



Bulletin 1494V Variable Depth Disconnect Switch Installation Instructions

(Cat 1494V-DS30; -DSX30 - Series D; 1494V-DS60; -DSX60 - Series D)

(Cat 1494V-DS100; -DSX100 - Series D; 1494V-DS200; -DSX200 - Series D)



ATTENTION: To prevent electrical shock, disconnect from power source before installing or servicing. Follow NFPA 70E requirements. Install in suitable enclosure. Keep free from contaminants.



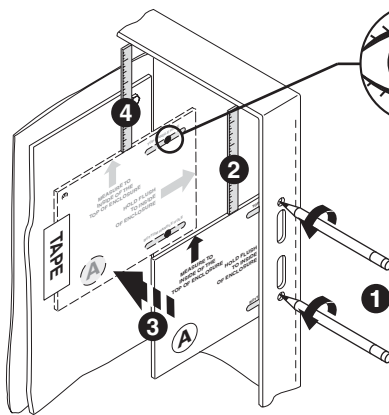
ATTENTION: The following procedures are critical to the proper operation of the disconnect handle and switch. Failure to follow these steps can result in damage to the equipment and/or serious injury or death to the operator.

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QUICK INSTALLATION GUIDE

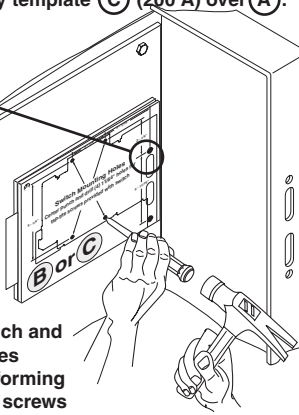
1 Disconnect Switch Installation (Right hand installation shown. For left hand installation follow similar procedure.)

Use template (A) to locate handle holes on mounting plate.

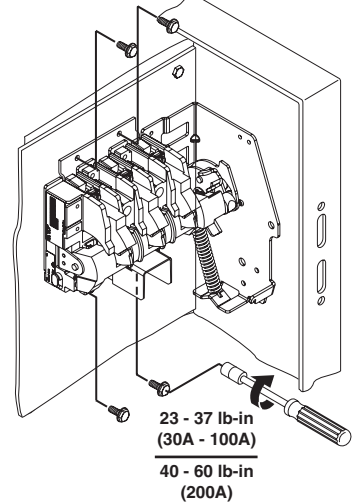


5 Overlay template (B) (30 A - 100 A) over (A).
Overlay template (C) (200 A) over (A).

6 Center punch and drill (4) holes for thread forming (TAP-TITE) screws provided with switch.
1 1/64" Dia. (30A - 100A)
7/32" Dia (200A)

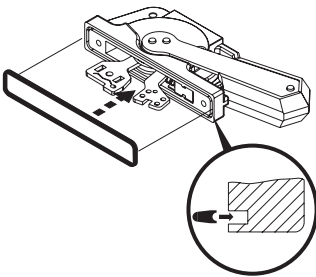


7 Install disconnect switch.

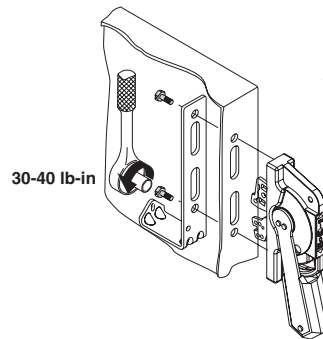


2 Disconnect Handle Installation

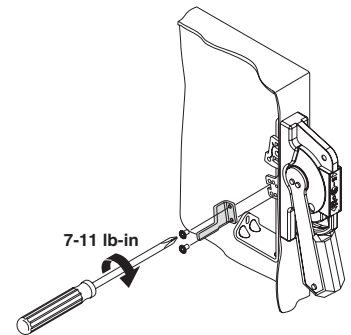
1 Install gasket.



2 Install handle and spring bracket.

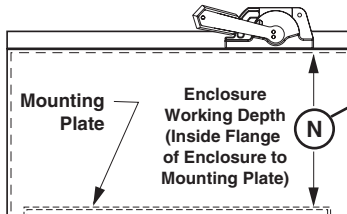


3 Install defeater lever.

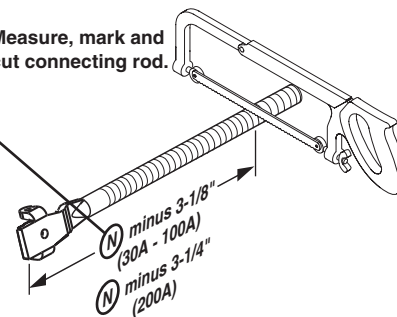


3 Cutting Connecting Rod

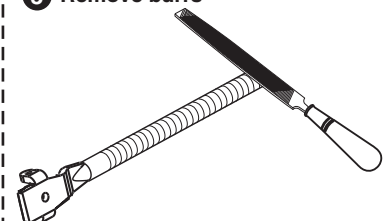
1 Measure working depth of enclosure.



2 Measure, mark and cut connecting rod.



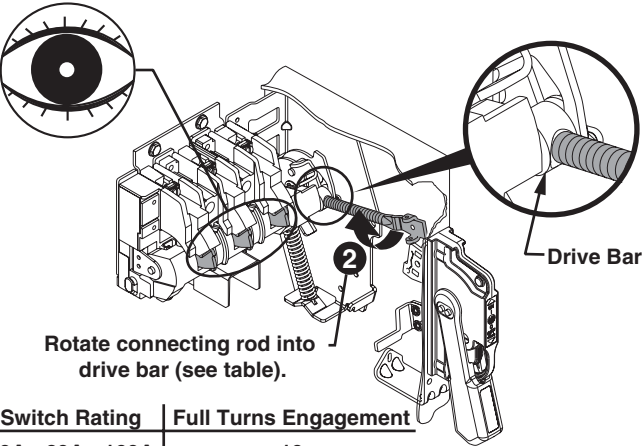
3 Remove burrs



QUICK INSTALLATION GUIDE (CONTINUED)

