3.7.1 Transport Safety Management Assessment

In FY2022, J-AIR, RAC, and SJO underwent a Transport Safety Management Assessment^(*) by MLIT Minister's Secretariat. Necessary measures will be taken to address Advice and Expectations below^(*). As for the other JAL Group airlines, we reported the status of top management and the Chief Safety Officer, and safety management enhancement measures on an SMS Status Confirmation Form.

【Assessment】	J-AIR	In order to ensure that efforts of the lessons learned from accidents based on the Three Actuals Principle will not cease even during the COVID-19 pandemic, J-AIR has established a new safety education facility at its Head Office and is promoting initiatives based on the situation.
	RAC	By visualization, human error was reduced, which in turn leads to protecting colleagues at work.
	SJO	In addition to compliance audits, we have established a system to check whether the PDCA cycle of the safety management system is functioning effectively by adopting an audit method mainly for checking effectiveness.
【Advice】	J-AIR	None
	RAC	Develop a Business Continuity Plan (BCP) and an associated action plan in line with the environment surrounding the company by accurately identifying the risks of natural disasters based on the overlapping hazard map.
	SJO	Review and improve measures for natural disasters by incorporating management reviews for natural disasters at the end of the fiscal year.
【Expectations】	J-AIR	Efforts must be made to complement each other in order to prevent accidents by selecting matters to be commended by the Aviation Safety Promotion Committee.
	RAC	To establish a company-wide assertion culture, the business management division shall take the lead in establishing and improving assertions and fostering employees to complement each other.
	SJO	To foster and promote employees to compliment each other as an initiative to maintain and improve employee motivation, including the distribution of thank you letters based on assertions among employees and the establishment of a system for commending employees from top management.

(*) Transport Safety Management Assessment: An assessment of all transportation modes (air, rail, marine, and vehicles) conducted by the Minister's Secretariat of MLIT to check the Safety Management System (SMS) of the company, and identify and advise improvements.

(*) Assessment, advice and expectations

【Assessment】	【Advice】	【Expectations】
<ul style="list-style-type: none"> Excellent points Points of originality and ingenuity Matters being tackled earnestly 	<ul style="list-style-type: none"> Matters to be further promoted to improve effectiveness Matters where improvement can be made Matters requiring continuous efforts for further improvement 	<ul style="list-style-type: none"> Matters where further improvement in safety management can be expected, though not of an advisory level

4.3.7.2 Safety Audit by the Authorities

In FY2022, the JAL Group airlines undertook a total of 99^(*) safety audits by the JCAB, MLIT^(*). We analyzed the cause of problems, considered measures and took the following corrective measures.







- Setting up appropriate mechanisms for storing information related to hazardous materials
- Appropriate establishment of planning procedures for return training of flight crews
- Setting up appropriate procedures for implementing change control
- Setting up appropriate procedures for conducting alcohol testing for flight attendants in between flights and setting up education for flight attendants to improve their independence in the testing

(*) En-route audit is not included.

(*) Safety audit by the JCAB, MLIT: An inspection conducted by the JCAB, MLIT at the premises of the airline's head office divisions, airport bases, training facilities and other facilities to confirm the establishment of the SMS and performance of duties by flight operations, maintenance and other divisions.

4.3.7.3 Outside Directors and Outside Auditors and Supervisory Board Members

Japan Airlines has three outside directors and three outside auditors and supervisory board members, who provide objective advice and recommendations on responses to the external environment and various issues. (For details, please check the [JAL website](#).)

Outside Directors		KOBAYASHI Eizo (Important positions concurrently assumed outside the Company) · Emeritus Director of ITOCHU Corporation · Outside Director of Japan Exchange Group, Inc.
		HATCHOJI Sonoko (Important positions concurrently assumed outside the Company) · Outside Director of Daicel Corporation · Outside Director of Maruha Nichiro Corporation
		YANAGI Hiroyuki (Important positions concurrently assumed outside the Company) · Advisor of Yamaha Motor Co., Ltd. · Outside Director of AGC Inc. · Outside Director of Kirin Holdings Company, Limited · Outside Director of Mitsubishi Electric Corporation
Outside Auditors and Supervisory Board Member		KAMO Osamu (Important positions concurrently assumed outside the Company) · Attorney at Law, Managing Partner of Ginza Sogo Law Office · Outside Auditor & Supervisory Board Member of Azeath Corporation
		KUBO Shinsuke (Important positions concurrently assumed outside the Company) · Managing Partner of Kyoei Accounting Office · Outside Auditor & Supervisory Board Member of KAWASAKI KISEN KAISHA, Ltd.
		OKADA Joji (Important positions concurrently assumed outside the Company) · External Director of Japan Exchange Regulation

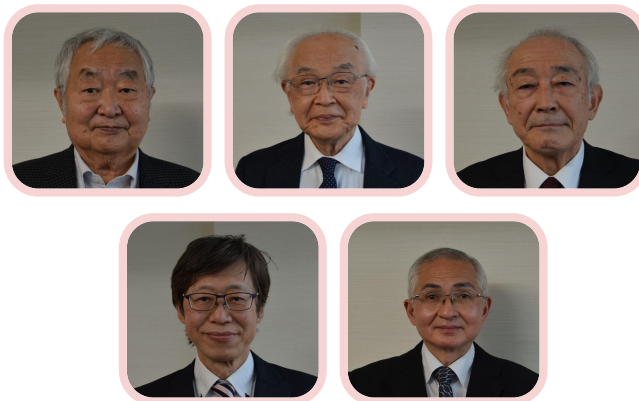
(As of April 1, 2023)

4.3.7.4 Safety Advisory Group

In August 2005, JAL requested five experts with extensive knowledge and experience in human factors, analysis of failures and defects, organizational management and culture, and safety to provide the company with objective advice and recommendations. This external panel of experts, called the Safety Advisory Group, provides a wide range of safety advice and recommendations from a professional perspective, which are used in management and safety initiatives of the JAL Group.



