1856 HT, 1856 SFT

Surface applied door closer
HT (stnd track) < 2″ frame face
SFT (swing free track) < 2″ frame face

Installation instructions

08280001 – 03-2020

| EN |

dormakaba

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1 Technical specifications

1.1 Overview

⚠ Each 1856 HT & 1856 SFT unit contains a door closer, hold open solenoid.

⚠ The unit can be connected to an 1800 series SD (smoke detector) unit for paired door applications. It is a companion to the main unit, and the solenoid de-engergizes along with the main unit.

⚠ ATTENTION!!! Read the entire instruction sheet prior to installing and refer to NFPA 72E. Standards may be obtained from THE NATIONAL FIRE PROTECTION ASSOCIATION in Batterymarch Park, Quincy, Massachusetts, 02169.

⚠ Please make sure you have the tools listed plus make sure you have the correct model unit and hand designation per your application.

⚠ CAUTION: Sex nuts are required for attachment of components to unreinforced, wood or plastic faced composite type fire doors, unless an alternative method is identified in the individual door manufacture's listings. Make sure door efficiently operates prior to installing the closer. When installing main arm attachment observe directions closely. Confirm dead stop degree prior to door and frame preparations.

1.2 Tools recommended

Table 1

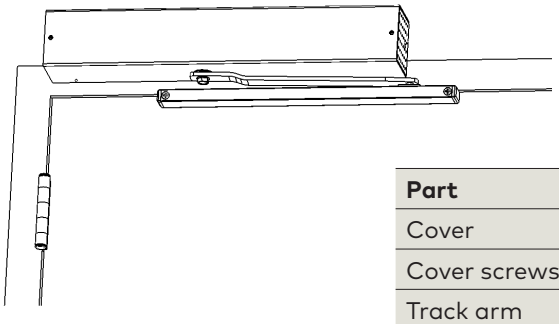
Drill bits:	#3 Phillips screwdriver
No. 7 drill bit & drill or 13/64" drill bit	3/16" slotted head screwdriver
1/4-20 tap & holder	M5 hex key
1/2" box wrench	
10" adjustable wrench	