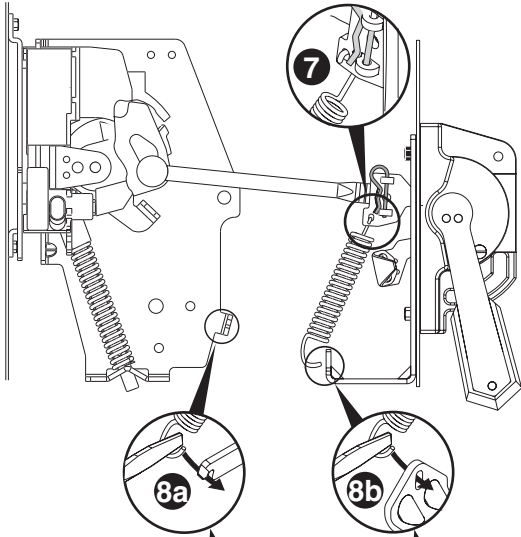
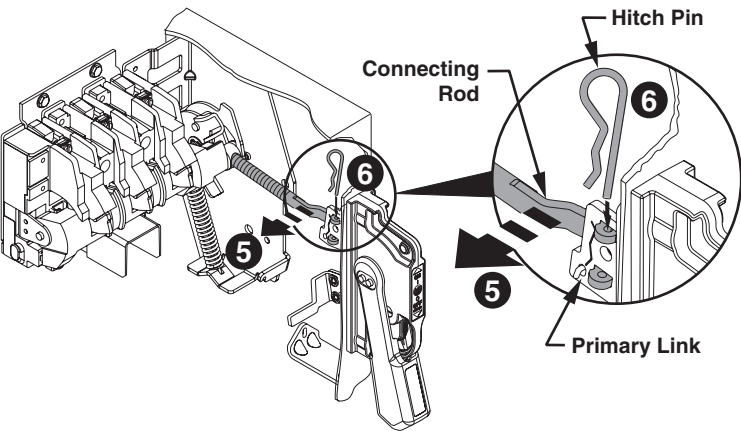
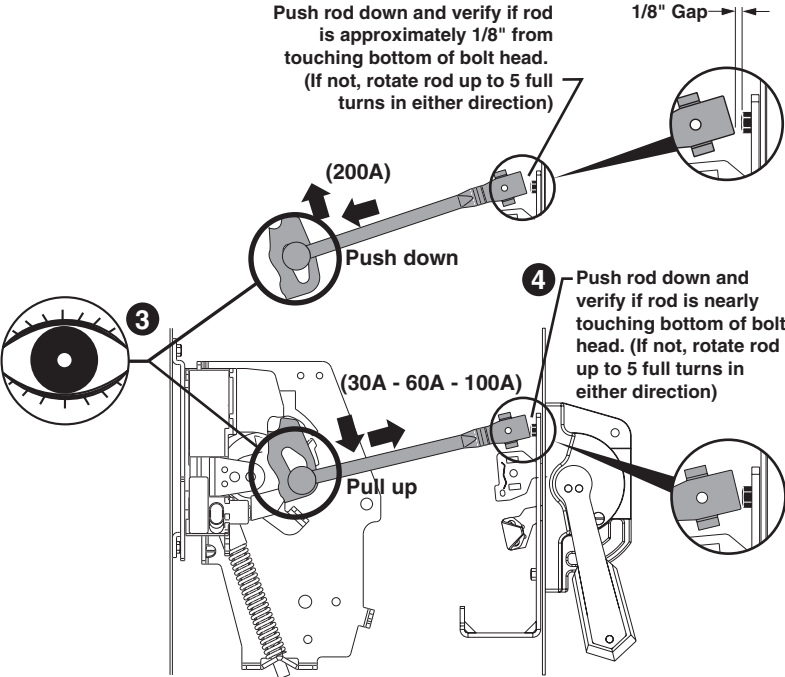
4 Connecting Rod Installation

1 Verify that disconnect switch and handle are in "OFF" position. (Switch blades will be visible)



Rotate connecting rod into drive bar (see table).

Switch Rating	Full Turns Engagement
30A - 60A - 100A	10
200A	13



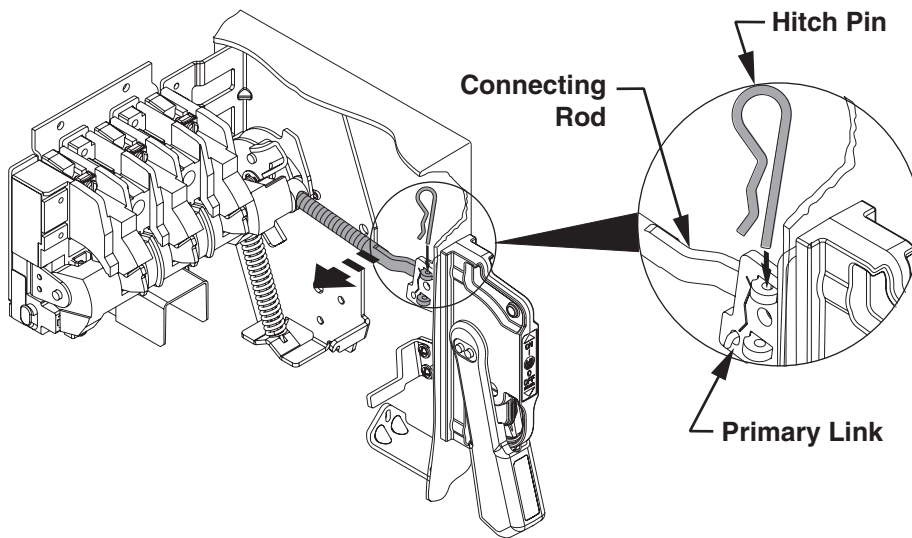
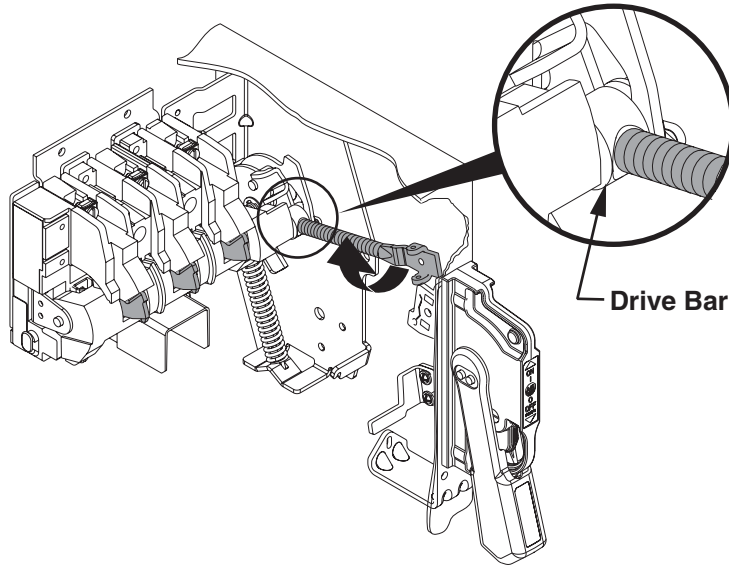
Enclosure depth 8 in. or less

Enclosure depth greater than 8 in.

**ATTENTION**

CHECK FOR PROPER OPERATION

Connecting Rod Adjustment Procedure



1 "ON" Position

- ➊ Move disconnect handle to the "ON" position.
- ➋ If switch does not fully close, return handle to "OFF" position.
- ➌ Remove link spring hitch pin and disengage the connecting rod from the primary link.
- ➍ Turn connecting rod counter-clockwise (1 or more) full turns.
- ➎ Re-engage connecting rod in primary link of handle, insert hitch pin and re-test
- ➏ Repeat ➊ - ➎ as necessary.
- ➐ Re-install link spring

