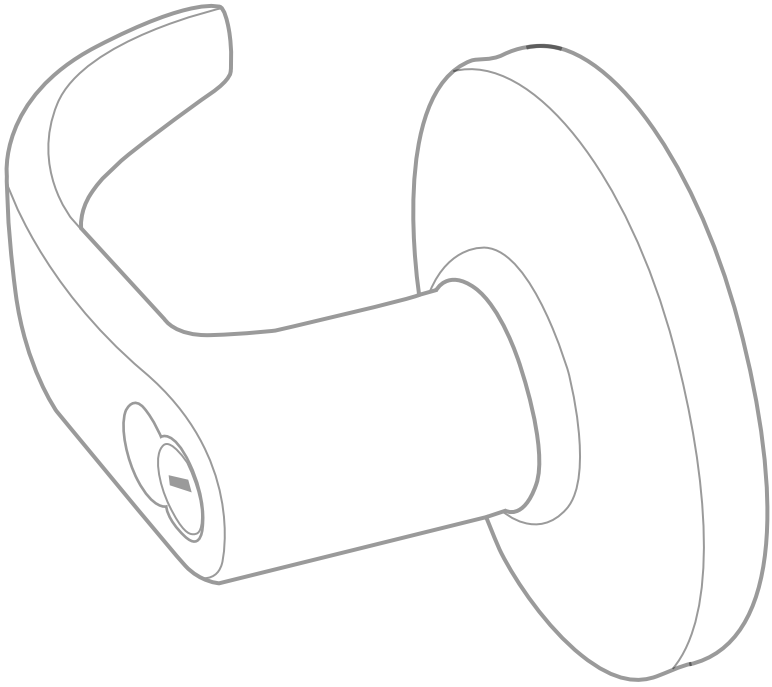
BEST
dormakaba Group

9K Series

Standard and electrified locks

Service Manual



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1 Getting started

1.1 Introduction

The 9K Series Service Manual contains essential information to help you maintain your 9K Series Lock. This manual addresses standard and electrified 9K Series Locks. Throughout this manual, the term electrified is used to refer to 93KW–95KW DEL, DEU function locks.

1.2 Certifications and standards

9K series locks

- Locks comply with ANSI A156.2, Series 4000 Grade 1 standards.
- Locks are listed by Underwriter's Laboratories for use on 3 Hr., A label single swinging doors (4' x 10'), or pairs of doors 8' wide and 10' high.
- When used with the 3/4" throw latch, the locks comply with Miami-Dade County standards with a design pressure rating of ±90 PSF for single doors and ±50 PSF for double door openings.
- AB, C, D, EA, G, IN, NX, Q, R, and YD function locks comply with ANSI A250.13 Windstorm standards with a design load rating of 1750 pounds.
- Chassis conforms to ANSI A115.2.
- KS3 strike fits the standard door frame cutout as specified in ANSI A115.2.
- #14 and #15 lever handles conform to California Administrative Code Title 19 and Title 24.
- #14, #15, and #16 lever handles conform to the Illinois Accessibility Standard.

Electrified locks

- KW Locks are UL listed for GYQS electrically controlled single point locks or latches.
- KW Locks are approved by the California State Fire Marshal (CSFM) pursuant to section 13144.1 of the California Health and Safety Code.
- 9KW Locks are approved by the city of New York Board of Standards and Appeals under calendar number 730-89-SA. See CSFM listing number 4136-1175:103.

Accessories

- 8W599 transformer is UL listed.
- 8WCON AC to DC converter full wave bridge rectifier is UL recognized.

1.3 Documentation package

Table 1

The following documentation is available to help you with the installation, start-up, and maintenance of your 9K Series Lock.

The installation and assembly instructions also can be ordered separately:

Documentation title	Doc No.
Installation Instructions for 9K Cylindrical Locks	T56075
Single and Double Dummy Trim Assembly Instructions for 9K 1DT/2DT	T56076
Wiring Instructions for 8K and 9K Series Electrified Cylindrical Locks with RQE	T56090
Door Wiring Instructions for Electrically-Operated Locks	T61926

A link to all installation instructions are included in this manual on page 54.

The templates required for lock installations also can be ordered separately:

Documentation title	Doc No.
K08 Template for Door and Frame Preparation for 63, 73, 83, 93K Locks	T56052
K09 Template for Door and Frame Preparation for 63, 73, 83, 93K Locks	T56053
K10 Template for Door and Frame Preparation for 64, 84, 94K Locks	T56054
K11 Template for Door and Frame Preparation for 64, 84, 94K Locks	T56055
K12 Template for Door and Frame Preparation for 65, 85, 95K Locks	T56056
K13 Template for Door and Frame Preparation for 65, 85, 95K Locks	T56057
K18 Template for 8K/9K Dummy Trim	T56059
K21 Template for Strike Specification for Cylindrical Locks	T56060
W14 Template; Installation Specifications for 83KW/93KW-85KW/95KW IDH Max Cylindrical Locks	T60777
W16 Template; Installation Template for 83KW/93KW-85KW/95KW IDH Max Cylindrical Locks	T60773

A link to all templates are included in this manual on page 54.

1.4 Technical support

Support services

When you have a question about the 9K Series Lock, your first resource for help is the 9K Series Service Manual. If you cannot find a satisfactory answer, contact your local dormakaba representative.

Contact technical support

A factory-trained Certified Product Specialist (CPS) is available in your area whenever you need. Before you call, please make sure that the product is in your immediate vicinity, and that you are prepared to give the following information:

- What happened and what were you were doing when the problem arose?
- What have you done so far to correct the problem?

dormakaba USA Inc. representatives provide telephone technical support for all 9K Series products. You may locate the representative nearest you by calling 1-800-392-5209. Monday through Friday, between 8:00 a.m. and 5:00 p.m. eastern standard time; or visit the web page: https://dhwsupport.dormakaba.com/hc/en-us.

dormakaba holds training sessions for its customers. The seminars are specifically designed for dormakaba end-users who have a registered dormakaba [BEST branded product] masterkeyed system and registered dormakaba [BEST branded product] security equipment. If you are interested, you may contact your local dormakaba representative for details.

2 Functions and parts lists

The following pages contain function descriptions for all 9K Series Locks. This chapter also includes exploded diagrams that show all field serviceable mechanical parts, diagrams of trim and other miscellaneous parts, and function conversion information.

2.1 Function descriptions

Fig. 1

This section includes function descriptions grouped by the following function types:

- Single-keyed (page 9)
- Double-keyed (page 10)
- Non-keyed (page 11)
- Special (page 12)
- Electrified (page 14)

For a list of the BEST designation for each ANSI-defined function, see page 15.

NOTE: If function is ANSI defined, ANSI designation appears by function name.

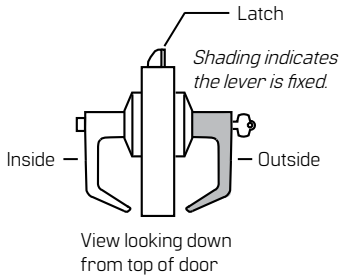


Figure 1 Understanding function drawings

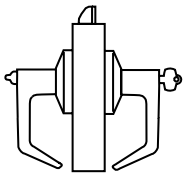
2.2 Single-keyed functions

Fig. 2

Single-keyed functions

The following lists describe how the latchbolt, outside lever, and inside lever operate for each single-keyed 9K function.

AB–Entrance (ANSI F109)



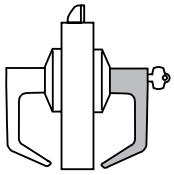
Latchbolt operated by:
- Inside lever
- Outside key
- Outside lever when inside button is in unlocked position

Outside lever locked by:
- Inside button, pushed in
- Inside button, pushed in and rotated clockwise

Outside lever unlocked by:
- Inside lever when inside button is pushed in but not rotated
- Outside key when inside button is pushed in but not rotated
- Closing door when inside button is pushed in but not rotated

Inside lever is always unlocked.

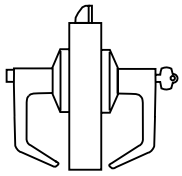
D–Storeroom (ANSI F86)



Latchbolt operated by:
- Inside lever
- Outside key

Outside lever always fixed.
Inside lever always unlocked.

E–Service station (ANSI F92)



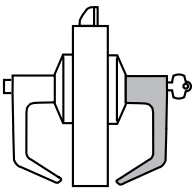
Latchbolt operated by:
- Inside lever
- Outside key
- Outside lever, with inside button in unlocked position

Outside lever locked by:
- Inside slotted button
- Inside slotted button, pushed in and rotated clockwise

Outside lever unlocked by:
- Inside lever
- Inside slotted button, rotated counterclockwise
- Outside key
- Closing door with inside button pushed in but not rotated

Inside lever is always unlocked.

H and HJ – Hotel guest room (ANSI F93 - H only)



Latchbolt operated by:
- Inside lever
- Outside key when inside button is in unlocked position
- Special emergency key after removing core with control key

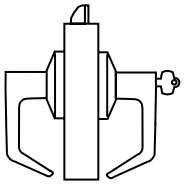
Outside lever is always fixed.

Key block feature released by:
- Inside lever
- Closing door

Inside lever is always unlocked.

NOTE: For H function, pushing inside button projects an "Occupied" indicator in outside lever and blocks all operating keys. For HJ function, pushing inside button blocks all operating keys.

R–Classroom (ANSI F84)



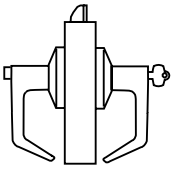
Latchbolt operated by:
- Inside lever
- Outside key
- Outside lever when not locked

Outside lever locked by:
- Outside key

Outside lever unlocked by:
- Outside key

Inside lever is always unlocked.

T–Dormitory (ANSI F90)



Latchbolt operated by:
- Inside lever
- Outside lever when not locked

Outside lever locked by:
- Inside button
- Outside key

Outside lever unlocked by:
- Inside lever when inside button is pushed in
- Outside key
- Closing door when inside button is pushed in

Inside lever is always unlocked.

2.3 Double-keyed functions

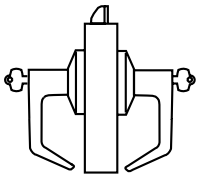
Fig. 3

Double-keyed functions

The following lists describe how the latchbolt, outside lever, and inside lever operate for each double-keyed 9K function.

WARNING (G, S, and W functions):
Locks that secure both sides of the door are controlled by building codes and the Life Safety Code®. In an emergency exit situation, failure to quickly unlock the door could be hazardous, or even fatal.

C–Corridor (ANSI F88)



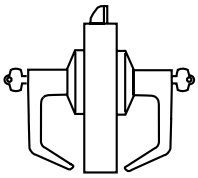
Latchbolt operated by:
- Inside lever
- Outside key
- Outside lever when not locked

Outside lever locked by:
- Inside key

Outside lever unlocked by:
- Inside key

Inside lever is always unlocked.

G–Storeroom (ANSI F91)



Latchbolt operated by:
- Inside lever when not locked
- Outside lever when not locked

Outside lever locked by:
- Inside key
- Outside key

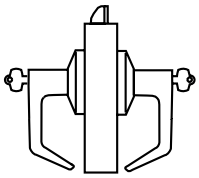
Outside lever unlocked by:
- Inside key
- Outside key

Inside lever locked by:
- Inside key
- Outside key

Inside lever unlocked by:
- Inside key
- Outside key

NOTE: Turning key in inside or outside lever locks or unlocks both sides.

IN–Intruder



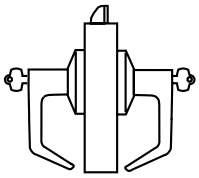
Latchbolt operated by:
- Inside lever
- Outside lever when not locked

Outside lever locked by:
- Inside key
- Outside key

Outside lever unlocked by:
- Inside key
- Outside key

Inside lever is always unlocked.

S–Communicating (ANSI F80)



Latchbolt operated by:
- Inside key
- Inside lever when not locked
- Outside key
- Outside lever when not locked

Outside lever locked by:
- Outside key

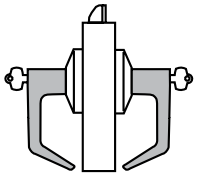
Outside lever unlocked by:
- Outside key

Inside lever locked by:
- Inside key

Inside lever unlocked by:
- Inside key

NOTE: Turning key in either lever locks or unlocks that lever independently.

W–Institutional (ANSI F87)



Latchbolt operated by:
- Inside key
- Outside key

Outside lever is always fixed.

Inside lever is always fixed.

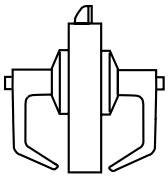
2.4 Non-keyed functions

Fig. 4

Non-keyed functions

The following lists describe how the latchbolt, outside lever, and inside lever operate for each non-keyed 9K function.

L–Privacy (ANSI F76)



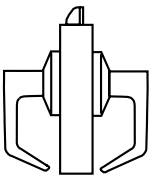
Latchbolt operated by:
- Inside lever
- Outside lever when inside button is in unlocked position

Outside lever locked by:
- Inside button

Outside lever unlocked by:
- Inside lever
- Outside slotted button when pushed in and rotated counterclockwise
- Closing door

Inside lever is always unlocked.

N – Passage (ANSI F75)

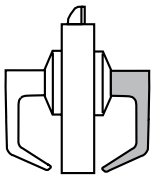


Latchbolt operated by:
- Inside lever
- Outside lever

Outside lever is always unlocked.

Inside lever is always unlocked.

NX–Exit (ANSI F89)

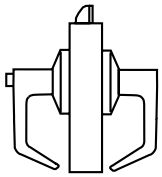


Latchbolt operated by:
- Inside lever

Outside lever is always fixed.

Inside lever is always unlocked.

P–Patio (ANSI F77)



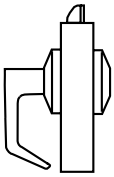
Latchbolt operated by:
- Inside lever
- Outside lever when inside button is in unlocked position

Outside lever locked by:
- Inside button

Outside lever unlocked by:
- Inside lever
- Closing door

Inside lever is always unlocked.

Y–Exit

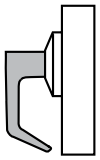


Latchbolt operated by:
- Inside lever

Inside lever is always unlocked.

---

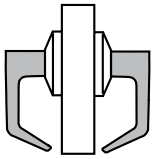
1 DT–Single dummy trim



This lock is a single, surface mounted lever for an inactive door or a non-latching door.

---

2 DT– Double dummy trim



This lock is a through-bolt mounted pair of matching levers for an inactive door or non-latching door.

2.5 Special functions

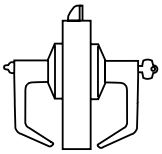
Fig. 5

Special functions

The following lists describe how the latchbolt, outside lever, and inside lever operate for each double-keyed 9K function.

Warning: Locks that secure both sides of door are controlled by building codes and Life Safety Code®. In an emergency exit situation, failure to quickly unlock door could be hazardous, or even fatal.

A– Dormitory or storeroom lock (ANSI F 8 1)



Latchbolt operated by:
- Inside lever
- Outside key
- Outside lever when inside button is in unlocked position

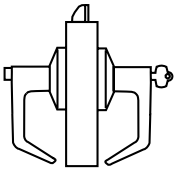
Outside lever locked by:
- Inside button

Inside lever is always unlocked.

Outside lever unlocked by:
- Inside button

NOTE: Inside button must be rotated counterclockwise to unlock outside lever.

B–Office (ANSI F 8 2)



Latchbolt operated by:
- Inside lever
- Outside key
- Outside lever when inside button is in unlocked position

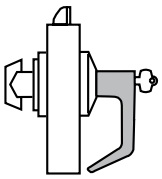
Outside lever locked by:
- Inside button

Outside lever unlocked by:
- Inside lever
- Outside key

Inside lever is always unlocked.

NOTE: Inside button is released by turning key in outside lever, or rotating inside lever. Closing door does not release inside button.

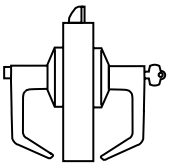
DZ– Closet or storeroom



Latchbolt operated by:
- Inside turn knob
- Outside key

Outside lever is always fixed
Inside turn knob is always unlocked.

EA– Entrance or office



Latchbolt operated by:
- Inside lever
- Outside key
- Outside lever when inside button is in unlocked position

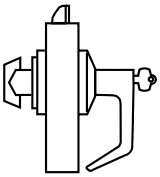
Outside lever locked by:
- Inside button
- Inside button, pushed in and rotated clockwise

Inside lever is always unlocked.

NOTE: Turning slotted button keeps outside lever locked until button is turned back.

Outside lever unlocked by:
- Inside lever
- Inside button rotated counterclockwise
- Outside key

RZ–Closet or storeroom



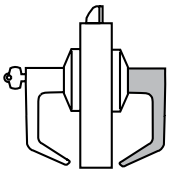
Latchbolt operated by:
- Inside turn knob
- Outside key
- Outside lever when not locked

Outside lever locked by:
- Outside key

Inside turn knob is always unlocked.

Outside lever unlocked by:
- Outside key

XR– Special

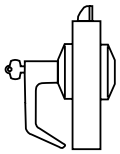


Latchbolt operated by:
- Inside key
- Inside lever when not locked

Outside lever is always fixed.
Inside lever locked by:
- Inside key

Inside lever unlocked by:
- Inside key

YR–Special

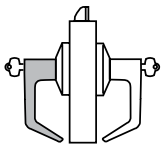


Latchbolt operated by:
- Inside key
- Inside lever when not locked

Inside lever locked by:
- Inside key

Inside lever unlocked by:
- Inside key

RD–Special



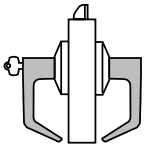
Inside lever is always fixed.

Latchbolt operated by:
- Inside key
- Outside key
- Outside lever when not locked

Outside lever locked by:
- Outside key

Outside lever unlocked by:
- Outside key

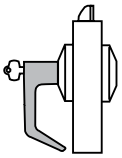
XD–Special



Latchbolt operated by:
- Inside key

Outside lever is always fixed.
Inside lever is always fixed.

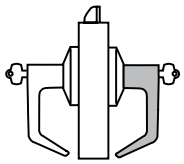
YD–Exit



Latchbolt operated by:
- Inside key

Inside lever is always fixed.

DR–Special



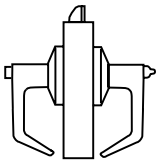
Latchbolt operated by:
- Inside key
- Inide lever when not locked
- Outside key

Outside lever is always fixed

Inside lever locked by:
- Inside key

Inside lever unlocked by:
- Inside key

LL–Hospital privacy



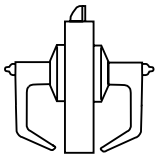
Inside lever is always unlocked.

Latchbolt operated by:
- Inside lever
- Outside lever when not locked

Outside lever locked by:
- Inside button when pushed in

Outside lever unlocked by:
- Inside lever
- Outside button, pushed in and rotated counterclockwise
- Closing door

M–Communicating (ANSI F78)



NOTE: Do not use this function for rooms that have no other entrance.

Latchbolt operated by:
- Inside lever when not locked
- Outside lever when not locked

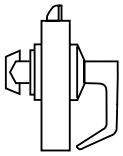
Outside lever locked by:
- Inside button

Outside lever unlocked by:
- Inside button

Inside lever locked by:
- Outside button

Inside lever unlocked by:
- Outside button

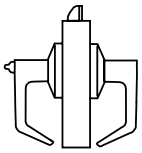
Z–Closet latch



Latchbolt operated by:
- Inside turn knob
- Outside lever

Outside lever is always unlocked.
Inside turn knob is always unlocked.

Q–Exit (ANSI F83)



Latchbolt operated by:
- Inside lever
- Outside lever when not locked

Outside lever locked by:
- Inside button

Outside lever unlocked by:
- Inside button

Inside lever is always unlocked.

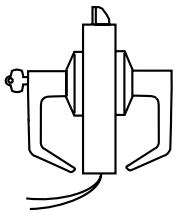
2.6 Electrified cylindrical functions

Fig. 6

Electrified cylindrical functions

The following lists describe how the latchbolt, outside lever, and inside lever operate for each electrified 9K function.

DEL–Electrically locked – Fail safe



Latchbolt operated by:

- Inside lever
- Outside lever when electric power is removed from solenoid
- Outside key

Outside lever locked by:

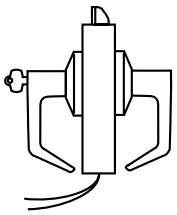
- Applying 24 VDC to solenoid; remains locked only while power continues to be applied

Outside lever unlocked by:

- Removing 24 VDC from solenoid

Inside lever is always unlocked.

DEU– Electrically unlocked – Fail secure



Latchbolt operated by:

- Inside lever
- Outside lever when electric power is applied to solenoid
- Outside key

Outside lever locked by:

- Removing 24 VDC from solenoid

Outside lever unlocked by:

- Applying 24 VDC to solenoid; remains unlocked only while power continues to be applied

Inside lever is always unlocked.