2 Installation instructions

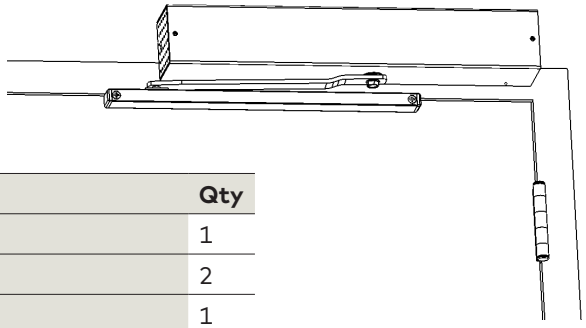
2.1 Overall

Fig.1

Right hand installation



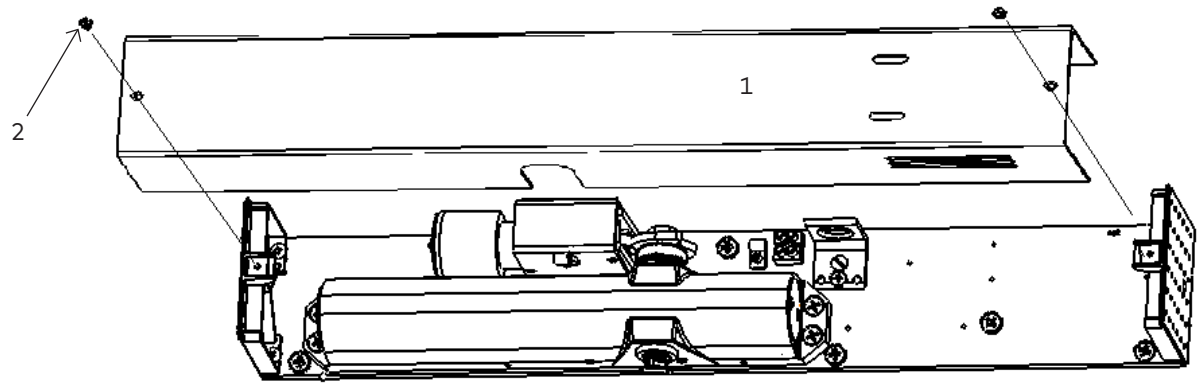
Left hand installation



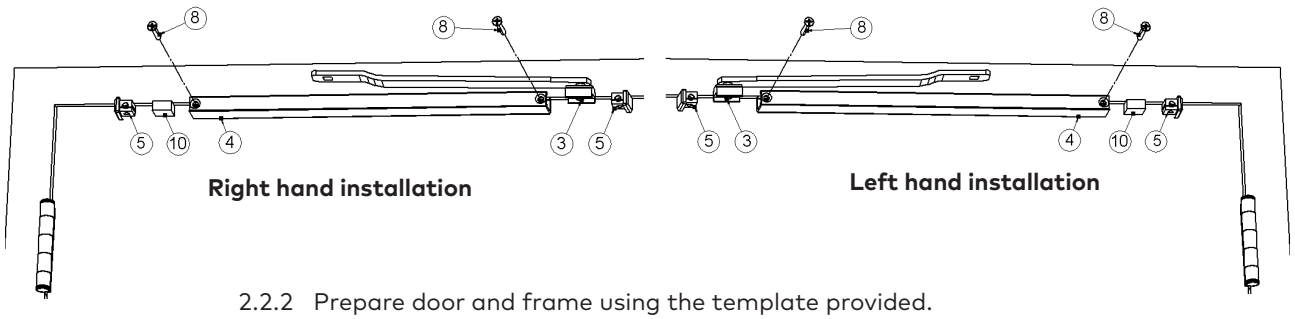
Part	Qty
Cover	1
Cover screws	2
Track arm	1
Track	1
Track end cap	2
1856 unit (HT or SFT - LH/RH)	1
Combo screws	5
Track flat head wood screws	2
Track flat head machine screws	2
Hex washer head screw (HT only)	1
Rubber stop	1
Free Swing Unit Parts	**Qty**
Socket head cap and washer	1
Bushing	1
Anti friction washer	2
Sweep arm	1

2.2 Install track

Fig.2



2.2.1 Remove the cover (1) by unscrewing the two Phillips screws (2).

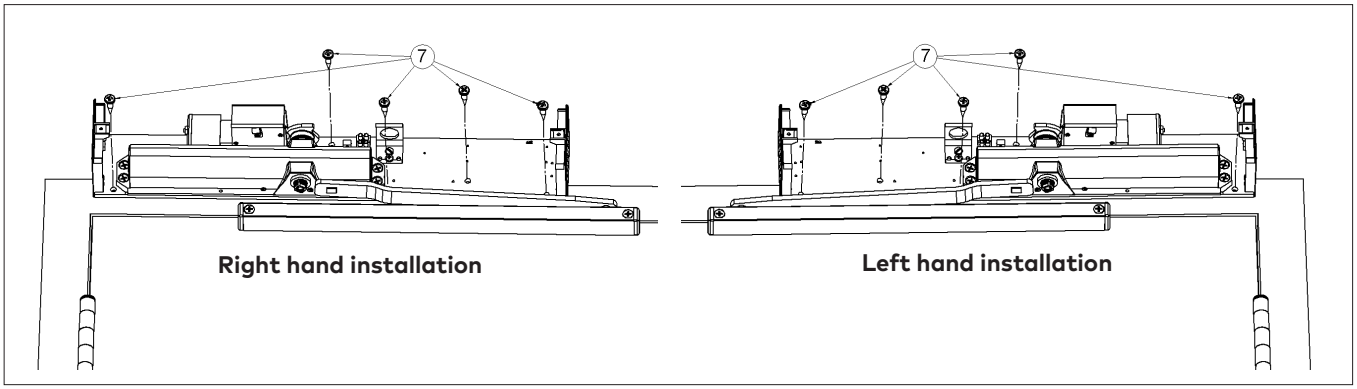


2.2.2 Prepare door and frame using the template provided.

2.2.3 Mount the track (4) by inserting the rubber block (10) into the track. Insert the track arm (3) into the track. Insert 2 end caps (5) into both end of the track. Attach track to the door by fastening track screws (8) tightly and securely.