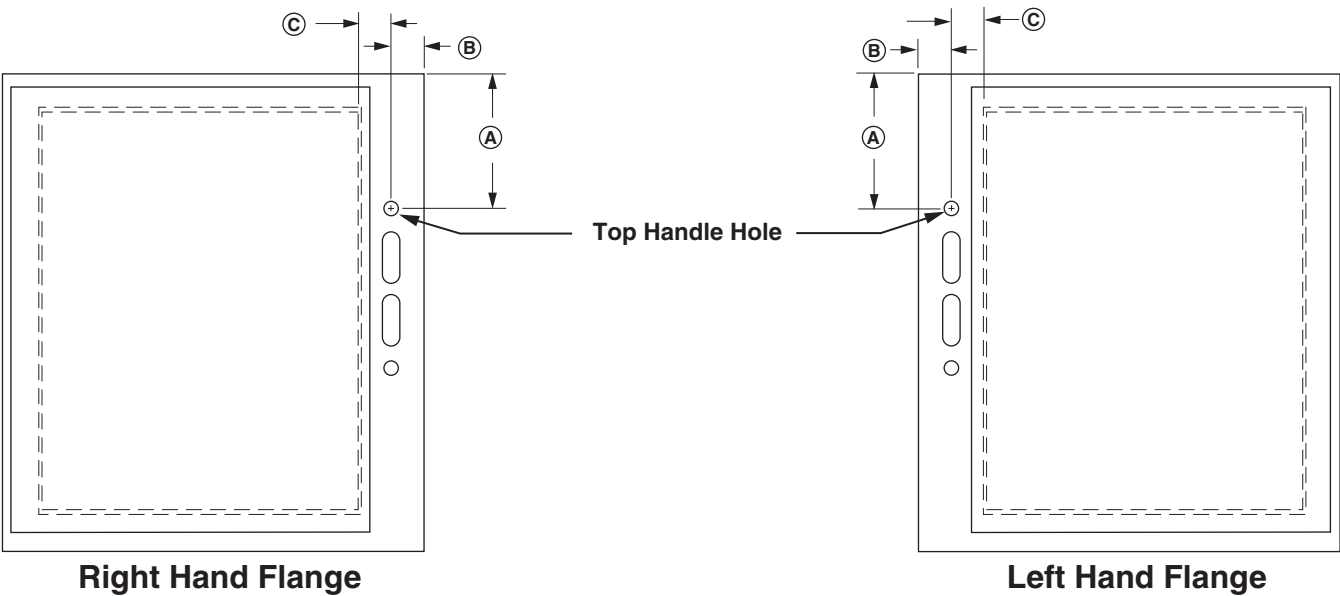
2 "OFF" Position

- ➊ Move disconnect handle to the "OFF" position.
- ➋ If switch does not fully open, return handle to "ON" position.
- ➌ Remove hitch pin and link spring, then disengage the connecting rod from the primary link.
- ➍ Turn connecting rod clockwise (1 or more) full turns.
- ➎ Re-engage connecting rod in primary link of handle, insert hitch pin and re-test.
- ➏ Repeat ➊ - ➎ as necessary.
- ➐ Re-install link spring

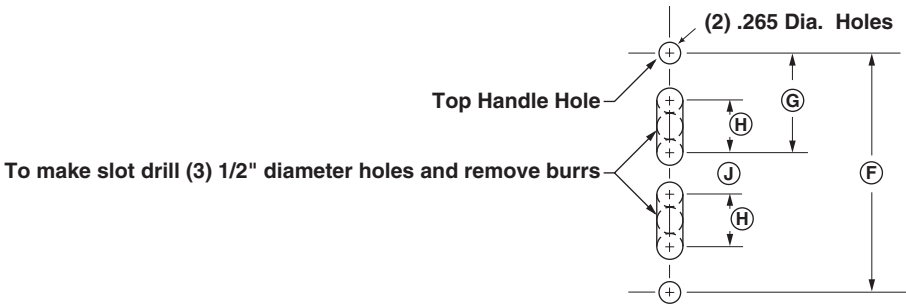
Enclosure without Handle Cutout

- Enclosures with a Flange Thickness less than 3/16" use dimensions below to install disconnect handle.
- Enclosures with a Flange Thickness 3/16" and greater use dimensions in alternate Mounting Kit 1494V-H3 to install disconnect handle.
- Multi-Door Enclosures may require the need for a more rigid flange / mounting plate system, such as a Channel Support Kit. Use dimensions in Channel Support Kit 1494V-H15, if handle is mounted on top of the channel.

1 Locate Handle



2 Drill Handle Holes



Enclosure Dimensions

NEMA SIZE	A (min)	B (min)	C (max)	F	G	H	J
30A, 60A	4 - 5/8"	1 - 1/8"	1 - 1/16"	4 - 11/16"	1 - 9/16"	1"	7/8"
100A	6 - 1/16"	1 - 1/8"	1 - 1/16"	4 - 11/16"	1 - 9/16"	1"	7/8"
200A	10 - 1/8"	1 - 1/8"	1 - 1/16"	4 - 11/16"	1 - 9/16"	1"	7/8"

Door Catch Bracket Installation

Right hand installation shown (for left hand installation follow similar procedures)

Door Catch Mounting Bracket:

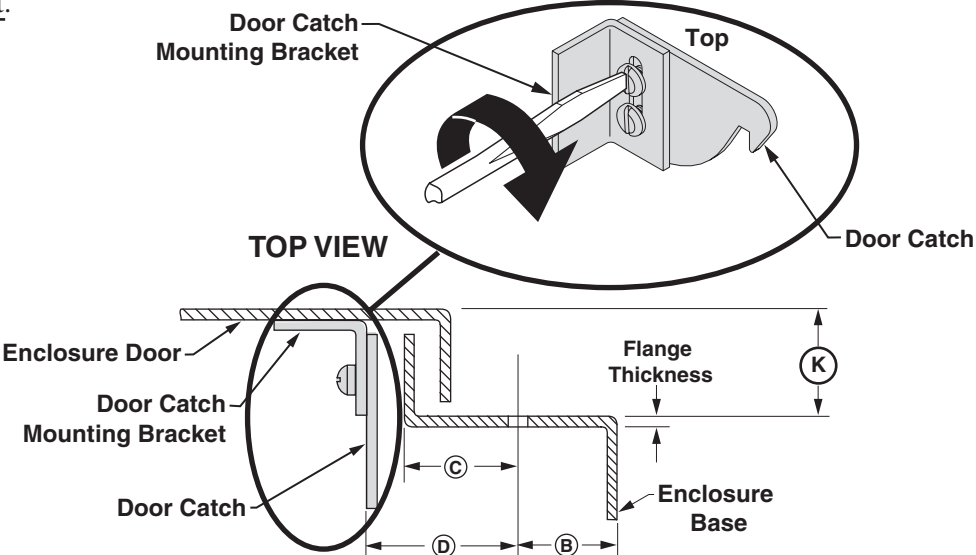
- Provided with projections for welding.
- Projections can also be used as a guide for drilling holes.
- Can be used as a template to drill corresponding holes in the enclosure door.
- User to supply the hardware for fastening the bracket.
- The bracket hardware must be inaccessible to unauthorized personnel.
- Fasteners must provide the degree of ingress protection for the environmental rating of the enclosure.

Dimension **(K)** (3/4" to 1")

- When using small disconnect handle kit only (1494F-P1, -M1 or -S1), use door catch provided with handle kit.
- When using small disconnect handle kit and small door hardware kits (1494V-L1, -LL1, -L2 or -LL2), use door catch provided with door hardware kit.

