

TOSHIBA

Leading Innovation >>>



TOSHIBA Standard Type

Escalator Instruction Manual

For Operation Management

Please read this instruction manual carefully before operation
for correct and safe use,
and keep the manual handy for future reference.

Introduction

Thank you very much for purchasing Toshiba escalator. In order to ensure the escalator's safe operation, periodic maintenances are required. However, regular inspection by the operator on a daily basis is necessary too.

Please assign operator to be in charge of the escalator's operation.

To ensure escalator is operated correctly and safely, the operator must read through this "Instruction Manual" carefully before operation.

After the operator has finished reading this manual, they should keep it where accessible.

When the owner or the operator is changed, please make sure that this manual is handed over to the next owner or operator.

If you find any question or incomprehensible descriptions, please inquiry to our local distributor.

This manual is intended as a guide to maintenance and operation of Toshiba escalator.

Terms and Definitions

The owner is the person who owns the escalator.

The operator is the person who directly manages the operation of escalators in use.

The engineer is the person with professional qualifications who is in charge of the maintenance of the escalator.

Please enter into a maintenance contract with our local distributor, to assure your satisfaction with high quality maintenance services.

Ensure quality performance and operation of your escalator.

- We understand the overall structure of the escalator clearly, including the design, manufacture, sales, installation, maintenance, and the correct technical information. Our service has quality assurance.

Ensure efficient repair and parts replacement.

- We supply appropriate parts according to the model and all parts are in stock. Repair service and part replacement are done efficiently.

Fast-action servicing.

- In case of malfunction or emergency, our engineers will be there to fix the problem in a timely manner.

Serviced by professionals.

- Your escalator is always maintained by professionals. Only engineers who possess the technical skills and qualifications will be assigned to take charge of the escalator's maintenance.

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Definition of Safety Indications

Be aware of the following safety indications and their meaning. These indications are very important in prompting operator and passengers awareness about hazardous actions or locations.

Description of labels



Label	Meaning of label
 DANGER	Indicates "If erroneously handled, there is an immediate risk that persons may die or be seriously injured".
 WARNING	Indicates "If erroneously handled, persons may die or be seriously injured *1".
 CAUTION	Indicates "If erroneously handled, persons may be injured*2 and/or only material damage*3 may occur".

*1: "Seriously injured" means blindness, injury, burns (high-temperature and moderate-temperature), electric shock, fractures, poisoning, etc. with long-lasting effects and that require hospitalization and/or long-term hospital visits for treatments.

*2: "Injured" means an injury, burns, electric shock, etc. that require hospitalization and/or long-term hospital visits for treatments.

*3: "Material damage" means extended damage involving assets and materials, and/or involving livestock and pets.

Description of symbols

Symbol	Meaning of symbol
 Prohibited	"⊘" indicates a prohibited action (a forbidden action). The nature of the hazard is depicted in the form of an image or a sentence within or near the symbol.
 Mandatory Action	"●" indicates a mandatory action (a compulsory action). The nature of the hazard is depicted in the form of an image or a sentence within or near the symbol.

Important notes:

Be sure to observe all safety precautions marked with the DANGER, WARNING and CAUTION labels, and do not do anything that is not described in this manual in order to avoid injury, death or property damage.

Disclaimer

Toshiba shall not be responsible for any breakdowns or accidents caused by inappropriate management or usage, including but not limited to the following:

- Failure to follow or apply the operating or handling instructions contained herein
- Inappropriate maintenance, inspections and/or repairs
- Unauthorized alterations to the escalator
- Use of parts other than those provided or specified by Toshiba

Safety Precautions



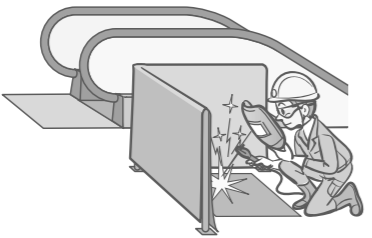

The following precautions apply to the Owner and the Operator of escalators.

WARNING

<p>■ Perform daily inspection (Refer to page 27) Perform daily inspection to avoid avoidable malfunction or risk of accident.</p> <p> Mandatory Action</p> <p></p>	<p>■ Carry out regular and preventive maintenance. Conduct regular inspections and maintenance on the escalators to detect and prevent any problem before it occurs. Please contact Toshiba for further details.</p> <p> Mandatory Action</p>
<p>■ Stop the escalator immediately in the event of malfunction, when smoke is emitted, there is any strange sound, etc. (Refer to page 17 for Shutdown). Stop operation; otherwise, it may result in a fire or fault. Please contact the maintenance service company immediately.</p> <p> Mandatory Action</p> <p></p>	<p>■ When water penetrates due to heavy rain, etc., stop operation immediately (Refer to page 17 for Shutdown). Continuing operation under such circumstances may lead to an accident. Please contact the maintenance service company after discontinuing operation.</p> <p> Mandatory Action</p> <p></p>
<p>■ Do not repair, remodel or disassemble. This may result in electric shock, serious injury, or fault. Please contact the maintenance service company if any problems occur.</p> <p> Prohibited</p> <p></p>	<p>■ Do not pour liquids, such as water, or apply wax etc. on the step and/or landing plate. This may increase the risk of slipping on the steps and landing plate surface, which may lead to an accident. Also, leakage of liquids into the escalator may result in electric shock or malfunction.</p> <p> Prohibited</p> <p></p>
<p>■ Do not remove the landing plate. Since it houses a control panel, motor, etc. inside, this may result in an accident.</p> <p> Prohibited</p> <p></p>	<p>■ Do not operate key switches with wet hands. This may result in an accident.</p> <p> Prohibited</p> <p></p>





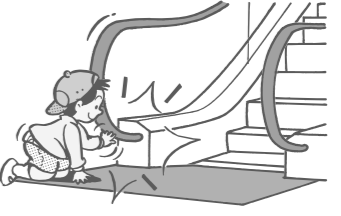

Safety Precautions

The following precautions apply to the Owner and the Operator of escalators.