2.7 Functions by ANSI designation

Table 2

ANSI No.	Function
F75	N
F76	L
F77	P
F78	M
F80	S
F81	A
F82	B
F83	Q
F84	R
F86	D
F87	W
F88	C
F89	NX
F90	T
F91	G
F92	E
F93	H
F109	AB

3 Standard functions — Exploded diagrams

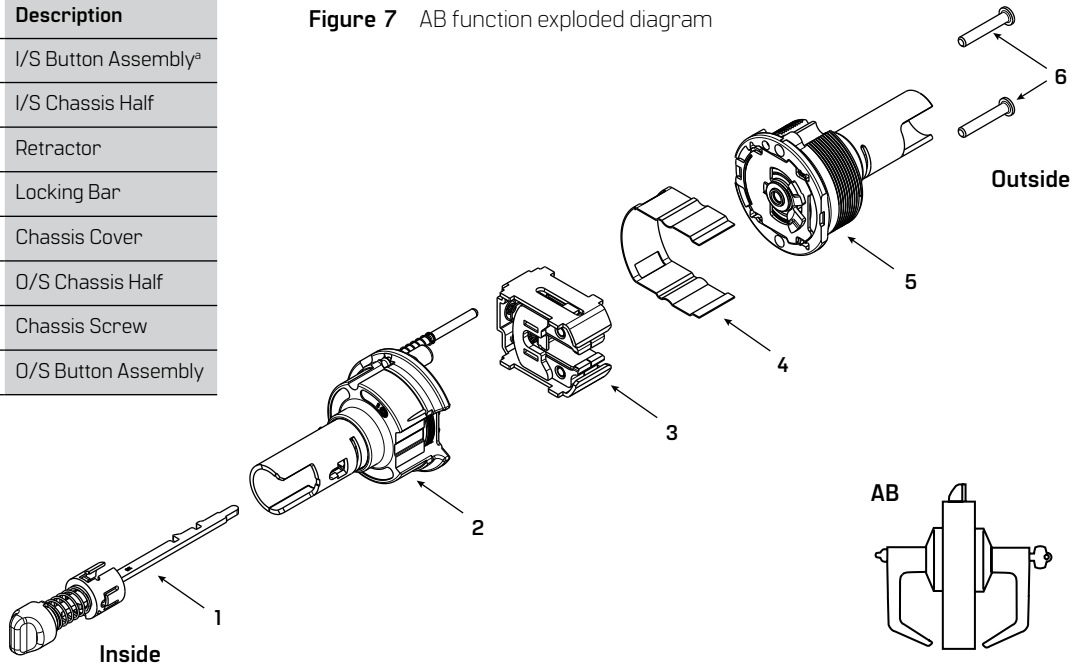
3.1 AB function chassis — Entrance lock (ANSI F109)

Fig. 7

Item	Part No.	Description
1	B55692	I/S Button Assembly[a]
2	C89873-1	I/S Chassis Half
3	B54886	Retractor
-	n/a	Locking Bar
4	B54172	Chassis Cover
5	C89870-1	O/S Chassis Half
6	A55505	Chassis Screw
-	n/a	O/S Button Assembly

a. Specify finish.

Figure 7 AB function exploded diagram

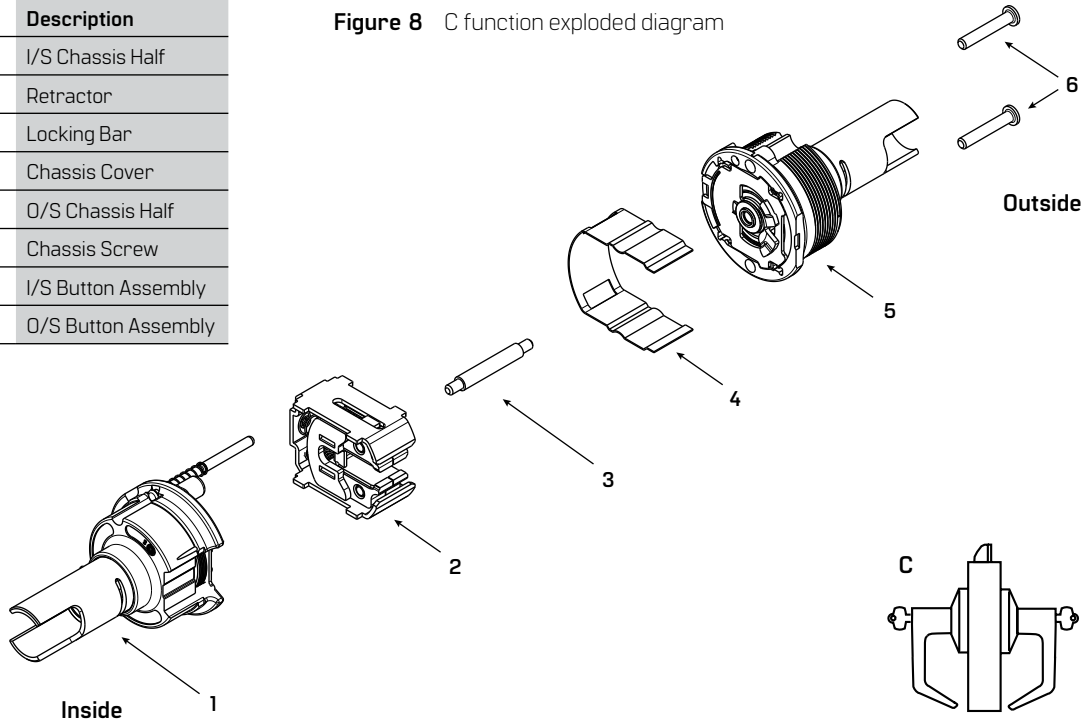


3.2 C function chassis — Corridor lock (ANSI F88)

Fig. 8

Item	Part No.	Description
1	C89873-5	I/S Chassis Half
2	B54888	Retractor
3	A54190	Locking Bar
4	B54172	Chassis Cover
5	C89870-1	O/S Chassis Half
6	A55505	Chassis Screw
-	n/a	I/S Button Assembly
-	n/a	O/S Button Assembly

Figure 8 C function exploded diagram

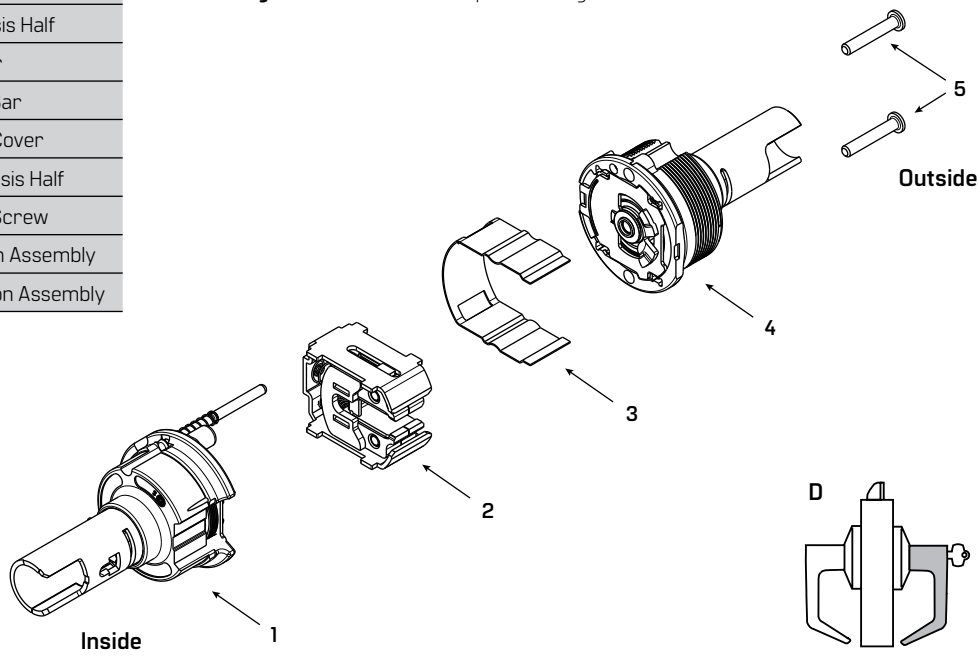


3.3 D function chassis — Storeroom lock (ANSI F86)

Fig. 9

Item	Part No.	Description
1	C89873-1	I/S Chassis Half
2	B54888	Retractor
-	n/a	Locking Bar
3	B54172	Chassis Cover
4	C89870-3	O/S Chassis Half
5	A55505	Chassis Screw
-	n/a	I/S Button Assembly
-	n/a	O/S Button Assembly

Figure 9 D function exploded diagram



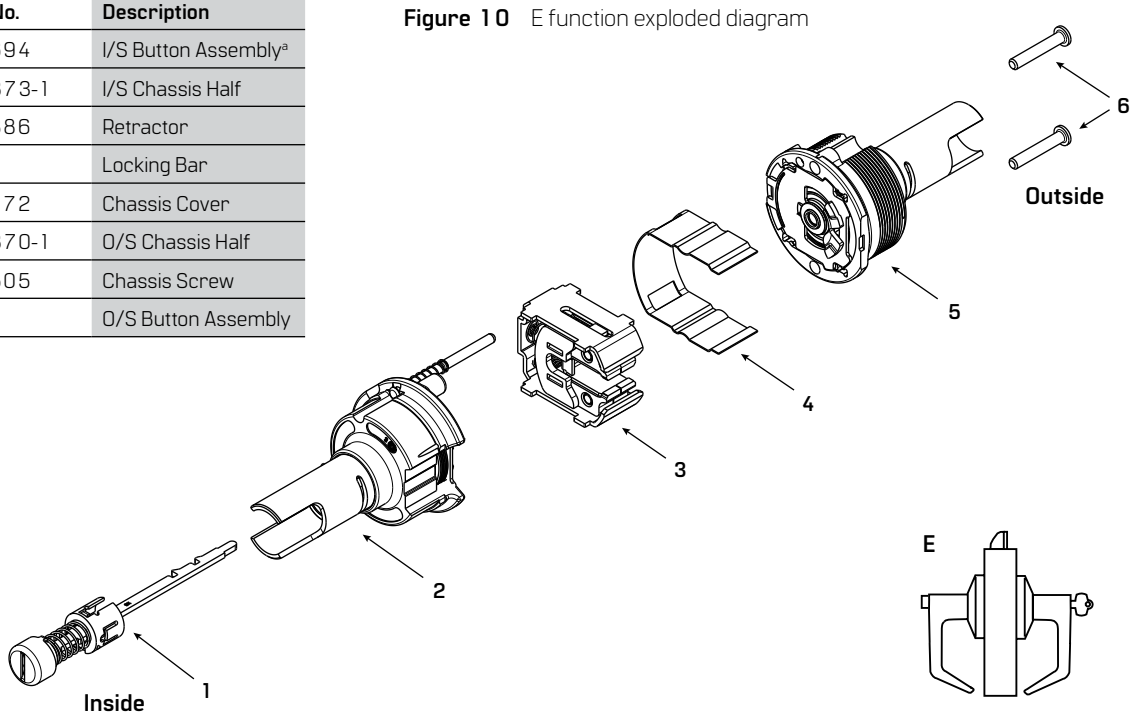
3.4 E function chassis — Service station lock (ANSI F92)

Fig. 10

Item	Part No.	Description
1	B55694	I/S Button Assembly[a]
2	C89873-1	I/S Chassis Half
3	B54886	Retractor
-	n/a	Locking Bar
4	B54172	Chassis Cover
5	C89870-1	O/S Chassis Half
6	A55505	Chassis Screw
-	n/a	O/S Button Assembly

a. Specify finish.

Figure 10 E function exploded diagram

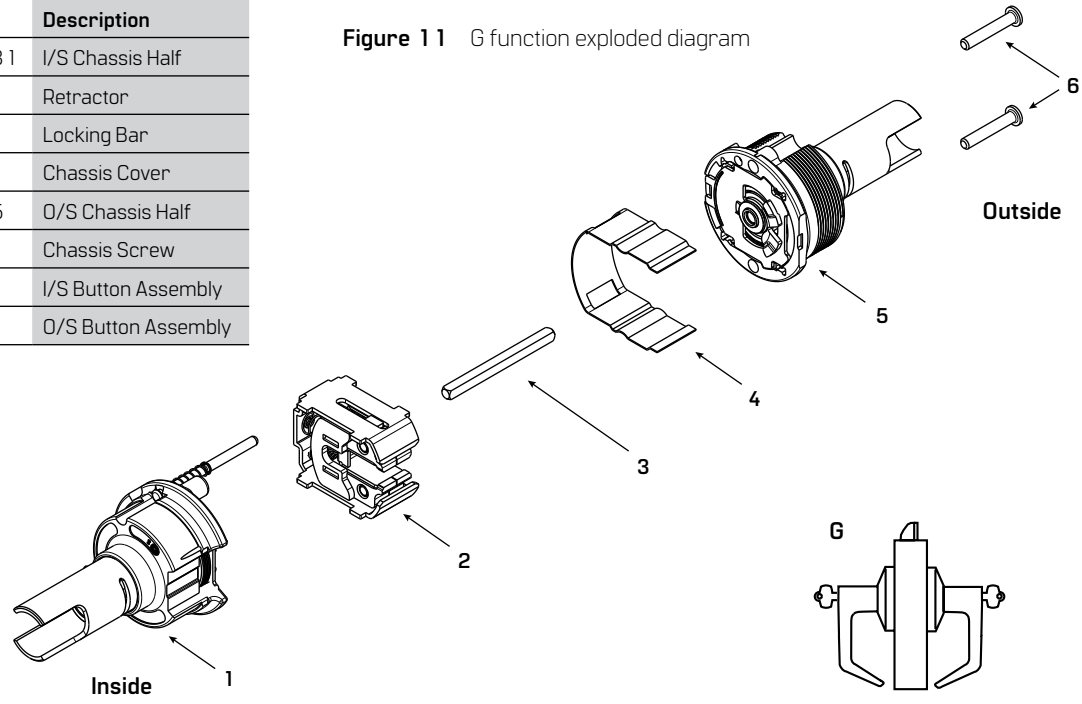


3.5 G function chassis — Storeroom lock (ANSI F91)

Fig. 11

Item	Part No.	Description
1	C89873-31	I/S Chassis Half
2	B54888	Retractor
3	A54195	Locking Bar
4	B54172	Chassis Cover
5	C89870-5	O/S Chassis Half
6	A55505	Chassis Screw
-	n/a	I/S Button Assembly
-	n/a	O/S Button Assembly

Figure 11 G function exploded diagram



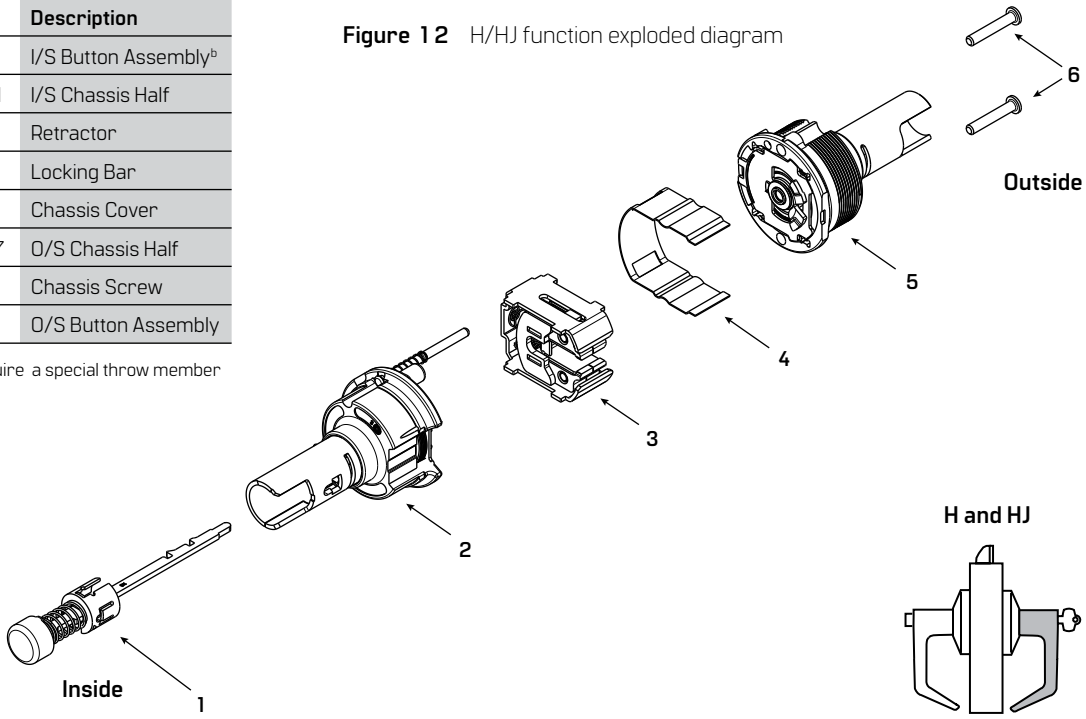
3.6 H function chassis — Hotel guest room lock with indicator (F93)
HJ function chassis — Hotel guest room lock without indicator

Fig. 12

Item[a]	Part No.	Description
1	B55693	I/S Button Assembly[b]
2	C89873-1	I/S Chassis Half
3	B54886	Retractor
-	n/a	Locking Bar
4	B54172	Chassis Cover
5	C89870-7	O/S Chassis Half
6	A55505	Chassis Screw
-	n/a	O/S Button Assembly

a. These functions require a special throw member (see page 39).
b. Specify finish.

Figure 12 H/HJ function exploded diagram



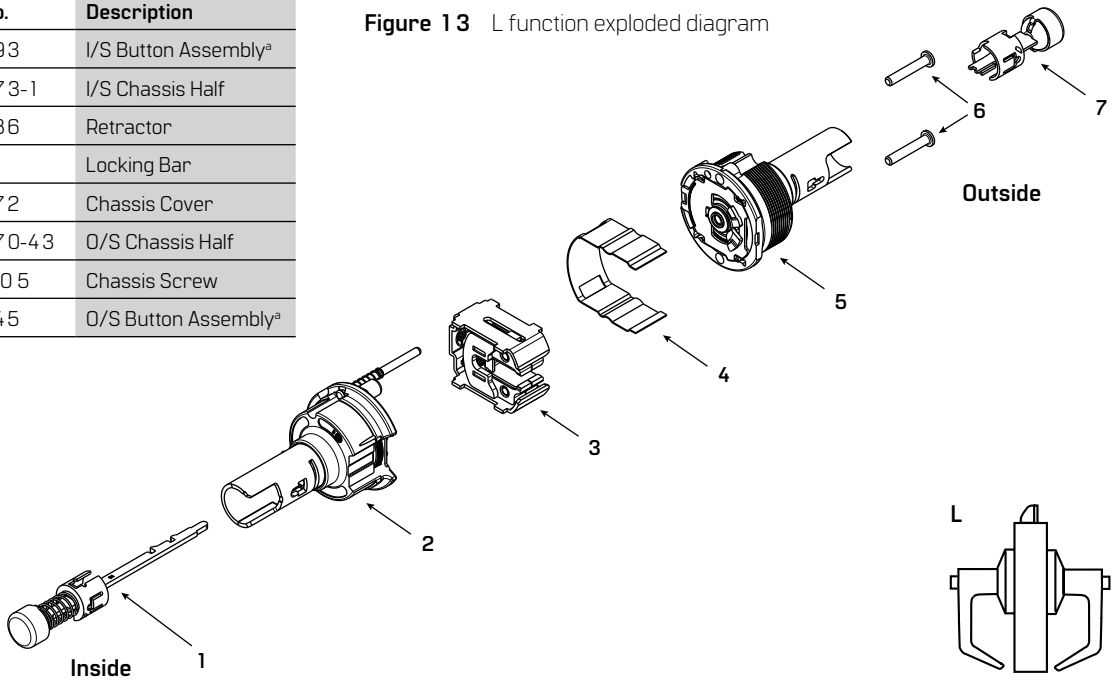
3.7 L function chassis — Privacy lock (ANSI F7 6)

Fig. 1 3

Item	Part No.	Description
1	B55693	I/S Button Assembly[a]
2	C89873-1	I/S Chassis Half
3	B54886	Retractor
-	n/a	Locking Bar
4	B54172	Chassis Cover
5	C89870-43	O/S Chassis Half
6	A55505	Chassis Screw
7	A54745	O/S Button Assembly[a]

a. Specify finish.