Follow-up meeting with management



Members of Safety Advisory Group
Upper row, from left, Prof. Hatamura,
Mr. Yanagida (Chair), Prof. Kamata,
Lower row, from left, Prof. Haga, Prof. Komatsubara

Members of Safety Advisory Group	
YANAGIDA Kunio (Chair)	Non-fiction writer, critic
HATAMURA Yotaro	Professor Emeritus at The University of Tokyo, Representative of Hatamura Institute for the Advancement of Technology Ltd. Fields of expertise include nano and micro machining, production machining science, healthcare engineering, the science of failure, the science of danger, and the science of creativity.
KAMATA Shinichi	Professor Emeritus at National Defense Academy of Japan. Fields of expertise include organizational theory and business administration.
HAGA Shigeru	Senior Technology Advisor at Research Institute for Social Safety, Professor Emeritus at Rikkyo University. Fields of expertise include traffic psychology, industrial psychology, and ergonomics.
KOMATSUBARA Akinori	Professor at Faculty of Science and Engineering of Waseda University. Fields of expertise include human life engineering.

4.3.7.5 IATA Operational Safety Audit (IOSA)

IOSA is an international safety audit program designed to ensure that an airline's SMS is functioning effectively. In the JAL Group, JAL, JTA, and J-AIR are IOSA-registered airlines. IATA member airlines are required to undergo an audit regularly, and the next audit is scheduled for FY2024.



4.3.8 Education, Training and Safety Awareness

The JAL Group provides education and training according to the role and position of each employee to equip them with the skills, knowledge, and abilities necessary for safety-related duties. We also share necessary safety information and conduct Safety Education regularly.

4.3.8.1 Initiatives based on the Three Actuals Principle

The Three Actuals Principle is a concept advocated by Prof. HATAMURA Yotaro of the Safety Advisory Group that frontline staff can understand the essence of accidents by going to the "actual place", seeing the "actual object" (parts of remaining aircraft, personal belongings of the victims, among others) and listening to stories of the "actual people" who experienced the situation at the time of the accident. JAL Group staff climb the Osutaka Ridge, the "actual place" of the accident, to console the souls of the victims, and see remaining parts of the aircraft and other "actual objects" in the Safety Promotion Center. By watching news videos of the accident and listening to talks from the "actual people", the JAL Group employees reaffirm the importance of safety from the depths of their mind.



Memorial climbing to Osutaka Ridge is different from manual learning. In this way it ensures a sense of safety that no matter what you face, you will be on the side of safety.

Through memorial climbing, new employees think deeply about what they must do with a sense of ownership, and leaders and executives express their desire for safety.

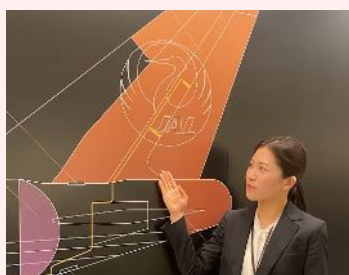


We visit the Safety Promotion Center, which is the cornerstone of safety at the juncture of our career, as a place to face the "physical" issues. We learn about accidents by confronting them, and we take a vow to ensure safety by bearing in mind the importance that the JAL Group's work is to look after our customers' precious lives and assets. The Safety Promotion Center is open to the public, and as of the end of March 2023, there were more than 280,000 visitors, both internally and externally.



By hearing directly from the people in the field, we hear what they saw and felt at the time, and learn deeply about the accident by putting ourselves in the same situation. Every year since 2005, we have been holding "Safety Talks - Stories to Pass On to Future Generations -," in which we hear directly from "actual people", with the aim of learning about past accidents, touching on the nature of accidents, and applying lessons learned from them to future safety. In fiscal 2022, we gave lectures on topics that cover not only aircraft accidents but also safety in a broader sense.

Voice of an employee-guide at the Safety Promotion Center



YAMAMOTO Kaede
Corporate Safety and Security,
Japan Airlines

At the Safety Promotion Center, the wishes of the victims, bereaved families, and related parties are displayed to remind us that the tragic accident should never occur again. As a guide at the Center, which is the starting point of safety, I instilled the bereaved families' thoughts that will never be healed no matter how many years pass. Even though majority of our employees are from a generation before the accident, it is important for each of us, from new employees to management to face the fact that the accident happened, to take responsibility deeply into our hearts, and to protect safe operations daily. By ensuring that the lessons learned from the accident and the preciousness of life are passed onto future generations, I strive to make all employees identify with and think of the importance of flight safety and to take action.

4.3.8.2 Safety Education

In order to maintain safety, which is the basic foundation for business continuity of the JAL Group, we provide employees with knowledge, skills, and abilities necessary for their everyday duties and education to develop employees with a high level of safety awareness.

4.3.8.2.1 Safety education common to the JAL Group

All JAL Group employees receive Safety Education regularly to re-evaluate safety associated with their duties and to foster an awareness that safety is the basis for business continuity of the JAL Group. In addition, the JAL Group and other companies and industries conduct annual education to raise awareness again by reflecting on drinking problems and to reconfirm correct knowledge about alcohol to ensure thorough self-management.

4.3.8.2.2 Safety Training by JAL Group Hierarchy

Based on the Three Actuals Principle (“actual place,” seeing the “actual object” (parts of remaining aircraft, personal belongings of the victims, among others), we will think about safety through a memorial climb to Osutaka Ridge, a tour of the Safety Awareness Center, and watching videos of people who were directly involved in the accident. Finally, a Safety Pledge was created to put their thoughts into action and linking them to our daily actions.