! WARNING	
<p>■ Ensure an escalator is free of passengers and/or objects before starting and stopping it. If it is made to start and stop with a person or object present, it may result in undesirable accident.</p> <p style="text-align: center;">! Mandatory Action</p> 	<p>■ Stop the escalator before cleaning and maintenance (Refer to page 17 for Shutdown). Failure to do so may result in an accident.</p> <p style="text-align: center;">! Mandatory Action</p> 
<p>■ Do not hold an event which may create a crowd around the landing plate from the escalator. The crowd will prevent passengers from getting off the escalator and lead to an accident.</p> <p style="text-align: center;">Prohibited</p> 	<p>■ Do not use a stopped escalator as seats. Overloading will cause it to descend, which may result in an accident.</p> <p style="text-align: center;">Prohibited</p> 
<p>■ If any work is to be done involving fire/sparks/heat, please provide adequate instructions for fire prevention to the personnel responsible for the work. Sparks produced from the work may get into escalator and cause an accident.</p> <p style="text-align: center;">! Mandatory Action</p> 	<p>■ Set up barricades when you suspend the escalator service to prevent people from using the escalators as stairs; otherwise, an accident may occur. Persons may trip or fall.</p> <p style="text-align: center;">! Mandatory Action</p>
<p>■ When holding an event, staff the escalator platform with guides and ensure there is space for boarding. Users getting off an escalator but remaining at its exit may cause others to fall.</p> <p style="text-align: center;">! Mandatory Action</p>	<p>■ Affix warning labels at places where the passengers can notice them easily. Passengers should be alerted to prevent accidents and breakdowns. The operation supervisor should guide persons in using the escalators.</p> <p style="text-align: center;">! Mandatory Action</p>
<p>■ The operator should keep the key after it is removed from the key switch. If the key inserted into the switch, it may cause an accident.</p> <p style="text-align: center;">! Mandatory Action</p>	<p>■ Do not allow children to play around the escalators. This may lead to an accident.</p> <p style="text-align: center;">Prohibited</p> 

Guide passengers with the following instructions:

! DANGER	
<p>■ Do not ride on the handrail and deck board. This may cause injury and accident.</p> <p style="text-align: center;">Prohibited</p> 	<p>■ Do not lean your body (any part of you) past the handrail, or lean against a handrail. This may cause injury and accident.</p> <p style="text-align: center;">Prohibited</p> 

! WARNING	
<p>■ Do not ride the escalator with wheelchairs, baby carriages, and shopping carts, etc. This may lead to an accident.</p> <p style="text-align: center;">Prohibited</p> 	<p>■ Do not run or walk on the steps. This may cause an accident.</p> <p style="text-align: center;">Prohibited</p> 
<p>■ Do not run on and off the steps. This may lead to an accident.</p> <p style="text-align: center;">Prohibited</p> 	<p>■ Do not lean against the glass (or a panel). This may lead to an accident.</p> <p style="text-align: center;">Prohibited</p> 
<p>■ Do not touch the steps, comb, skirt guard panels, or handrail inlet with hands. This may lead to serious injury and an accident.</p> <p style="text-align: center;">Don't touch</p> 	<p>■ Do not allow children to play around the escalators. This may lead to an accident.</p> <p style="text-align: center;">Prohibited</p> 

Safety Precautions

Guide passenger with the following instructions:

⚠ WARNING

- **Do not climb or walk on the deck boards.**
This may lead to an accident.



Prohibited



- **Do not use escalator in the event of a fire and/or earthquake.**
This may lead to matters becoming worse.



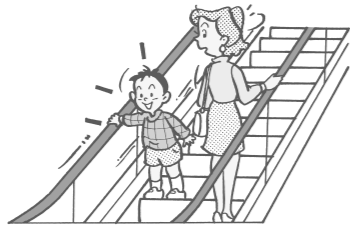
Prohibited



- **Do not use in the opposite direction.**
Falling might cause an accident.



Prohibited



- **Do not pull a handrail or kick away the skirt guard panel etc.**
The safety mechanism may trigger an emergency stop, or result in unsynchronized motion of handrail and steps, causing an accident.



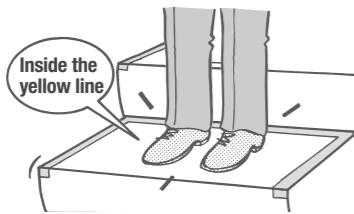
Prohibited



- **Stand within the yellow line.**
If you stand on the yellow line, your feet may be injured.



Mandatory Action



- **Do not ride with clothes that may be caught by the escalator such as a long dress.**
The dress may become caught by the escalator and lead to an accident.



Prohibited



- **Hold the handrail firmly.**
This will help to prevent the occurrence of an accident.



Mandatory Action



- **When small children get on, their parents or guardians need to hold their hand.**
Not holding their hand or letting them use the escalator alone may result in an accident.



Mandatory Action



Guide passengers with the following instructions:

⚠ WARNING

- **Escalators with a width of 1000 mm allow up to two passengers to stand on the same step (while those with widths of 600 mm and 800 mm allow only one passenger on the same step). Accidents are more likely to occur on a crowded escalator; passengers should leave sufficient space between themselves.**
Otherwise, passengers may fall, or unexpected accidents may occur.



Mandatory Action



- **Do not step on the comb when you are getting on or off an escalator.**
Doing so may lead to undesirable accident.



Mandatory Action



⚠ CAUTION

- **Do not carry large baggage on the escalator.**
You may tumble down with the baggage, or the baggage may hit other passengers and result in an accident.



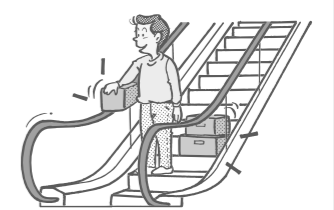
Prohibited



- **Do not place any package, etc., on a step, handrail, deck board, or landing plate.**
The package, etc., may fall, and cause serious injury and an accident.



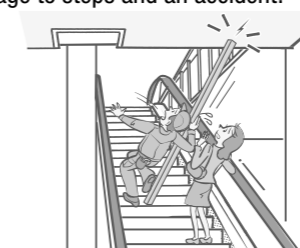
Prohibited



- **Do not carry any long objects.**
You may lose balance, leading to an accident. The object may become stuck between the moving escalator and the ceiling, causing damage to steps and an accident.



Prohibited



- **Do not use a stopped escalator as stairs.**
This may lead to an accident.






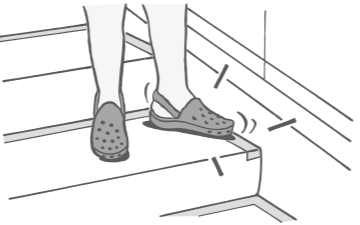


Prohibited








Safety Precautions

Guide passengers with the following instructions:

 CAUTION	
<p>■ Do not sit on the steps. It may cause serious injury.</p> <p style="text-align: center;"> Prohibited</p> <p style="text-align: center;"></p>	<p>■ Do not ride with animals. It may lead to an accident.</p> <p style="text-align: center;"> Prohibited</p> <p style="text-align: center;"></p>
<p>■ Do not stop at the landing plate once getting off from the escalator. The way of other passengers will be blocked, causing an accident.</p> <p style="text-align: center;"> Prohibited</p> <p style="text-align: center;"></p>	<p>■ Do not touch steps with thin or pointy objects, such as the point of an umbrella. It may be caught in between the grooves, leading to an accident or damaging the steps.</p> <p style="text-align: center;"> Prohibited</p> <p style="text-align: center;"></p>
<p>■ Do not smoke while riding an escalator. This may lead to an accident.</p> <p style="text-align: center;"> Prohibited</p> <p style="text-align: center;"></p>	<p>■ Do not get on an escalator with wet shoes, or hold a handrail with wet hands. Slippery steps and handrails may lead to undesirable accident.</p> <p style="text-align: center;"> Prohibited</p> <p style="text-align: center;"></p>
<p>■ Do not force the head or heels of footwear made of soft material, such as rubber or vinyl products, into the clearance between skirt guard panels or steps. This may cause an accident if the object is caught between a skirt guard panel or step. Moreover, this will trigger the safety mechanism and an emergency stop, which may lead to an accident.</p> <p style="text-align: center;"> Prohibited</p> <p style="text-align: center;"></p>	