2.3 Install closer (track mount HT)

Fig.3

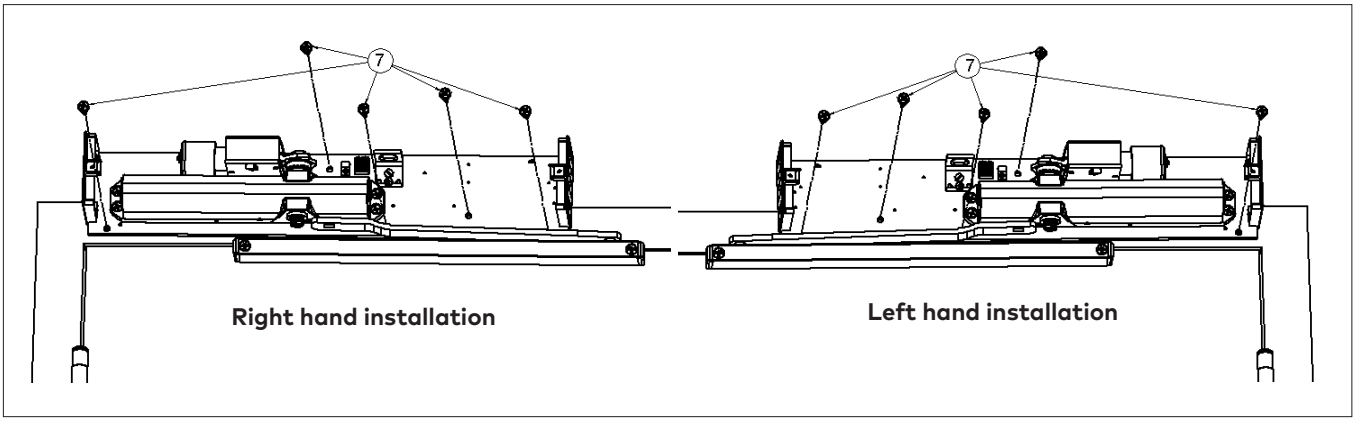


2.3.1 Prepare door and frame using the template provided.

2.3.2 Attach unit (6) to frame with 5 combo screws (7).

2.4 Install closer (<2" frame face mount)

Fig.4

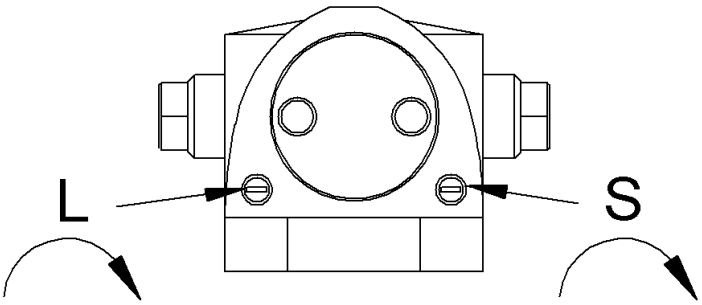


2.4.1 Prepare door and frame using the template provided. Attach unit (6) to frame with 5 combo screws (7).

2.5 Secure arm

Fig.5

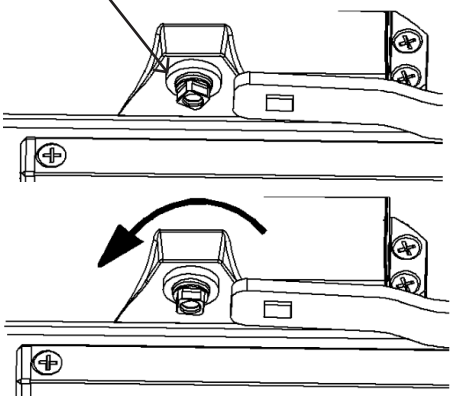
Note: This step will keep the pinion square from rotating while you are attaching the track arm or swing free sweep arm.



