

# Crane 4000-M

Manual revolving door

## Owner's Manual

RL6000-018 – 07-2022

| EN |

 **Crane**  
dormakaba Group

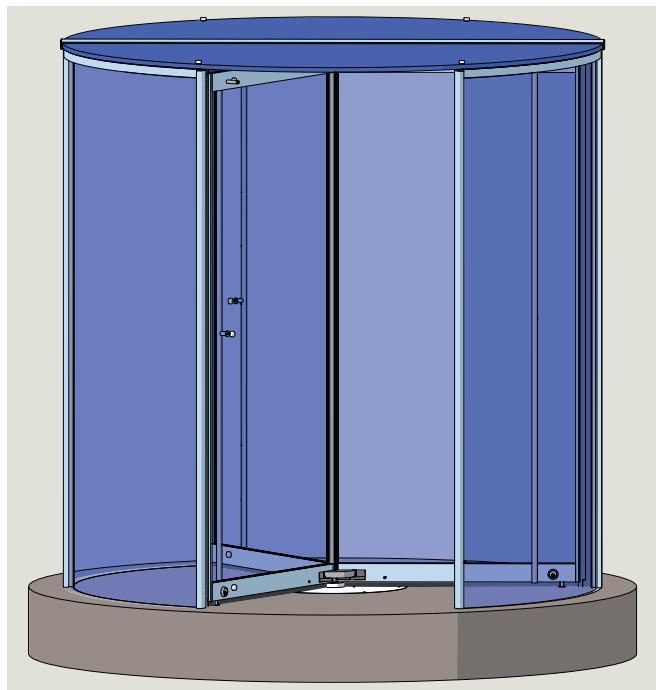
**dormakaba** 

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# 1 General information

Fig.1.1 4000-M 3 wing door with in-ground speed control



## 1.1 Owner's Manual

This Owner's manual applies to Crane 4000-M manual revolving doors with an in-ground speed control.

## 1.2 Manual storage.

This document must be kept in a secure place, and accessible for reference as required.

## 1.3 [dormakaba.us](http://dormakaba.us) website.

Manuals are available for review, download, and printing on [dormakaba.us](http://dormakaba.us) website.

## 1.4 Dimensions

Unless otherwise specified, all dimensions are given in inches (").

## 1.5 Symbols used in this manual.



### WARNING

This symbol warns of hazards which could result in personal injury or threat to health.

### CAUTION

Warns of a potentially unsafe procedure or situation.

### NOTICE

Draws attention to important information presented in this document.

# 2 To our customers

We are pleased that a Crane 4000-M all glass manual revolving door has been selected for this installation. Crane designed, tested and built the system to provide many years of service.

The purpose of this manual is to provide you information regarding your Crane 4000-M manual revolving door. This includes safety and maintenance information.

It is essential that you recognize the importance of maintaining your door.

**It is your responsibility** as owner and caretaker of the equipment, to inspect the operation of your door system to insure that it is safe for use by your customers and employees.

Call your local dormakaba distributor for repair. The distributor is trained to service the revolving door using the applicable dormakaba USA, Inc. Installation Manual.

## 2.1 Service availability.

dormakaba USA, Inc. has a nationwide network of authorized distributors for sales, installation and service of its products.

# 3 What you should know

## 3.1 Distributor information

### 3.1.1 dormakaba USA, Inc. distributor information.

Be sure that the dormakaba USA, Inc. distributor has provided the following information for each door installation:

1. Crane 4000-M Owner's Manual RL6000-018.
2. Review of safety (Reference Chapter 4).
3. Review of door maintenance (Reference Chapter 8).
4. Discussion of problems that could result from door operation after a malfunction observed.
5. Number to call for service or questions about your revolving door if you are uncertain of any condition or situation.
6. Location of job number tag on door center shaft assembly.  
(Reference Chapter 5, Fig. 5.1.3 and Fig 5.1.5).



#### **WARNING**

If there are any problems, discontinue door operation immediately and secure the door in a safe manner.

Call your local dormakaba USA, Inc. distributor for repair.

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# 4 Safety

## 4.1 Intended use

### 4.1.1 Intended use.

- The 4000-M manual revolving doors are designed as 3 or 4 wing revolving doors for use as a doorway for people to pass through at entrances and in the interior of buildings.
- When a bookfold turnstile is used (Chapter 6), the revolving door can be used for use as an emergency exit.