Guide passengers with the following instructions:

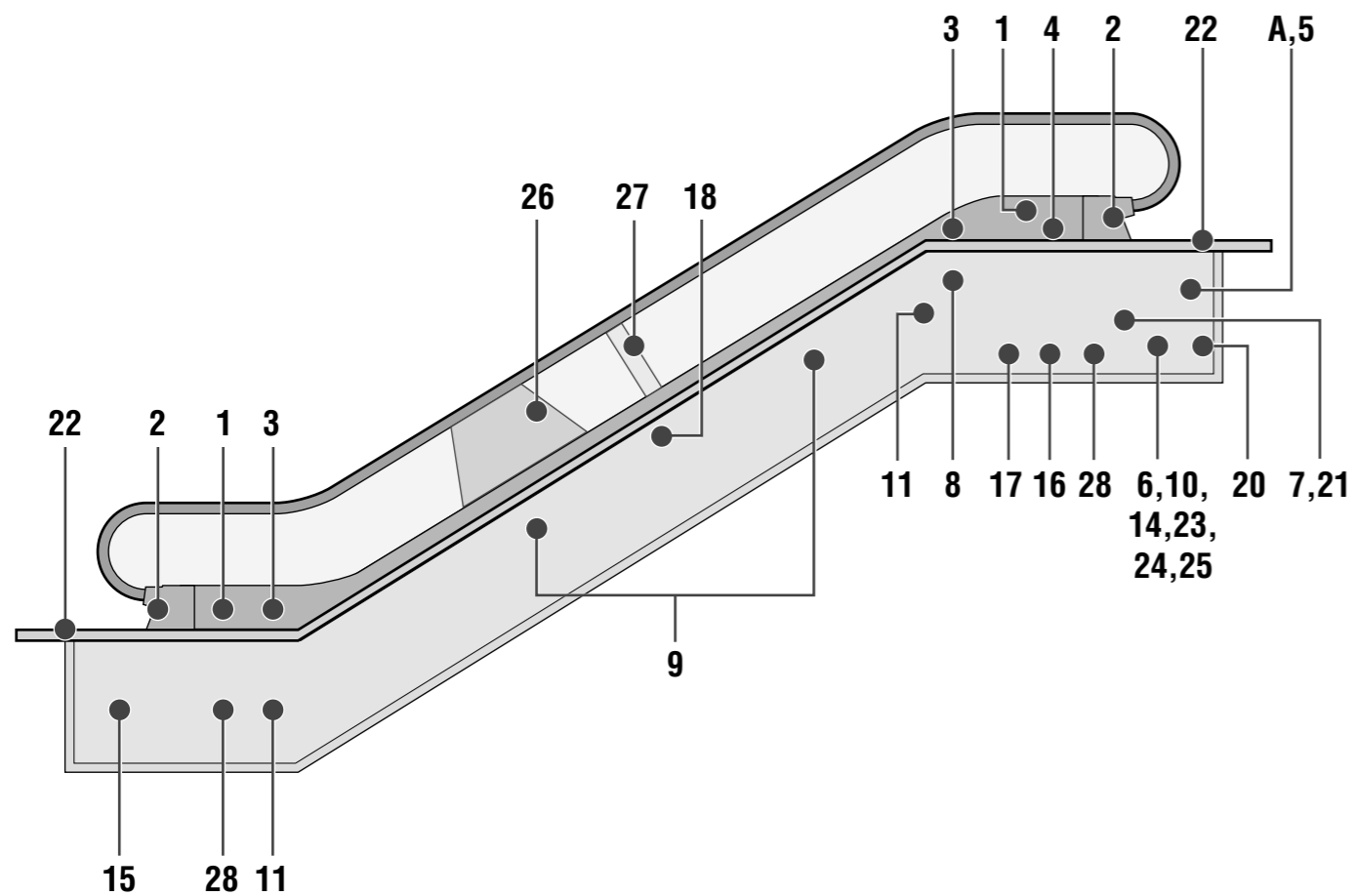
 CAUTION	
<p>■ Be careful not to let stiletto heels get caught in between the escalator steps. Stiletto heels may become stuck in between the grooves or comb, leading to an accident.</p> <p style="text-align: center;"> Mandatory Action</p> <p style="text-align: center;"></p>	<p>■ Do not ride the escalator barefoot. This may lead to serious injury.</p> <p style="text-align: center;"> Prohibited</p> <p style="text-align: center;"></p>

Safety Devices

Safety devices in Escalator.

Escalator

All of these safety devices trigger an emergency stop. To resume operation, please refer to page 21.



The installation location of safety devices (outline)

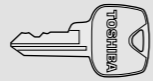
Apply below the specification for floor height 6m or less.

Mark of Applications ○ : Applied
▲ : Optional

Position	no.	Device name	Application			
			Standard	CP15	COP	
Upper floor	A	PESSRAE	○	○	○	
	1	Emergency stop button	○	○	○	
	2	Handrail inlet safety device	○	○	○	
	3	Skirt guard panel safety device	▲	▲	○	
	4	Comb safety device	○	○	○	
	5	Electric-circuit protection device	○	○	○	
	6	Electromagnetic brake	○	○	○	
	7	Broken drive-chain detective device	○	○	○	
	8	Step up thrust detective device	▲	▲	▲	
	9	Step sag safety device	○	○	○	
	10	Electromagnetic brake overheat protection device	○	○	○	
	11	Step cover	○	○	○	
	14	Motor overheat protection device	○	○	○	
	16	Auxiliary brake	▲	▲	▲	
	17	Handrail speed monitoring device	○	○	○	
	20	Fire shutter interlocking device	▲	▲	▲	
	21	Ratchet wheel	○	○	○	
	22	Landing plate switch	○	○	○	
	23	Brake release checking device	○	○	○	
	24	Over speed and reverse operation monitoring device	○	○	○	
	25	Stopping distance detector	○	○	○	
	28	Step missing detector	○	○	○	
	Middle floor	18	Skirt guard panel safety device	▲	▲	▲
		26	Running up prevention device	▲	▲	▲
		27	Emergency stop button (Middle)	▲	▲	▲
Lower floor	1	Emergency stop button	○	○	○	
	2	Handrail inlet safety device	○	○	○	
	3	Skirt guard panel safety device	▲	▲	○	
	4	Comb safety device	○	○	○	
	8	Step up thrust detective device	▲	▲	▲	
	9	Step sag safety device	○	○	○	
	11	Step cover	○	○	○	
	15	Broken step chain detection device	○	○	○	
22	Landing plate switch	○	○	○		
28	Step missing detector	○	○	○		