Safety Seminar for New Employees	Safety Seminar for Employees with Ten Years of Employment	NEW	Safety Seminar for New Managers
The JAL Group provides a common Group education program for new employees for them to be aware of, to identify with, and to think about JAL’s past accidents and consider what they each need to do to ensure safety with a sense of ownership.	The JAL Group provides this program for employees with ten years of employment. This is to provide them, as a workplace leader, to learn the perspectives and ideas necessary to lead small groups while serving as a role model to promote safety awareness.		The JAL Group provides education for new managers to renew their awareness of the relationships between their responsibilities as organizational leaders and safety.

Comments from a Participant of the Safety Seminar for Employees with Ten Years of Employment

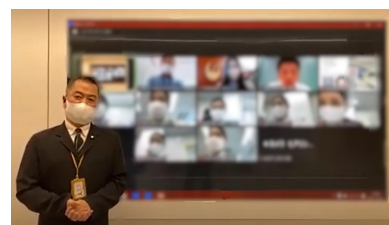


TOMINAGA Moe
Cabin Attendants Division,
Japan Airlines

Ten years have passed since I joined the company, and as my position and role has changed. I have gained different perspectives and new awareness from the safety seminar I received when I joined the company. In addition, by mentioning the three facts again, I became acutely aware of the tragedy of the accident and the gravity of the fact that many lives were lost. It was a good opportunity for me to reflect on my safety awareness and objectives of observing safety. In addition, through discussions with my contemporaries who are working toward the same goal of safe flight operations, I was able to share my struggles as a leader and the difficulties I have in interacting with my peers. As a leader, I would like to create an environment where it is easy to report and point things out, have a “second to the third person” point of view, and be the center of the vortex so that everyone can work with the same sense of safety.

4.3.8.2.3 Safety Promotion Seminar

For JAL Group employees and subcontract staff, we hold seminars where employees voluntarily participate, such as a tour of the Safety Promotion Center, a memorial climb to Osutaka Ridge, a second to the third person perspective seminar, and a safety seminar for interindustry exchanges. We strive to raise safety awareness through the participation of employees from both domestic and overseas job categories and regions by holding conversations about safety.



Online tour
of the Safety Promotion Center

4.3.8.3 Training and assessment

To assure stable safety and quality standards, the following training and education programs are provided for pilots, cabin attendants, maintenance engineers, and dispatchers.

4.3.8.3.1 Pilots

Pilots begin as trainees to learn flight basics such as training, checking and flying experiences before becoming co-pilots. It takes more than ten years to be promoted to become a captain of a ship. In addition, even after becoming a first officer or a captain, it is legally required to undergo regular training and tests every year. They undergo various training tests using flight simulators, not only for controlling aircraft but also for handling abnormal and emergency situations. In the past, training tests for pilots focused on personal flying skills (technical skills), such as the accuracy of manual handling and maneuvering in the event of engine failure. In addition to these, more emphasis has been placed on the contents of modern aircraft operations. For example, how to respond to various problems and changes in flight situations and how the captain and the first officer form a team to solve problems by communicating appropriately. We place importance on the skills (non-technical skills) that enable the team to function and manage the flight safely. To improve competency (*) worldwide practical training tests applying the Competency-based Training and Assessment (CBTA) are deployed. JAL has also introduced CBTA to improve its ability to cope with various situations and enhance safety (resilience). We also use IT to analyze and utilize training, and check data and various information obtained from route operations to improve training and checks.



(*) Competencies: Skills, Knowledge, and Attitude competency factors that form the basis of flight crew behavior to address various situations and enhance safety. (Skills include technical and non-technical skills)

4.3.8.3.2 Cabin Attendants

During the initial training at the time of employment, cabin attendants aim to develop autonomous human resources. By attending practical training programs they can acquire the basics of a security personnel. In order to be able to respond quickly and reliably in the event of an emergency, we conduct training on measures such as emergency landing (including water landing), fire, sudden depressurization, operation of escape doors, and measures to protect safety.



Later, during the periodic rescue training, we prepare training contents to maintain skills and knowledge, cooperation with pilots and colleagues so that each cabin attendant can independently demonstrate their abilities and respond to emergency situations.

In addition, periodic safety training is provided to ensure that employees properly understand the safety procedures and related laws and regulations specified in the manual.

4.3.8.3.3 Maintenance Engineers

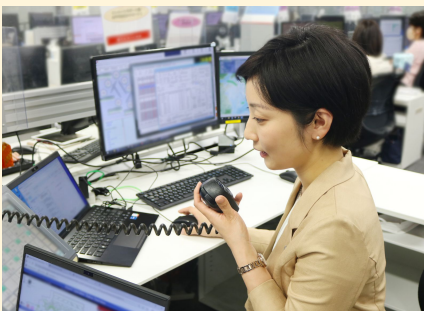
After joining the company, maintenance engineers are educated and trained in a well-planned manner to acquire various qualifications including internal, Japanese and European qualifications. They are required to continuously gain advanced knowledge and skills. In the training course for mechanics, they not only acquire expertise in aircraft maintenance, but are also receive fundamental education that incorporates the active learning method through repeated interactive dialogues. This aids engineers to gain the ability to think and communicate, while also strengthening their ability to explore and think about problems and issues.

In addition, with the aim to further improve their mechanic skills, led by highly skilled mechanics (such as top meisters), the organization is working to raise the skill level of the entire organization to carry out activities to develop distinguished mechanics. In addition, the following education and training are conducted to develop a correct understanding of the quality system, a strong sense of responsibility, and mission for safety.



- Human factors training
- Quality assurance training
- Safety forums
- Education by grade

4.3.8.3.4 Dispatchers



After joining the company, dispatchers are educated and trained on a wide range of subjects relating to aircraft, including aeronautical meteorology, aviation regulations, aircraft systems, and air traffic control. They must pass competency tests for aircraft dispatchers, which is a national qualification. Thereafter they must further increase their knowledge and skills through hands-on experience and training to pass the company's practical and oral examinations in order to work as a JAL Group dispatcher. After passing the examination, they continue to brush up on their knowledge through periodical examinations and training sessions, to ensure they maintain the necessary knowledge and skills.