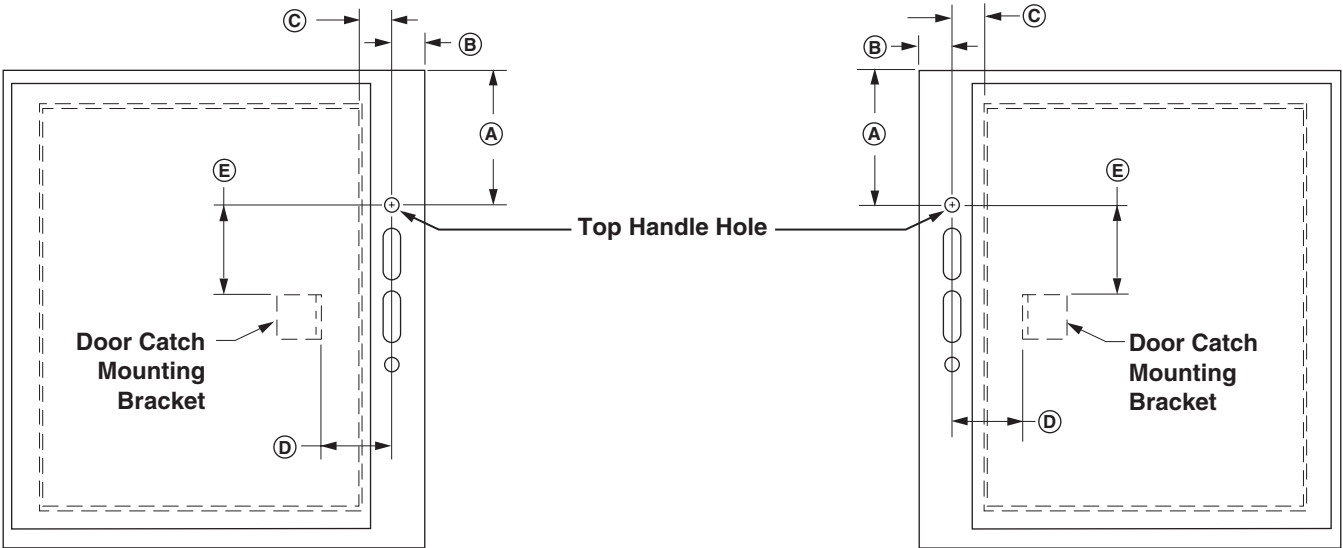
Dimension **(K)** (1-1/8" to 1-3/8")

- When using small disconnect handle kit only (1494F-P1, -M1 or -S1), use door catch (40492-080-02) which can be ordered from factory.
- When using small disconnect handle kit and large door hardware kits (1494V-L3 or -LL3), use door catch provided with door hardware kit.



Enclosure Dimensions

NEMA SIZE	A (min)	B (min)	C (max)	D	E	F	G	H	J
30A, 60A	4 - 5/8"	1 - 1/8"	1 - 1/16"	1 - 5/8"	2 - 3/8"	4 - 11/16"	1 - 9/16"	1"	7/8"
100A	6 - 1/16"	1 - 1/8"	1 - 1/16"	1 - 5/8"	2 - 3/8"	4 - 11/16"	1 - 9/16"	1"	7/8"
200A	10 - 1/8"	1 - 1/8"	1 - 1/16"	1 - 5/8"	2 - 3/8"	4 - 11/16"	1 - 9/16"	1"	7/8"