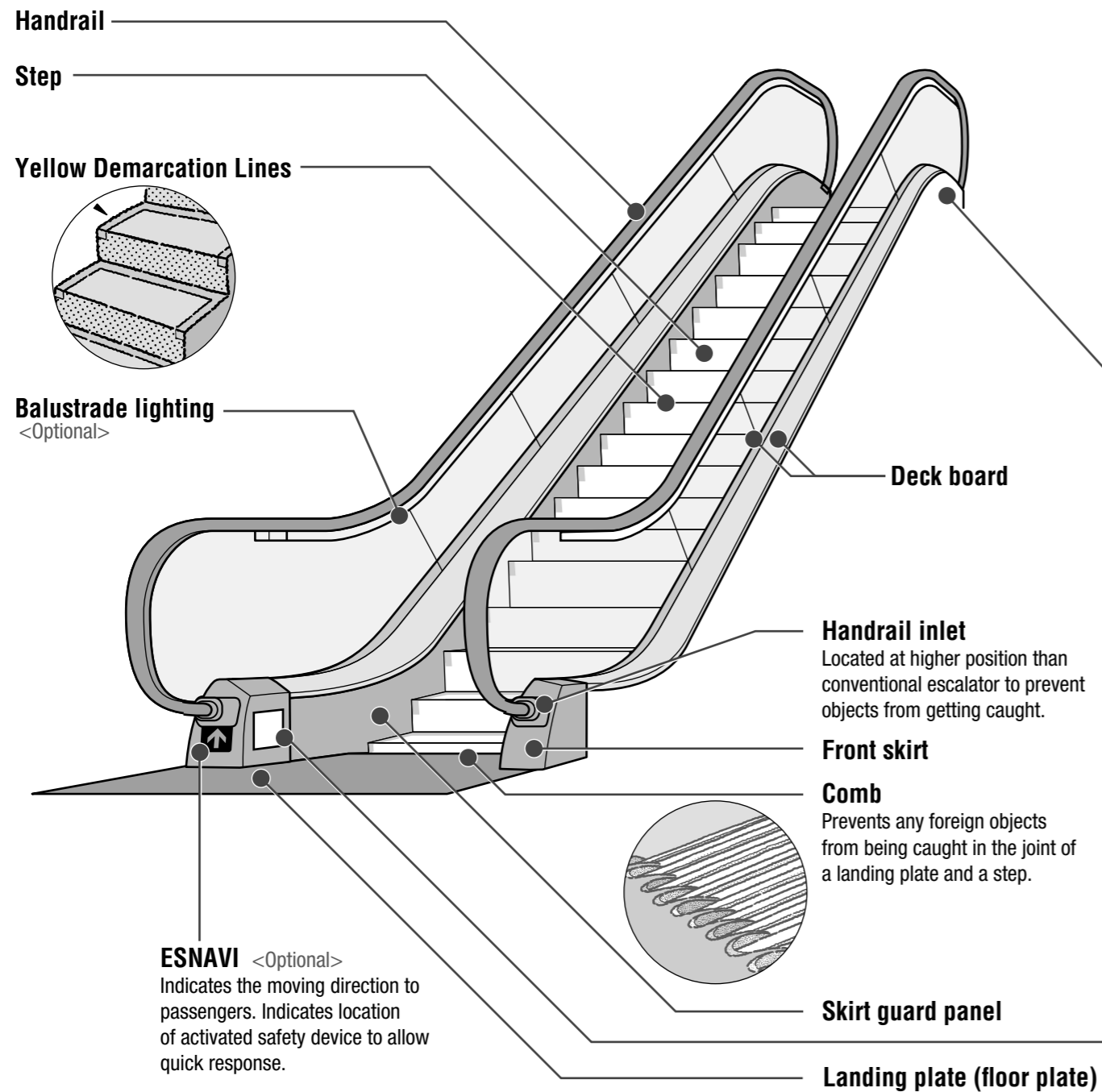
Based on application: Standard=GB16899:2011
COP=COP2012
CP15=CP15:2004

Names and Functions of Escalator Parts

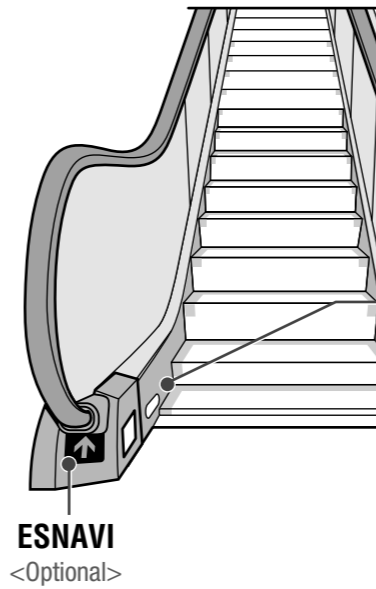


Operation key

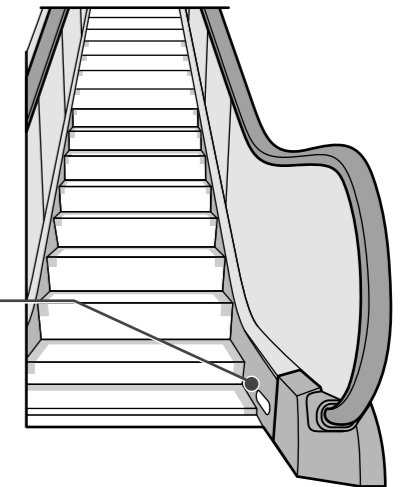
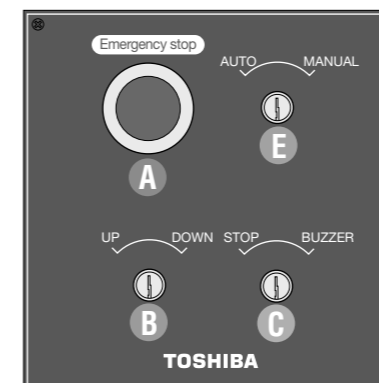
To start or stop an escalator.
The operation key should be kept
by an authorized person only



Symbol	Operating panel feature	Explanation
A	Emergency stop button	In case of emergency, stop the escalator immediately by pressing this button. The emergency stop button has a protective cover around it to prevent inadvertent operation. Press the emergency stop button firmly at the center of the cover.
B	UP/DOWN key switch	Select the moving direction by turning the UP/DOWN key switch.
C	STOP/BUZZER key switch	Turn the switch to stop the escalator or to sound a buzzer.
D	Lighting/lights-off key switch (Only the lower floor operating panel)	Turn on or turn off the lighting system (Optional).
E	Automatic/Manual mode key switch (Only the upper floor operating panel)	Turn to select the automatic or manual operation mode (Optional).