Figure 1 3 L function exploded diagram

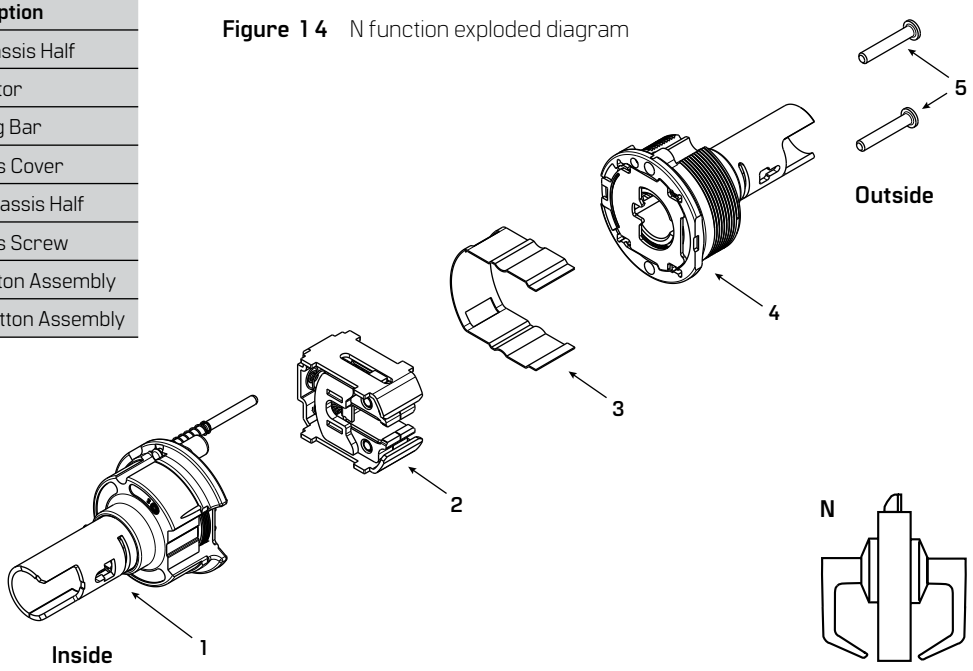


3.8 N function chassis — Passage lock (ANSI F7 5)

Fig. 1 4

Item	Part No.	Description
1	C89873-1	I/S Chassis Half
2	B54888	Retractor
-	n/a	Locking Bar
3	B54172	Chassis Cover
4	C89870-41	O/S Chassis Half
5	A55505	Chassis Screw
-	n/a	I/S Button Assembly
-	n/a	O/S Button Assembly

Figure 1 4 N function exploded diagram



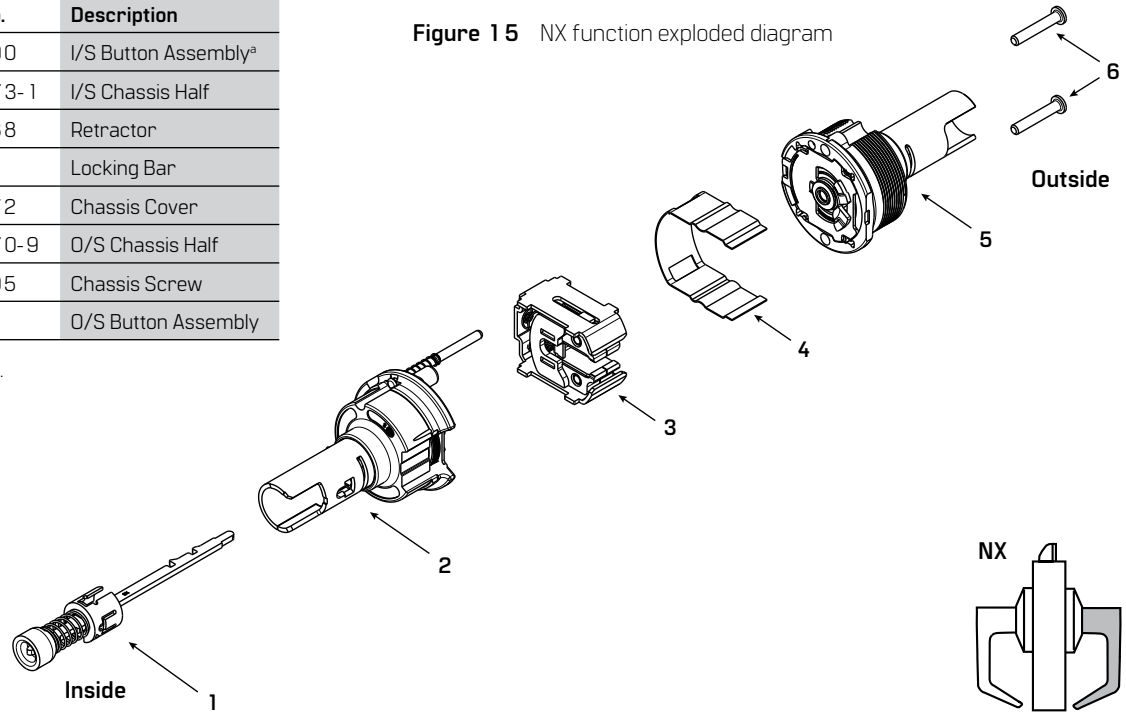
3.9 NX function chassis — Exit lock (ANSI F89)

Fig. 15

Item	Part No.	Description
1	B55690	I/S Button Assembly[a]
2	C89873-1	I/S Chassis Half
3	B54888	Retractor
-	n/a	Locking Bar
4	B54172	Chassis Cover
5	C89870-9	O/S Chassis Half
6	A55505	Chassis Screw
-	n/a	O/S Button Assembly

a. Specify finish.

Figure 15 NX function exploded diagram



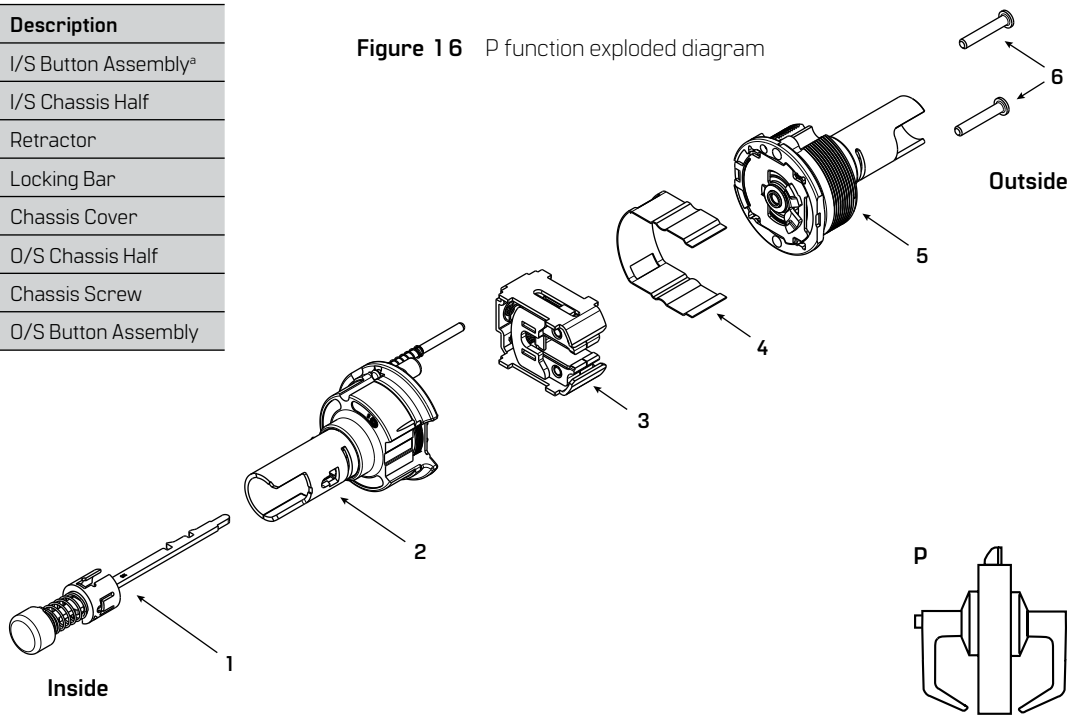
3.10 P function chassis — Patio lock (ANSI F77)

Fig. 16

Item	Part No.	Description
1	B55693	I/S Button Assembly[a]
2	C89873-1	I/S Chassis Half
3	B54886	Retractor
-	n/a	Locking Bar
4	B54172	Chassis Cover
5	C89870-9	O/S Chassis Half
6	A55505	Chassis Screw
-	n/a	O/S Button Assembly

a. Specify finish.

Figure 16 P function exploded diagram

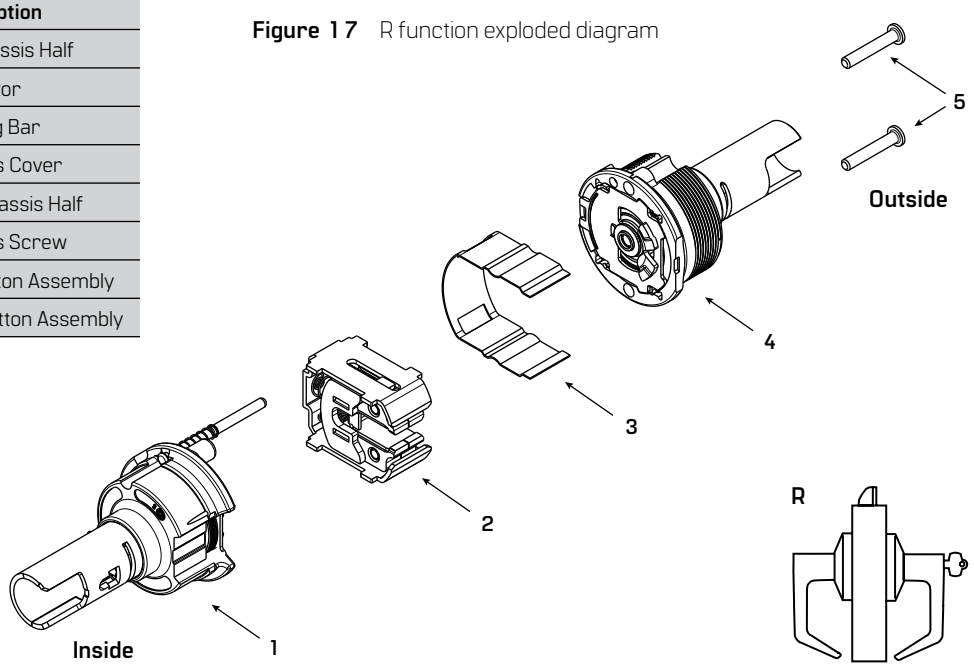


3.11 R function chassis — Classroom lock (ANSI F84)

Fig. 17

Item	Part No.	Description
1	C89873-1	I/S Chassis Half
2	B54888	Retractor
-	n/a	Locking Bar
3	B54172	Chassis Cover
4	C89870-11	O/S Chassis Half
5	A55505	Chassis Screw
-	n/a	I/S Button Assembly
-	n/a	O/S Button Assembly

Figure 17 R function exploded diagram

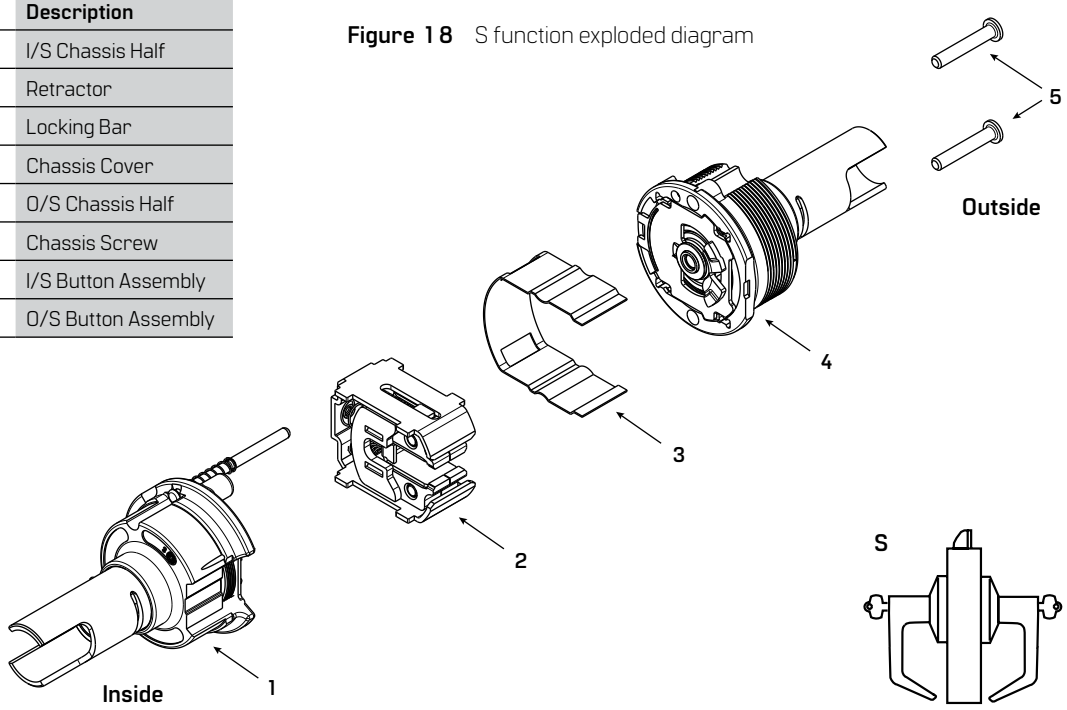


3.12 S function chassis — Communicating lock (ANSI F80)

Fig. 18

Item	Part No.	Description
1	C89873-41	I/S Chassis Half
2	B54888	Retractor
-	n/a	Locking Bar
3	B54172	Chassis Cover
4	C89870-11	O/S Chassis Half
5	A55505	Chassis Screw
-	n/a	I/S Button Assembly
-	n/a	O/S Button Assembly

Figure 18 S function exploded diagram



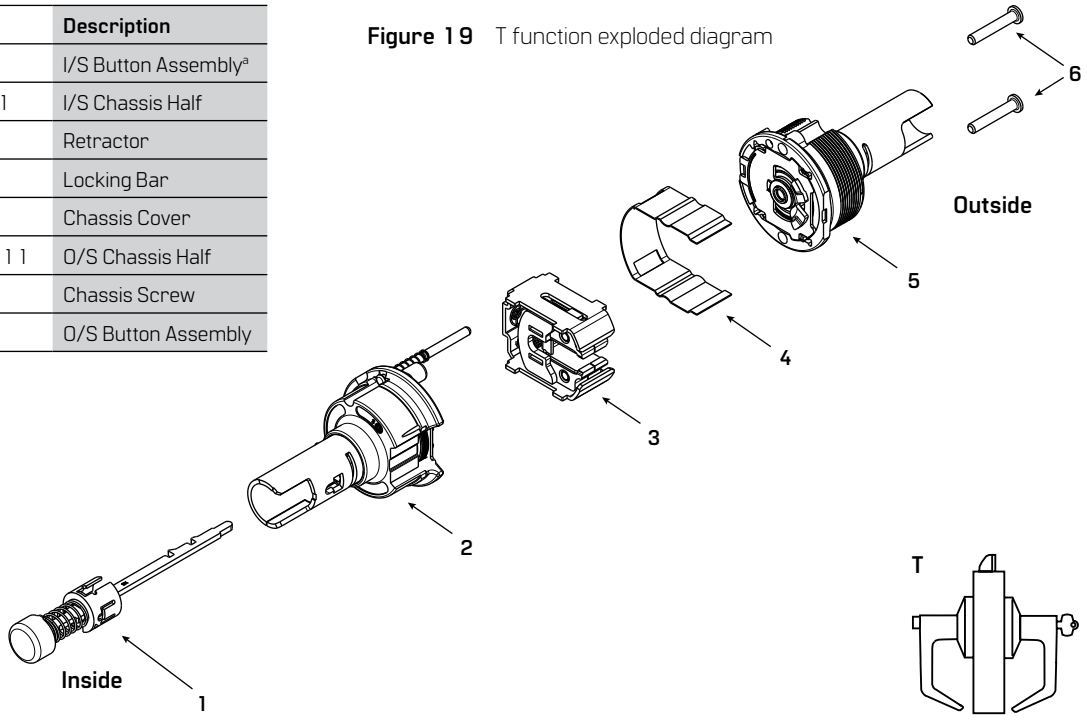
3.13 T function chassis – Dormitory lock (ANSI F90)

Fig. 19

Item	Part No.	Description
1	B55693	I/S Button Assembly[a]
2	C89873-1	I/S Chassis Half
3	B54886	Retractor
-	n/a	Locking Bar
4	B54172	Chassis Cover
5	C89870-11	O/S Chassis Half
6	A55505	Chassis Screw
-	n/a	O/S Button Assembly

a. Specify finish.

Figure 19 T function exploded diagram



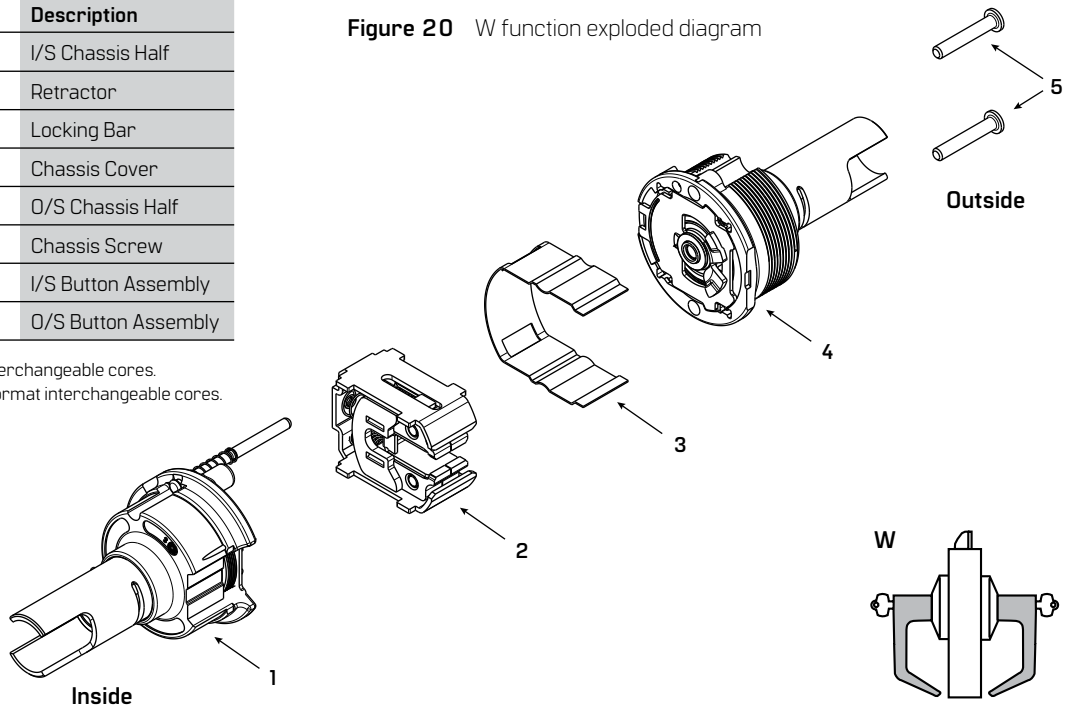
3.14 W function chassis – Utility or institutional lock (ANSI F87)

Fig. 20

Item	Part No.	Description
1	C89873-21	I/S Chassis Half
2	B54888	Retractor
-	n/a	Locking Bar
3	B54172	Chassis Cover
4	C89870-3	O/S Chassis Half
5	A55505	Chassis Screw
-	n/a	I/S Button Assembly
-	n/a	O/S Button Assembly

a. For use with non-interchangeable cores.
b. For use with large format interchangeable cores.

Figure 20 W function exploded diagram

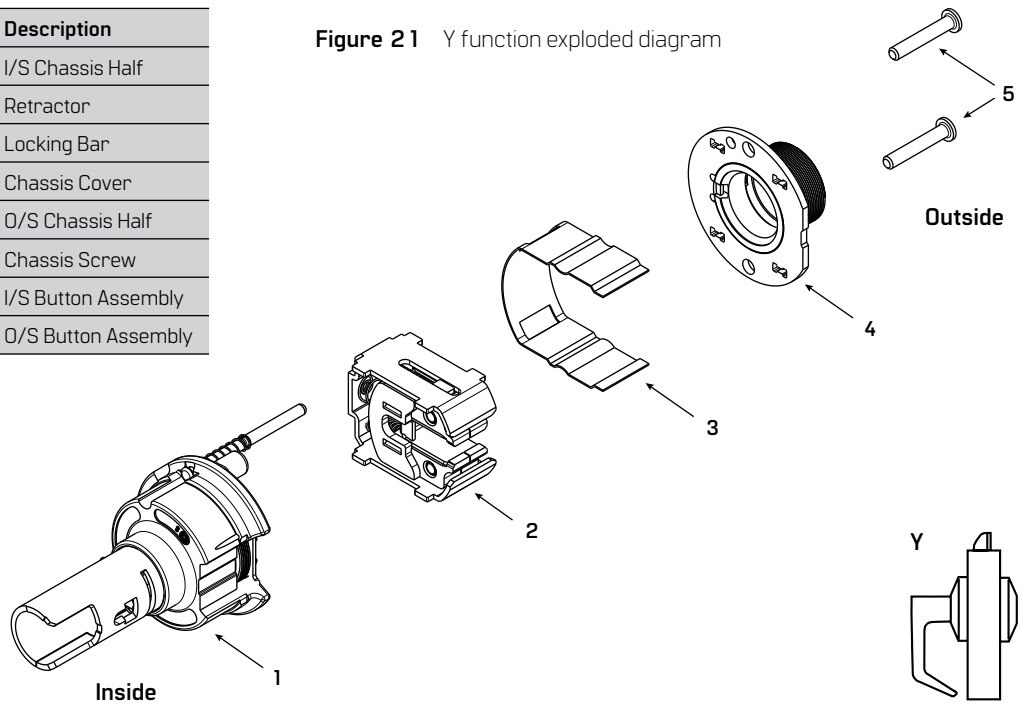


3.1 5 Y function chassis – Exit lock

Fig. 2 1

Item	Part No.	Description
1	C89873-1	I/S Chassis Half
2	B54888	Retractor
-	n/a	Locking Bar
3	B54172	Chassis Cover
4	C89870-48	O/S Chassis Half
5	A55511	Chassis Screw
-	n/a	I/S Button Assembly
-	n/a	O/S Button Assembly

Figure 21 Y function exploded diagram



4 Non-standard functions — exploded diagrams

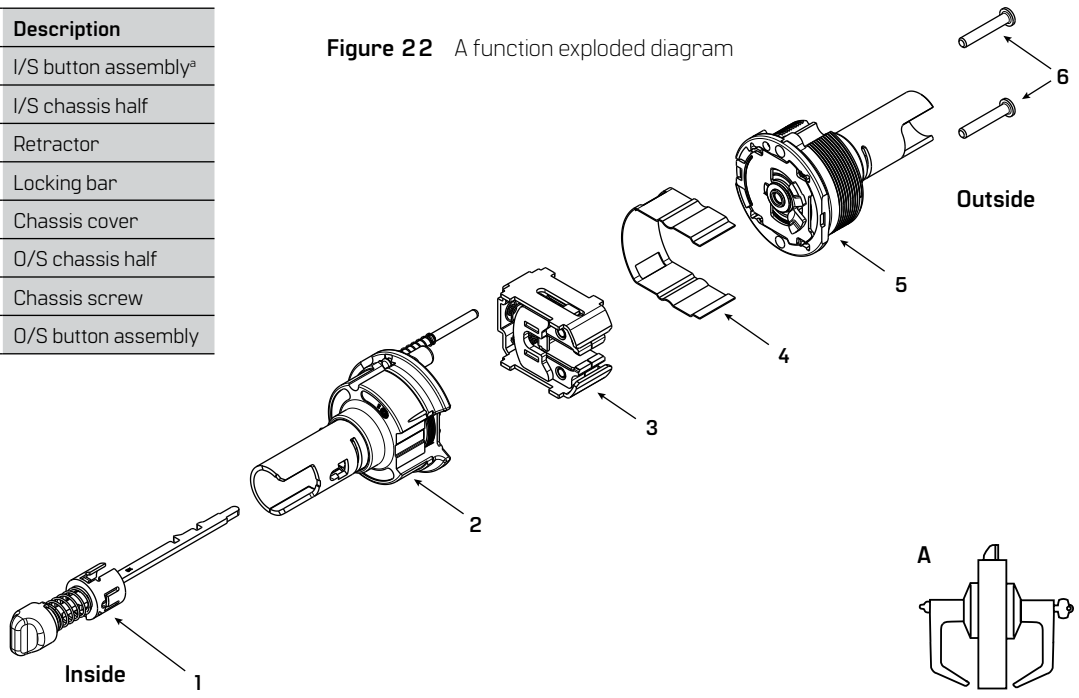
4.1 A function chassis – Entrance lock (ANSI F81)

Fig. 22

Item	Part No.	Description
1	B55692	I/S button assembly[a]
2	C89873-1	I/S chassis half
3	B54888	Retractor
-	n/a	Locking bar
4	B54172	Chassis cover
5	C89870-1	O/S chassis half
6	A55505	Chassis screw
-	n/a	O/S button assembly

a. Specify finish.