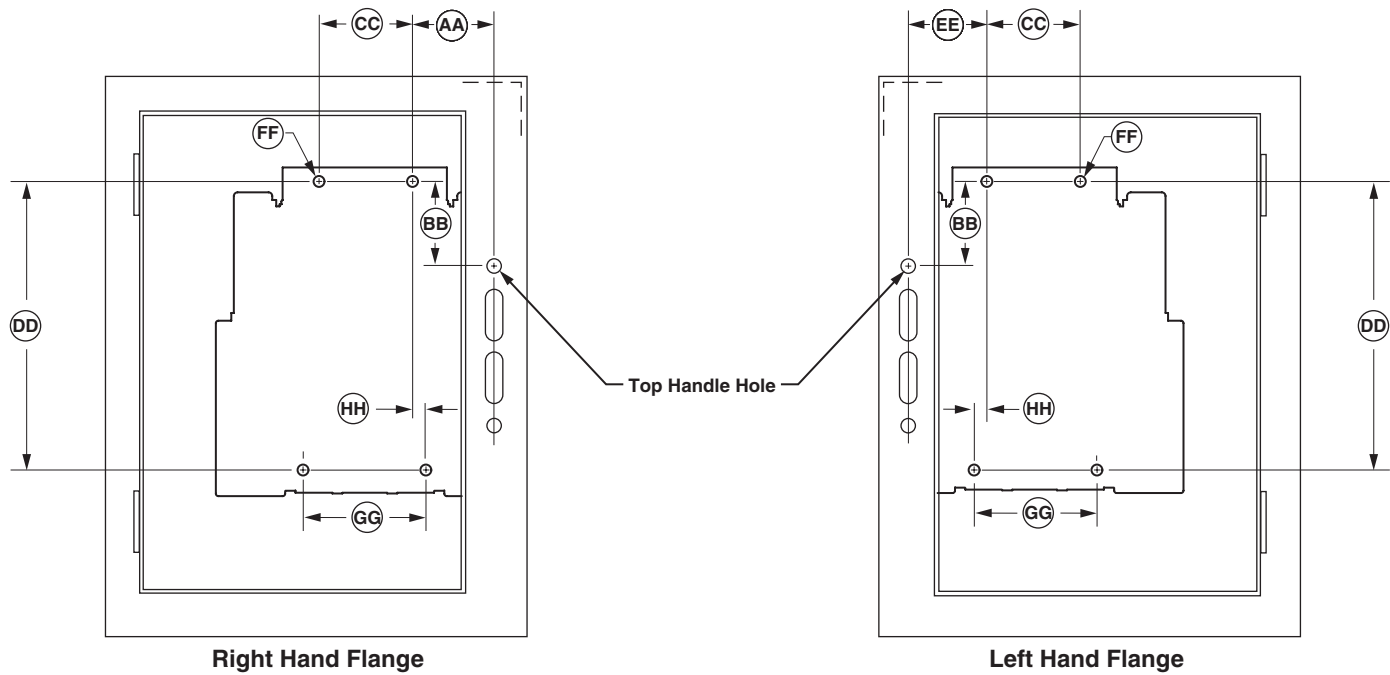


Right Hand Flange

Left Hand Flange

Disconnect Switch Installation

1 Locate Disconnect Switch

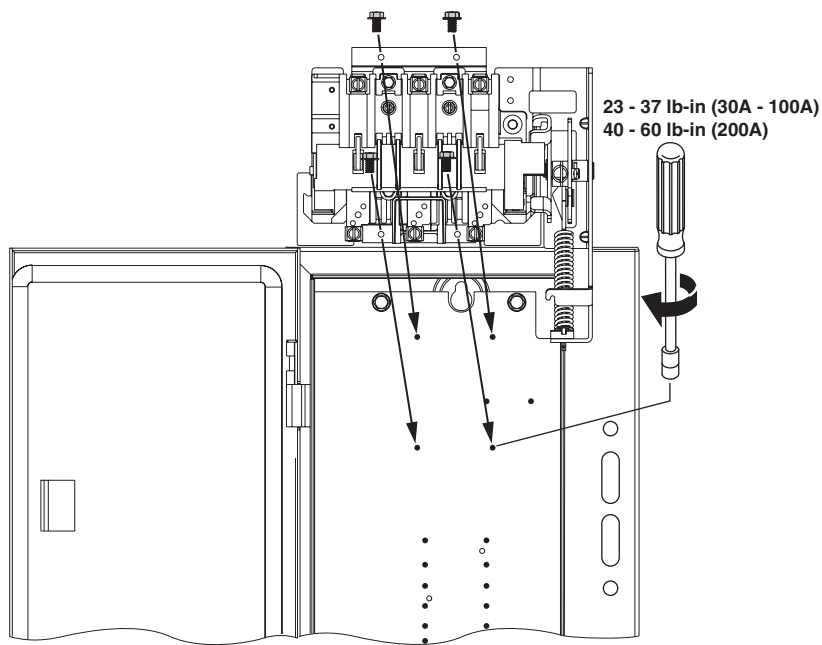


Panel Mounting Dimensions

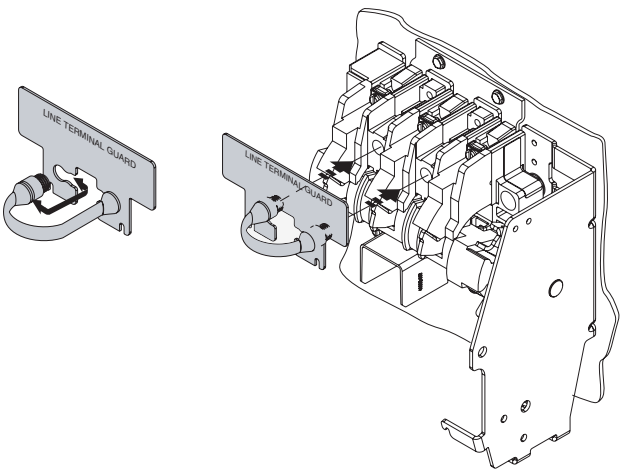
Switch Size	AA	BB	CC	DD	EE	FF (4 Mounting Plate Holes)	GG	HH
30A, 60A, 100A	3-1/16"	① 2-1/2"	2-1/4"	5-1/4"	3-1/16"	11/64" Dia.	2-1/4"	----
200A	3-9/16"	3-9/16"	2"	8-1/4"	3-9/16"	7/32" Dia.	4-1/4"	1-1/8"

① This dimension can be 2-1/4" if necessary, to avoid interference with panel mounting studs in some 8 inch deep enclosures.

2 Install Disconnect Switch



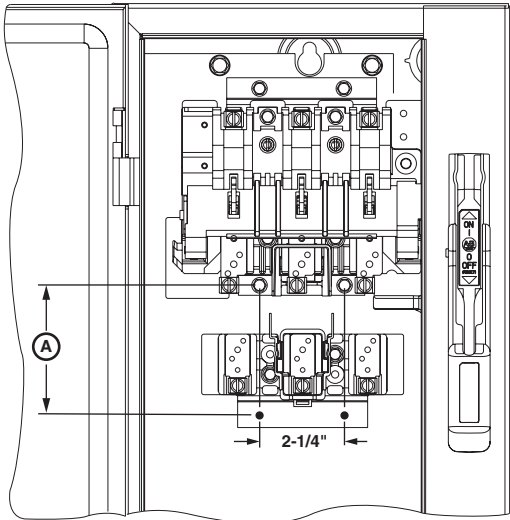
3 Assemble and Install Line Terminal Guard



Trailer Fuse Block Installation (Switch Rating 30A - 100A)

1 Trailer Fuse Block Location

Note: Not required for non-fusible disconnect switch applications.



30 Amp Trailer Fuse Block (1494V-FS30)

Fuse			Ⓐ	Torque (lb-in)			
Amps	Voltage	Class		Fuse Block	Fuse Clip	Lug to Terminal	Wire into Lug
30	250	H/R	2-27/32"	23-37	22-37	20-25	20-25
30	600	H/R	5-5/8"				
30	600	J	2-27/32"				
30	600	HRCII-C	4-3/16"				
60	250	H/R	3-5/8"				
60	600	H/R	6-1/8"				
60	600	J	3"				
60	600	HRCII-C	4-3/16"				

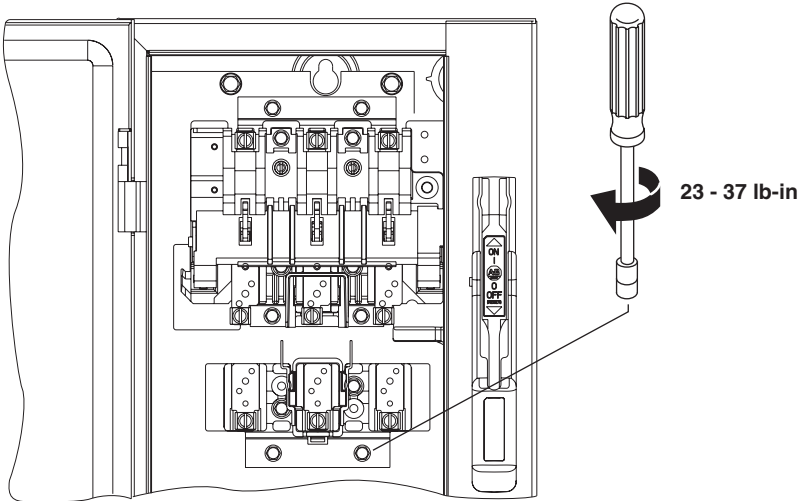
60 Amp Trailer Fuse Block (1494V-FS60)

Fuse			Ⓐ	Torque (lb-in)			
Amps	Voltage	Class		Fuse Block	Fuse Clip	Lug to Terminal	Wire into Lug
30	250	H/R	2-27/32"	23-37	23-37	40-60	45-50
30	600	H/R	5-5/8"				
30	600	J	2-27/32"				
30	600	HRCII-C	4-3/16"				
60	250	H/R	3-5/8"				
60	600	H/R	6-1/8"				
60	600	J	3"				
60	600	HRCII-C	4-3/16"				
100	600	J	4-15/16"	23-37	16-22	40-60	45-50
100	600	H/R	8-1/8"				

100 Amp Trailer Fuse Block (1494V-FS100)

Fuse			Ⓐ	Torque (lb-in)			
Amps	Voltage	Class		Fuse Block	Fuse Clip	Lug to Terminal	Wire into Lug
60	250	H/R	4-3/16"	23-37	22-37	90-110	150-165
60	600	J	3-9/16"				
60	600	H/R	6-11/16"				
60	600	HRCII-C	4-11/16"				
100	250	H/R	6-11/16"	23-37	16-22	90-110	150-165
100	600	H/R	8-11/16"				
100	600	J	5-1/2"				
100	600	HRCII-C	7-9/16"				
200	600	J	6-1/4"				

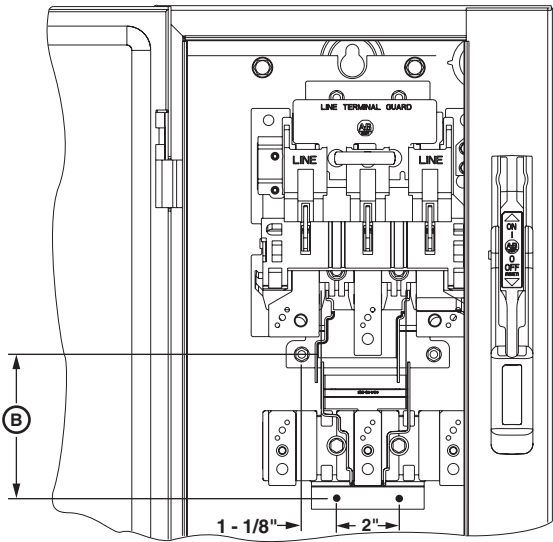
2 Install Trailer Fuse Block



Trailer Fuse Block Installation (Switch Rating 200A)

1 Trailer Fuse Block Location

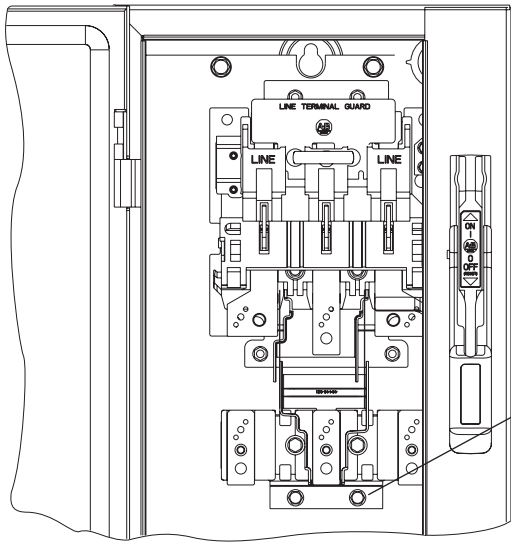
Note: Not required for non-fusible disconnect switch applications.