Upper floor operating panel



Lower floor operating panel

(Lighting/lights-out key switch is only optional item)

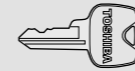


Operating Procedures

⚠ WARNING

- **Before starting or stopping the escalator operation:**
Make sure that there are no passengers on the escalator, and that there are no objects placed on the escalator.
Starting or stopping the escalator when there are passengers on the escalator could cause the passengers to tumble down the steps, which may lead to death or serious injury.
- **Remove the key and return it to the person in charge after use to prevent unexpected accident.**
- **Do not use keys and switches with wet hands.**
There is the possibility of electric shock if water reaches internal electrical components from the operating keys, which may lead to death or serious injury. This could also cause equipment failures or breakdown.

- **Automatic operation in low-speed standby mode. < Optional >**
Automatic operation in low-speed standby mode (below: low-speed standby operation) uses a sensor which detects a passenger at the in landing, and changes the operation running speed of the escalator accordingly. In standby (when there is no passenger), escalator operates at standby speed (10m/min), and if a passenger is detected, it will automatically accelerate to normal speed. If no passengers are detected for a certain period of time after that, it will slow down to standby speed automatically.



Operation key

Use to start or stop an escalator.
The operation key should be kept by an authorized person only.

Startup

1

Make sure that there are no passengers on the escalator, and that there are no objects placed on the escalator.

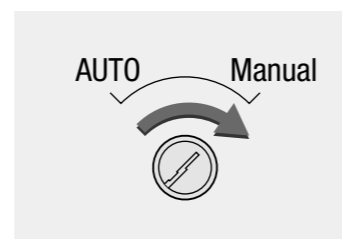
- If anyone is on the escalator, wait for them to get off.
- If any objects are placed on the escalator, remove them.
- If the escalator is interlocked with fire-proof shutters, make sure that the fire-proof shutters are completely open.



2

Low-speed standby mode.
Automatic / Manual : follow step 3 for key switch.

- **During low-speed standby operation**
Confirm the key switch for “low-speed standby” operation on the operating panel is in “Automatic” mode.
 - If it is in “Manual” mode, turn it to the “Automatic” side.
- **During normal operation**
Confirm the key switch for “low-speed standby” operation on the operating panel is in “Manual” mode.
 - If it is in “Automatic” mode, turn it to “Manual” side.

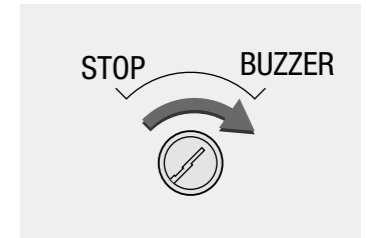


Startup

3

Turn the operating panel STOP/BUZZER switch to “BUZZER” .

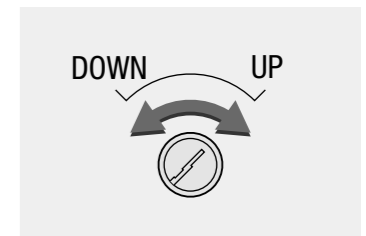
- The alarm sounds, informing anyone in the vicinity that escalator operation is about to begin.
- If the alarm does not sound, contact the maintenance service company.



4

Turn to the desired direction of operation via the up/down key switch.

- During lowspeed standby mode. after initial operating time (40sec) Where the normal speed is reached. If will enter into lowspeed standby out.
- Operating starts in normal operation.
- If lighting is installed, all the lighting will be illuminated.
- If ESNVI is installed, it is indicated in the indicator at the entrance. Where is indicated in the indicator at the exit.



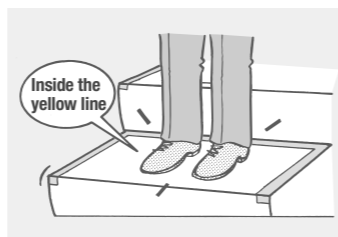
How to Ride an Escalator Safely

Please also read the safety precautions (Refer to page 3) and describe the right way to use escalators (Refer to pages 4 to 10) to users via notices, announcements, etc. Please guide users directly, especially during rush hours.

1

Always stand within the yellow demarcation line of the step.

- If you stand on the yellow line, you may get your feet caught in between a moving step and the skirt guard panel, or between the steps.



2

Hold the handrail firmly.

- Small children must be held by the hand.



3

Do not run or walk on the escalator.

- Escalators are not stairs; running or walking on escalators may lead undesirable accident.



4

Step over the comb when you get on/off the escalator.

- Give instructions to passengers, so they can get on and off the escalator safely, especially to children, elderly and disabled passengers.



Attention to the owner and the operator

Escalators with a width of 1000 mm allow up to two passengers to stand on the same step while those with widths of 600 mm and 800 mm allow only one passenger on the same step. To avoid tripping or unexpected accidents due to contact with passengers or with baggage, please make sure that passengers allow a proper space in front and behind them.

When the escalator is crowded with passengers, please give instructions to restrict the flow of passengers and have them keep a proper space in front of them when getting on the escalator to prevent crowding at the landing area. If the landing area is crowded, stop passengers from getting on the escalator immediately to avoid an accident.

ESNAVI Indications

< Optional >

- ESNAVI indicates the moving direction of the escalator before passengers get on an escalator.
- When a safety device is activated, the escalator will stop, and ESNAVI will indicate the position of the safety device to enable maintenance staff to find the problem quickly.

When the Escalator Operates Normally

Indication where getting on an escalator



: Displays the direction of movement (green, scrolling).

Indication where getting off an escalator




: Displays no entry (red, flickering).

ESNAVI <Optional>



When a Problem Is Detected

Displays the following indications and the no entry indication  alternately.

The display where getting on / getting off

ES	: Emergency stop button is activated (red/green)
HS	: Handrail speed monitoring device is activated (green)
IN1 / IN1	: Upper floor handrail inlet safety device is activated (red/green)
IN2 / IN2	: Lower floor handrail inlet safety device is activated (red/green)
SK1 / SK1	: Safety device for the upper floor skirt guard panels is activated (red/green) <Optional>
SK2 / SK2	: Safety device for the lower floor skirt guard panels is activated (red/green) <Optional>
SK3 / SK3	: Safety Device for the middle floor skirt guard panels is activated (red/green) <Optional>
SE1 / SE1	: Upper floor step safety device is activated (red/green)
SE2 / SE2	: Lower floor step safety device is activated (red/green)
HT	: Electric-circuit protective device/broken driving chain safety device/broken step chain safety device, etc., is detected (red)

When the emergency stop is activated for one of 7 possible mentioned factors, ESNAVI displays the cause of the abnormality in "red". Once the abnormality has been resolved and normal operation is enabled, the display color of ESNAVI will turn to "green".