Figure 22 A function exploded diagram



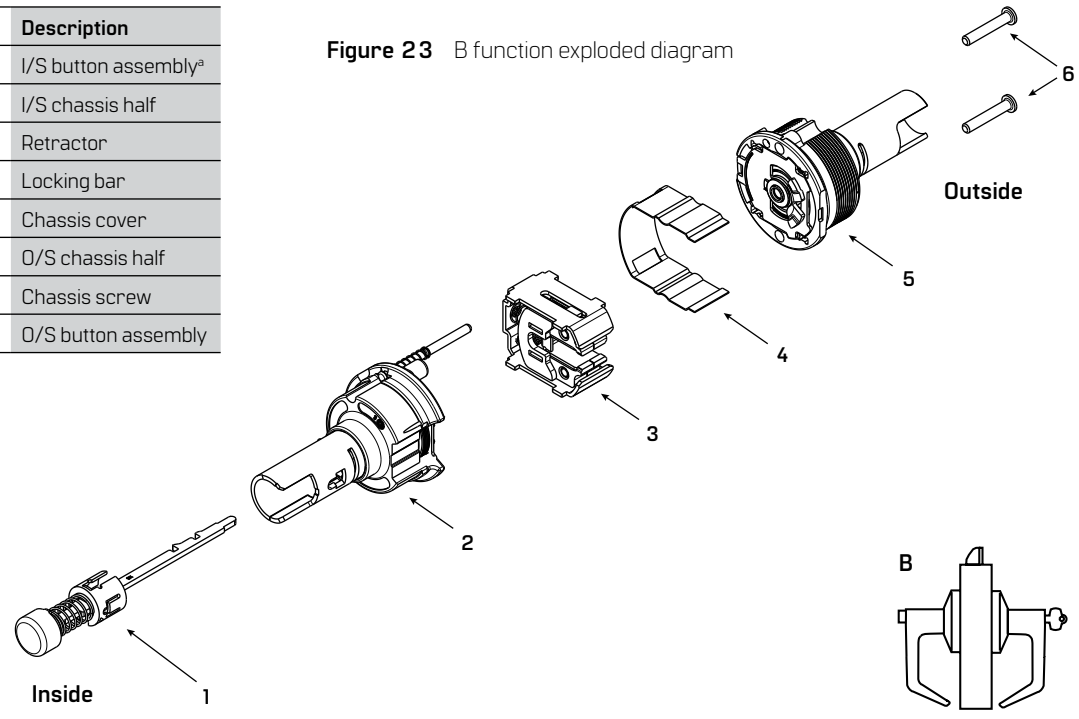
4.2 B function chassis – Office lock (ANSI F82)

Fig. 23

Item	Part No.	Description
1	B55693	I/S button assembly[a]
2	C89873-1	I/S chassis half
3	B54887	Retractor
-	n/a	Locking bar
4	B54172	Chassis cover
5	C89870-1	O/S chassis half
6	A55505	Chassis screw
-	n/a	O/S button assembly

a. Specify finish.

Figure 23 B function exploded diagram

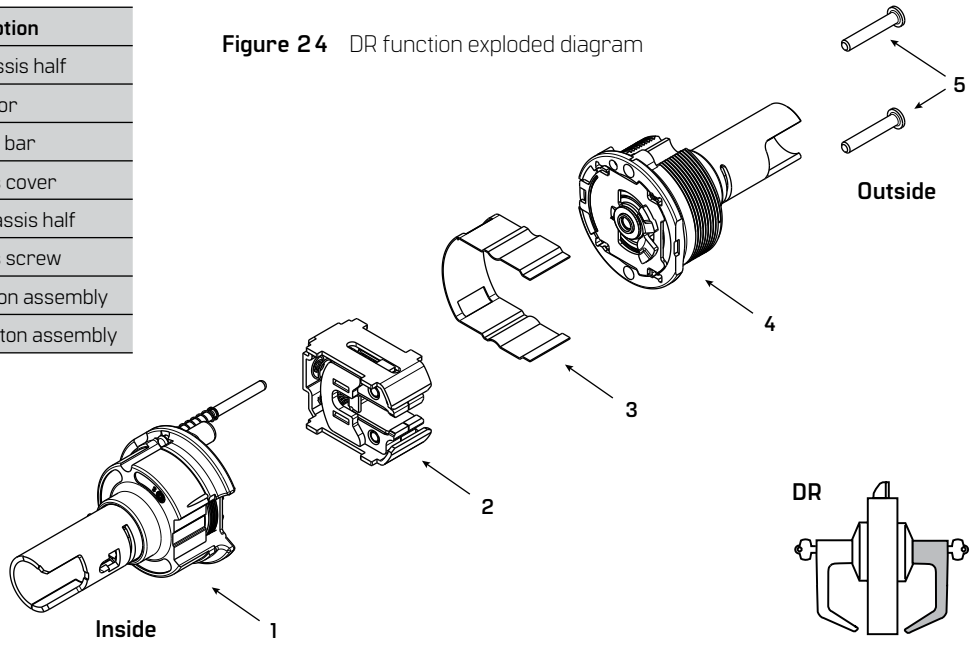


4.3 DR Function chassis — Special lock

Fig. 24

Item	Part No.	Description
1	C89873-41	I/S chassis half
2	B54888	Retractor
-	n/a	Locking bar
3	B54172	Chassis cover
4	C89870-3	O/S chassis half
5	A55505	Chassis screw
-	n/a	I/S button assembly
-	n/a	O/S button assembly

Figure 24 DR function exploded diagram



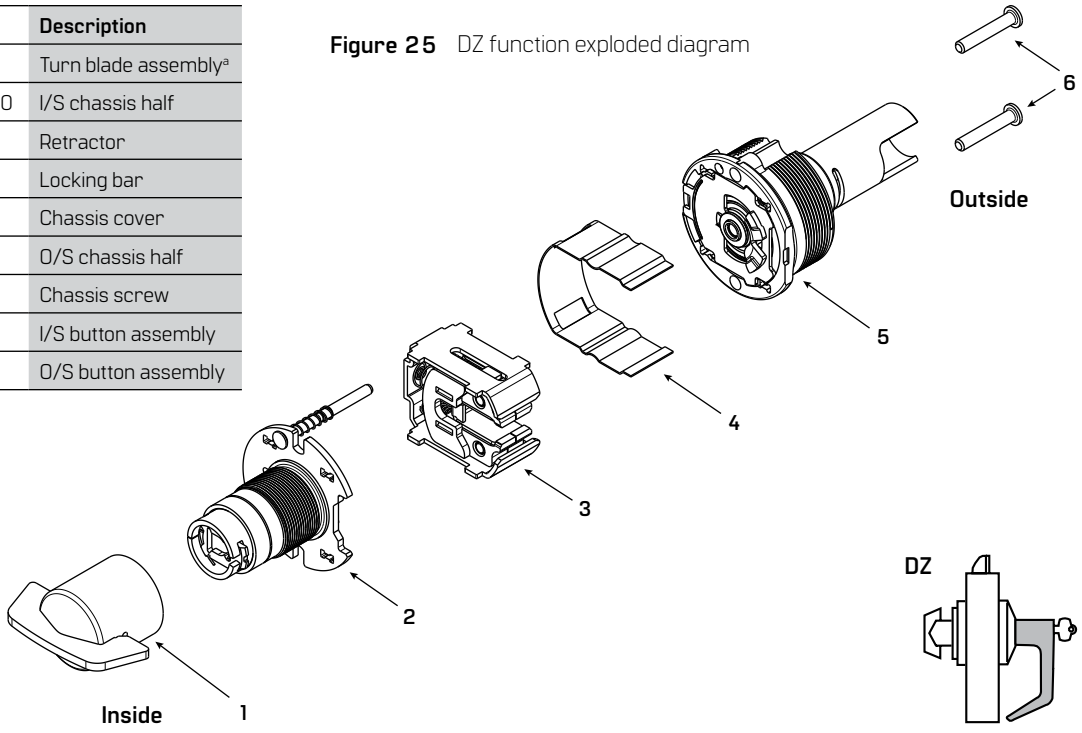
4.4 DZ function chassis — Closet or storeroom lock

Fig. 25

Item	Part No.	Description
1	A54736	Turn blade assembly[a]
2	C89873-20	I/S chassis half
3	B54888	Retractor
-	n/a	Locking bar
4	B54172	Chassis cover
5	C89870-3	O/S chassis half
6	A55511	Chassis screw
-	n/a	I/S button assembly
-	n/a	O/S button assembly

a. Specify finish.

Figure 25 DZ function exploded diagram



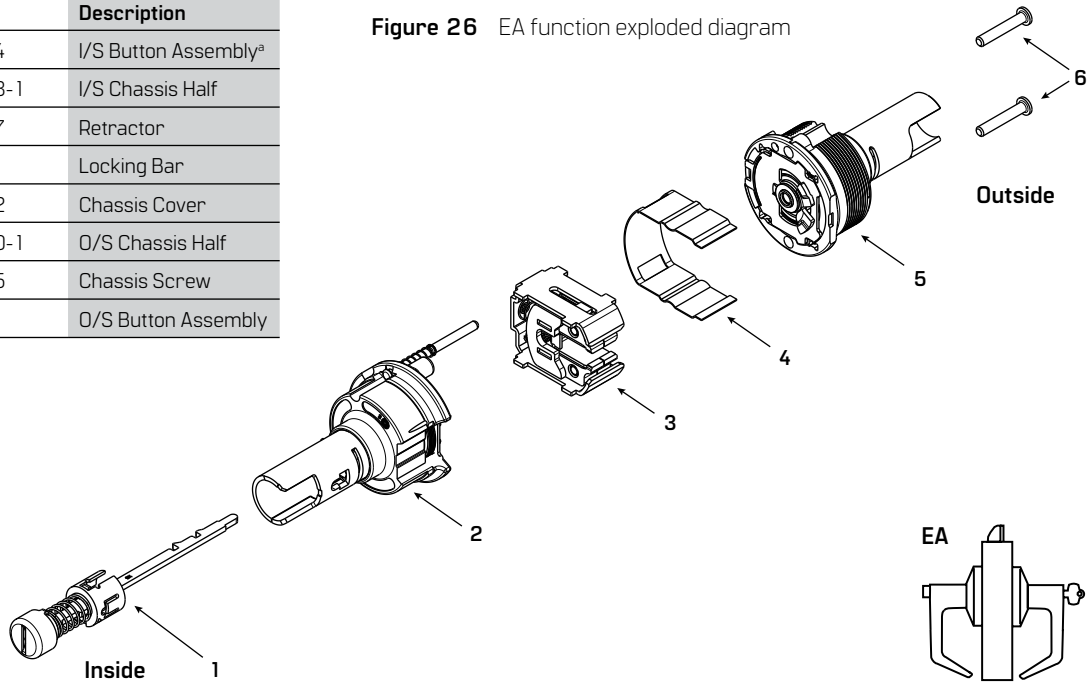
4.5 EA function chassis – Entrance or office lock

Fig. 26

Item	Part No.	Description
1	B55694	I/S Button Assembly[a]
2	C89873-1	I/S Chassis Half
3	B54887	Retractor
-	n/a	Locking Bar
4	B54172	Chassis Cover
5	C89870-1	O/S Chassis Half
6	A55505	Chassis Screw
-	n/a	O/S Button Assembly

a. Specify finish.

Figure 26 EA function exploded diagram

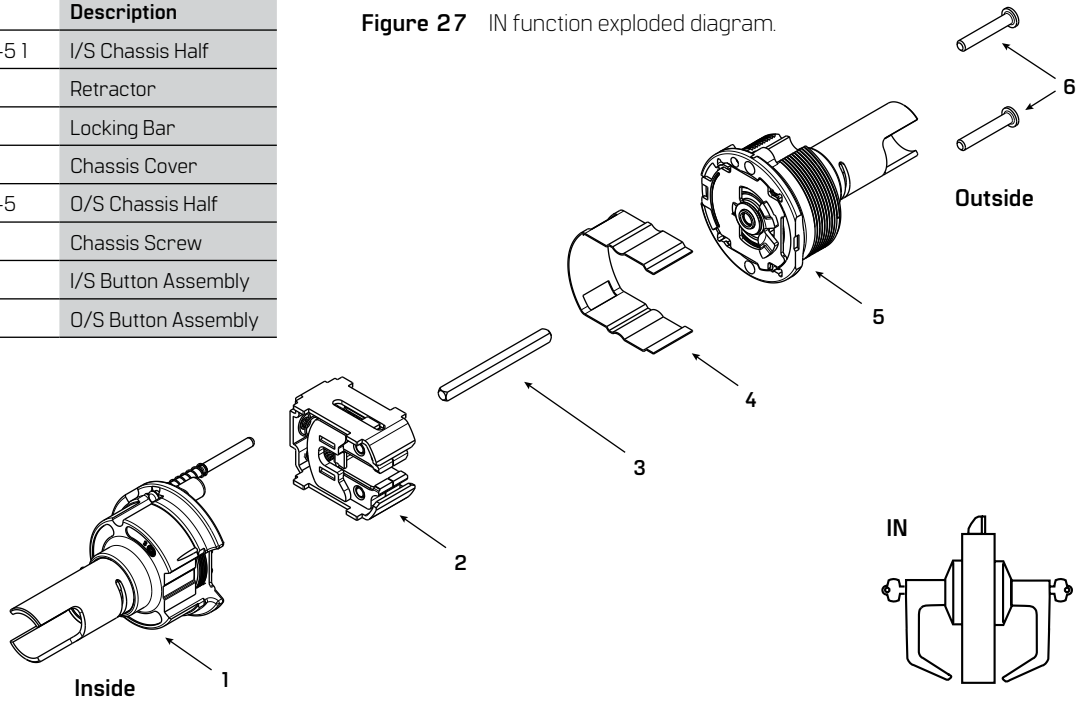


4.6 IN function chassis – Intruder lock

Fig. 27

Item	Part No.	Description
1	C89873-51	I/S Chassis Half
2	B54888	Retractor
3	A54195	Locking Bar
4	B54172	Chassis Cover
5	C89870-5	O/S Chassis Half
6	A55505	Chassis Screw
-	n/a	I/S Button Assembly
-	n/a	O/S Button Assembly

Figure 27 IN function exploded diagram.



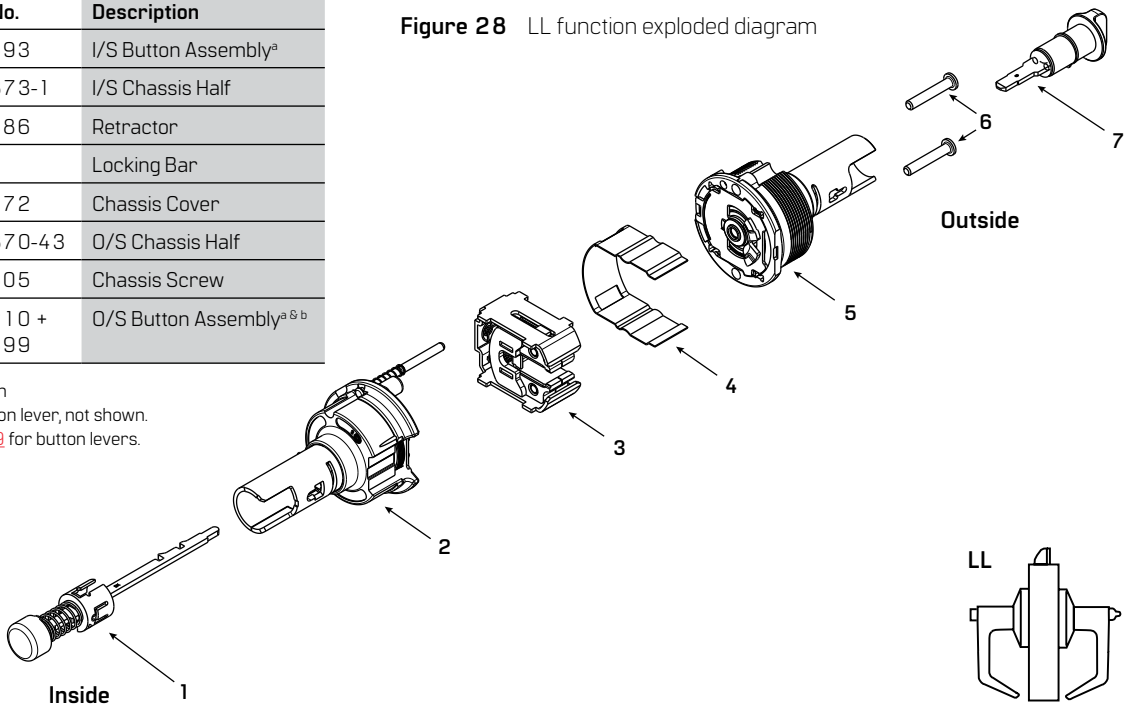
4.7 LL function chassis — Hospital privacy lock

Fig. 28

Item	Part No.	Description
1	B55693	I/S Button Assembly[a]
2	C89873-1	I/S Chassis Half
3	B54886	Retractor
-	n/a	Locking Bar
4	B54172	Chassis Cover
5	C89870-43	O/S Chassis Half
6	A55505	Chassis Screw
7	B54210 + A55699	O/S Button Assembly[a & b]

a. Specify finish
b. Fits into button lever, not shown. See page 39 for button levers.

Figure 28 LL function exploded diagram



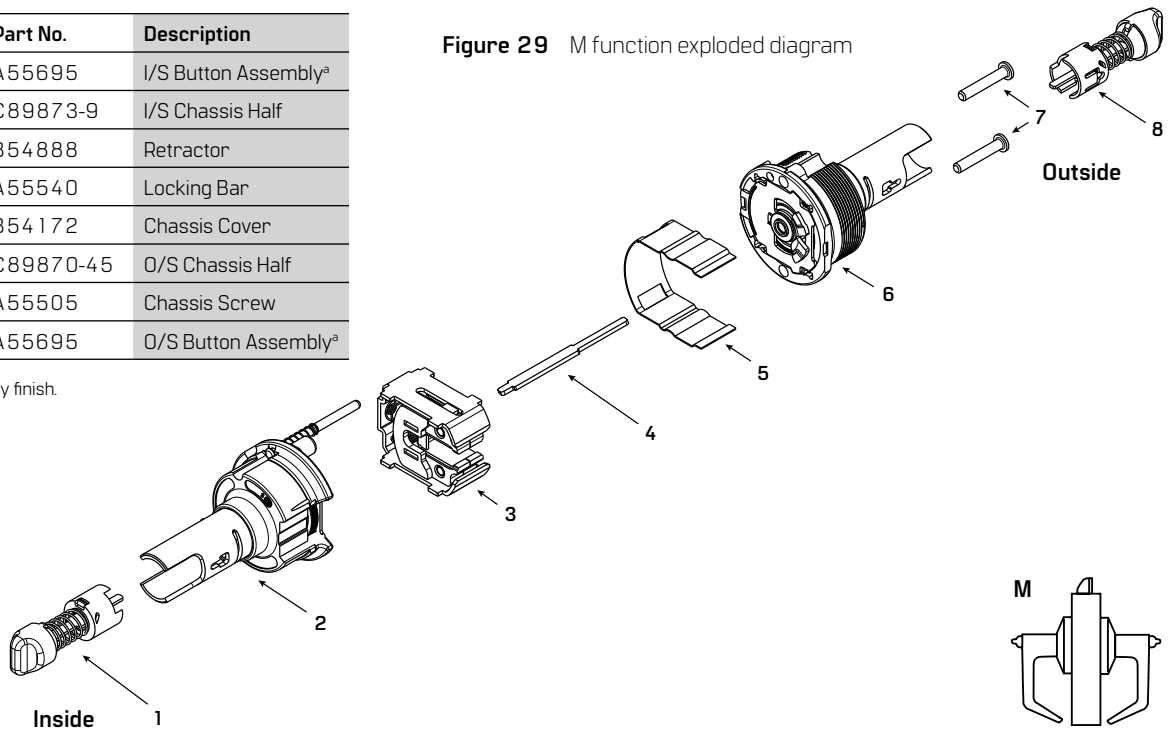
4.8 M function chassis — Communication lock (ANSI F78)

Fig. 29

Item	Part No.	Description
1	A55695	I/S Button Assembly[a]
2	C89873-9	I/S Chassis Half
3	B54888	Retractor
4	A55540	Locking Bar
5	B54172	Chassis Cover
6	C89870-45	O/S Chassis Half
7	A55505	Chassis Screw
8	A55695	O/S Button Assembly[a]

a. Specify finish.

