

1816 HJ & SFJ

Surface applied door closer

HJ (stnd jamb mount) x drop plate

SFJ (swing free jamb mount) x drop plate

Installation instructions

08280201 – 03-2020


| EN |


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1 Technical specifications


1.1 Overview

 Each 1816 HJ & SFJ 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-energizes 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

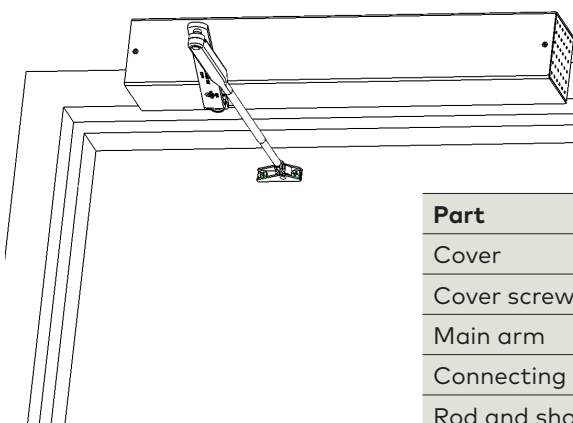
Drill bits:	#3 Phillips screwdriver
No. 7 drill bit & drill or 13/64" drill bit	3/16" slotted head screwdriver
1/4-20 tap & holder	M5 hex key
1/2" box wrench	
10" adjustable wrench	

2 Installation instructions

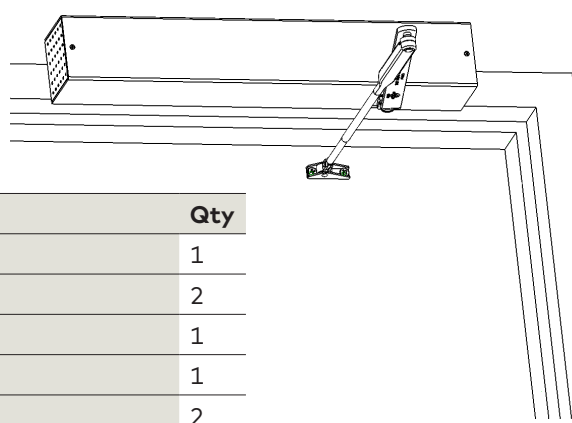
2.1 Overall

Fig.1

Left hand installation



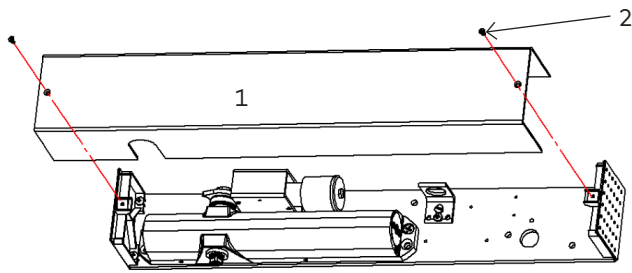
Right hand installation



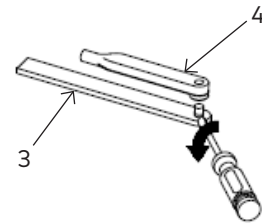
Part	Qty
Cover	1
Cover screws	2
Main arm	1
Connecting arm	1
Rod and shoe	2
1816 unit (HJ or FSFJ - LH/RH)	1
Combo screws	5
Flat head wood screws	2
Flat head machine screws	2
Hex washer head screw (HJ only)	1
Rubber stop	1
Free Swing Unit Parts	Qty
Socket head cap and washer	1
Bushing	1
Anti friction washer	2
Sweep arm	1