#### WARNING

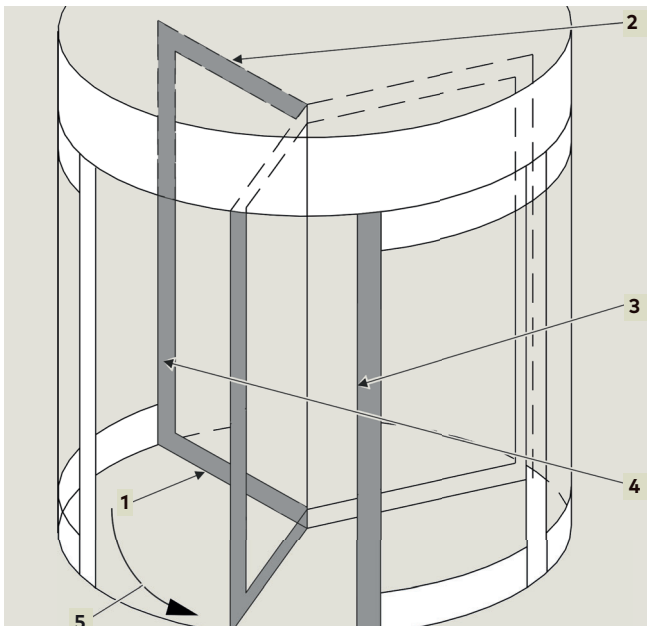
In case of emergency, revolving door can be used as an exit, but it is not the primary path of egress.  
The side door(s) should be used!

- **The customer can only operate the revolving door after door commissioning by dormakaba service technicians.**

## 4.2 Danger points of the revolving door

When passing through the revolving door, people may be at risk for injury at the following locations:

Fig. 4.2.1 Revolving door danger points



- |                                  |  |
|----------------------------------|--|
| 1 Secondary closing edge floor   | 4 Main closing edge inner wall                   |
| 2 Secondary closing edge ceiling | 5 Wings rotating in a counterclockwise direction |
| 3 Opposing closing edge          |  |



#### WARNING

Danger of misuse!  
Misuse of the revolving door can cause dangerous situations.

- Children should never be allowed to enter the revolving door without adult supervision/accompaniment.
- Children should never be allowed to play in front of the entrance and exit of the revolving door or inside of the revolving door itself.
- Do not install the revolving door over soft flooring (e.g., carpet).
- Never mount or hang objects on the revolving door.
- Never stop or block the revolving door with an object.
- Customer - Do not operate the revolving door until "record of delivery" has been received.
- Do not walk through the revolving door with bulky objects.
- Do not walk against the wing rotation direction of the revolving door.
- Do not operate the revolving door if there is insufficient lighting.
- Do not operate the revolving door if it is damaged (e.g., broken glass).
- Never use replacement parts that are not approved by dormakaba.
- People cannot be allowed to stay in the revolving door for longer than it takes to pass through the door.
- Do not walk on the glass ceiling of the revolving door.

# 5 Revolving door assemblies

## 5.1 4000-M revolving door enclosure assembly examples

- 1 Center shaft assembly
- 2 Wing assembly
- 3 Center post
- 4 Quarter post/end wall
- 5 Base assembly
- 6 Canopy assembly
- 7 Enclosure glass
- 8 In-ground speed control
- 12 Nameplate/job number tag