In addition, we are implementing IOC^(*) Competency^(**) education as an initiative that will lead to the growth of each dispatcher. This is to prepare the dispatchers for all types of operational risks to support safe and secure operations in the face of significant changes in the environment surrounding operations, such as natural disasters and conflicts. We support the safe operation of the aircraft through the training, examination, and daily operations described above.

^(*) IOC: An organization for centrally managing operations of the JAL Group

^(**) IOC competency: Competencies (behavioral characteristics) defined by ICAO, adapted for IOC staff Communication, Situation Awareness, Workload Management, Problem Solving/Decision Making, Team Building, Strengthening Organizational Functions, Specialty Skills, and Application of Procedures and Regulations

4.3.8.4 Safety-related communication

The JAL Group is focusing on a variety of initiatives that focus on the workplace culture and the motivation of employees, such as creating an atmosphere in which opinions and consultations can be casually held in the workplace, and praising the contributions of employees who take their daily work seriously. We are working to foster a culture of safety through these initiatives.

4.3.8.4.1 Direct communication between employees and management

The JAL Group provides opportunities for top management and executive officers of Flight Operations, Engineering and Maintenance, Cabin Attendants, Airport Operations, Operations, Cargo and Mail, and other production divisions to visit frontlines on a regular basis to communicate directly with our employees. During the Semiannual Safety Campaign and the Year-end and New Year Safety Inspection, executive officers of general managing divisions such as General Affairs, Accounting, Human Resources, and IT Planning, as well as production divisions, visit airports in Japan and overseas to try to identify the issues at the frontlines.



Workplace visit by executive officers

4.3.8.4.2 Communication Leader Meeting (CLM)

The CLM is a meeting where employees in various occupations and divisions assemble from all over Japan to communicate with each other to create an open corporate culture, promote autonomous activities, and strengthen frontline capabilities. This is an initiative to bring co-workers together to make connections and broaden their perspectives by discussing and solving active or latent issues within the JAL Group.



CLM Activities Reporting Meeting for Management

4.3.8.4.3 Employee recognition awards

The JAL Group awards the employees with the aim to foster a culture to compliment each other and enhance safety awareness. In the JAL Awards Fortress of Safety category, employees are awarded for such actions as proactively preventing events that affect safe operations by acting in accordance with the Safety Charter or analyzing and reporting irregularities, and contributing significantly to sharing knowledge and actively preventing recurrence. In addition to the above awards, the Senior Vice President of Corporate Safety and Security presents a Certificate of Appreciation to employees for detecting abnormal situations and preventing trouble.



Certificate of Appreciation Presentation Ceremony

5. Data

5.1 JAL Group Passenger Traffic Data

5.1.1 Aircraft types

	2022					
	Total Flights	YoY (%)	RPK (000's)	YoY (%)	RTK (000's)	YoY (%)
777-300ER	5,193	97.9	7,987,474	375.6	1,491,822	133.6
777-200ER	5,706	115.3	1,290,957	166.6	140,928	123.1
787-8	23,056	127.7	10,059,740	474.7	1,663,278	180.7
787-9	12,410	101.8	9,670,423	439.1	2,005,243	124.2
767-300ER	36,826	171.6	6,679,794	296.4	712,515	246.0
737-800	108,722	132.5	8,525,321	178.5	678,609	174.8
A350	24,264	195.3	6,540,134	257.2	661,548	221.5
ATR42-600	29,123	128.9	207,686	174.6	15,790	173.1
ATR72-600	4,768	123.8	55,952	159.0	4,260	158.0
DHC8-Q400CC	14,342	120.2	76,835	119.1	6,423	116.1
EMBRAER170	49,042	132.6	880,451	165.0	66,773	163.4
EMBRAER190	31,000	133.7	1,092,986	177.5	83,461	175.4
SAAB 340B	0	0.0	0	0.0	0	0.0
Total	344,452	133.7	53,067,752	292.0	7,530,651	155.3

Key

RPK= Revenue Passenger Kilometers

RTK= Revenue Ton Kilometer

Note:

*Data includes sales by other airline partners on JAL operated flights.

*Starting FY2020, International Financial Reporting Standards (IFRS) have been applied, in which award tickets are counted as revenue tickets. As a result, the figures listed above (Passengers, RPK, LF) include passengers traveling with an award ticket.

*Tickets sold as codeshare flights operated by a partner carrier are not included in the data.

*The data of SJO is from June 29, 2021.

5.1.2 Route

5.1.2.1 International

Combined international traffic data of the JAL Group (JAL, ZIP, SJO)

	2022								2021
	Total Flights	Total Passengers	YoY (%)	RPK (000's)	YoY (%)	ASK (000's)	YoY (%)	L/F (%)	
America	8,783	1,415,959	409.5	13,087,803	406.3	18,398,078	162.4	71.1	28.4
Europe	2,748	389,465	430.6	3,640,147	433.8	5,452,100	122.1	66.8	18.8
Southeast Asia	14,058	2,136,945	580.9	9,179,105	569.3	12,943,313	188.2	70.9	23.4
Oceania	869	128,644	767.9	1,019,109	773.9	1,346,515	212.2	75.7	20.7
Hawaii/Guam	2,714	374,253	1141.8	2,292,407	1133.6	3,689,740	445.4	62.1	24.4
Korea	1,687	286,056	2466.0	347,089	2378.5	484,881	399.1	71.6	12.0
China	1,197	143,626	220.4	276,794	220.9	491,735	142.0	56.3	36.2
Total	32,056	4,874,948	524.0	29,842,453	485.5	42,806,361	174.0	69.7	25.0

Key

RPK= Revenue Passenger Kilometers

ASK= Available Seat Kilometers

L/F= Load Factor=RPK÷ASK

Note:

*Data includes sales by other airline partners on JAL operated flights.