2.2 Install main arm

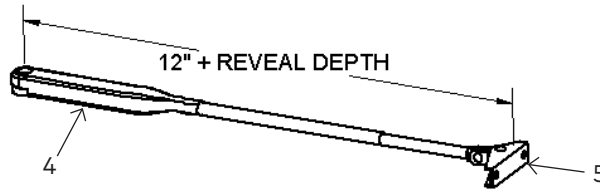
Fig.2



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

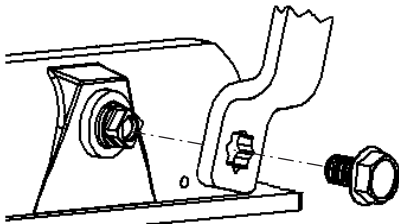


2.2.2 Pry apart connecting arm (4) tube from main arm (3).



2.2.3 Thread the connecting tube (4) and rod shoe (5) together.
Length = 12" plus the reveal depth

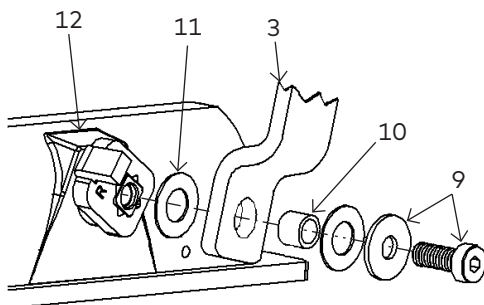
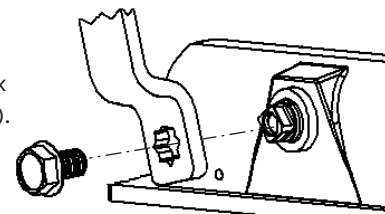
Left hand installation



Hold Open Jamb Mount:

2.2.4 Attach main arm (3).
2.2.5 Secure tightly with hex head washer screw (9).
Note: indexing by hand of unit.

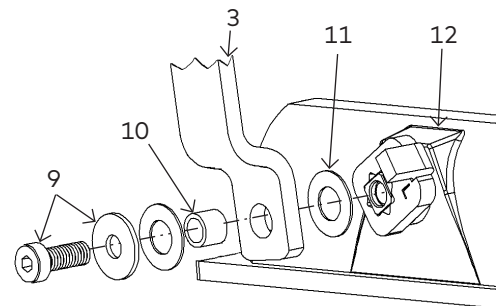
Right hand installation



Free Swing Mount:

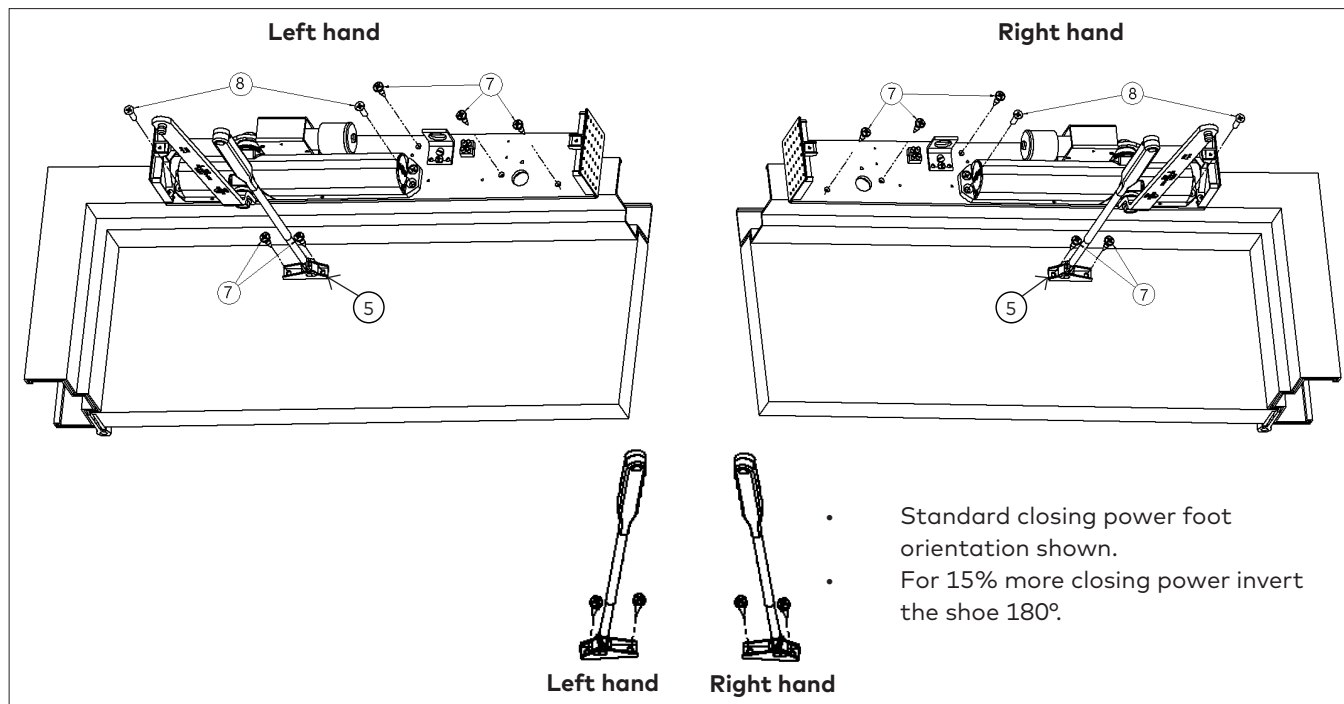
2.2.6 Attach swing arm (12) as shown, by inserting the bushing (10) into the main arm (3).
2.2.7 Apply two anti-friction washers (11) on both sides of the main arm.
2.2.8 Tightly secure with socket head cap screw and washer (9).