2.6.1 Turn sweep and latch valve clockwise until snug (closed).

Pinion square

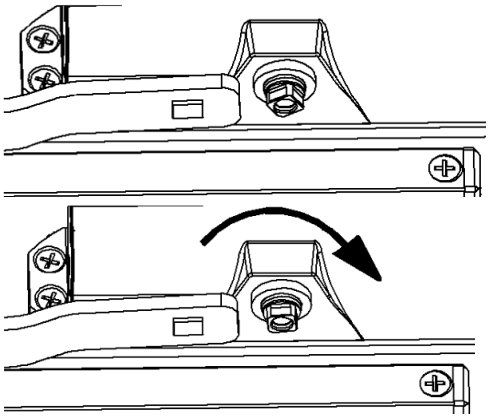
Right hand installation



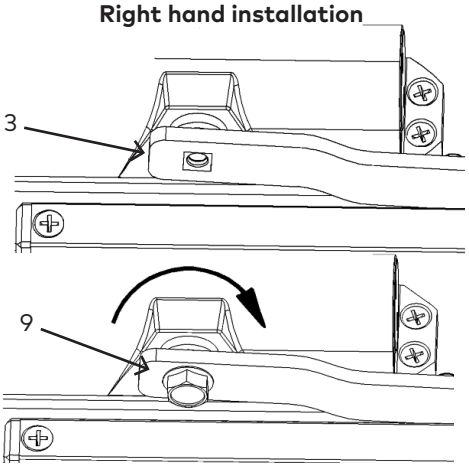
Preload pinion:

2.6.2 With the door closed, place wrench on pinion square and rotate per illustration until it aligns with the square hole in the arm (approx. 45 degrees).

Left hand installation



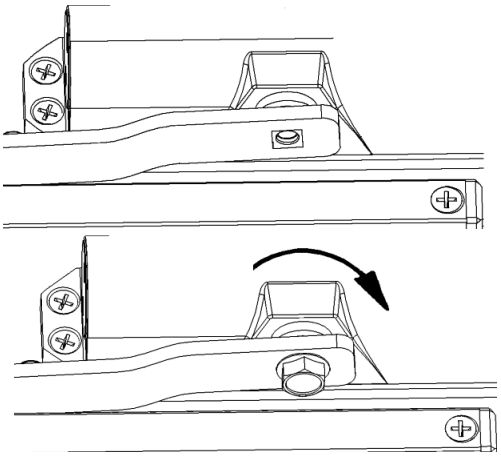
Right hand installation



Hold open track mount:

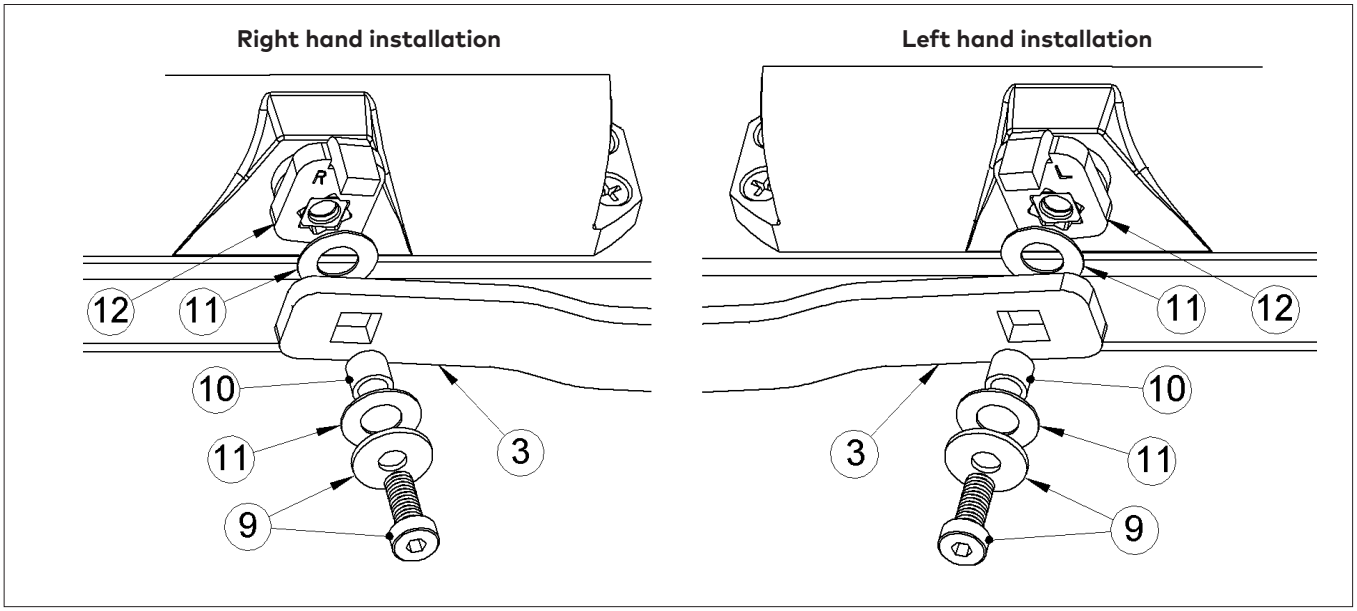
2.6.3 Attach main arm (3) to pinion square, secure with hex head washer screw (9) tightly .