*Starting FY2020, International Financial Reporting Standards (IFRS) have been applied, in which award tickets are counted as revenue tickets. As a result, the figures listed above (Passengers, RPK, LF) include passengers traveling with an award ticket.

*Tickets sold as codeshare flights operated by a partner carrier are not included in the data.

*The data of SJO is from June 29, 2021.

5.1.2.2 Domestic

Combined domestic traffic data of the JAL Group (JAL, J-AIR, JTA, JAC, RAC, HAC, SJO)

			2022						2021
			Total Flights	Total Passengers	YoY (%)	Number of available seats	YoY (%)	L/F (%)	
TOKYO (HANEDA) - OSAKA (ITAMI)	-		10,910	2,242,985	157.1	3,305,145	136.2	67.9	58.8
TOKYO (HANEDA) - OSAKA (KANSAI)	-		2,120	223,732	333.5	343,538	207.5	65.1	40.5
TOKYO (HANEDA) - SAPPORO (NEW CHITOSE)	-		11,581	2,602,775	183.6	3,760,852	146.0	69.2	55.0
TOKYO (HANEDA) - NAGOYA (CHUBU)	-		1,139	106,519	327.0	169,123	203.6	63.0	39.2
TOKYO (HANEDA) - FUKUOKA	-		12,438	2,685,082	170.8	4,047,383	142.7	66.3	55.4
TOKYO (HANEDA) - OKINAWA (NAHA)	-		9,239	2,416,344	209.2	3,093,267	140.1	78.1	52.3
TOKYO (HANEDA) - MEMANBETSU	-		2,150	230,470	181.5	399,666	131.3	57.7	41.7
TOKYO (HANEDA) - ASAHIKAWA	-		2,861	458,148	207.2	687,806	150.6	66.6	48.4
TOKYO (HANEDA) - KUSHIRO	-		2,120	215,694	194.2	382,370	146.0	56.4	42.4
TOKYO (HANEDA) - OBIHIRO	-		2,821	334,350	202.5	587,305	164.6	56.9	46.3
TOKYO (HANEDA) - HAKODATE	-		2,200	340,042	193.2	485,531	142.0	70.0	51.5
TOKYO (HANEDA) - AOMORI	-		4,278	442,585	215.0	713,642	165.6	62.0	47.8
TOKYO (HANEDA) - MISAWA	-		2,888	244,393	213.2	364,086	152.1	67.1	47.9
TOKYO (HANEDA) - AKITA	-		2,787	218,546	214.6	456,103	193.8	47.9	43.3
TOKYO (HANEDA) - HANAMAKI	-		102	6,683	145.6	9,690	182.1	69.0	86.3
TOKYO (HANEDA) - YAMAGATA	-		1,444	94,277	177.7	137,104	98.2	68.8	38.0
TOKYO (HANEDA) - SENDAI	-		136	15,920	105.9	21,926	121.2	72.6	83.1
TOKYO (HANEDA) - KOMATSU	-		4,197	468,047	196.8	778,131	171.0	60.2	52.3
TOKYO (HANEDA) - NANKI-SHIRAHAMA	-		2,232	229,669	165.1	352,243	127.4	65.2	50.3
TOKYO (HANEDA) - OKAYAMA	-		3,580	340,007	209.5	584,295	159.5	58.2	44.3
TOKYO (HANEDA) - IZUMO	-		3,557	484,180	192.5	771,659	149.8	62.7	48.8
TOKYO (HANEDA) - HIROSHIMA	-		5,766	630,121	205.0	1,206,055	175.0	52.2	44.6
TOKYO (HANEDA) - YAMAGUCHIUBE	-		2,842	234,408	202.9	458,220	151.4	51.2	38.2
TOKYO (HANEDA) - TOKUSHIMA	-		4,279	547,232	211.8	998,527	183.2	54.8	47.4
TOKYO (HANEDA) - TAKAMATSU	-		5,006	498,157	208.9	905,251	169.4	55.0	44.6
TOKYO (HANEDA) - KOCHI	-		3,584	355,735	194.4	584,787	148.3	60.8	46.4
TOKYO (HANEDA) - MATSUYAMA	-		4,336	434,561	204.0	705,874	152.0	61.6	45.9
TOKYO (HANEDA) - KITAKYUSHU	-		2,831	237,131	195.1	459,849	153.1	51.6	40.5
TOKYO (HANEDA) - OITA	-		4,285	446,770	182.0	752,013	152.7	59.4	49.8
TOKYO (HANEDA) - NAGASAKI	-		4,290	529,543	202.3	840,760	166.1	63.0	51.7
TOKYO (HANEDA) - KUMAMOTO	-		5,674	710,169	197.9	1,216,937	175.2	58.4	51.7
TOKYO (HANEDA) - MIYAZAKI	-		4,219	349,338	182.9	587,418	134.6	59.5	43.8
TOKYO (HANEDA) - KAGOSHIMA	-		5,705	786,122	192.1	1,239,664	148.4	63.4	49.0
TOKYO (HANEDA) - AMAMI-OSHIMA	-		732	91,709	142.4	120,318	100.8	76.2	54.0
TOKYO (HANEDA) - MIYAKO	-		764	114,111	153.2	148,640	103.2	76.8	51.7
TOKYO (HANEDA) - ISHIGAKI	-		1,455	218,702	171.3	308,262	114.7	70.9	47.5
TOKYO (HANEDA) - KUMEJIMA	-		144	15,165	235.5	15,840	116.2	95.7	47.2
TOKYO (NARITA) - OSAKA (ITAMI)	-		729	76887	1,467.6	120285	561.2	63.9	24.4
TOKYO (NARITA) - SAPPORO (NEW CHITOSE)	-		2,506	266,244	830.2	473,634	775.9	56.2	52.5
TOKYO (NARITA) - NAGOYA (CHUBU)	-		1,232	97,457	2,162.8	178,030	1,014.1	54.7	25.7
TOKYO (NARITA) - SENDAI	-		20	373	-	3,780	-	9.9	-
TOKYO (NARITA) - HIROSHIMA	-		1,730	155,052	587.0	326,970	530.7	47.4	42.9
TOKYO (NARITA) - SAGA	-		241	18,880	160.4	45,549	128.2	41.4	33.1