Figure 29 M function exploded diagram



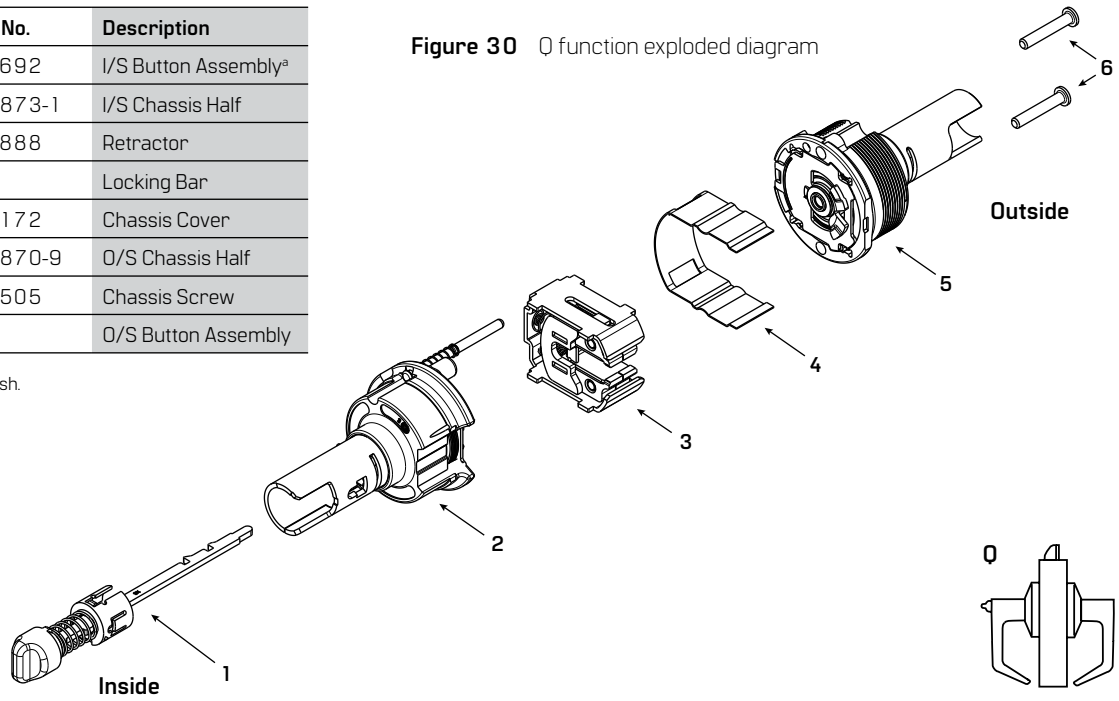
4.9 Q function chassis – Exit lock (ANSI F83)

Fig. 30

Item	Part No.	Description
1	B55692	I/S Button Assembly[a]
2	C89873-1	I/S Chassis Half
3	B54888	Retractor
-	n/a	Locking Bar
4	B54172	Chassis Cover
5	C89870-9	O/S Chassis Half
6	A55505	Chassis Screw
-	n/a	O/S Button Assembly

a. Specify finish.

Figure 30 Q function exploded diagram

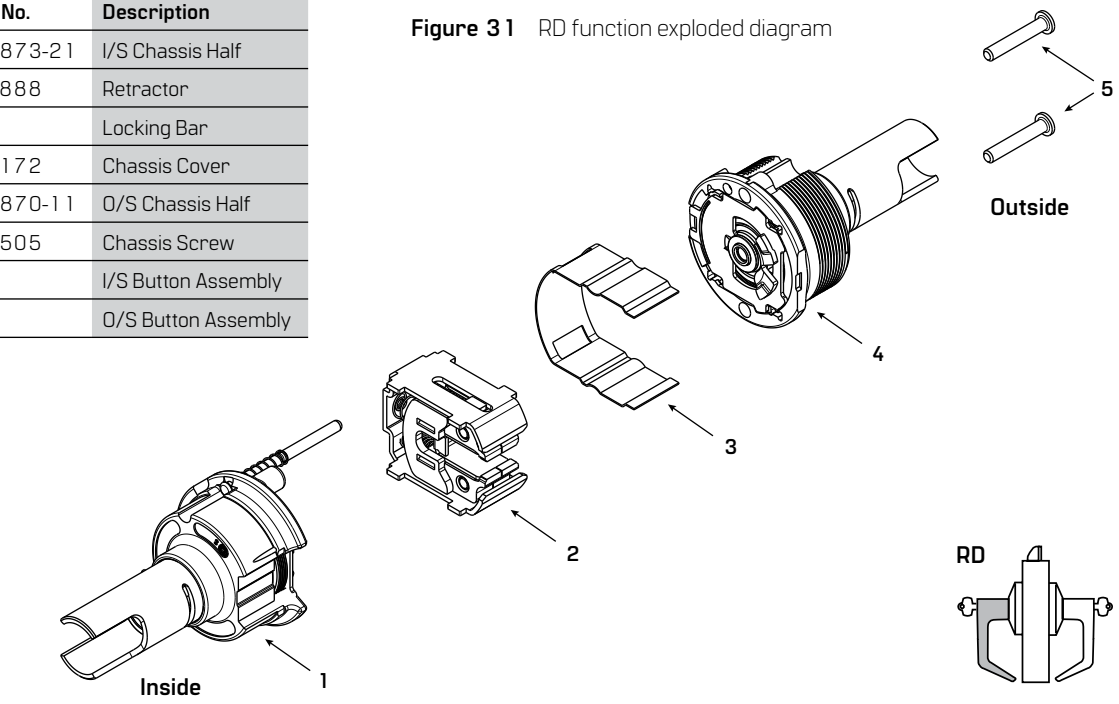


4.10 RD function chassis – Special lock

Fig. 31

Item	Part No.	Description
1	C89873-21	I/S Chassis Half
2	B54888	Retractor
-	n/a	Locking Bar
3	B54172	Chassis Cover
4	C89870-11	O/S Chassis Half
5	A55505	Chassis Screw
-	n/a	I/S Button Assembly
-	n/a	O/S Button Assembly

Figure 31 RD function exploded diagram



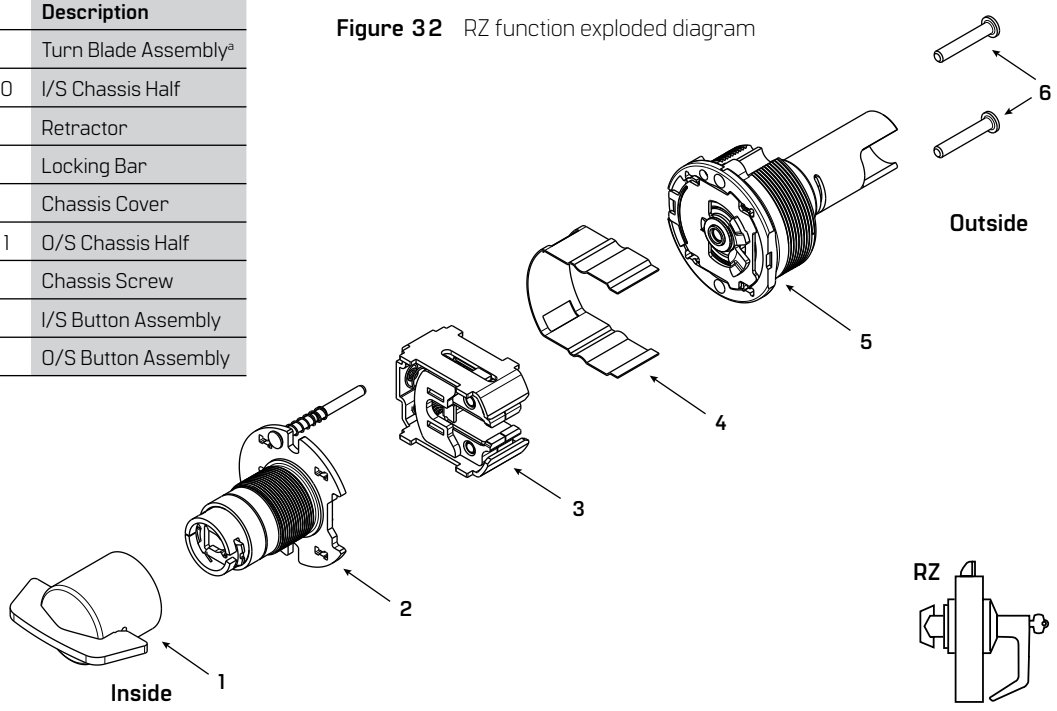
4.1 1 RZ function chassis — Closet or storeroom lock

Fig. 3 2

Item	Part No.	Description
1	A54736	Turn Blade Assembly[a]
2	C89873-20	I/S Chassis Half
3	B54888	Retractor
-	n/a	Locking Bar
4	B54172	Chassis Cover
5	C89870-11	O/S Chassis Half
6	A55511	Chassis Screw
-	n/a	I/S Button Assembly
-	n/a	O/S Button Assembly

a. Specify finish.

Figure 32 RZ function exploded diagram

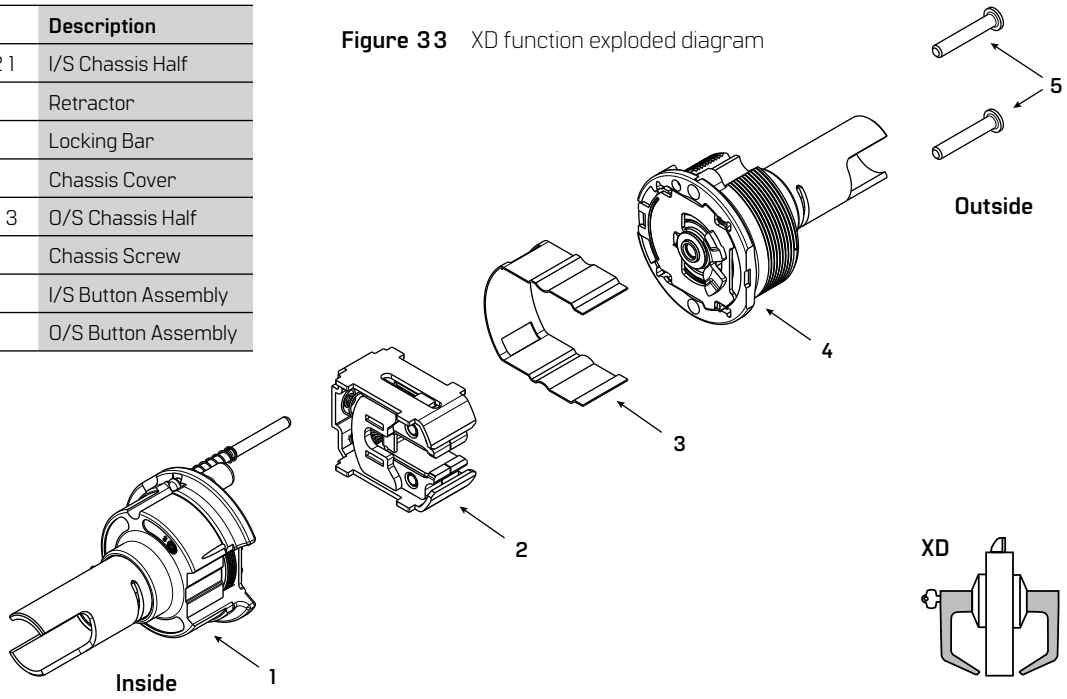


4.1 2 XD function chassis — Special lock

Fig. 3 3

Item	Part No.	Description
1	C89873-21	I/S Chassis Half
2	B54888	Retractor
-	n/a	Locking Bar
4	B54172	Chassis Cover
5	C89870-13	O/S Chassis Half
6	A55505	Chassis Screw
-	n/a	I/S Button Assembly
-	n/a	O/S Button Assembly

Figure 33 XD function exploded diagram

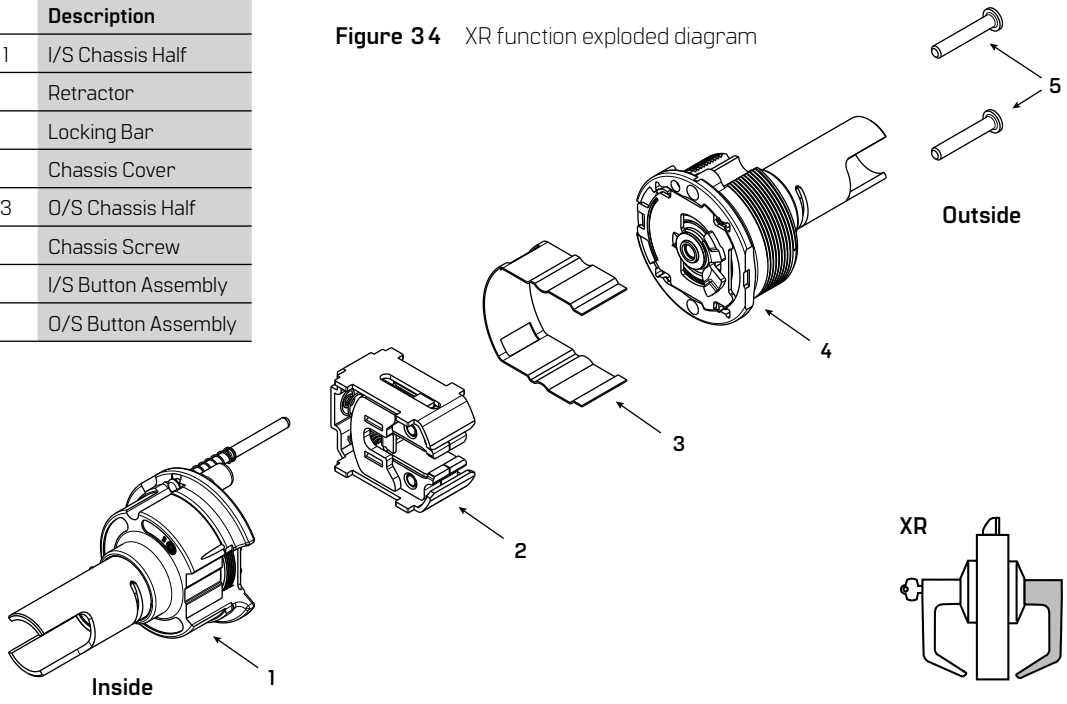


4.13 XR function chassis – Special lock

Fig. 34

Item	Part No.	Description
1	C89873-41	I/S Chassis Half
2	B54888	Retractor
-	n/a	Locking Bar
3	B54172	Chassis Cover
4	C89870-13	O/S Chassis Half
5	A55505	Chassis Screw
-	n/a	I/S Button Assembly
-	n/a	O/S Button Assembly

Figure 34 XR function exploded diagram

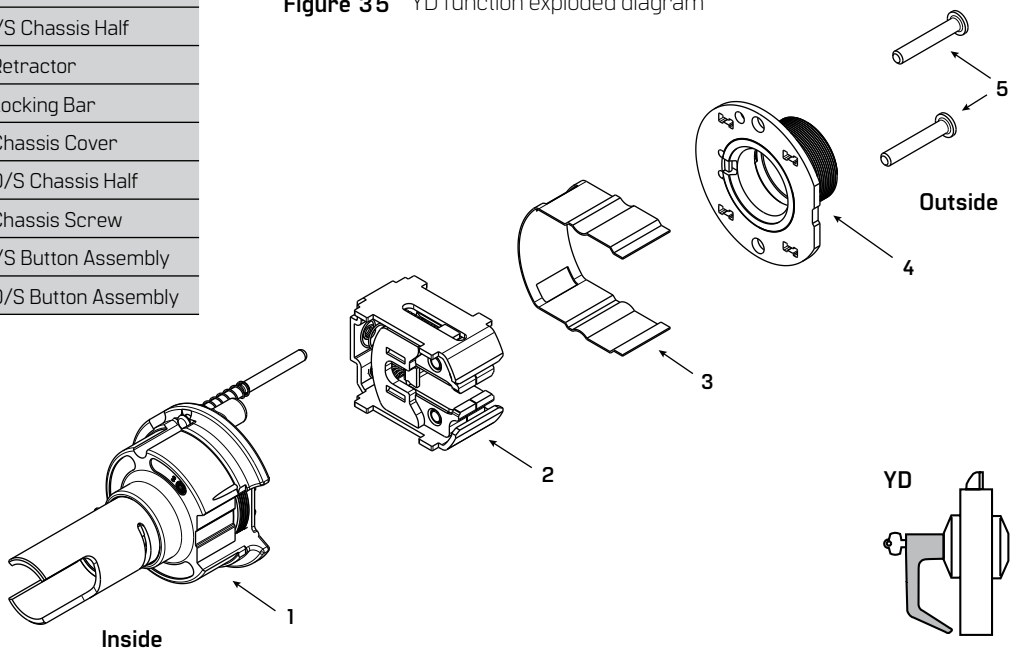


4.14 YD function chassis – Exit lock

Fig. 35

Item	Part No.	Description
1	C89873-21	I/S Chassis Half
2	B54888	Retractor
-	n/a	Locking Bar
3	B54172	Chassis Cover
4	C89870-48	O/S Chassis Half
5	A55511	Chassis Screw
-	n/a	I/S Button Assembly
-	n/a	O/S Button Assembly

Figure 35 YD function exploded diagram

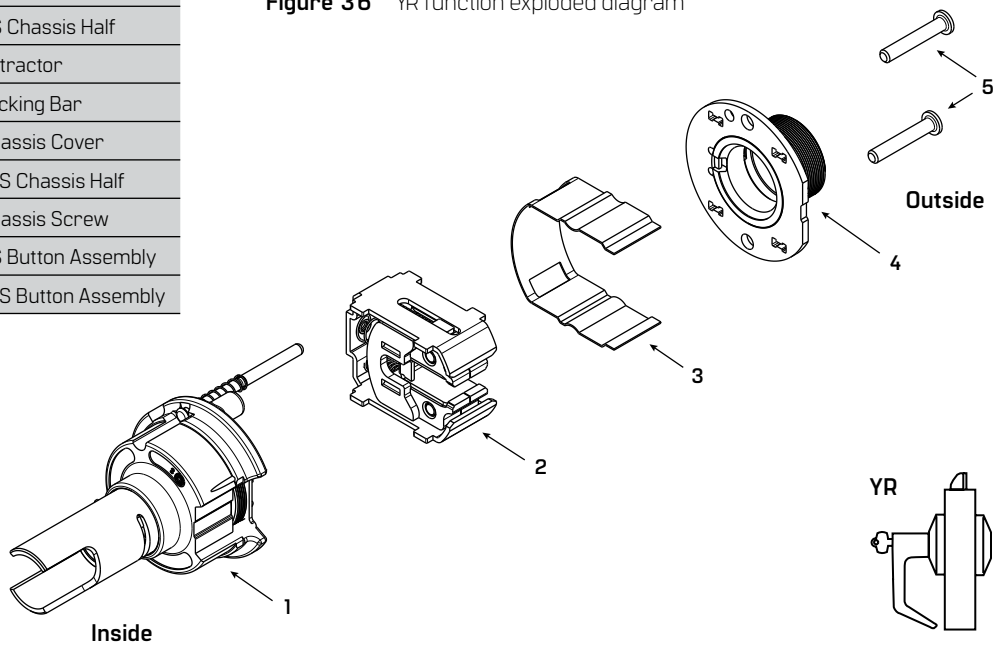


4.15 YR function chassis — Special lock

Fig. 36

Item	Part No.	Description
1	C89873-41	I/S Chassis Half
2	B54888	Retractor
-	n/a	Locking Bar
3	B54172	Chassis Cover
4	C89870-48	O/S Chassis Half
5	A55511	Chassis Screw
-	n/a	I/S Button Assembly
-	n/a	O/S Button Assembly

Figure 36 YR function exploded diagram



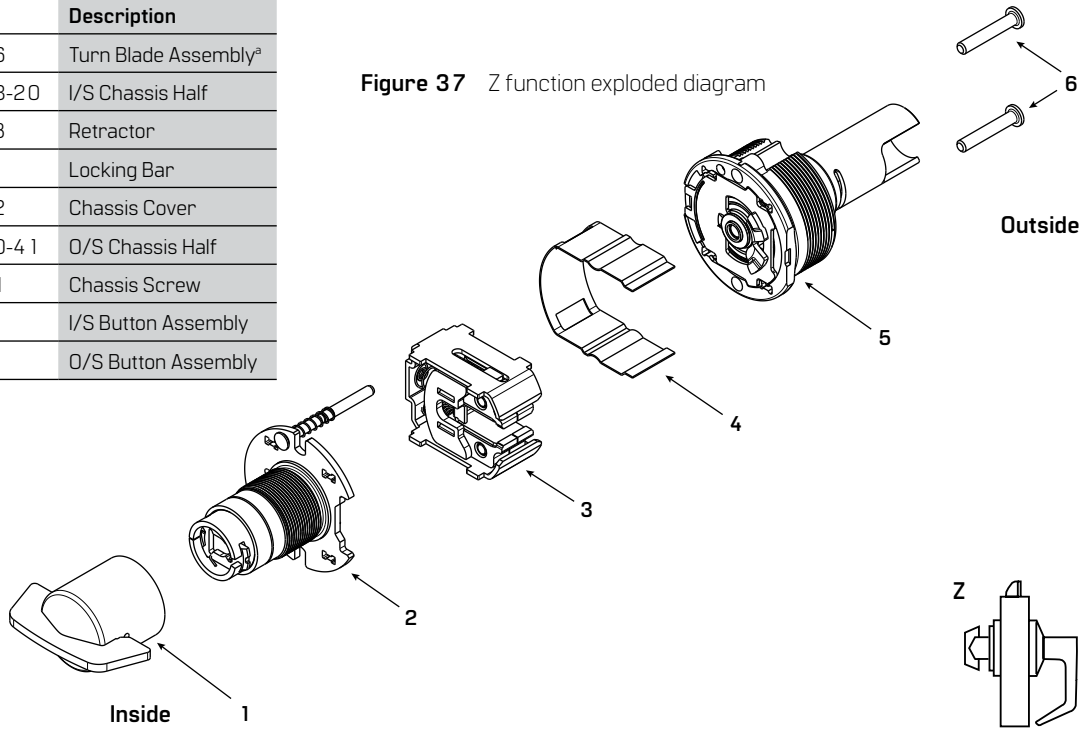
4.16 Z function chassis — Closet lock

Fig. 37

Item	Part No.	Description
1	A54736	Turn Blade Assembly[a]
2	C89873-20	I/S Chassis Half
3	B54888	Retractor
-	n/a	Locking Bar
4	B54172	Chassis Cover
5	C89870-41	O/S Chassis Half
6	A55511	Chassis Screw
-	n/a	I/S Button Assembly
-	n/a	O/S Button Assembly

a. Specify finish.