Left hand installation



2.6 Swing free track mount (SFT)

Fig.6



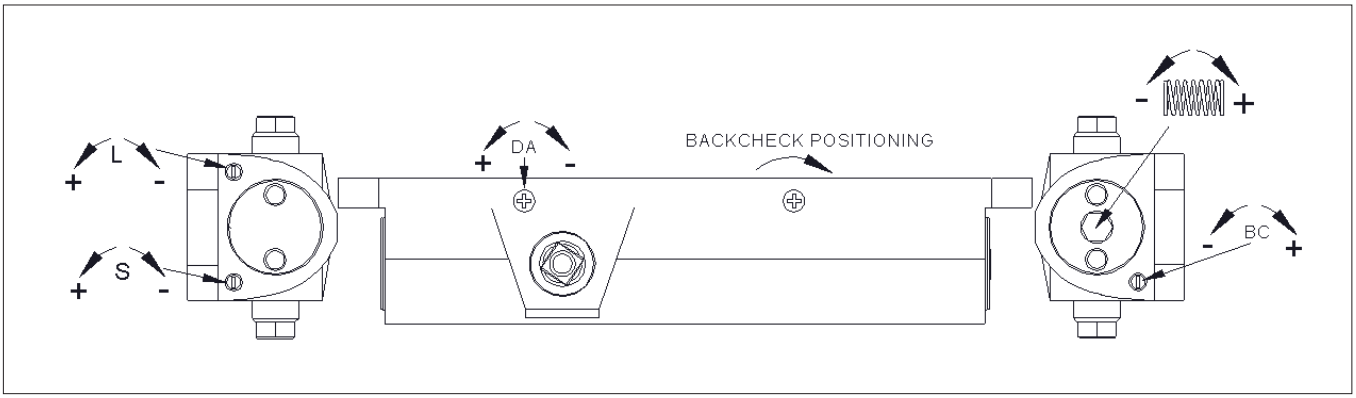
2.7.1 After rotating the pinion square (step 2.6.2) attach sweep arm (12) to pinion square as shown. Insert bushing (10) into track arm's (3) square hole, apply two anti-friction washers (11) on both sides of the track arm, secure tightly with socket head cap screw and washer (9).

3 Adjustments

- Be sure closer has appropriate spring power prior to making any closer speed adjustments.
- Door should close in 3 to 6 seconds from 90 degrees
- Do not back valves out beyond closer casting surface.
- Check closing sweep (S) and latch (L) speed; adjust as necessary.
- Backcheck position will advance approximately 15 degrees by placing position valve in the “on” position (fully clockwise).
- Check delay action (DA) function if supplied.
- Ball bearing hinges or pivots should always be used.