Fig. 5.1.1 4 wing 4000-M revolving door

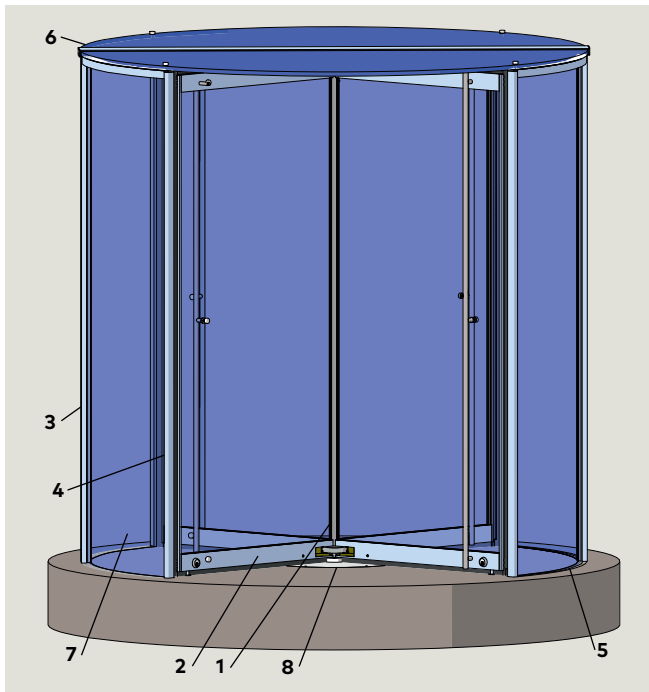


Fig. 5.1.2 3 wing 4000-M revolving door

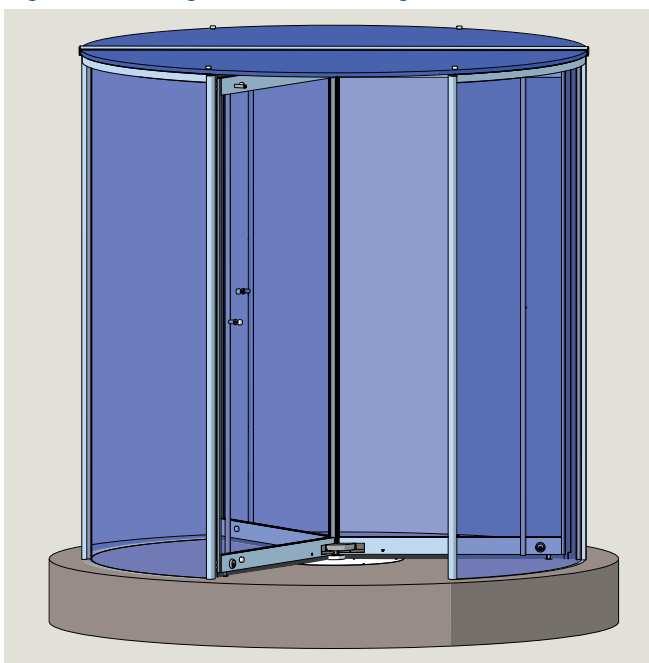


Fig. 5.1.3 4 wing center shaft assembly

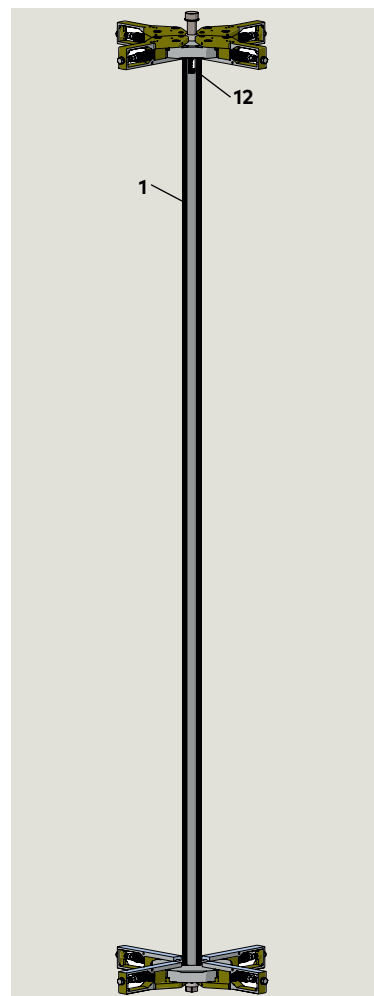


Fig. 5.1.4 In-ground speed control

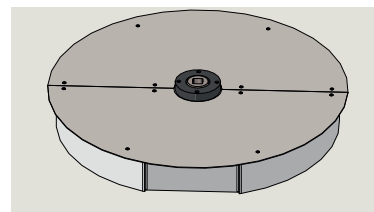
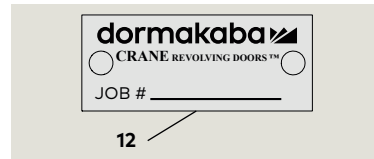