			2022						2021
			Total Flights	Total Passengers	YoY (%)	Number of available seats	YoY (%)	L/F (%)	
OSAKA (ITAMI)	-	SAPPORO (NEW CHITOSE)	3,256	430,880	173.9	522,276	126.8	82.5	60.1
OSAKA (ITAMI)	-	FUKUOKA	2,723	183,516	130.0	231,173	99.7	79.4	60.9
OSAKA (ITAMI)	-	OKINAWA (NAHA)	1,699	443,151	186.4	612,737	105.7	72.3	41.0
OSAKA (ITAMI)	-	MEMANBETSU	82	4,931	137.5	7,410	121.1	66.5	58.6
OSAKA (ITAMI)	-	ASAHIKAWA	62	7,838	228.1	10,230	100.0	76.6	33.6
OSAKA (ITAMI)	-	HAKODATE	729	58,158	161.2	69,255	112.8	84.0	58.8
OSAKA (ITAMI)	-	AOMORI	2,197	137,275	171.5	207,993	125.6	66.0	48.3
OSAKA (ITAMI)	-	MISAWA	722	42,629	153.7	68,590	101.6	62.2	41.1
OSAKA (ITAMI)	-	AKITA	2,120	93,196	257.0	180,633	176.8	51.6	35.5
OSAKA (ITAMI)	-	HANAMAKI	2,817	119,624	207.5	215,270	160.9	55.6	43.1
OSAKA (ITAMI)	-	YAMAGATA	2,177	100,655	203.1	168,378	141.5	59.8	41.6
OSAKA (ITAMI)	-	SENDAI	5,700	291,817	202.7	523,868	154.5	55.7	42.5
OSAKA (ITAMI)	-	NIIGATA	2,782	118,861	230.0	250,154	169.4	47.5	35.0
OSAKA (ITAMI)	-	MATSUMOTO	62	3,658	200.2	4,712	100.0	77.6	38.8
OSAKA (ITAMI)	-	TAJIMA	1,334	29,367	140.4	64,032	105.0	45.9	34.3
OSAKA (ITAMI)	-	IZUMO	2,823	127,616	220.5	222,756	165.5	57.3	43.0
OSAKA (ITAMI)	-	OKI	710	32,257	214.5	59,763	110.5	54.0	27.8
OSAKA (ITAMI)	-	MATSUYAMA	1,450	62,473	192.5	111,302	114.7	56.1	33.5
OSAKA (ITAMI)	-	OITA	2,164	102,618	189.7	165,832	131.1	61.9	42.8
OSAKA (ITAMI)	-	NAGASAKI	2,858	147,728	217.6	270,750	162.8	54.6	40.8
OSAKA (ITAMI)	-	KUMAMOTO	2,877	138,300	220.6	238,336	163.5	58.0	43.0
OSAKA (ITAMI)	-	MIYAZAKI	3,616	174,994	188.2	314,697	152.8	55.6	45.2
OSAKA (ITAMI)	-	KAGOSHIMA	5,589	278,221	175.8	510,730	148.9	54.5	46.1
OSAKA (ITAMI)	-	TANEGASHIMA	78	2,905	182.8	6,004	102.6	48.4	27.2
OSAKA (ITAMI)	-	YAKUSHIMA	697	24,729	124.3	33,456	98.9	73.9	58.8
OSAKA (ITAMI)	-	AMAMI-OSHIMA	808	75,625	140.1	132,900	119.3	56.9	48.5
OSAKA (ITAMI)	-	TOKUNOSHIMA	8	484	119.8	684	90.0	70.8	53.2
OSAKA (KANSAI)	-	SAPPORO (NEW CHITOSE)	1,393	176,697	295.0	229,803	154.3	76.9	40.2
OSAKA (KANSAI)	-	OKINAWA (NAHA)	1,996	206,107	318.6	329,340	173.9	62.6	34.1
OSAKA (KANSAI)	-	ISHIGAKI	708	67,714	201.9	116,820	115.7	58.0	33.2
OSAKA (KANSAI)	-	MIYAKO	316	32,461	159.1	52,140	104.6	62.3	40.9
SAPPORO (NEW CHITOSE)	-	MEMANBETSU	2,165	99,984	132.5	164,540	107.0	60.8	49.1
SAPPORO (NEW CHITOSE)	-	HAKODATE	8	234	-	608	-	38.5	-
SAPPORO (NEW CHITOSE)	-	AOMORI	2,132	88,432	183.2	162,032	163.6	54.6	48.7
SAPPORO (NEW CHITOSE)	-	AKITA	1,369	41,891	216.4	104,044	176.2	40.3	32.8
SAPPORO (NEW CHITOSE)	-	HANAMAKI	2,102	68,968	210.2	159,752	209.2	43.2	43.0
SAPPORO (NEW CHITOSE)	-	SENDAI	3,542	150,416	167.7	282,264	155.3	53.3	49.3
SAPPORO (NEW CHITOSE)	-	NIIGATA	1,384	57,122	210.2	105,184	159.4	54.3	41.2
SAPPORO (NEW CHITOSE)	-	HIROSHIMA	728	91,191	216.5	120,120	133.1	75.9	46.7
SAPPORO (NEW CHITOSE)	-	IZUMO	36	4,706	393.1	5,940	105.9	79.2	21.3
SAPPORO (NEW CHITOSE)	-	TOKUSHIMA	26	3,190	380.2	4,290	100.0	74.4	19.6
SAPPORO (OKADAMA)	-	RISHIRI	835	25,795	140.2	40,080	122.5	64.4	56.2
SAPPORO (OKADAMA)	-	MEMANBETSU	1,247	32,626	429.3	59,856	276.2	54.5	35.1
SAPPORO (OKADAMA)	-	KUSHIRO	2,349	75,626	139.2	112,752	124.5	67.1	60.0
SAPPORO (OKADAMA)	-	HAKODATE	3,401	121,078	138.5	163,248	126.4	74.2	67.7
SAPPORO (OKADAMA)	-	MISAWA	416	13,327	174.8	19,968	122.0	66.7	46.6
SAPPORO (OKADAMA)	-	OKUSHIRI	214	3,788	225.5	10,272	201.9	36.9	33.0
HAKODATE	-	OKUSHIRI	448	8,688	111.4	21,504	99.5	40.4	36.1
NAGOYA (CHUBU)	-	SAPPORO (NEW CHITOSE)	2,259	268,494	195.8	370,446	124.4	72.5	46.1
NAGOYA (CHUBU)	-	OKINAWA (NAHA)	2,749	285,583	262.3	453,585	147.6	63.0	35.4
NAGOYA (CHUBU)	-	KUSHIRO	26	3,314	157.5	4,290	108.3	77.2	53.1
NAGOYA (CHUBU)	-	OBIHIRO	36	4,104	192.2	5,814	97.9	70.6	35.9
NAGOYA (CHUBU)	-	MIYAKO	314	21,628	213.9	51,810	142.1	41.7	27.7
NAGOYA (CHUBU)	-	ISHIGAKI	318	25,210	224.3	52,470	135.9	48.0	29.1