3.1 Adjust closing speeds: sweep, latch, backcheck, delayed actions

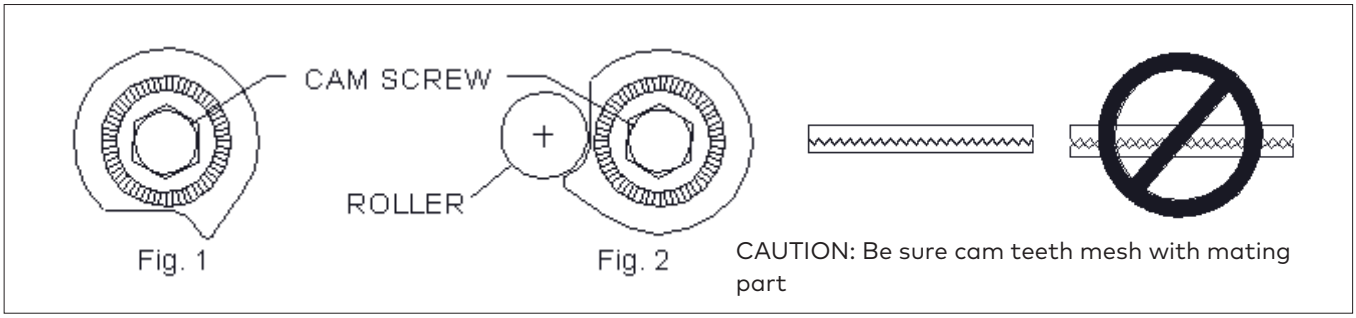
Fig.7



Closer size (ANSI)	Closer size	Max door weight (lbs)	Door width		Full turns
			Interior	Exterior	
4	5	125	3′	2′-6″	-8
5	6	150	3′-6″	3′	0

3.2 Set the hold open

Fig.8



3.2.1 Open the door to factory preset hold open position at 90 degree approximately.

3.2.2 Loosen cam screw so the cam moves freely. (Fig. 1)

3.2.3 Move door to the required hold open position.

3.2.4 Turn cam so that the cam lobe is resting against the roller in the plunger. Tighten cam screw securely. (Fig. 2)

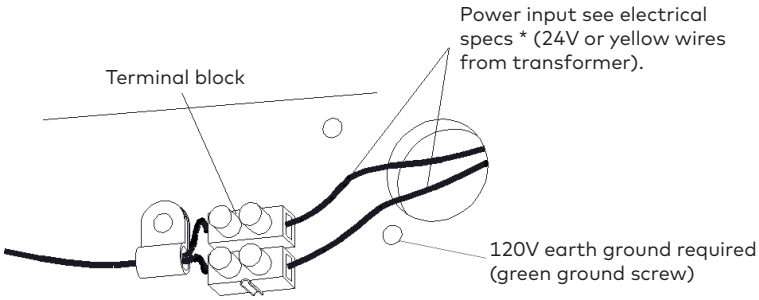
4 Wiring

4.1 Electrical connections

Fig.9

Verify voltage marked on unit identification label and connect the two incoming power wires to terminal block.

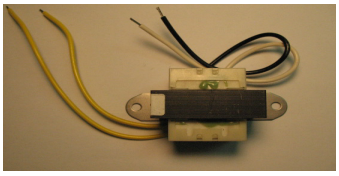
NOTE: THIS CONNECTION IS NOT POLARITY DEPENDENT.



4.2 120V transformer and optional surface wiring

Fig.10

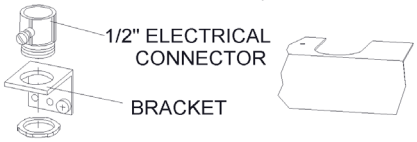
Optional 120V Transformer



Yellow wires go to terminal block.

120V in-coming power

Optional Surface Wiring

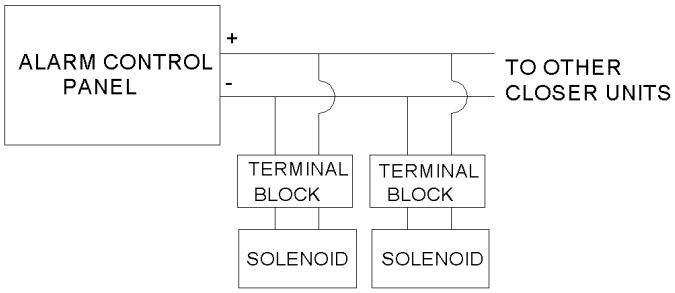


Optional surface wiring must be specified when the unit is ordered. The surface wiring bracket is added for installation of the 1/2" electrical conduit connector and the cover is notched to accept the conduit.