Fig. 5.1.5 Job number tag



12 Nameplate/job number tag

## 5.2 Door wing types

Fig. 5.2.1 Patch fitting type wing

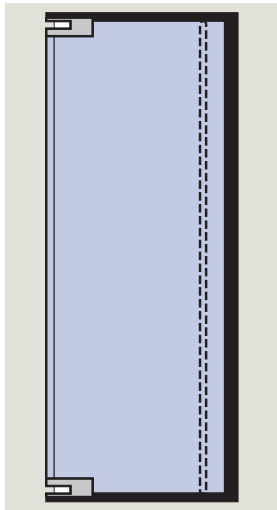
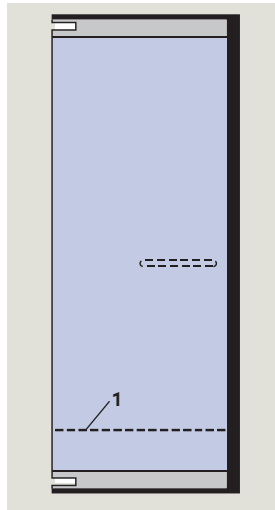


Fig. 5.2.2 Herculite type wing



1 Optional tall bottom rail

## 5.3 Glass canopy with muntin assembly

Fig. 5.3.1 Glass canopy with muntin, top view

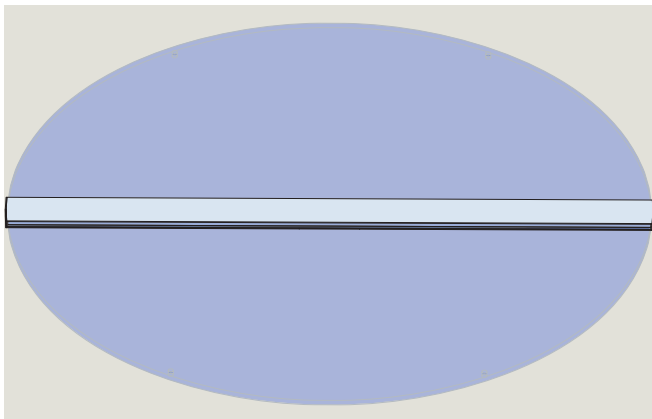
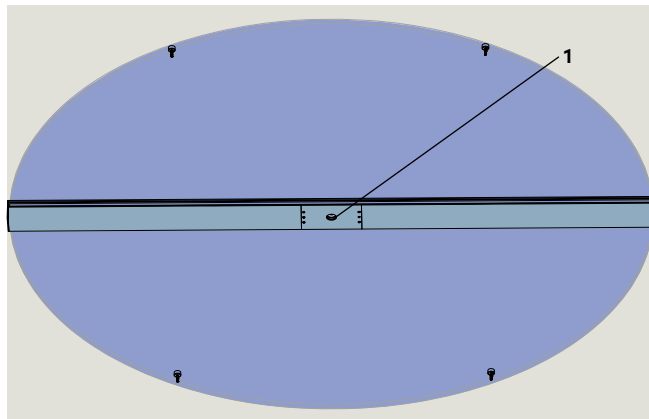


Fig. 5.3.2 Glass canopy with muntin, bottom view



1 Bearing assembly

## 5.4 Glass canopy with bearing assembly

Fig. 5.4.1 Canopy glass with bearing assembly, top view

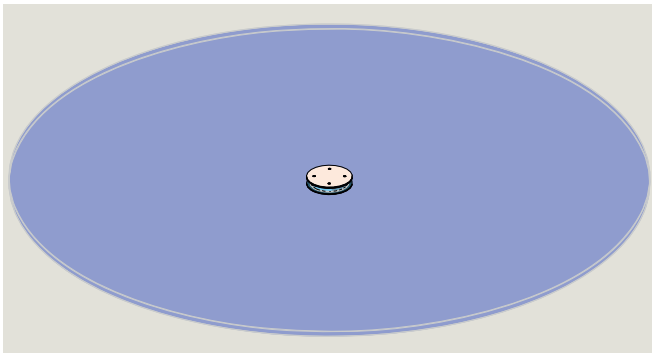
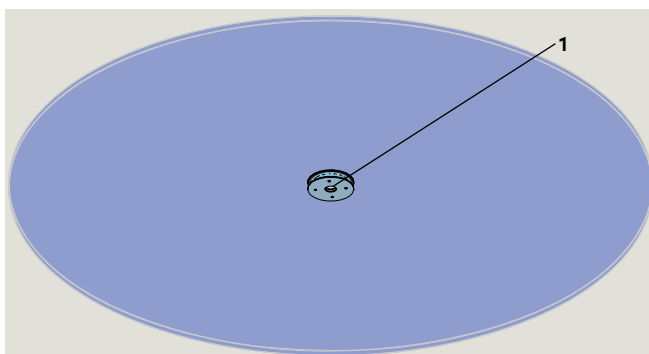


Fig. 5.4.2 Canopy glass with bearing assembly, bottom view



1 Bearing assembly

## 6 Bookfold

### 6.1 Bookfold mechanism.

The Crane bookfold mechanism is constructed from a high grade chilled bronze casting.