Figure 37 Z function exploded diagram



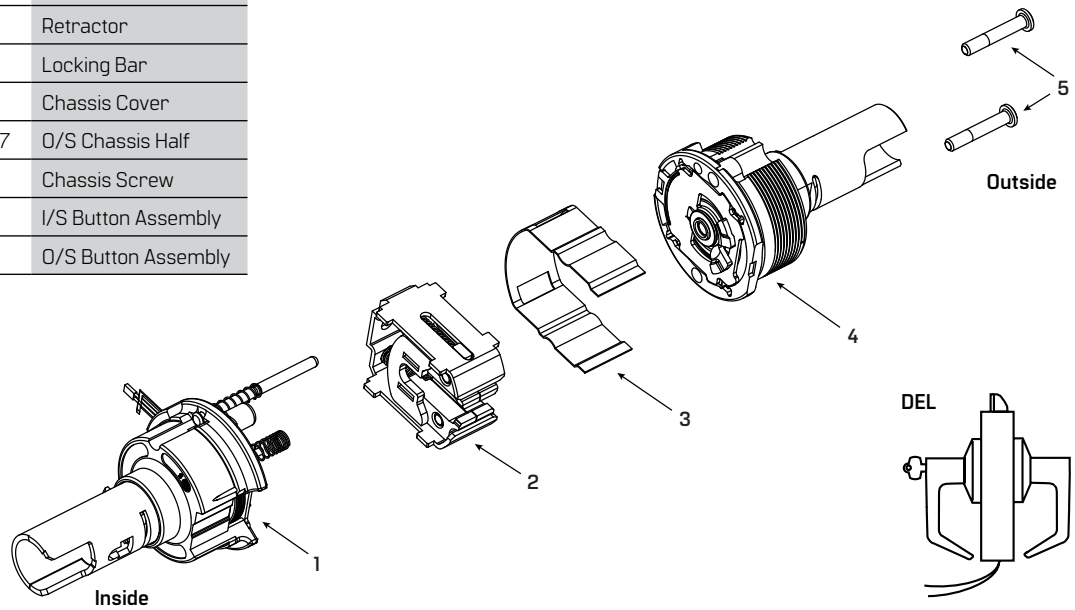
5 Electrified functions - exploded diagrams

5.1 DEL function chassis - Electrically locked fail safe

Fig. 38

Item	Part No.	Description
1	C89873-66	I/S Chassis Half
2	B60463	Retractor
-	n/a	Locking Bar
3	B54172	Chassis Cover
4	C89870-27	O/S Chassis Half
5	A55505	Chassis Screw
-	n/a	I/S Button Assembly
-	n/a	O/S Button Assembly

Figure 38 DEL function exploded diagram

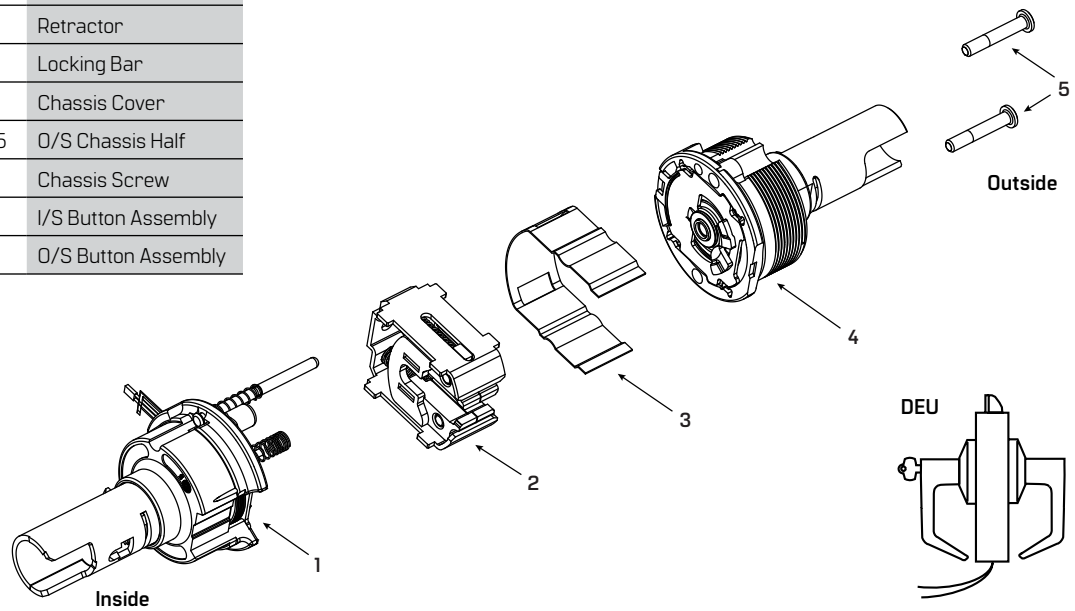


5.2 DEU function chassis - Electrically unlocked fail safe

Fig. 39

Item	Part No.	Description
1	C89873-61	I/S Chassis Half
2	B60463	Retractor
-	n/a	Locking Bar
3	B54172	Chassis Cover
4	C89870-25	O/S Chassis Half
5	A55505	Chassis Screw
-	n/a	I/S Button Assembly
-	n/a	O/S Button Assembly

Figure 39 DEU function exploded diagram



5.3 Replacement chassis matrix by function

Table 3

		STD	LM	RQE	LM w/ RQE	Non-IC	Non-IC w/ LM	Non-IC w/ RQE	Non-IC w/ LM & RQE
Functions	**A**	C89886-1	C89886-2	C89886-3	C89886-4	C89886-6	C89886-7	C89886-8	C89886-9
	AB, E	C89886-41	C89886-42	C89886-43	C89886-44	C89886-46	C89886-47	C89886-48	C89886-49
	B, EA, UA	C89886-81	C89886-82	C89886-83	C89886-84	C89886-86	C89886-87	C89886-88	C89886-89
	C	C89886-121	C89886-122	n/a	n/a	C89886-126	C89886-127	n/a	n/a
	D	C89886-161	C89886-162	C89886-163	C89886-164	C89886-166	C89886-167	C89886-168	C89886-169
	DR	C89886-201	C89886-202	n/a	n/a	C89886-206	C89886-207	n/a	n/a
	DZ	C89886-241	C89886-242	n/a	n/a	C89886-246	C89886-247	n/a	n/a
	G	C89886-281	C89886-282	n/a	n/a	C89886-286	C89886-287	n/a	n/a
	H, HJ	C89886-321	C89886-322	C89886-323	C89886-324	n/a	n/a	n/a	n/a
	IN	C89886-341	C89886-342	n/a	n/a	C89886-346	C89886-347	n/a	n/a
	L, LL	C89886-381	C89886-382	C89886-383	C89886-384	n/a	n/a	n/a	n/a
	M	C89886-401	C89886-402	n/a	n/a	n/a	n/a	n/a	n/a
	N	C89886-421	n/a	C89886-423	n/a	n/a	n/a	n/a	n/a
	NX, Q	C89886-441	C89886-442	C89886-443	C89886-444	n/a	n/a	n/a	n/a
	P	C89886-461	C89886-462	C89886-463	C89886-464	n/a	n/a	n/a	n/a
	R	C89886-481	C89886-482	C89886-483	C89886-484	C89886-486	C89886-487	C89886-488	C89886-489
	RD	C89886-521	C89886-522	n/a	n/a	C89886-526	C89886-527	n/a	n/a
	RZ	C89886-561	C89886-562	n/a	n/a	C89886-566	C89886-567	n/a	n/a
	S	C89886-601	C89886-602	n/a	n/a	C89886-606	C89886-607	n/a	n/a
	T	C89886-641	C89886-642	C89886-643	C89886-644	C89886-646	C89886-647	C89886-648	C89886-649
	W	C89886-681	C89886-682	n/a	n/a	C89886-686	C89886-687	n/a	n/a
	XD	C89886-721	C89886-722	n/a	n/a	C89886-726	C89886-727	n/a	n/a
	XR	C89886-761	C89886-762	n/a	n/a	C89886-766	C89886-767	n/a	n/a
	Y	C89886-801	n/a	C89886-803	n/a	n/a	n/a	n/a	n/a
	YD	C89886-821	C89886-822	n/a	n/a	C89886-826	C89886-827	n/a	n/a
	YR	C89886-861	C89886-862	n/a	n/a	C89886-866	C89886-867	n/a	n/a
	Z	C89886-901	n/a	n/a	n/a	n/a	n/a	n/a	n/a

5.3 Replacement chassis matrix by function (continued)

		Sargent LFIC	Sargent LFIC w/LM	Sargent LFIC w/RQE	Sargent LFIC w/LM & RQE	Yale LFIC	Yale LFIC w/LM	Yale LFIC w/RQE	Yale LFIC w/LM & RQE
Functions	**A**	C89886-11	C89886-12	C89886-13	C89886-14	C89886-16	C89886-17	C89886-18	C89886-19
	AB, E	C89886-51	C89886-52	C89886-53	C89886-54	C89886-56	C89886-57	C89886-58	C89886-59
	B, EA, UA	C89886-91	C89886-92	C89886-93	C89886-94	C89886-96	C89886-97	C89886-98	C89886-99
	C	C89886-131	C89886-132	n/a	n/a	C89886-136	C89886-137	n/a	n/a
	D	C89886-171	C89886-172	C89886-173	C89886-174	C89886-176	C89886-177	C89886-178	C89886-179
	DR	C89886-211	C89886-212	n/a	n/a	C89886-216	C89886-217	n/a	n/a
	DZ	C89886-251	C89886-252	n/a	n/a	C89886-256	C89886-257	n/a	n/a
	G	C89886-291	C89886-292	n/a	n/a	C89886-296	C89886-297	n/a	n/a
	H, HJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	IN	C89886-351	C89886-352	n/a	n/a	C89886-356	C89886-357	n/a	n/a
	L, LL	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	M	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	N	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	NX, Q	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	P	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	R	C89886-491	C89886-492	C89886-493	C89886-494	C89886-496	C89886-497	C89886-498	C89886-499
	RD	C89886-531	C89886-532	n/a	n/a	C89886-536	C89886-537	n/a	n/a
	RZ	C89886-571	C89886-572	n/a	n/a	C89886-576	C89886-577	n/a	n/a
	S	C89886-611	C89886-612	n/a	n/a	C89886-616	C89886-617	n/a	n/a
	T	C89886-651	C89886-652	C89886-653	C89886-654	C89886-656	C89886-657	C89886-658	C89886-659
	W	C89886-691	C89886-692	n/a	n/a	C89886-696	C89886-697	n/a	n/a
	XD	C89886-731	C89886-732	n/a	n/a	C89886-736	C89886-737	n/a	n/a
	XR	C89886-771	C89886-772	n/a	n/a	C89886-776	C89886-777	n/a	n/a
	Y	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	YD	C89886-831	C89886-832	n/a	n/a	C89886-836	C89886-837	n/a	n/a
	YR	C89886-871	C89886-872	n/a	n/a	C89886-876	C89886-877	n/a	n/a
	Z	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

6 Trim parts

6.1 Standard strikes and strike boxes

Fig. 40

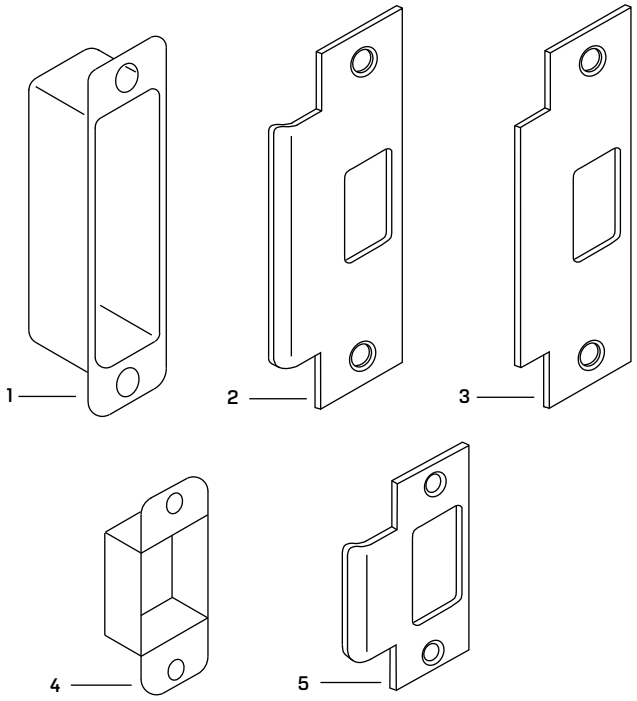


Figure 40 Standard strikes and strike boxes

Standard strikes and strike boxes parts list:

Item	Nomen-clature	Part No.	Description
1	30HS4	B34380	ANSI plastic strike box
2	8KS[a]3	B25641	ANSI strike plate
3	83KS3	C63016	ANSI 7/8" flat lip strike
4	8KS1	B25640	Standard steel strike box
5	8KS[b]2	B25639	Standard strike plate

a. Two (2) A25359 latch screws and two (2) A18724 strike screws are included with the 8KS3 strike. 30HS4 ANSI Strike box is not included.

b. Four (4) A25359 screws are included with 8KS2 strike—two (2) for latch and two (2) for the strike.

6.2 Non-standard strikes

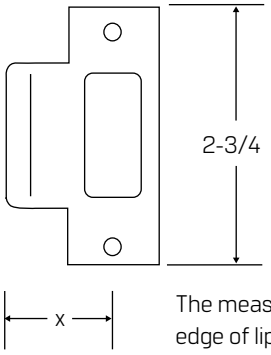
Fig. 41

Non-standard strikes parts list:

Part no.[a]	X dimension
B54063	7/8"
B54064	1"
B54065	1 1/8"
B54066	1 1/2"
B54067	1 3/4"
B54068	2"
B54069	2-1/4"
B54070	2-1/2"
B54072	4"

a. Specify finish.

Figure 41 Understanding strike lip measurement



The measurement is taken from edge of lip to center of screw holes.

6.3 Lead-lined parts

Fig. 42

Lead-lined parts list

Item	Description
1	Turn button liner with shield
2	Inside lever sleeve with shield (for button levers)
3	Hub and side plate with shield
4	Inside lever sleeve with shield (for plain levers)

Lead-lined option is available for new lock orders only. Because individual lead-lined parts are not field-serviceable, they are not available to order for replacement parts. See **Figure 42**. Shaded portions indicate lead shields.

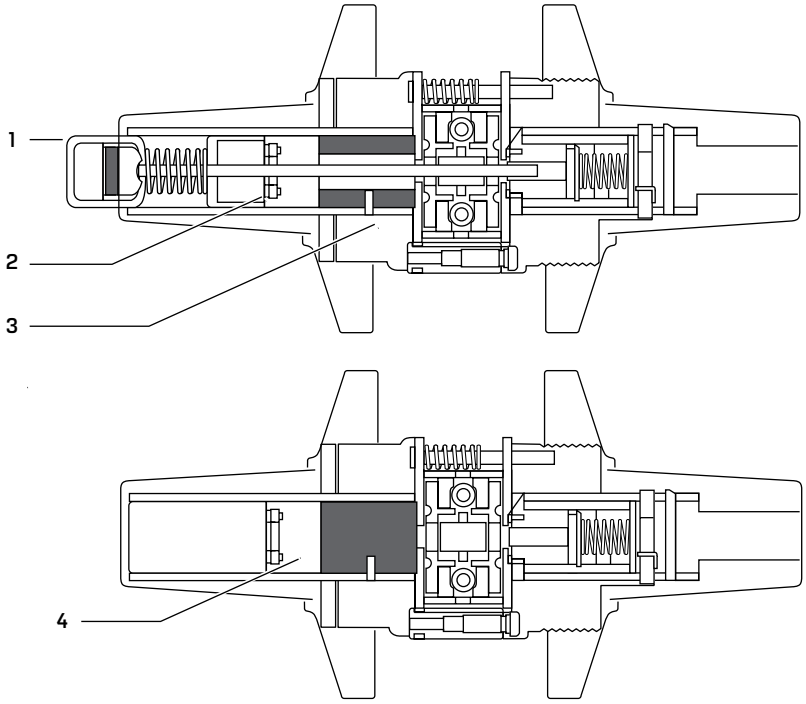
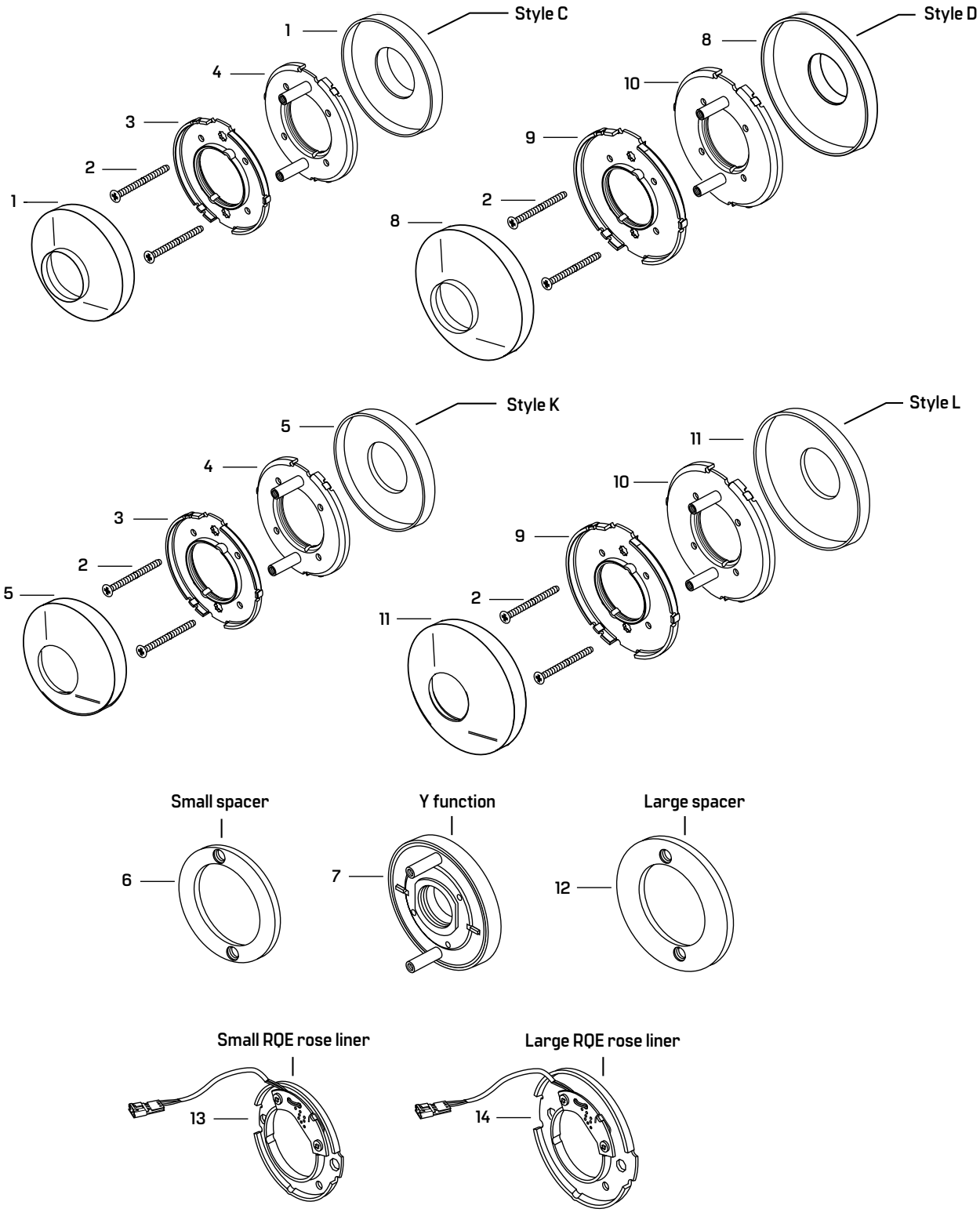


Figure 42 Cross-section of 9K locks showing lead-lined parts

6.4 Roses, rose liners, and rose spacers

Fig. 4 3

Figure 43 Roses, rose liners, and rose spacers



6.5 Rose, rose liners, rose spacers, parts lists

Table 4

Item	Style	Part no.	Description
1	C	B55015[a]	Small rose
2	C, D, K, L	A55557	Through-bolt screws
3	C & K	C55556	Small inside rose liner
4	C & K	B55603	Small outside rose liner
5	K	B55018[a]	Small rose
6	C & K	B55043[b]	Small rose spacer
7	N/A	A55711	Y function outside rose assembly
8	D	B55007[a]	Large rose
9	D & L	C55555	Large inside rose liner
10	D & L	B55602	Large outside rose liner
not shown	D & L	C81795	ATB large inside rose liner
not shown	D & L	B81797	ATB large outside rose liner
not shown	D & L	C88595	ATB2 large inside rose liner
not shown	D & L	B89836	ATB2 large outside rose liner
11	L	B55017[a]	Large rose
12	D & L	B55044[b]	Large rose spacer
13	N/A	B61049	Small RQE rose liner
14	N/A	B60221	Large RQE rose liner

a. Inside and outside are the same.
b. Two (2) spacers are required for 1 3/8" thick doors.