Safety Measures in Case of Emergency

In Case of Emergency Stop

When the emergency stop button is pressed or a safety device has been activated, please follow the procedures stated below:

[Where ESNAVI does not apply]

- 1 **Inspect the handrail inlet, front skirt, comb, step, skirt guard panels, etc. (Refer to page 27 for the check method)**
 - If any foreign object or problem is found, please contact the maintenance service company.
 - If case of accident resulting in injury or death, please refer to page 22.

- 2 **Start the escalator. (Refer to page 15 for how to start)**
 - In case you are unable to start the escalator, please contact the maintenance service company.

[Where ESNAVI applies]

- 1
 - Please refer to page 20 for ESNAVI indications.
 - Inspect the handrail inlet, front skirt, comb, step, skirt guard panels, etc. (Refer to page 27 for the inspection method)**
 - Please identify the cause of the emergency stop via ESNAVI. (Please refer to page 20 for definition of the ESNAVI's signs)
 - If any foreign object or problem is found, please contact the maintenance service company.
 - In case of accident resulting in injury or death, please refer to page 22.

- 2 **Check if the display color of ESNAVI has turned to green.**
 - When the cause of an emergency stop is resolved, the display color of ESNAVI will turn to green. Escalator is able to restart.
 - If the display color does not turn to green, please do not restart the escalator. Please contact the maintenance service company immediately.
 - In case of **HT**, the escalator cannot be restarted; please contact the maintenance service company.

- 3 **Start the escalator. (Refer to page 15 for how to start)**
 - In case you are unable to start the escalator, please contact the maintenance service company.
 - In case it stops frequently for the same cause after restart, or immediately after restart, please contact the maintenance service company.

In Case of Accident Resulting in Injury or Death

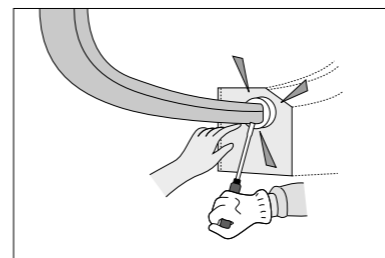
Stay calm and take action according to the following procedures:
Please contact the police/fire department, and maintenance service company immediately.

- 1 **Press the emergency stop button immediately.**
 - The escalator stops.
- 2 **Take any possible safety measures to rescue the victim(s).**
 - Please contact the fire station if rescue is impossible, and in case of serious injury.
 - Stay attentive during any rescue and keep unauthorized people away from the spot.
- 3 **Contact the maintenance service company.**

Examples of Rescue Methods

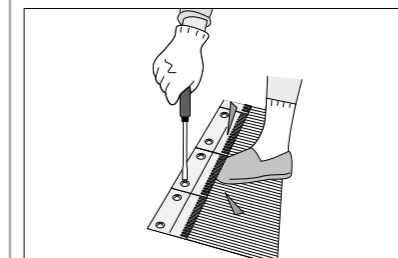
■ When fingers are caught in the handrail inlet.

Use tools (driver, etc.) to help the victim to draw out his/her fingers from the handrail inlet.



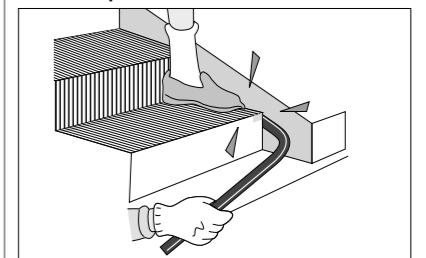
■ Hand and/or foot is caught in between the comb.

Remove the comb with a screwdriver.



■ The foot is caught in between the step and the skirt guard panel.

Use tools (bar, etc.) to widen the clearance between the skirt guard and step.



● These rescue methods are examples. Rescue may be difficult depending on the situation. In such cases, please seek professional help.

Safety Measures in Case of Disaster

In case of disaster, it is very important for the supervisors to assess the situation calmly, take action promptly, and always ensure user safety. Here, we explain the procedures to be taken in times of disaster.

In Case of Earthquake

! DANGER

- Please do not use the escalator in case of earthquake. Taking refuge on an escalator may make matters worse.

! WARNING

- When you suspend the escalator service, put up barricades to prevent people from using escalators like stairs to prevent an accident. Otherwise, a trip or fall accident may occur.

1

Notify passengers about the occurrence of an earthquake by making announcement, and alert them not to use the escalator.

- Please guide the passengers, so they can take refuge safely.

2

Stop the escalator. (Refer to page 17 for how to stop)

3

Carry out daily inspection, after the earthquake has subsided. (Refer to page 27)

- If any problem is detected, please contact the maintenance service company.
- If no problem is found, please resume operation (Refer to page 15 for how to start).

In Case of Fire

! DANGER

- Please do not use the escalator in case of fire. Taking refuge on an escalator raises the potential of matters becoming worse.

! WARNING

- When you suspend the escalator service, put up barricades to prevent people from using escalators like stairs to prevent an accident. Otherwise, a trip or fall accident may occur.

1

Notify passengers about the outbreak of fire by making announcement, and alert them not to use the escalator.

- Please guide the passengers, so they can take refuge safely.

2

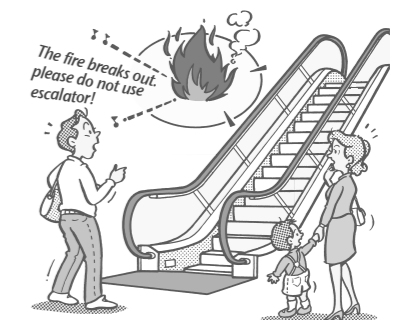
Notify the fire station immediately.

- Please also contact the maintenance service company.

3

Stop the escalator. (Refer to page 17 for Shutdown)

- A fire prevention shutter may be activated, which will stop automatically.



Power Outage Notification

WARNING

■ When you suspend the escalator service, put up barricades to prevent people from using escalators like stairs to prevent an accident.

Otherwise, a trip or fall accident may occur.