- This hardware complies with all state and federal requirements for providing emergency egress.
- The pressure required to engage the bookfold mechanism is adjustable to meet ANSI/BHMA A156.27, Power and Manual Operated Revolving Pedestrian Doors.

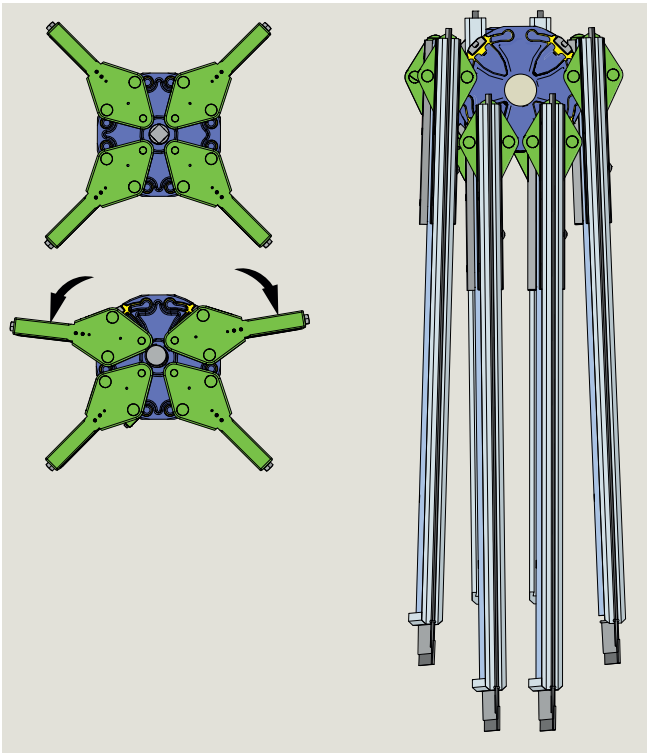


#### WARNING

In case of emergency, revolving door can be used as an exit, but it is not the primary path of egress.

The side door(s) should be used!

Fig. 6.1 Bookfold mechanism





# 7 Manual speed control

## 7.1 Speed control.

All Crane manual revolving doors use the same 100:1 gear ratio manual speed control; a steel cast, precision machined, sealed unit mounted in a cement case (In-ground speed control).

- A centrifugal force brake slowly engages as the door reaches the maximum allowable RPM set by ANSI/BHMA A156.27, Standard for Power and Manual Operated Revolving Pedestrian Doors.

### CAUTION

**Manual speed control maintenance must be done by dormakaba service personnel.**

## 7.2 Speed control oil fill.

- In-ground speed control: Reference Para. 8.3.