6.6 Rose and rose liner assemblies and parts list

Table 5

Item	Style	Part no.	Description
1 & 3	C	B55609	Small inside rose and liner assembly
1 & 4	C	B55605	Small outside rose and liner assembly
3 & 5	K	B55607	Small inside rose and liner assembly
4 & 5	K	B55604	Small outside rose and liner assembly
8 & 9	K	B55608	Large inside rose and liner assembly
8 & 10	D	B55601	Large outside rose and liner assembly
not shown	D	B81796	ATB Large inside rose and liner assembly
not shown	D	B81798	ATB Large outside rose and liner assembly
not shown	D	B88937	ATB2 Large inside rose and liner assembly
not shown	D	B88638	ATB2 Large outside rose and liner assembly
9 & 11	L	B55606	Large inside rose and liner assembly
10 & 11	L	B55600	Large outside rose and liner assembly

6.7 Standard levers and components

Fig. 44

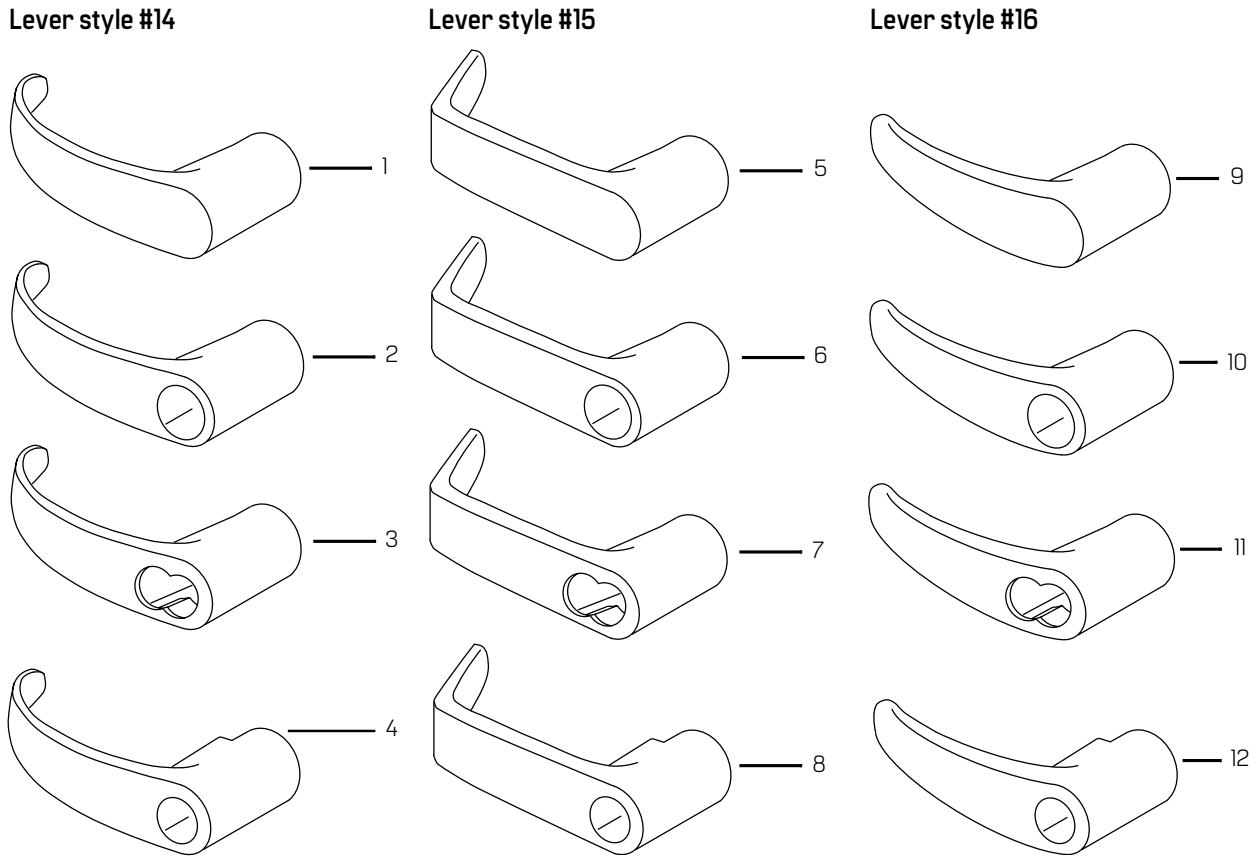


Figure 44 Standard levers and components

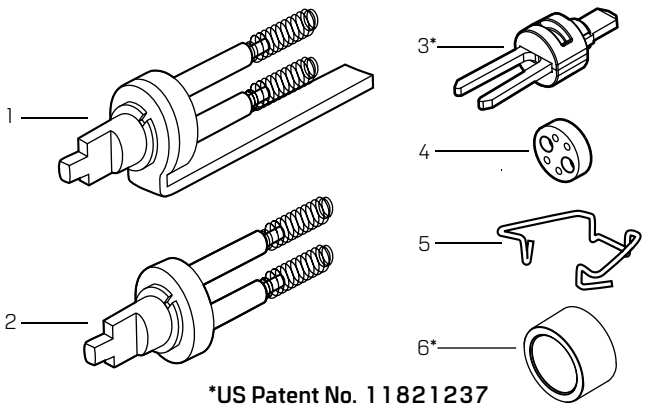
Levers parts list

Style	Item	Part No.	Description	Item	Part No.	Description
#14	1	D55022	Plain lever	not shown	D81211	Schlage LFIC Lever
	2	D55021	Button lever	not shown	D88621	Yale LFIC Lever
	3	D55020	Keyed lever	not shown	D88622	Sargent LFIC Lever
	not shown	B55100	Keyed lever for H functions	not shown	D88623	Corbin Russwin LFIC Lever
	4	D80989	Universal lever for use with non-interchangeable cores			
#15	5	B55169	Plain lever	not shown	D81212	Schlage LFIC Lever
	6	B55170	Button lever	not shown	D88624	Yale LFIC Lever
	7	B55168	Keyed lever	not shown	D88625	Sargent LFIC Lever
	not shown	B55177	Keyed lever for H functions	not shown	D88626	Corbin Russwin LFIC Lever
	8	D55723	Universal lever for use with non-interchangeable cores			
#16	9	D55025	Plain lever	not shown	D86149	Schlage LFIC Lever
	10	D55024	Button lever	not shown	D88627	Yale LFIC Lever
	11	D55023	Keyed lever	not shown	D88628	Sargent LFIC Lever
	not shown	B55110	Keyed lever for H functions	not shown	D88629	Corbin Russwin LFIC Lever
	12	D80992	Universal lever for use with non-interchangeable cores			

6.8 Standard lever components

Fig. 45

Figure 45 Standard lever components



***US Patent No. 11821237**

Lever components parts list:

Item	Part No.	Qty.	Description
1	A55697	1	"H" throw member
2	A55696	1	"HJ" throw member
3	B92503	1[a]	9K throw member[b*]
4	1882120	50	Six pin spacer
5	B54182	1	Lever keeper spring
6	B92501	1	Sleeve bushing*

a. Single-keyed locks require one (1); double-keyed locks require two (2).
b. For information about cores and keys, see Core and Key Service Manual.

6.9 Lever components with interchangeable cores

Fig. 46

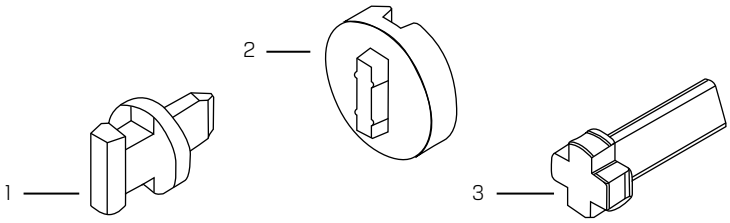


Figure 46 Lever components with interchangeable cores

Lever components with interchangeable cores parts list:

Item	Part No.	Qty.	Description
1	A88633	1	Yale tailpiece
2	A88634	1	Yale six pin spacer
3	B88756	1	Schlage tailpiece

6.10 Lever components for use with non-interchangeable cores

Fig. 47

Lever components for use with non-interchangeable cores parts list

Item	Part No.	Qty.	Description
1	B55709[a]	1[b]	Throw member for use with Sargent and Yale non-interchangeable cores[c]
2	A55708[d]	1[b]	Throw member for use with Schlage, Corbin, KA, KD, and OB cores[c]
3	A55712[e]	1[b]	Throw member for use with Medeco core[c]
4	C55714	1[b]	Lever handle insert for use with non-interchangeable cores
5	A55713	1[b]	Throw member support ring for use with non-interchangeable cores

a. To order kit that contains throw member, insert, and support ring for use with Sargent cores, use number 1770600. For Yale cores, use number 1770642; this kit contains two throw members, two inserts, and two support rings.
b. Single-keyed locks require one (1); double-keyed locks require two (2).
c. For information about cores and keys, see Core and Key Service Manual.
d. To order kit that contains throw member, insert, and support ring for use with Schlage, Corbin, KA, KD, and OB cores, use number 1770527.
e. To order kit that contains throw member, insert, and support ring for use with Medeco cores, use number 1778196.

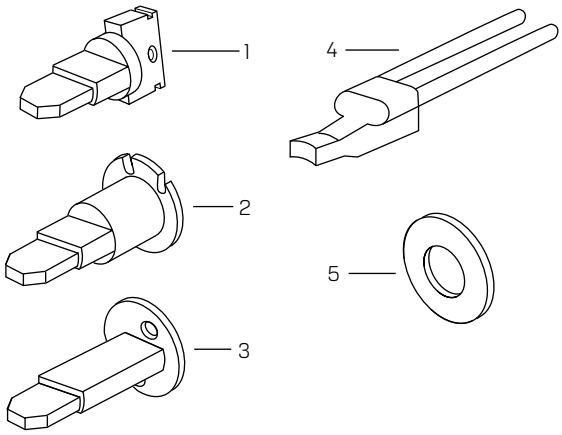


Figure 47 Lever components for use with non-interchangeable cores

Non-interchangeable cylinders parts list

Part No.	Finish.	Description
1888913	626	Non-interchangeable cylinder, keyed different
1888955	606	Non-interchangeable cylinder, keyed different
1891329[b]	626	Non-interchangeable cylinder, keyed alike
1891287[a]	606	Non-interchangeable cylinder, keyed alike
1888756	626	Non-interchangeable cylinder, zero-bitted
1888798	606	Non-interchangeable cylinder, zero-bitted

a. Throw members shipped with non-interchangeable cylinders are incompatible with 9K Series Locks. Refer to Lever components for use with non-interchangeable cores parts list above to select appropriate throw member.
b. Contains a set of four (4) cylinders.

6.1 1 Dummy trim

Fig. 4 8

Dummy trim parts

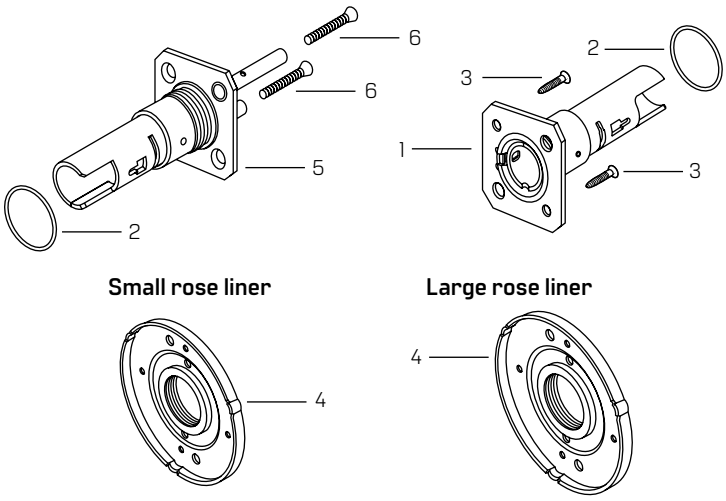
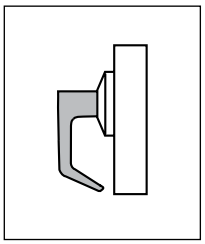


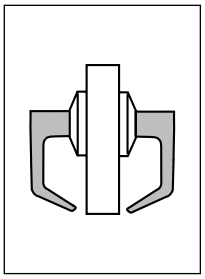
Figure 48 Dummy trim parts

Single dummy trim parts list



Item	Part No.	Qty.	Description
1	B55067	1	Chassis sub-assembly
2	A54465	1	"O" ring
3	A39217	2	#8 × 1 PFH type AB screw
4	B55051	1	Small liner and ring assembly or
	B55050	1	Large liner and ring assembly

Double dummy trim parts list



Item	Part No.	Qty.	Description
1	B55239	1	Chassis sub-assembly
2	A54465	2	"O" ring
4	B55051	2	Small liner and ring assembly or
	B55050	2	Large liner and ring assembly
5	B55067	1	Chassis sub-assembly
6	A18991	2	#8-32 × 1-1/8 Phil. FHMS screw

6.1 2 Latches

Fig. 4 9

Latches parts list

Item	Latch Type	Backset	Part No.	Nomen-clature.	Description
1	Deadlocking	2-3/4"	C54680	8KL3	Latch
2	Deadlocking	2-3/4"	A54661	N/A	Latch with 3/4" throw
3	Deadlocking	3-3/4"	C54682	8KL4	Latch
4	Deadlocking	5"	C54684	8KL5	Latch
5	Spring	2-3/4"	C54681	8KSL3	Latch
6	Spring	3-3/4"	C54683	8KSL4	Latch

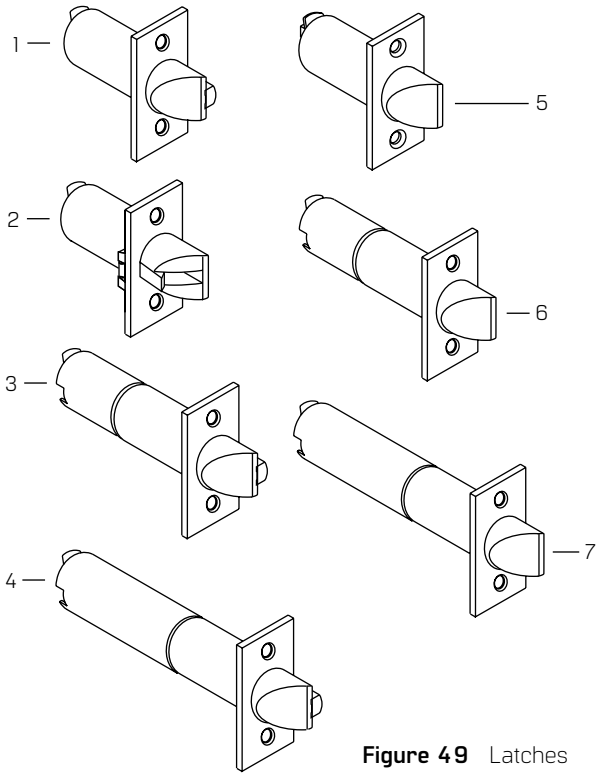


Figure 49 Latches

6.1 3 Installation tools

Fig. 5 0

Installation tools parts list

Item	Nomen-clature	Part No.	Description
1	KD303	C55034	Drill jig
2	KD325	A01514	Strike plate locating pin
3	KD315	1350393	Faceplate marking chisel

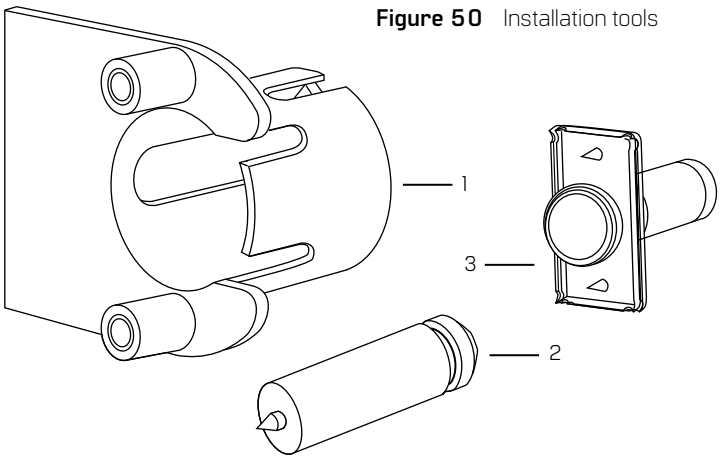


Figure 50 Installation tools

6.1 4 Boring jig kit

Fig. 5 1

Item	Nomen-clature	Part No.	Description
1	N/A	N/A	Boring jig[a]
2	KD325	A01514	Strike plate locating pin
3	KD315	1350393	Faceplate marking chisel (1-1/8" x 2-1/4")
not shown	KD312	1487975	Faceplate marking chisel (1" x 2-1/4")
4	KD309	A54084	2-1/8" diameter chassis hole bit assembly
5	KD318	A54085	1" diameter drill bit assembly
6	N/A	N/A	Adaptor for 3/8" drill chuck[a]
1-6	KD304A	N/A	Boring jig kit

a. Can only be ordered as part of KD304A boring jig kit.

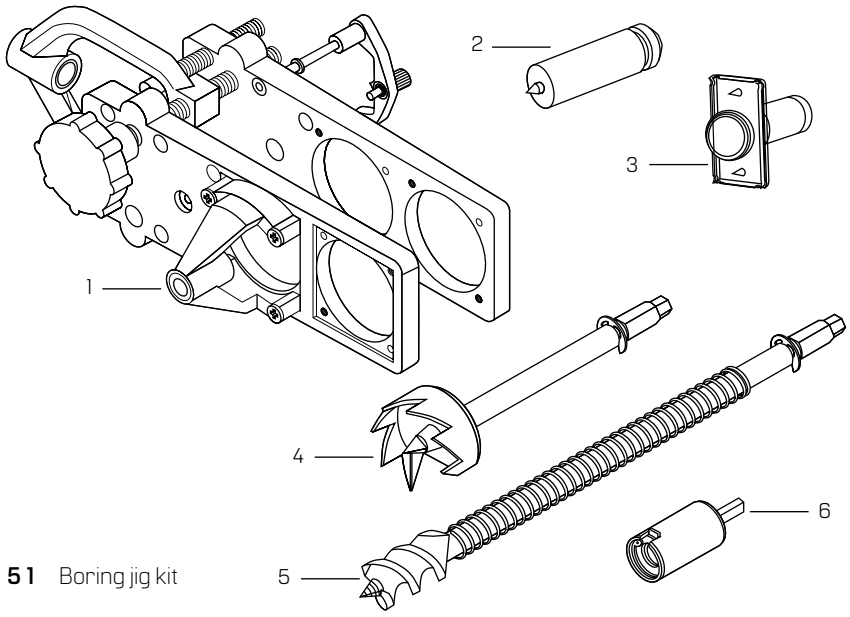


Figure 5 1 Boring jig kit

7 Service and maintenance — replacing parts

This chapter contains instructions for removing and replacing components, servicing and maintaining components, and troubleshooting common questions.

Service and maintenance issue	Page
Replace levers	46
Replace inside rose and rose liners	47
Replace outside rose and liner assembly	48
Replace RQE rose liner for electrified locks	49
Replace button assembly	49
Replace lever keeper spring	50
Lubricate cores	51
Align chassis and trim	51
Position locking cam for C function locks	52
Position locking cam for G and IN function locks	52
Use emergency key for H and HJ function locks	53
Troubleshoot common problems	54

7.1 Maintenance tools required

Fig. 52

Item	Nomen-clature	Part No.	Description
1	KD340	N/A	Spring loading tool
2	KD317	C55506	Spanner wrench
3	N/A	A25586	Emergency driver[a]

a. For use with hotel function locks (H and HJ).

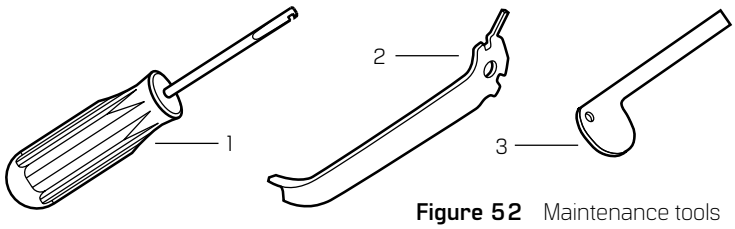


Figure 52 Maintenance tools

7.2 Replacing lever

Fig. 53 , Fig. 54 , Fig. 55

To remove keyed lever:

7.2.1 Insert control key into core and rotate key 15° right.

7.2.2 Remove core and throw member from lever.

7.2.3 Insert a flat blade screwdriver into figure-8 core hole and into lever keeper.

7.2.4 Press screwdriver blade in direction of arrow in **Figure 53.**

NOTE: You will not be able to remove lever if screwdriver blade is inserted too far past keeper.