1

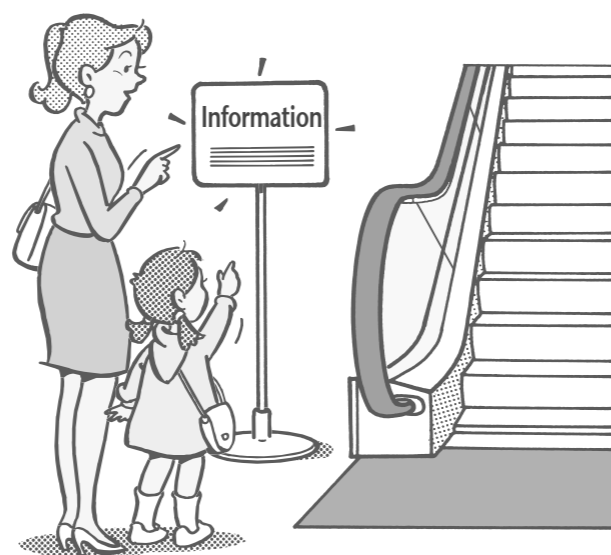
Notify users of the power outage via notice, announcement, etc., in advance.

2

Stop the escalator, before the power is cut off.
(Refer to page 17 for how to stop)

3

Resume operation, after the power is restored.
(Refer to page 15 for how to start)



In Case of Rainstorm

DANGER

■ If water penetrates into the escalator due to heavy rain, etc., please stop the escalator immediately (Refer to page 17 for how to stop).

Continuing operation may lead to an accident. If equipment/parts have been exposed to water, replacement may be required.

WARNING

■ When you suspend the escalator service, put up barricades to prevent people from using escalators like stairs to prevent an accident.

Otherwise, a trip or fall accident may occur.

In case of rainstorm (possibility of water seepage)

1

Stop the escalator. (Refer to page 17 for how to stop)

- When there is possibility of water seepage, please stop the escalator.

2

Create a barrier to prevent water from flowing into the escalator.



[After the rainstorm]

1

Check the landing plate to ensure there is no trace of water penetrating into the escalator.

- If any of water trace is detected, please stop the operation and contact the maintenance service company (Refer to page 17 for how to stop).
- If there is no trace of water seepage, please resume the operation (Refer to page 15 for how to start).
- Although the outdoor escalators are designed to withstand a certain extent of rainstorm, we recommend you to stop the escalator in advance, like a normal escalator during rainstorm.

[If any parts of the escalator have been exposed to water during operation]

1

Please stop operation immediately and contact the maintenance service company.

- Please do not resume operation under any circumstances unless procedures such as the insulating measurement test, etc., draining, and dryness check have been done by an authorized technician.

Procedure for Daily Inspection

! DANGER

■ Please conduct daily inspections.

Conduct regular inspections daily to prevent undesirable problems and accidents. Operation with safety comprised may lead to undesirable accident.

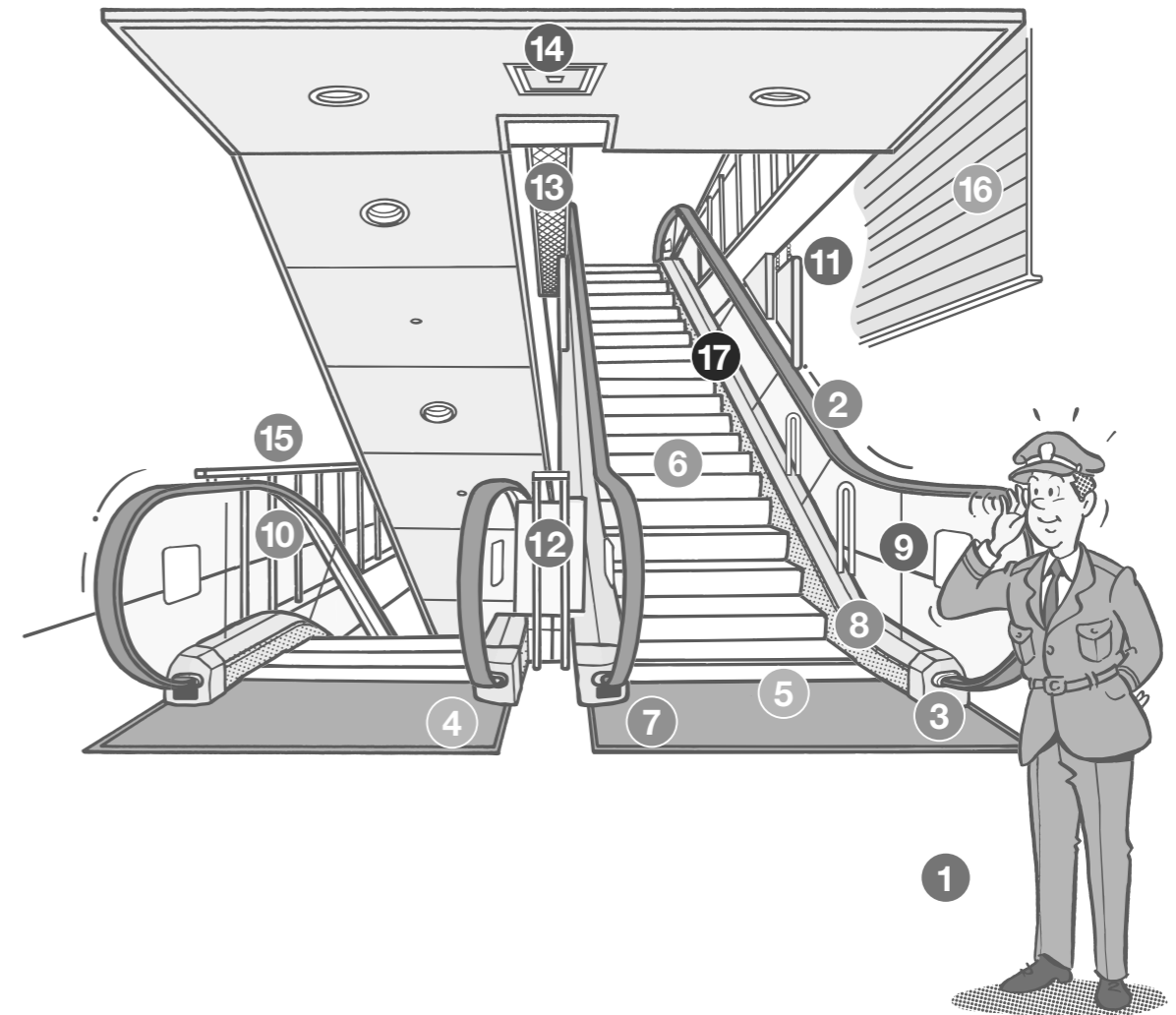
Please conduct the following inspection everyday.

If anything unusual occurs, please contact the maintenance service company.

Please check the surrounding facility installation situation at the time of test runs and round checks.

If the safety equipment is deficient, or any hindrance exists, do not operate the escalator under any circumstances.