Fig. 7.1 In-ground manual speed control

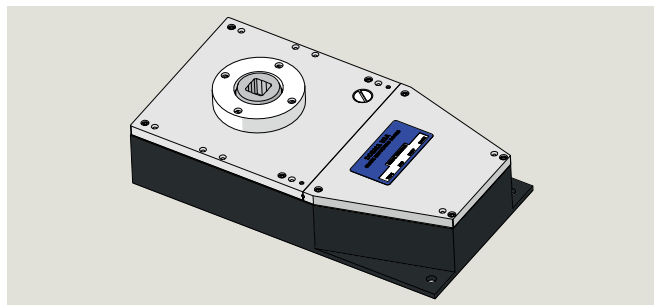
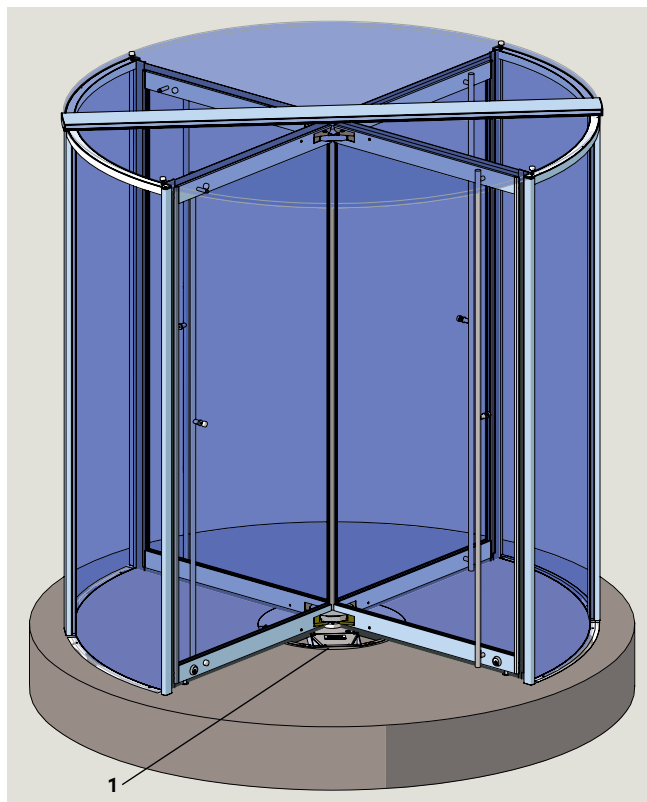
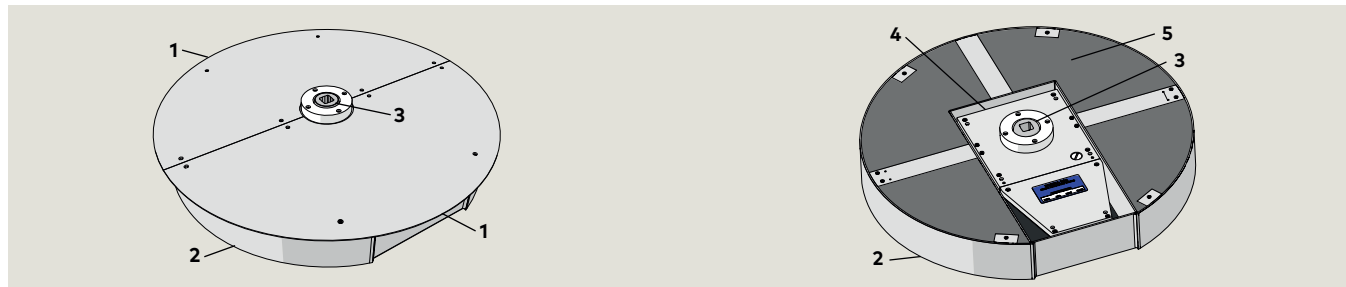


Fig. 7.2 In-ground speed control



1 Manual speed control

Fig. 7.3 In-ground speed control assembly

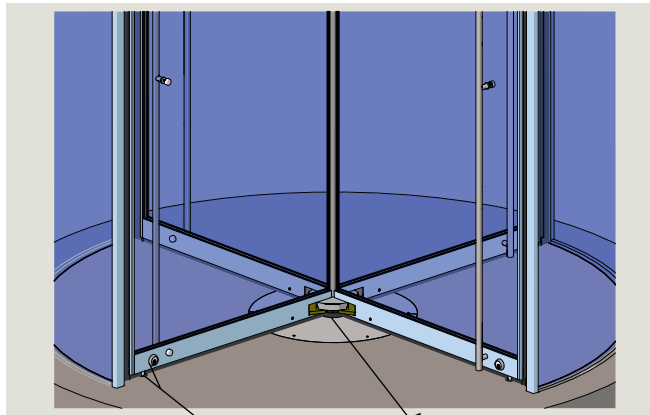


- 1 Cover plate
- 2 Round cement box
- 3 Drive shaft
- 4 Manual speed control assembly
- 5 Non-shrink grout

# 8 Maintenance

## 8.1 Door and floor maintenance

Fig. 8.1.1 Floor pivot bearing maintenance



- 1 In-ground speed control
- 1 Mechanical wing lock
- 2 Wing lock and floor strike
- 2 Floor strike

### 8.1.1 Floor surface.

- 1. Keep revolving door floor surface clean.

### 8.1.2 In-ground speed control and center shaft.

- 1. Clean surface area at in-ground speed control and center shaft.