Note: indexing by hand of unit.



2.3 Install closer (top jamb mount)

Fig.3

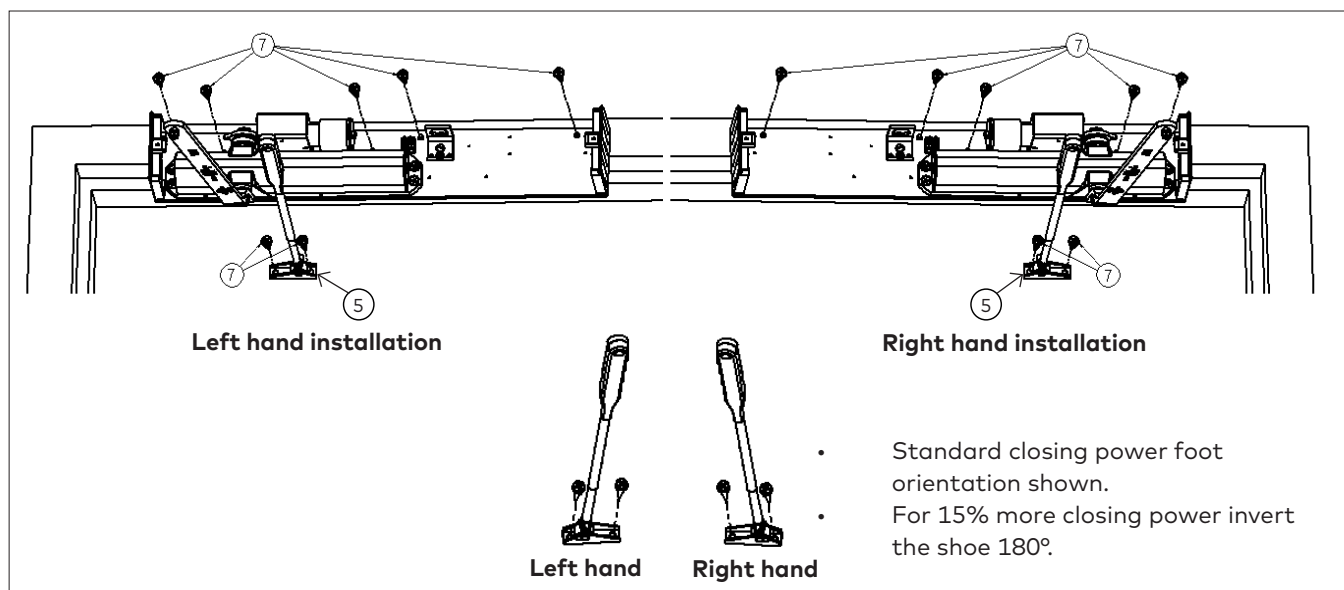


- 2.3.1 Prepare door and frame using the template provided.
- 2.3.2 Attach unit (6) to frame with 3 combo screws (7) and 2 flat head wood screws (8) or 2 flat head machine screws (8).

- 2.3.3 Attach rod and shoe (5) to door with 2 combo screws (7).