Inspection	Details of inspection
1 Operational status	<ul style="list-style-type: none"> Ensure there is no sign of abnormal sound. Ensure there is no sign of abnormal vibration.
2 Handrail	<ul style="list-style-type: none"> Ensure there is no sign of abnormal flaw. Match the step speed. Ensure there is no sign of abnormal vibration.
3 Handrail inlet safety device	<ul style="list-style-type: none"> Ensure there is nothing missing or damaged. Ensure nothing is caught.
4 Front skirt	<ul style="list-style-type: none"> Ensure there is nothing missing or damaged. Ensure nothing is caught.
5 Comb	<ul style="list-style-type: none"> Ensure there is nothing missing or damaged. Ensure nothing is caught.
6 Step	<ul style="list-style-type: none"> Ensure there is nothing missing or damaged. Ensure nothing is caught.
7 ESNAVI <Optional>	<ul style="list-style-type: none"> Ensure there is nothing missing or damaged. Ensure the display operates normally and does not blink.
8 Skirt guard panel	<ul style="list-style-type: none"> Are not in contact with a step. Ensure the clearance between steps is not excessive. Ensure nothing is caught.
9 Glass panel/Deck board	<ul style="list-style-type: none"> Ensure no damage.
10 Skirt guard panel lighting <Optional>	<ul style="list-style-type: none"> Ensure it operates normally and does not blink. Ensure that there is no damage or crack on the acrylic cover of the skirt guard panel lighting. Ensure the skirt guard panel lighting operates normally and does not flicker.
11 Wedge guard	<ul style="list-style-type: none"> Ensure no damage. Ensure it does not shift.
12 The partition plate for ingress prevention	<ul style="list-style-type: none"> Ensure no damage. Please provide partition plate prevent the passengers from falling from the clearance between the balustrade and the fall prevention fence, etc., in a landing place.
13 Falling object prevention net	<ul style="list-style-type: none"> In order to catch falling objects, to prevent accident, please install a net for protection.
14 Speaker	<ul style="list-style-type: none"> It is effective to use announcements over a store's public address system etc. for guidance, PR, etc. concerning the right method of getting on and off escalators.
15 Fall prevention fence	<ul style="list-style-type: none"> Please install a fence around the escalator to prevent small children or any object from falling accidentally.



Inspection	Details of inspection
16 Fire prevention shutter interlock device	<ul style="list-style-type: none"> In the event of fire, it is necessary to isolate the escalator from the outside.
17 Deflector	<ul style="list-style-type: none"> Ensure no damage. Ensure it does not shift.

● Please remove any object that triggered an emergency stop in 3, 5, 6 and 8 (Refer to page 17 for how to stop).

● 7, 10 and 11 are optional, depending on the situation.

● 11, 12, 13, 14, 15: These facilities are not included in escalator installation.


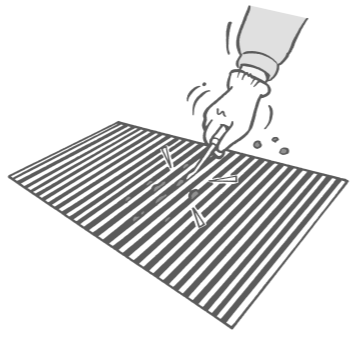
How to Clean and Maintain Escalators

Please stop the escalator before cleaning and maintenance (Refer to page 17 for how to stop). Failure to do so may result in an accident.

! DANGER



■ Please do not pour liquids, such as water, or apply wax etc. on the step and/or landing plate.

This may increase the risk of slipping on the step and landing plate surface, which may lead to an accident. Also, leakage of liquid into escalator may result in electric shock or malfunction.

Cleaning area	The cleaning method
Handrail	<ul style="list-style-type: none"> Wipe with a dry soft cloth. Wipe stubborn stains with neutral detergent diluted to about 1%. Remove the moisture with a dry cloth later. After the handrail is dried, please apply slide agent* with a cloth to the handrail surface. When the liquid is dried, please wipe the handrail with a dry cloth. Keep in mind that the handrail may get scratched if it is neglected or over-wet with too much silicone. Stop the escalator. Clean only the exposed portion of the handrail. When the cleaned section is thoroughly dried, operate the escalator to allow the remaining section to be exposed for cleaning.  <p>*An example slide agent Toshiba Silicone emulsion TSM 630 <GE Toshiba Silicones Co., Ltd.></p>
Comb / steps / landing plate	<ul style="list-style-type: none"> Remove rubbish, etc., with a vacuum cleaner. Remove any rubbish in the groove of the comb or step. 

Note

Please do not use benzene, thinner, gasoline, etc.
These solvents may cause degradation and discoloration of escalator material.


Cleaning area	The cleaning method
Glass panel / deck board	<ul style="list-style-type: none"> Wipe with the dry soft cloth. Wipe stubborn stains with neutral detergent diluted to about 1%. Remove the moisture with a dry cloth later. Please read the instruction manual for how to use the glass cleaner. 
Illumination cover / ESNAVI / Front skirt	<ul style="list-style-type: none"> Wipe the stain with neutral detergent diluted to about 1% strength. Occasionally, wipe stains with plain water. Remove the moisture with a dry cloth and apply anti-static agent. Users should read the instruction manual for how to use the antistatic agent. 

! DANGER

■ Please apply a slide agent to the skirt guard panel once or twice a month.

Inadequate slide agent may cause shoes, etc., to become pulled into the clearance between the step and skirt guard panel.

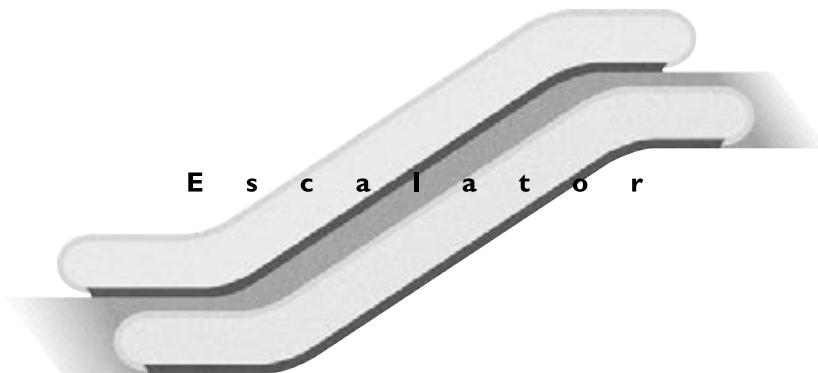
■ Please do not allow the slide agent to adhere to a step. Otherwise, it may lead to an accident.

Cleaning area	The cleaning method
Skirt guard panel	<ul style="list-style-type: none"> Please apply a slide agent once or twice a month. (When a fluoro-resin coating skirt is used, please apply once every three months.) <p>An example slide agent Toshiba Silicone emulsion TSM 630 <GE Toshiba Silicones Co., Ltd.></p> 

Memo

A series of horizontal dotted lines for writing on page 33.

A series of horizontal dotted lines for writing on page 34.



Safety Cautions

- Observance of relevant laws / regulations are required.
- Read the entire "Instruction Manual" carefully before use, for important information about safety, handling and operation.

TOSHIBA

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