4.3 Companion unit (optional)

Fig.11

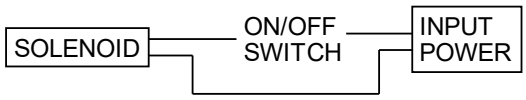
When installing as a companion unit to a smoke detector unit use 24VAC/VDC only.
To test a non-detector unit, trip the test switch of the main closer detector as explained in the Smoke Detector Test Procedure include with those types of units. After tripping the test switch both the main detector unit and non-detector unit will release and the doors will close. Resetting the test switch will allow the units to return to standby condition.



4.4 ON/OFF switch (optional)

Fig.12

1. Wire ON/OFF switch as shown at the right.
2. Push button will cut power to the hold open solenoid and the door will close.
3. Pushing button a second time will engage power to the hold open solenoid allowing the door to be held open.
4. The push button is accessible by inserting a small cylindrical object thru the hole in the end cap.



5 Final set up

5.1 Unit testing

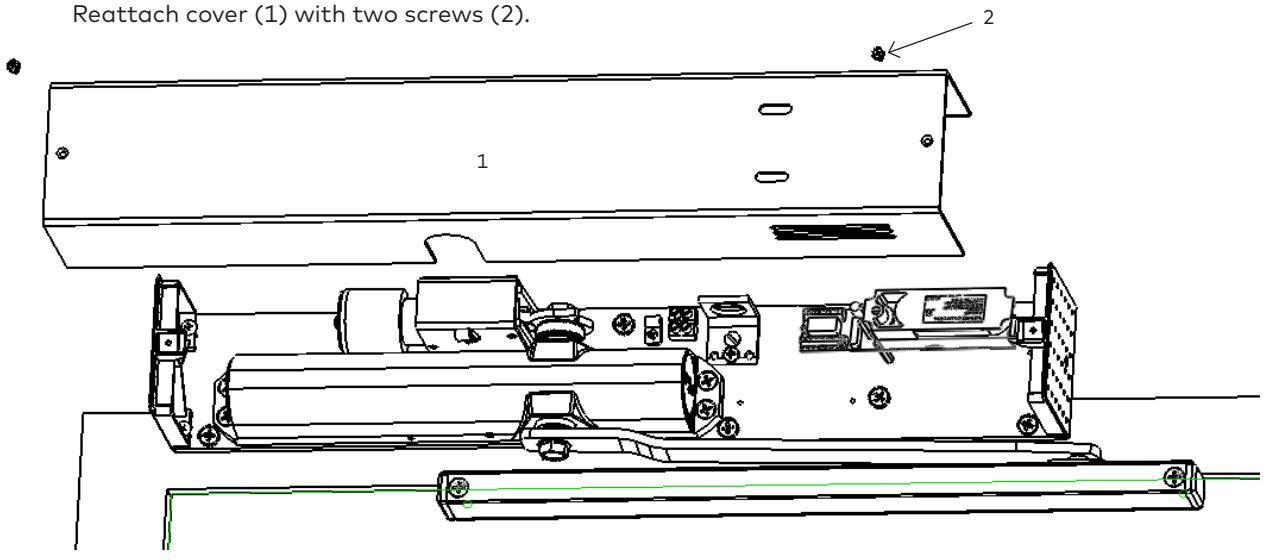
Fig.13

IMPORTANT: THE UNIT MUST BE TESTED AFTER THE INSTALLATION, BY THE END USER, TO ASSURE THAT THE DOOR CLOSER UNITS FUNCTION PROPERLY WHEN THE ALARM SYSTEM IS ACTIVATED. THE ENTIRE SYSTEM MUST ALSO BE TESTED PERIODICALLY AFTER THE INITIAL INSTALLATION TEST, IN CONJUNCTION WITH THE TESTING OF THE FIRE ALARM SYSTEM. THE END USER IS ALSO RESPONSIBLE FOR THE ADJUSTMENTS AND MAINTENANCE TO RETAIN THE SYSTEM IN WORKING ORDER.

5.2 Install covers

Fig.14

Reattach cover (1) with two screws (2).



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