### 8.1.3 Wing locks and floor strikes.

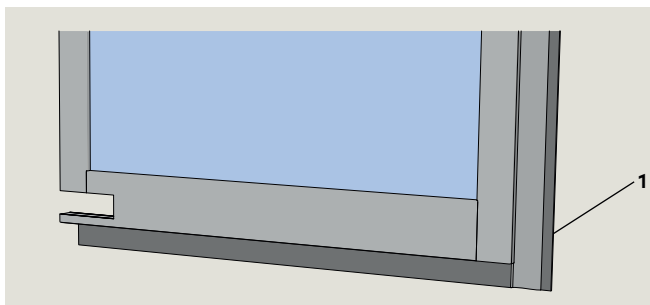
- 1. Clean wing locks.
- 2. Clean floor strikes of all dirt and debris.

### 8.1.4 Glass surfaces.

- 1. Clean glass surfaces with commercially available glass cleaner.

## 8.2 Weathersweeps

Fig. 8.2.1 T-style weathersweep



- 1 T-style weathersweep

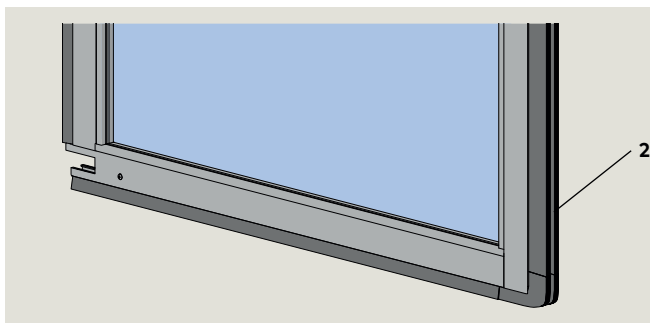
### 8.2.1 Weathersweep maintenance.

#### NOTICE

Reducing or trimming the size of the bottom sweep makes the sweep more rigid and voids all warranties.

- 1. Inspect condition of sweeps.
  - Recondition horsehair sweeps if possible using conditioner.
- 2. Replace weathersweeps as required.
  - Contact dormakaba distributor for replacement weathersweeps.

Fig. 8.2.2 Horsehair weathersweep



- 2 Horsehair weathersweep

## 8.3 In-ground speed control oil

### CAUTION

Manual speed control maintenance must be done by dormakaba service personnel.

### NOTICE

Oil is added to in-ground speed control during door installation.

### 8.3.1 in-ground speed control oil fill during door installation.

Procedure:

A 22 oz. bottle of multigrade synthetic oil is supplied.

- In-ground speed control cover plates are not installed.
- Oil fill hole .500-13 x 3/4" long undercut slotted flat head machine screw is removed.
- Entire contents of bottle poured into speed control oil fill hole.
- .500-13 x 3/4" long undercut slotted flat head machine screw is reinstalled.

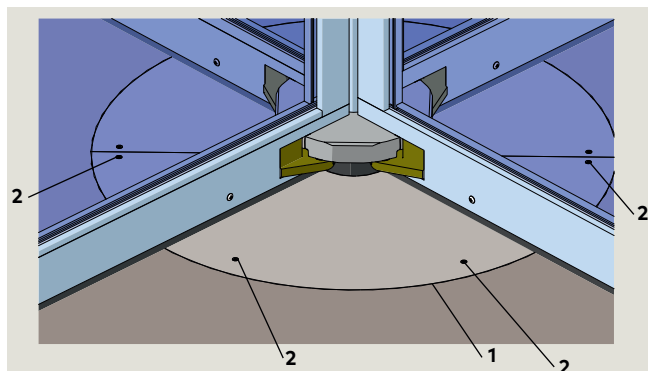
### 8.3.2 Addition of oil to in-ground speed control after door installation.

### CAUTION

Manual speed control maintenance must be done by dormakaba service personnel.