			2022						2021
			Total Flights	Total Passengers	YoY (%)	Number of available seats	YoY (%)	L/F (%)	
FUKUOKA	-	SAPPORO (NEW CHITOSE)	1,461	192,793	198.3	240,687	133.1	80.1	53.8
FUKUOKA	-	OKINAWA (NAHA)	4,278	442,671	206.9	705,870	153.1	62.7	46.4
FUKUOKA	-	HANAMAKI	723	32,492	170.3	54,986	103.5	59.1	35.9
FUKUOKA	-	SENDAI	1,420	85,730	214.7	134,900	138.8	63.6	41.1
FUKUOKA	-	IZUMO	1,413	39,044	153.7	67,824	102.5	57.6	38.4
FUKUOKA	-	TOKUSHIMA	1,404	54,018	214.7	106,780	156.6	50.6	36.9
FUKUOKA	-	KOCHI	1,410	61,715	194.9	107,236	153.5	57.6	45.3
FUKUOKA	-	MATSUYAMA	2,886	126,289	171.3	219,488	147.7	57.5	49.6
FUKUOKA	-	MIYAZAKI	4,989	235,872	161.4	379,525	130.9	62.1	50.4
FUKUOKA	-	KAGOSHIMA	714	20,175	151.4	34,272	99.6	58.9	38.7
FUKUOKA	-	YAKUSHIMA	696	24,166	145.3	33,408	99.6	72.3	49.6
FUKUOKA	-	AMAMI-OSHIMA	714	39,727	125.0	54,283	98.9	73.2	57.9
OKINAWA (NAHA)	-	KOMATSU	685	68,593	336.2	113,025	188.7	60.7	34.1
OKINAWA (NAHA)	-	OKAYAMA	706	82,795	320.3	116,490	146.5	71.1	32.5
OKINAWA (NAHA)	-	MIYAKO	6,317	545,155	154.0	960,540	128.5	56.8	47.3
OKINAWA (NAHA)	-	ISHIGAKI	5,289	413,558	155.1	820,245	129.8	50.4	42.2
OKINAWA (NAHA)	-	KITADAITO	359	13,037	98.4	17,950	99.7	72.6	73.6
OKINAWA (NAHA)	-	MINAMIDAITO	1,055	31,090	111.6	52,750	104.8	58.9	55.3
OKINAWA (NAHA)	-	YORON	991	37,309	155.1	49,048	133.8	76.1	65.6
OKINAWA (NAHA)	-	KUMEJIMA	4,820	190,135	140.8	314,830	131.1	60.4	56.3
OKINAWA (NAHA)	-	AMAMI-OSHIMA	406	10,849	159.7	19,798	128.6	54.8	44.1
OKINAWA (NAHA)	-	YONAGUNI	949	27,458	150.5	47,450	135.2	57.9	52.0
OKINAWA (NAHA)	-	OKINOERABU	704	19,099	123.7	33,792	99.7	56.5	45.6
IZUMO	-	OKI	682	22,229	130.3	32,736	101.2	67.9	52.8
KAGOSHIMA	-	MATSUYAMA	642	11,437	194.1	31,168	159.1	36.7	30.1
KAGOSHIMA	-	TANEGASHIMA	2,688	82,201	158.2	148,120	123.7	55.5	43.4
KAGOSHIMA	-	YAKUSHIMA	3,221	135,783	151.7	196,914	107.8	69.0	49.0
KAGOSHIMA	-	KIKAIJIMA	1,385	37,912	149.6	66,480	107.6	57.0	41.0
KAGOSHIMA	-	AMAMI-OSHIMA	5,273	174,634	122.9	352,391	112.9	49.6	45.5
KAGOSHIMA	-	TOKUNOSHIMA	2,985	133,148	137.0	198,328	105.3	67.1	51.6
KAGOSHIMA	-	OKINOERABU	2,077	65,797	134.9	106,868	111.5	61.6	50.9
KAGOSHIMA	-	YORON	704	26,930	112.9	47,740	97.6	56.4	48.8
AMAMI-OSHIMA	-	KIKAIJIMA	1,376	35,734	115.7	66,048	75.7	54.1	35.4
AMAMI-OSHIMA	-	TOKUNOSHIMA	1,399	37,867	118.8	67,152	100.5	56.4	47.7
AMAMI-OSHIMA	-	YORON	456	9,573	121.9	21,888	65.8	43.7	23.6
OKINOERABU	-	TOKUNOSHIMA	700	14,168	101.1	33,600	98.6	42.2	41.1
MIYAKO	-	ISHIGAKI	2,134	57,839	173.3	106,930	199.2	54.1	62.2
MIYAKO	-	TARAMA	1,363	38,550	138.3	68,150	129.8	56.6	53.1
ISHIGAKI	-	YONAGUNI	1,879	65,170	135.2	93,950	128.7	69.4	66.0
KITADAITO	-	MINAMIDAITO	353	10,867	92.2	17,650	100.3	61.6	67.0
Total			305,513	30,179,804	187.5	47,895,711	146	63.0	49

*Excluding charter flights and codeshare flights

*L/F=Load Factor=RPK÷ASK

*The data of SJO is from June 29, 2021.