7.2.5 Slide lever off sleeve.

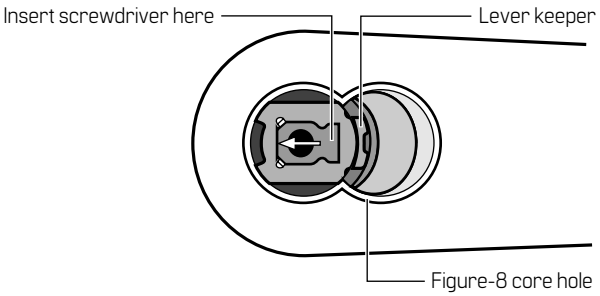


Figure 53 Removing keyed lever

To remove plain lever or button lever:

7.2.6 Insert protrusion on spanner wrench into hole on shaft of lever as shown in **Figure 54**. Slide lever off sleeve.

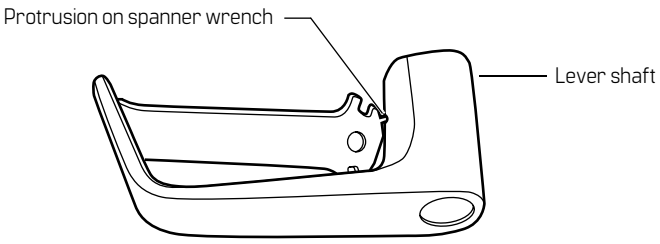


Figure 54 Removing plain lever or button lever

To reinstall lever:

7.2.7 Position lever so handle points toward door hinges.

7.2.8 Slide lever onto sleeve and firmly push on lever until it is seated. Turn levers to ensure smooth operation.

7.2.9 If lever is keyed, insert control key into core and rotate key 15° right. Using control key, insert core and throw member into lever. Rotate control key 15° left and remove key.

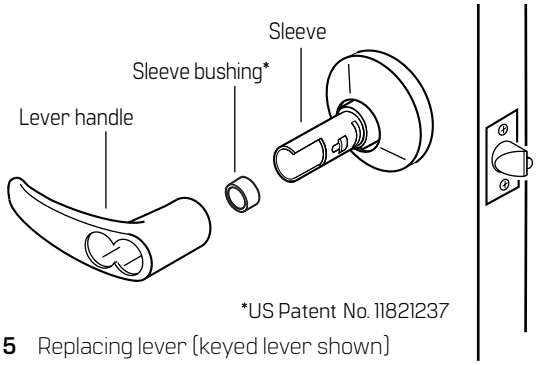


Figure 55 Replacing lever (keyed lever shown)

7.3 Replacing inside rose and rose liner

Fig. 56 , Fig. 57, Fig. 58

To remove inside rose and rose liner:

7.3.1 Remove inside lever (page 45).

7.3.2 Insert solid, curved end of spanner wrench in between rose and sleeve, as shown in **Figure 56**. Pry rose until it pops off of liner.

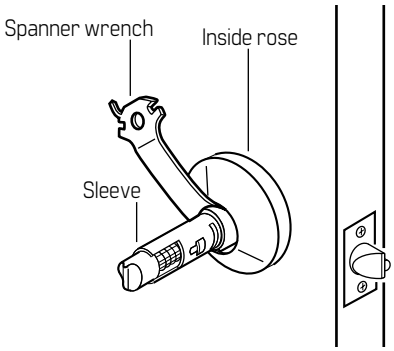


Figure 56 Removing inside rose with spanner wrench

7.3.3 Unscrew two through-bolts (**Figure 57**). **NOTE: Save through-bolts.**

7.3.4 If there is an RQE rose liner, disconnect it. Slide liner off of sleeve.

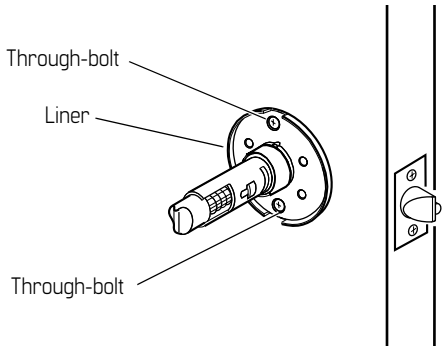


Figure 57 Removing two through-bolts

To reinstall inside rose and rose liner:

7.3.5 Align holes in liner with holes prepared in door.

7.3.6 Install two through-bolts through liner and door in top and bottom holes.

7.3.7 Tighten liner onto door with through-bolts. If there is an RQE rose liner, connect it.

7.3.8 Install rose.

7.3.9 Reinstall lever (page 45).

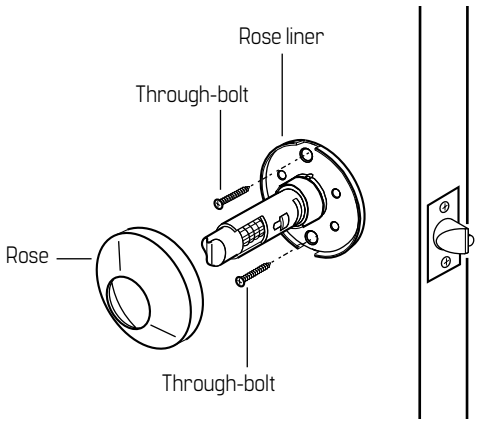


Figure 58 Replacing inside rose and rose liner

7.4 Replacing outside rose and liner assembly

Fig. 58 , Fig. 59

To remove outside rose and liner assembly:

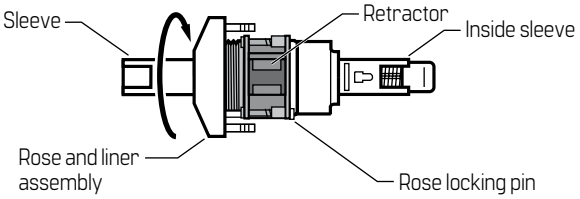
7.4.1 Remove components as follows:
Levers (page 46)
Inside rose and rose liner (page 47)

7.4.2 Slide chassis assembly out of door.

7.4.3 Retract rose locking pin and rotate rose and liner assembly counterclockwise until freed from hub.

7.4.4 Remove rose and liner assembly from sleeve.

Retractor-side view of chassis



Head-on view of rose and liner assembly from inside sleeve side

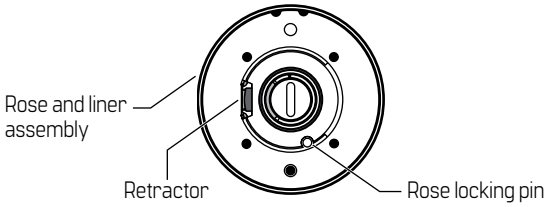


Figure 58 Removing outside rose and liner assembly

To reinstall outside rose and liner assembly:

7.4.5 Retract rose locking pin and rotate rose and liner assembly clockwise until proper door thickness groove on through-bolt stud lines up with hub face.

7.4.6 Release rose locking pin. It should lock into rose liner.

7.4.7 Install lock chassis assembly from outside. Make sure latch tabs engage chassis frame and latch tailpiece engages retractor.

7.4.8 Reinstall components as follows:
- Inside rose and rose liner (page 47)
- Levers (page 46)

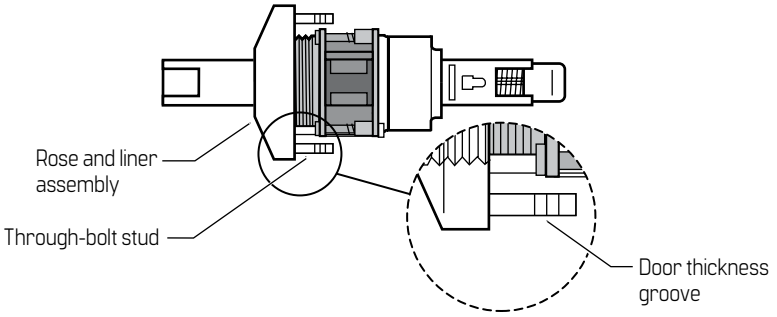


Figure 59 Replacing outside rose and liner assembly

7.5 Replacing RQE rose liner for electrified locks

To remove RQE rose liner:

7.5.1 Remove components as follows:
- Levers (page 46).
- Inside rose and rose liner (page 47)

7.5.2 Disconnect RQE connector.

7.5.3 Remove through-bolts and RQE rose liner.

To reinstall RQE rose liner:

7.5.4 Place RQE rose liner on chassis, aligning holes in rose liner with holes prepared in door.

⚠ **CAUTION: Ensure there is clearance for solenoid wire between RQE rose liner and door.**

7.5.5 Install through-bolts through RQE rose liner and door in top and bottom holes.

7.5.6 Tighten RQE rose liner on door with through-bolts.

7.5.7 Connect RQE connector.

7.4.8 Reinstall components as follows:
- Inside rose and rose liner (page 47)
- Levers (page 46)

7.6 Replacing button assembly

Fig. 60 , Fig. 61 , Fig. 62

To remove button assembly:

NOTE: These instructions apply for all types of button assemblies.

7.6.1 Remove components as follows:
- Levers (page 46)
- Rose and rose liner (page 47 or page 48)

7.6.2 Use a flat-blade screwdriver to press down on button assembly tab, which is visible through cutout in sleeve. Tab should now lie flat.

NOTE: When performing step 7.6.2, position lock on a flat surface so retractor faces upward.

7.6.3 Press down on retractor and slide button assembly out of sleeve.

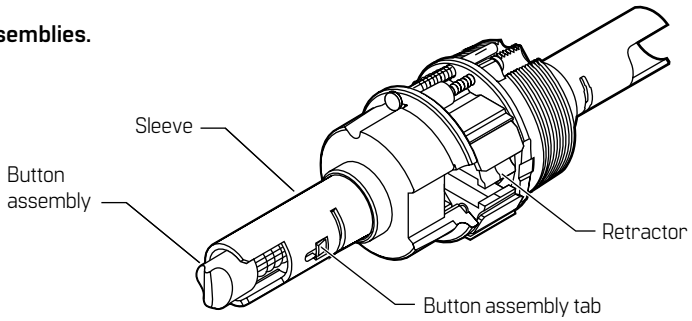


Figure 60 Removing button assembly

To reinstall button assembly:

7.6.4 Insert new button assembly into sleeve, as shown in **Figure 61**, until tab lines up with cutout in sleeve. It may be necessary to slightly press in retractor with your thumb so that locking bar can properly align itself through chassis and into key release cam assembly.

NOTE: Button assembly should not pop out of sleeve. If it does, it is misaligned and will not function properly.

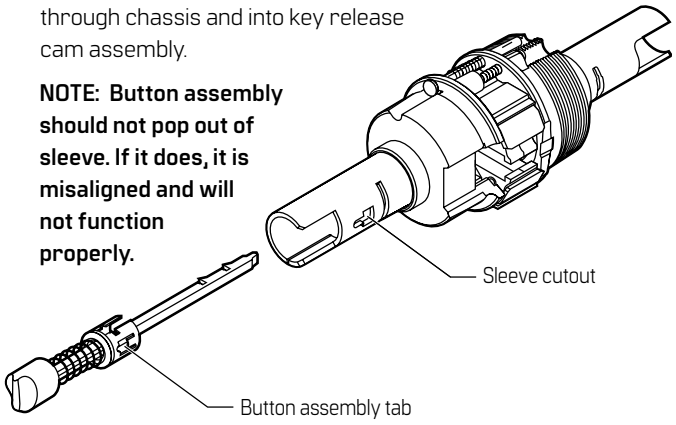


Figure 61 Inserting button assembly into sleeve

7.6.5 Insert a small screwdriver into cutout in sleeve and under button assembly tab. Bend tab into cutout (see **Figure 62**).

NOTE: Do not bend tab so that it protrudes further than diameter of sleeve. It could interfere with lever function.

7.6.6 Reinstall components as follows:
- Roses and rose liner (page 47)
- Levers (page 46)

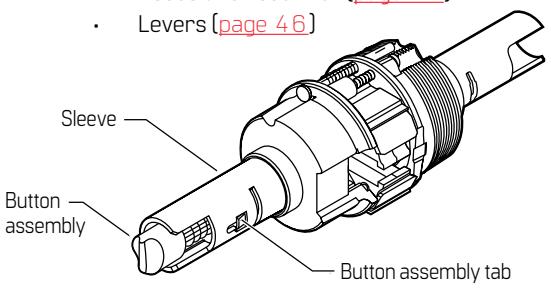


Figure 62 Bending button assembly tab

7.7 Replacing lever keeper spring

Fig. 63 , Fig. 64 , Fig. 65

To remove lever keeper spring:

7.7.1 Remove components as follows:

- Levers (page 46)
- Rose and rose liner (page 47 or page 48)
- Button assembly, if applicable (page 49)

7.7.2 Using a pair of needle-nosed pliers, reach into sleeve and remove lever keeper spring (see **Figure 63**).

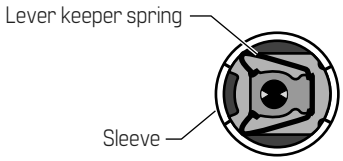


Figure 63 Removing lever keeper spring

To reinstall lever keeper spring:

7.7.3 Position lever keeper spring (see **Figure 64**).

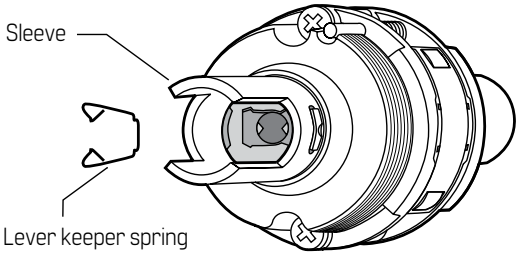


Figure 64 Positioning lever keeper spring

7.7.4 Use a pair of needle-nosed pliers to insert lever keeper spring into sleeve. Using pliers, work spring into position so spring is gripping lever keeper (see **Figure 65**).

NOTE: If lever keeper spring is not installed correctly, lever may fall off of chassis.

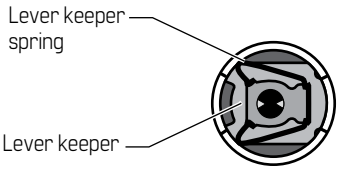


Figure 65 Lever keeper spring in position

7.7.5 Reinstall components as follows:

- Button assembly, if applicable (page 49)
- Roses and rose liners (page 47 or page 48)
- Levers (page 46)

7.8 Lubricating cores

⚠ CAUTION

Do not lubricate cores with oil. Use of oil will attract dirt.

For powdered graphite lubrication:

7.8.1 Dip a key in graphite. Insert key into keyhole and remove it; repeat several times. **OR**
Spray graphite into keyhole. Insert key into keyhole and remove it; repeat several times.

7.8.2 Allow graphite to sift into pin segment holes.

For silicone type lubrication:

7.8.3 Clean all existing lubricant out of core.

⚠ CAUTION

Do not mix graphite with a silicone-type lubricant.

7.8.4 With core inverted, spray lubricant into key opening allowing spray to penetrate pin segment holes.
NOTE: When cores are installed and exposed to harsh weather conditions, silicone-type lubricants can help displace moisture as well as spread into pin segment holes and other surfaces.

7.9 Aligning chassis and trim

Fig. 66

Establish a schedule to inspect locks, doors, and door hardware for proper alignment and operation. Occasionally a lock chassis and/or rose trim may become lose and require tightening.

To retighten a loose or misaligned chassis or rose trim:

7.9.1 Remove inside trim.

7.9.2 Align chassis with latch. Ensure latch tabs engage chassis frame and latch tailpiece engages retractor (see **Figure 66**).

7.9.3 Tighten chassis screws.

7.9.4 Test lever operation to ensure latch tailpiece does not bind with chassis retractor.

7.9.5 Reinstall inside trim. See page 46 for instructions.

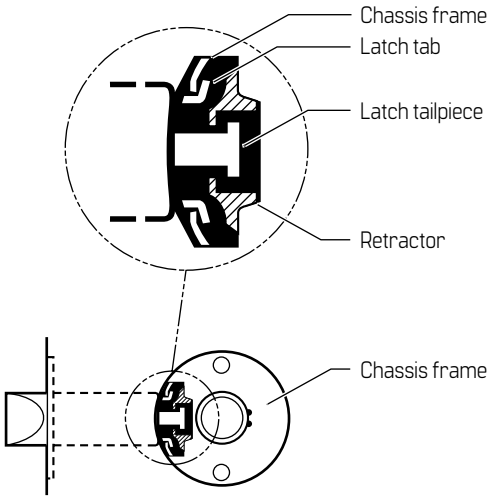


Figure 66 Engaging retractor in latch

8 Cam positioning instructions

8.1 Positioning cam for C function locks positioning instructions

Fig. 67

Vibration during shipment of C function locks may cause inside locking cam to rotate out of position. You might notice this problem in these ways.

- Inside key does not rotate a full 360° and outside key does not rotate full 135°. Remove inside core and throw member. Perform steps below to reposition inside locking cam.
- Before you install core and throw member, you can see inside locking cam is not positioned as shown in **Figure 67**. Perform these steps to reposition inside locking cam.

To reposition locking cam

8.1.3 Looking into figure-8 core hole in inside lever, turn locking cam ears counterclockwise to match position shown in **Figure 67**.

8.1.4 Install core and throw member.

8.1.5 Check operation of levers while door is open. Outside lever is locked by rotating inside key 360° counterclockwise and unlocked by rotating inside key 360° clockwise.

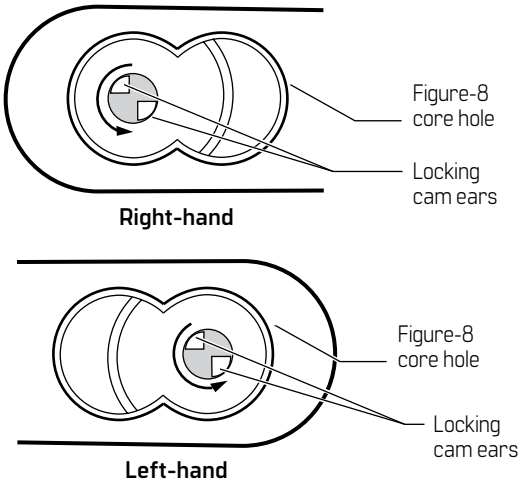


Figure 67 Correct position of C function inside locking cam

8.2 Positioning cam for G and IN function locks

Fig. 68 , Fig. 69

Vibration during shipment of G and IN function locks may cause inside locking cam to rotate out of position. You might notice this problem in these ways.

- With levers in locked position, both inside and outside keys do not rotate one full turn in both directions. Remove both cores and throw members, and perform following steps to reposition locking cam.
- Before you install core and throw member, you can see locking cam is not positioned as shown in **Figure 68**. Perform following steps to reposition locking cam.

To reposition locking cam

8.2.1 Looking through figure-8 core hole in either lever, turn locking cam drive slot to match position shown in **Figure 68.**

8.2.2 Looking into figure-8 core hole in other lever, turn locking cam drive slot counterclockwise until it stops (see **Figure 69**).

8.2.3 Turn drive slot clockwise to match position shown in **Figure 68**.

8.2.4 Reinstall lever's core and throw member.

8.2.5 Check operation of levers while door is open. Levers are locked by rotating key 1-1/4 turns counterclockwise and unlocked by rotating key 1-1/4 turns clockwise.

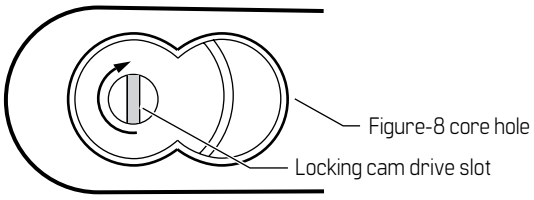


Figure 68 Correct position of C function inside locking cam

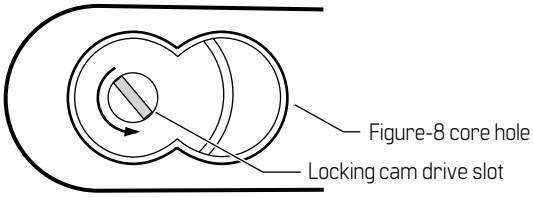


Figure 69 Intermediate position of C function inside locking cam

8.3 Emergency key instructions for H and HJ function locks

Fig. 70

To use emergency key:

8.2.1 Remove core and throw member.

8.2.2 Insert blade of emergency key into slot (see **Figure 70**).

8.2.3 Turn key and retract latch.

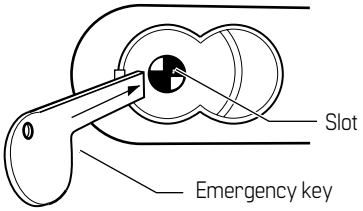


Figure 70 Inserting emergency key

9 Troubleshooting

This table summarizes possible causes for certain lock questions. Causes are listed in order of likelihood. (Most likely cause is first, and so forth.)

You notice...	Possible causes include...	You should...
Lever won't return to its normal position.	Lever return spring is out of position.	Replace chassis.
	Lever return spring is broken.	Replace chassis.
	There is binding between lever and rose.	Ensure lock chassis is centered within door.
Key spins freely, but won't retract latch or unlock door.	Throw member is not installed.	Install throw member.
	6-pin core is installed with a 7-pin throw member.	Change core or throw member.
Core doesn't fit into lever core hole.	7-pin core is installed with a 6-pin throw member.	Change core or throw member.
	Keyed lever is defective.	Replace keyed lever (page 46).
Button doesn't pop out as expected.	Button shaft is damaged or bent.	Replace button assembly (page 49).
Latch doesn't retract.	Latch tailpiece is broken.	Replace latch assembly.
	Latch tailpiece didn't engage retractor correctly during installation.	Reinstall lock chassis (page 48).
For a C function lock, inside key does not rotate full 360°, and outside key does not rotate full 135°.	Inside locking cam is out of position.	Reposition inside locking cam (page 52).
For a G or IN function lock with levers in locked position, key does not rotate one full turn in both directions.	Locking cam is out of position.	Reposition the locking cam (page 52).
Cannot remove operating key from an H or HJ function lock.	Key is turned 180° past correct position.	Push inside button, turn key back clockwise 180°, and remove key.

10 Installation instructions

All installation instructions and templates for 9K Cylindrical Locks can be found on the Knowledge Base: 9K Grade 1 Cylindrical Locks.

For additional product details, downloads, and warranty information, please visit: https://dhwsupport.dormakaba.com/hc/en-us/

For further assistance, please contact dormakaba's technical support team at **1-800-392-5209.**