HASHIDA



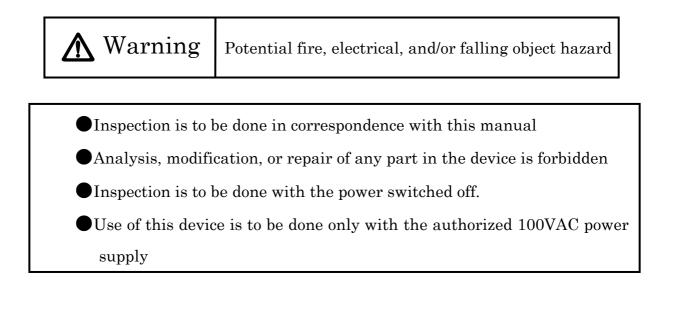
Service Manual

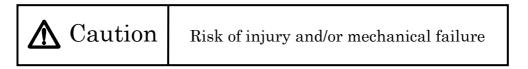
EDM

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L I S T No. 3 4 9 8





- Do not turn off the power when the door is in motion
- Do not turn on the power when there is a person or object in the vicinity of the door.

1. Scope

This manual is written for the purpose of maintaining proper functionality of the EDM automatic door system so as to allow for the continued safe passage of pedestrians and vehicles, etc. Guidelines for the proper maintenance of the system are outlined in this manual.

2. Inspection and Maintenance

Regular inspection of this automatic door system is to be conducted quarterly.

- 6-1 Components to be inspected
 - 1) Automatic door system (drive system and electronic components)
 - 2) Sensors
 - 3) Door
- 6-2 Frequency of inspection for special components

The frequency of inspection for certain components varies due to their impact on safety, as well as their relative rates of wear and fatigue. The inspection schedule for these parts is outlined in Table 1 below.

Table 1

Criterion for inspection	Inspection Frequency	
Components important for maintaining safety and	Every 3 months	
functionality		
Components with low rate of malfunction	Twice per year	
Components that must be checked for wear and fatigue	Once per year	

6-3 Items for inspection and evaluation procedures

Refer to Table 2 for evaluation criteria.

3. Maintenance

The following procedures are to be done in order to ensure the safe and proper functionality of the EDM automatic door system.

1) Adjustment

Adjust settings (brake power, door hold-open time, etc.) and reposition parts if necessary.

2) Secure fasteners

All bolts and fasteners are to be tightened securely.

- Clean moving parts
 Rollers and rails are to be cleaned of any dirt.
- 4) Part replacement

Replace parts that are likely to fail before the next inspection.

<u>4. Repair</u>

Repair is to be done as determined necessary and in accordance with the results of the inspection.

1) Part Replacement

Parts showing signs of wear are to be identified and replaced if deemed necessary.

5. Regular Part Replacement

Determining the lifetime of certain parts can be difficult by judging their appearance or by taking measurements, and as such they are to be replaced at regular intervals based on their frequency of use or by the lifespan of that particular component.

Table 2	2
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		Inspection Method	Inspection				
	Item for Inspection			nterval		Condition for	Maintenance
			3 6 mo. mo.		1 yr.	Maintenance	Procedure
	Sensor cover fasteners	Visual, screwdriver, etc.	0			Loose bolts	Tighten bolts
Door	Obstruction inside guide rail	Visual	0			Obstruction present	Clean
and	Damage to door	Visual	0			Damaged	Repair, replace
Sash	Check door sticker	Visual	0			Defect present	Repair, replace
	Abnormal sound	Listen	0			Abnormality present	Adjust
	Clearance between door and	Visual	0			Clearance has changed	Adjust
	sensor					by 1mm or more	
	Door clearance in open posi-	Visual	0			Vertical clearance has	Adjust
	tion					changed by 1mm or	
						more	
	Clearance between door and	Visual	0			Clearance has changed	Adjust
	door frame					by 1mm or more	
	Clearance between door and	Visual	0			Clearance has changed	Adjust
	guide rail					by 1mm or more	
Hanger and Rail	Door stroke	Measure	0		-	Change of ±10mm	Adjust
	Dust/dirt inside rail	Visual	0			Present	Clean
	Rail fasteners	Visual, wrench, etc.			0	Loose	Tighten
	Rail wear	Visual, touch, etc.			0	Unevenness detected	Repair, replace
	Dirt/dust on roller	Visual	0			Present	Clean
	Roller fasteners	Visual, wrench, etc.		0		Loose	Tighten
	Wear or damage of roller	Visual	0			Damaged or worn	Repair, replace
	Stopper fasteners	Visual, wrench, etc.		0		Loose	Tighten
	Retainer clearance	Thickness gauge	0			Unsuitable clearance	Adjust
Drive Related Compo- nents	Manual operation of door	Open and close by hand	0			Unsmooth operation	Adjust
	Abnormal sound	Listen	0			Abnormality	Adjust
	Main drive unit fasteners	Visual, wrench		0		Loose	Tighten
	Rubber shock isolators	Visual		0		Deformation present	Repair, replace
	Idler pulley fasteners	Visual, wrench		0		Loose	Tighten
	Sprocket or pulley fasteners	Visual, wrench		0		Loose	Tighten
	Wear in belt, chain, or wire	Visual		0		Damaged or deformed	Repair, replace
	Belt, chain, or wire tension	Visual, touch		0		Loose	Tighten

	T. 0 T		Inspection				
Item for Inspection		Inspection Method	Interval 3 6 mo mo . .		1	Condition for Maintenance	Maintenance Procedure
	Opening/Closing Speed	Visual	0			Inappropriate setting	Adjust
Control	Hold-open timer	Visual	0			Inadequate timer setting	Adjust
	Brake	Visual	0			Unsmooth operation	Adjust
	Door position sensor	Visual, screwdriver	0			Loose	Tighten
	Power switch	Check operation	0			Abnormality upon turning	Repair,
						switch on or off	replace
	Control equipment installa- tion	Visual, screwdriver, etc.			0	Loose	Tighten
Sensor	Detection range	Measure	0			Range is less than 70% of door width	Adjust
	Sensor operation	Confirm operation	0			Unexpected behavior	Repair, replace
	Sensor fasteners	Visual, wrench, etc.	0			Loose	Tighten
	Dirt/dust on sensor	Visual	0			Present	Clean
	Wire supports	Visual, wrench, etc.		0		Loose	Tighten
Circuit	Connection of wires	Visual, gently pull wires		0		Loose	Reconnect
	Cracked or worn wires	Visual			0	Damage, wear present	Repair, replace
	Check power source voltage	Voltmeter, DMM			0	Out of nominal range (AC100V±10V)	Repair, replace
	Insulation resistance	Ohmmeter, DMM			0	Over 10MΩ	Repair,
Other	(AC100V and motor circuit) All fasteners	Visual, wrench, etc.		0		Loose	replace Tighten
	Signs of wear in all components	Visual		0		Wear, damage present	Repair, replace
	General door operation (normal operation and reverse motion)	Visual	0			Irregular behavior	Adjust