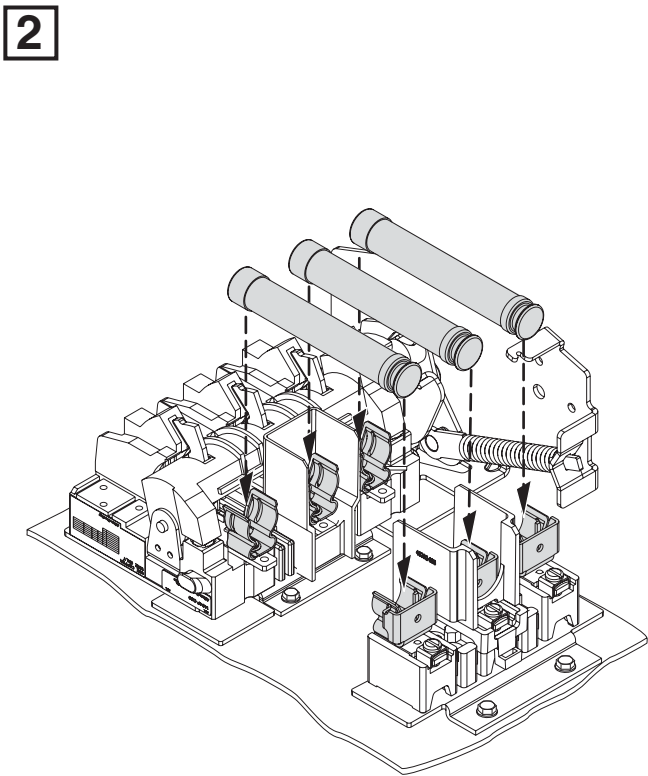
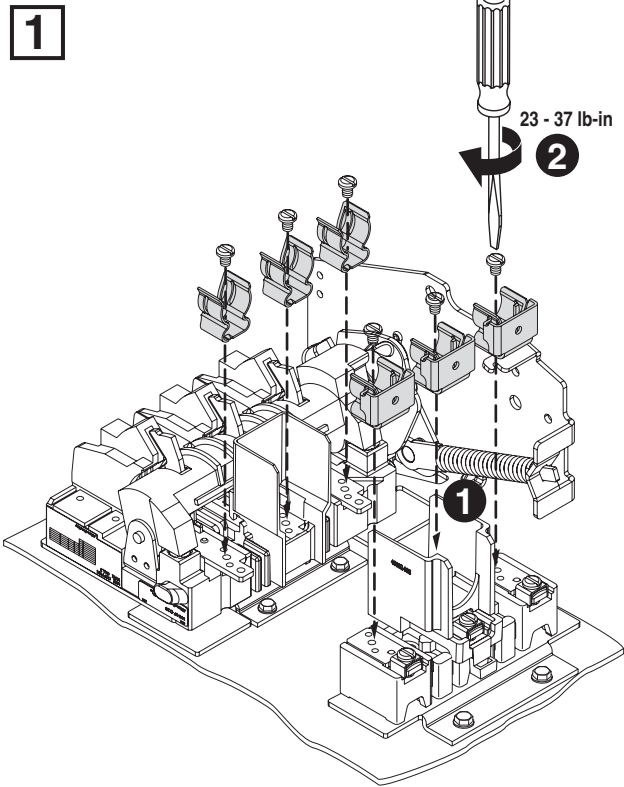
200 Amp Trailer Fuse Block (1494V-FS200)

Fuse			Ⓑ	Torque (lb-in)			
Amps	Voltage	Class		Fuse Block	Fuse Clip	Lug to Terminal	Wire into Lug
100	250	H/R	5-7/8"	40-60	16-22	175-200	275-305
100	600	H/R	7-7/8"				
100	600	J	4-5/8"				
100	600	HRCII-C	4-5/8"				
200	250	H/R	6-3/4"				
200	600	H/R	9-1/4"				
200	600	J	5-3/8"				
200	600	HRCII-C	5-3/8"				

2 Install Trailer Fuse Block

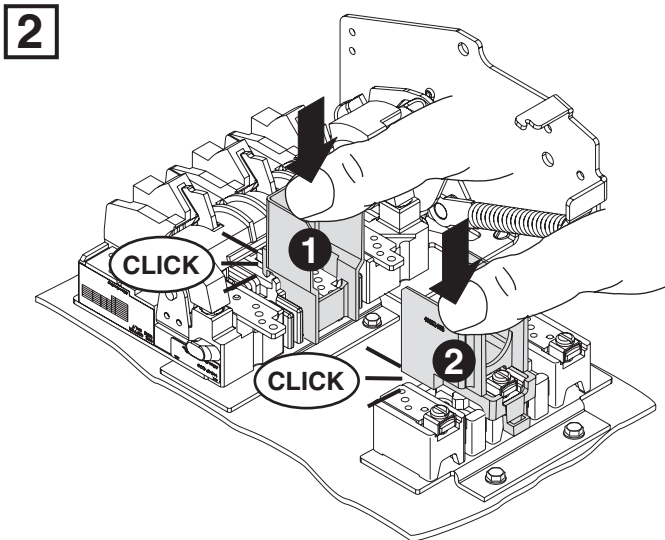
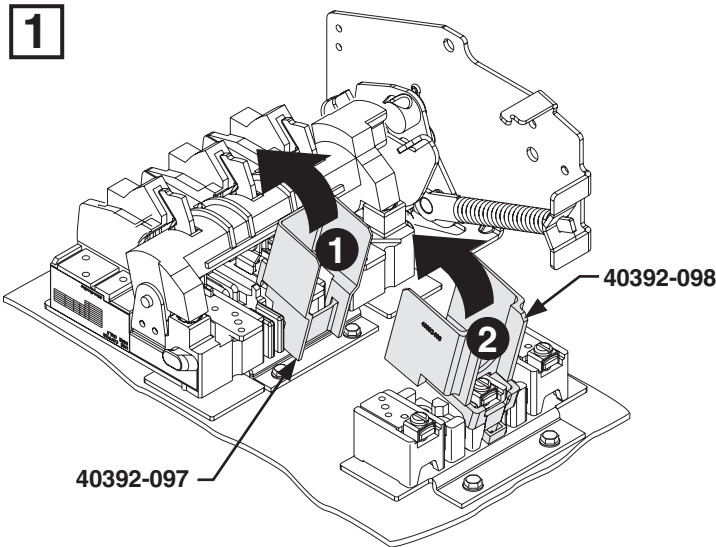