2.4 Install closer (top jamb mount x drop plate)

Fig.4

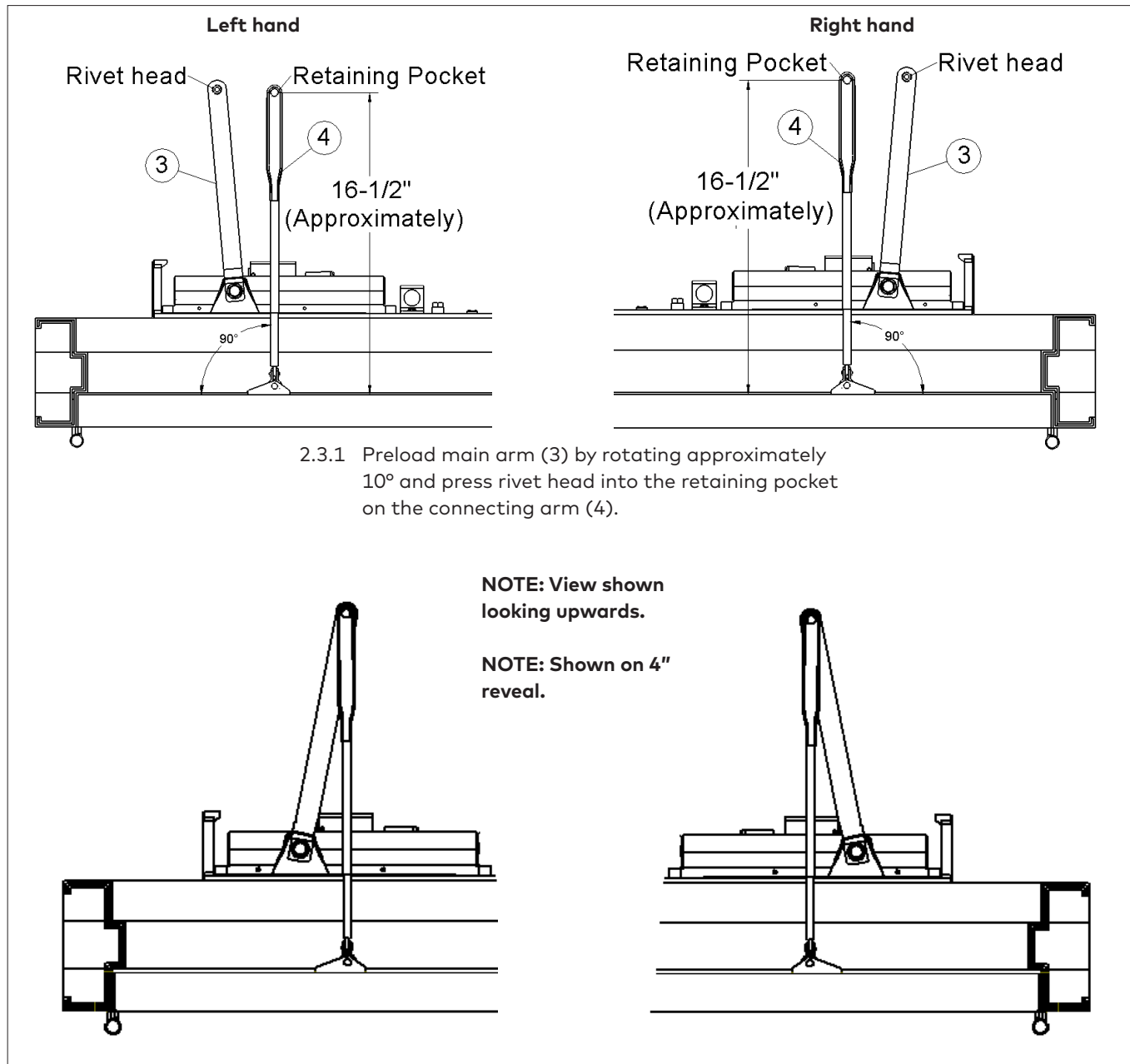


- 2.4.1 Prepare door and frame using the template provide.
- 2.4.2 Attach unit (6) to frame with 5 combo screws (7).




- 2.4.3 Attach rod shoe (5) to door with 2 combo screws (7).