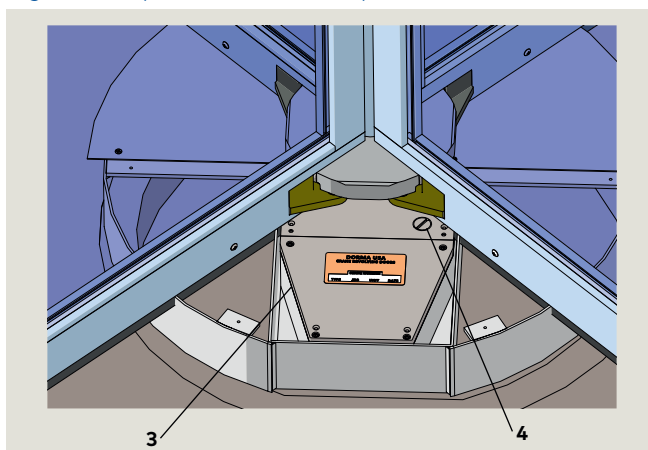
1. Remove four 10-24 x 1/2" long special Phillips flat head screws securing speed control cover plate to access speed control cover oil fill hole.
2. Remove speed control cover plate.
3. Remove oil fill hole .500-13 x 3/4" long undercut slotted flat head machine screw.
4. Add required amount of oil to speed control.
  - **Multigrade synthetic oil must be used.**
5. Reinstall screw removed in step 3.
6. Replace speed control cover plate and secure with 10-24 x 1/2" long screws removed in step 1.

Fig. 8.3.1 In ground speed control cover plates



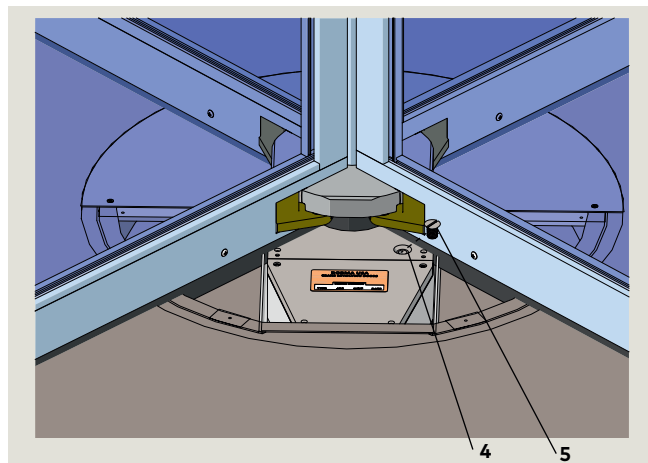
- 1 In-ground speed control cover  
2 10-24 x 1/2" long special Phillips flat head SS screw

Fig. 8.3.2 Speed control cover plate removed



- 3 In-ground speed control  
4 Oil fill hole

Fig. 8.3.3 Speed control oil fill hole screw removed



- 4 Oil fill hole  
5 .500-13 x 3/4" undercut slotted flat head machine screw

## 8.4 Cleaning surfaces

### 8.4.1 Aluminum

1. Dust and grime can be removed by regular cleaning.
  - Use a mild, non-abrasive soap or cleaning solution and water.
  - After cleaning, surfaces should be wiped dry with a clean absorbent material.
2. Tar and built-up dirt can be removed with solvent cleaners such as turpentine if followed by a soap and water cleaning and fresh water rinse.

#### NOTICE

Avoid acid or alkali cleaners; they may attack the anodized finish.

- After cleaning, surfaces should be wiped dry with a clean absorbent material.

### 8.4.2 #4 stainless steel

1. For routine cleaning, use soap, ammonia, or detergent and water.
  - Always working in the direction of the grain, rub with a sponge or rag.
  - Rinse with water, wipe dry.
2. Stubborn dirt or grime can be removed with a quality commercial stainless steel cleaner.

### 8.4.3 Mirror finish stainless steel

#### NOTICE

Mirror finishes require very special care. Abrasive cleaners and cloths should never be used.

1. Use only mild soap and water or glass cleaner.
  - After cleaning, surfaces should be wiped dry with a clean absorbent material.

### 8.4.4 Bronze

#### NOTICE

To insure proper maintenance, consult a professional bronze finisher and establish a regular metal cleaning program.

1. Bronze finishes are protected during shipping and installation by a shop coat of lacquer.

#### NOTICE

Lacquer can be damaged by ammonia in window cleaners, or by acids from masonry cleaners. Protect doors from these cleaners.

#### NOTICE

Doors must be inspected and worked after installation by a qualified bronze finisher.

### 8.4.5 Painted finishes

1. Any mild non-abrasive soap or mild solvent can be used for cleaning.

#### NOTICE

Strong solvents may dissolve paint. Test any solvent first.

2. Wax can be used to protect the finish.

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