Switch Rating (30A, 60A Rating)
Fuse Clip Installation



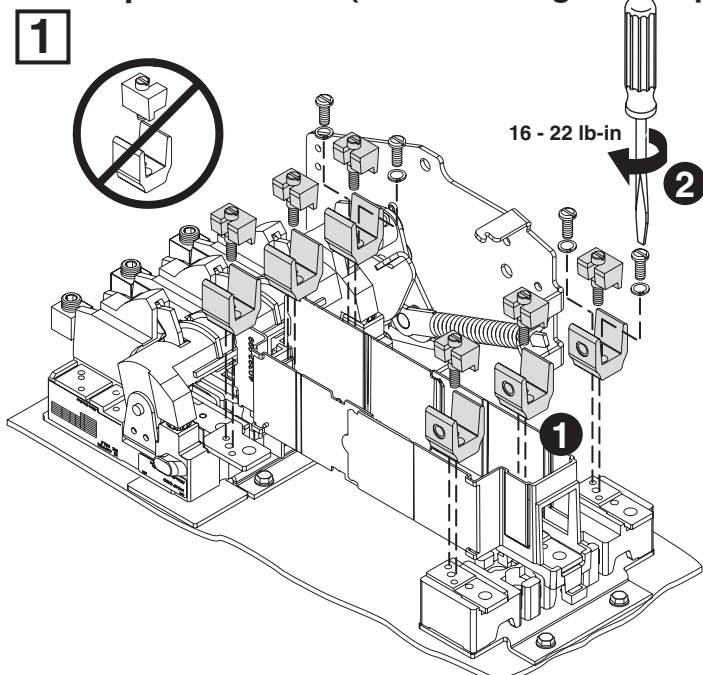
Phase Barrier Replacement Kit
1494F-PH2

NOTE: Fuse clips and lugs must be removed to add or replace phase barriers.

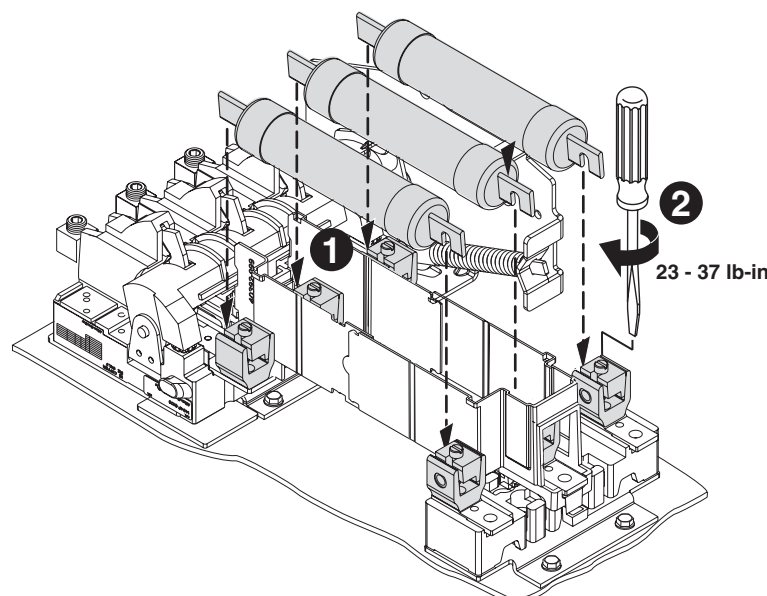


Fuse Clip Installation (Switch Rating 100 Amp)

1



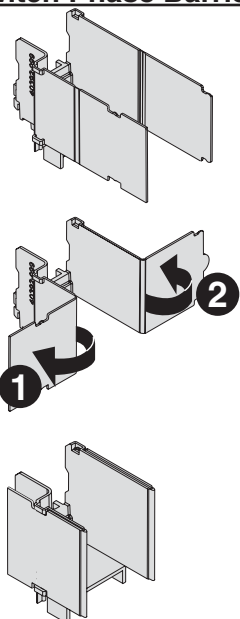
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Phase Barrier Replacement Kit 1494F-PH3

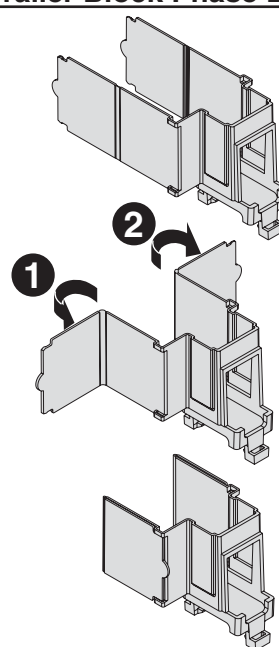
Switch Phase Barrier

1



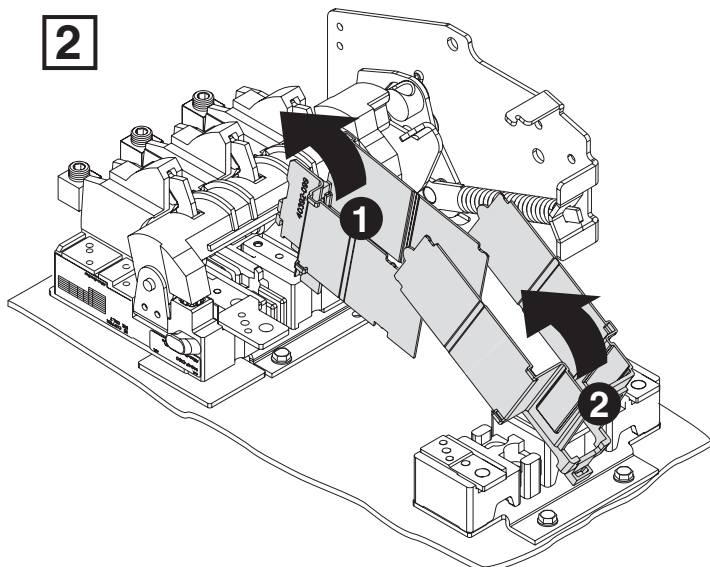
Fuse Clip Size and Class		
60 A	600V	H - R
100 A	600V	H - R
200 A	600V	H - R
200 A	250V	H - R

Trailer Block Phase Barrier

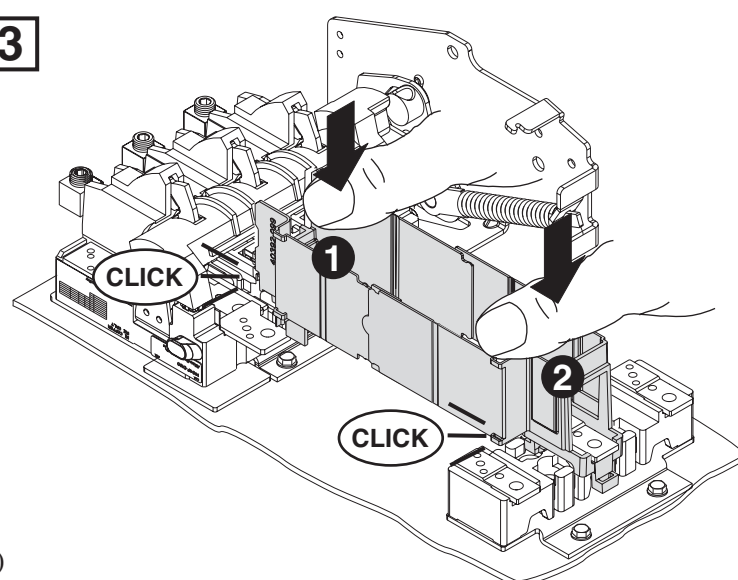


Fuse Clip Size and Class		
60 A	250V	H - R
60 A	600V	J
100 A	250V	H - R
100 A	600V	J
200 A	600V	J