2.5 Preload main arm

Fig.5



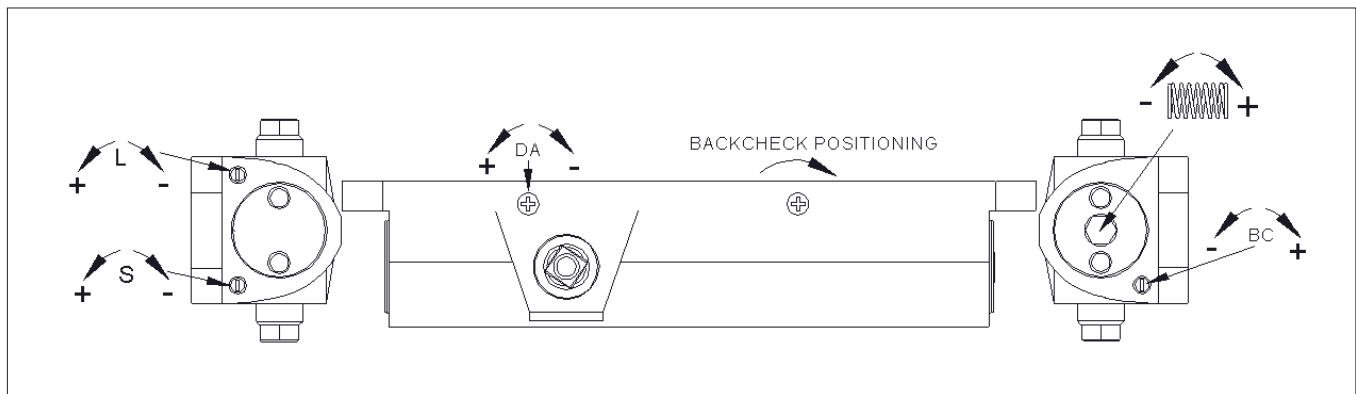
3 Adjustments

-  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

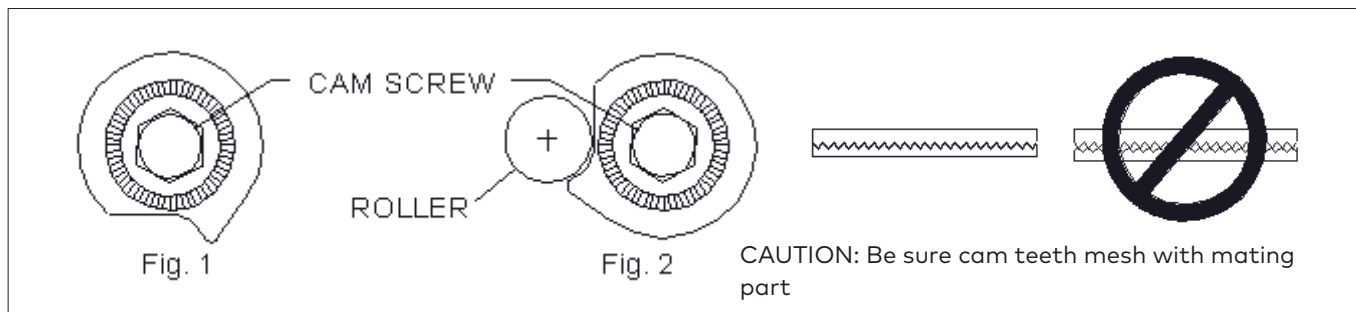
Fig.6



Closer size	Max door weight (lbs)	Door width		Full turns
		Interior	Exterior	
2	100	2'-6"	---	-6
3	125	3'	2'-6"	0
4	150	3'-6"	3'	+8
5	200	4'	3'-6"	+16
6	250	---	4'	+24

3.2 Set the hold open

Fig.7



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.8

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

NOTE: THIS CONNECTION IS NOT POLARITY DEPENDENT.

Terminal block

Power input see electrical specs * (24V or yellow wires from transformer).

120V earth ground required (green ground screw)

4.2 120V transformer and optional surface wiring

Fig.9

Optional 120V Transformer

Yellow wires go to terminal block.

120V in-coming power

Optional Surface Wiring

1/2" ELECTRICAL CONNECTOR

BRACKET

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.10

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.

ALARM CONTROL PANEL

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TO OTHER CLOSER UNITS

TERMINAL BLOCK

TERMINAL BLOCK

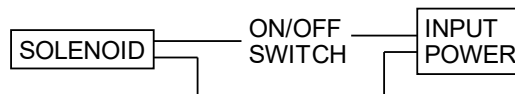
SOLENOID

SOLENOID

4.4 ON/OFF switch (optional)

Fig.11

1. Wire ON/OFF switch as shown above.
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 through the hole in the end cap.



5 Final set up

5.1 Unit testing

Fig.12

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.13

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