*Starting FY2020, International Financial Reporting Standards (IFRS) have been applied, in which award tickets are counted as revenue tickets. As a result, the figures listed above (Passengers, RPK, LF) include passengers traveling with an award ticket.

5.2 JAL Group Fleet and Aircrafts

AIRBUS A350 	Number of Aircrafts: 16	BOEING 787 	Number of Aircrafts: 52
	Operator: JAL		Operator: JAL/ZIP
	Number of Seats: 369-391		Number of Seats: 161-290
	Service Entry: 2019		Service Entry: 2012
	Average Age: 2.3		Average Age: 6.8
	Average Yearly FH: 2,790		Average Yearly FH: 4,099
	Average Yearly FC: 1,517		Average Yearly FC: 687
BOEING 777 	Number of Aircrafts: 16	BOEING 767 	Number of Aircrafts: 27
	Operator: JAL		Operator: JAL
	Number of Seats: 236-500		Number of Seats: 199-261
	Service Entry: 1996		Service Entry: 1985
	Average Age: 16.7		Average Age: 15.8
	Average Yearly FH: 4,427		Average Yearly FH: 2,906
	Average Yearly FC: 686		Average Yearly FC: 1,367
BOEING 737-800 	Number of Aircrafts: 62	EMBRAER 170 	Number of Aircrafts: 18
	Operator: JAL/JTA/SJO		Operator: J-AIR
	Number of Seats: 144-189		Number of Seats: 76
	Service Entry: 2006		Service Entry: 2008
	Average Age: 11.0		Average Age: 11.2
	Average Yearly FH: 2,704		Average Yearly FH: 2,200
	Average Yearly FC: 1,755		Average Yearly FC: 2,750
EMBRAER 190 	Number of Aircrafts: 14	DE HAVILLAND DHC-8-400 CARGO COMBI 	Number of Aircrafts: 5
	Operator: J-AIR		Operator: RAC
	Number of Seats: 95		Number of Seats: 50
	Service Entry: 2016		Service Entry: 2016
	Average Age: 5.8		Average Age: 6.4
	Average Yearly FH: 2,390		Average Yearly FH: 1,926
	Average Yearly FC: 2,220		Average Yearly FC: 2,893
ATR 42-600 	Number of Aircrafts: 12	ATR 72-600 	Number of Aircrafts: 2
	Operator: JAC/HAC		Operator: JAC
	Number of Seats: 48		Number of Seats: 70
	Service Entry: 2017		Service Entry: 2018
	Average Age: 3.7		Average Age: 4.2
	Average Yearly FH: 1,726		Average Yearly FH: 1,846
	Average Yearly FC: 2,453		Average Yearly FC: 2,399
Average Aircraft Age of the entire JAL Group: 9.5 years			

*About Average Aircraft Age: Aircraft can be used almost permanently if they are properly maintained according to their age. Average aircraft age does not directly affect safety. All JAL Group aircrafts are properly maintained with good quality under the maintenance program recommended by the manufacturer and approved by MLIT.

*Average Yearly FH (Flight Hour)=Yearly FH ÷ the number of aircrafts (as of March 31, 2023)

*Average Yearly FC (Flight Cycle)=Yearly FC ÷ the number of aircrafts (as of March 31, 2023)

About This Report

The JAL Group Safety Report FY2022 is a safety report prepared by the eight JAL Group airlines in accordance with Article 111, Paragraph 6 of the Civil Aeronautics Act.

【Period Covered by this Report】

April 1, 2022 to March 31, 2023. Some items are related to matters occurring before or after this period.

【Scope of This Report】

This report covers the eight JAL Group airlines listed on the front cover. The report covers the eight JAL Group airlines listed on the front cover with some topics limited to JAL. Information on safety initiatives of each company can be viewed on the following websites.

Company (abbreviation)	URL
Japan Airlines (JAL)	https://www.jal.com/en/safety/
J-AIR (J-AIR)	http://www.jair.co.jp/about/safety.html (in Japanese only)
Japan Transocean Airlines (JTA)	https://jta-okinawa.com/safety/ (in Japanese only)
Japan Air Commuter (JAC)	http://www.jac.co.jp/company_info/safety.html (in Japanese only)
Ryukyu Air Commuter (RAC)	https://rac-okinawa.com/safety/ (in Japanese only)
Hokkaido Air System (HAC)	https://www.info.hac-air.co.jp/wp-content/uploads/2019/04/hacsafetyreport201904.pdf (in Japanese only)
ZIPAIR Tokyo (ZIP)	http://www.zipairtokyo.com/ja/safety/ (in Japanese only)
SPRING JAPAN (SJO)	https://jp.ch.com/JP/DownloadReport (in Japanese only)

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Japan Airlines Co., Ltd.
J-AIR Co., Ltd.
Japan Transocean Air Co., Ltd.
Japan Air Commuter Co., Ltd.
Ryukyu Air Commuter Co., Ltd.
Hokkaido Air System Co., Ltd.
ZIPAIR Tokyo Inc.
SPRING JAPAN Co., Ltd.