2

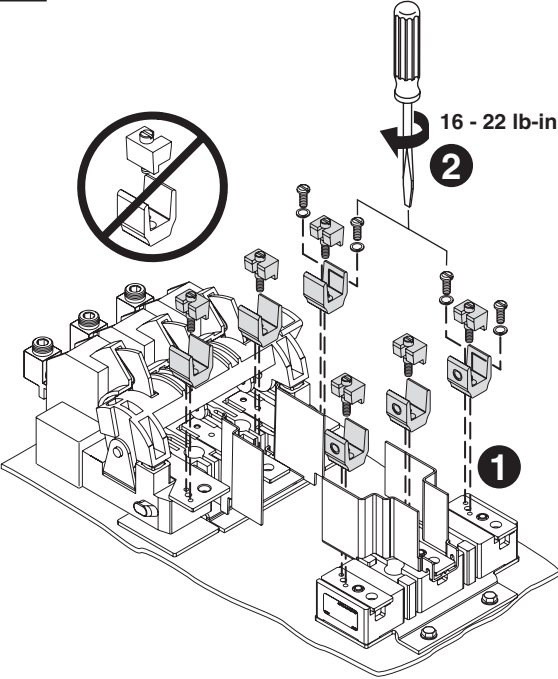


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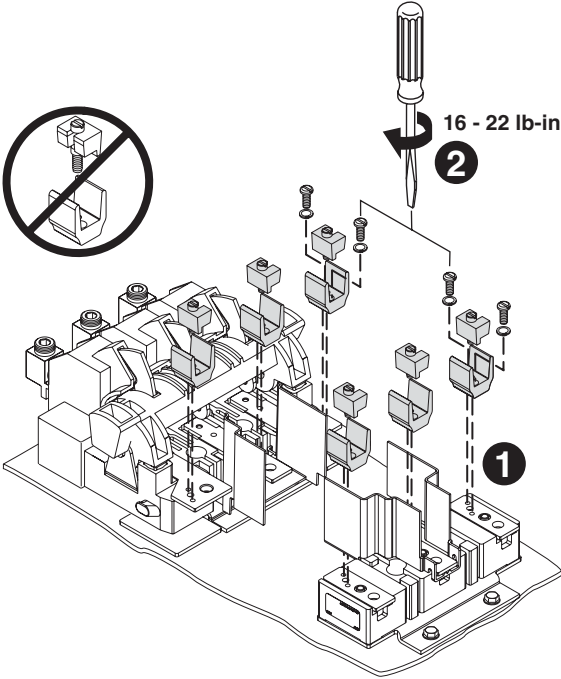


Fuse Clip Installation (Switch Rating 200A)

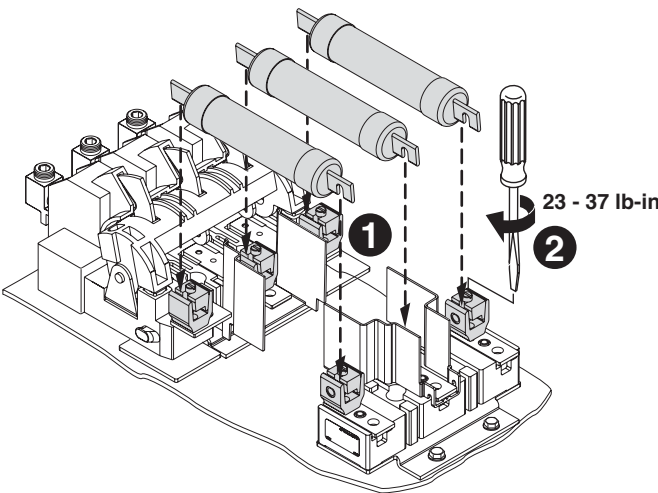
1 Switch for Right Hand Mechanism



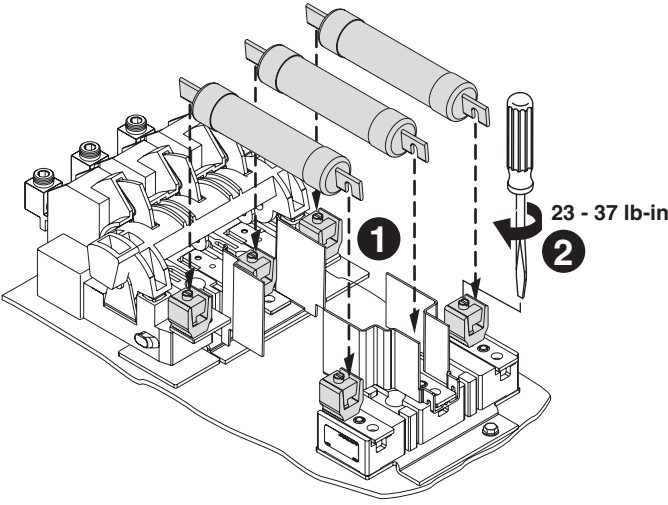
1 Switch for Left Hand Mechanism



2 Switch for Right Hand Mechanism

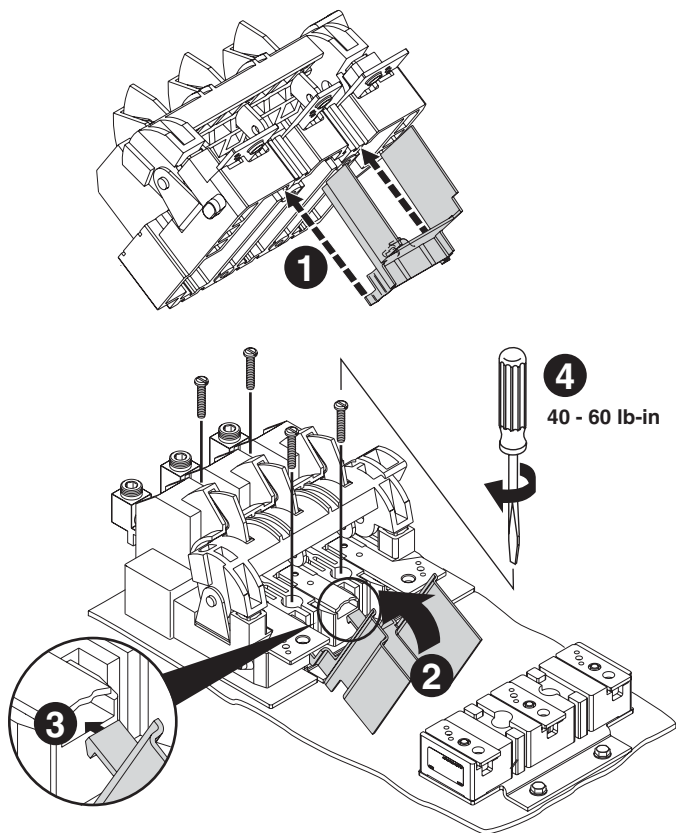


2 Switch for Left Hand Mechanism

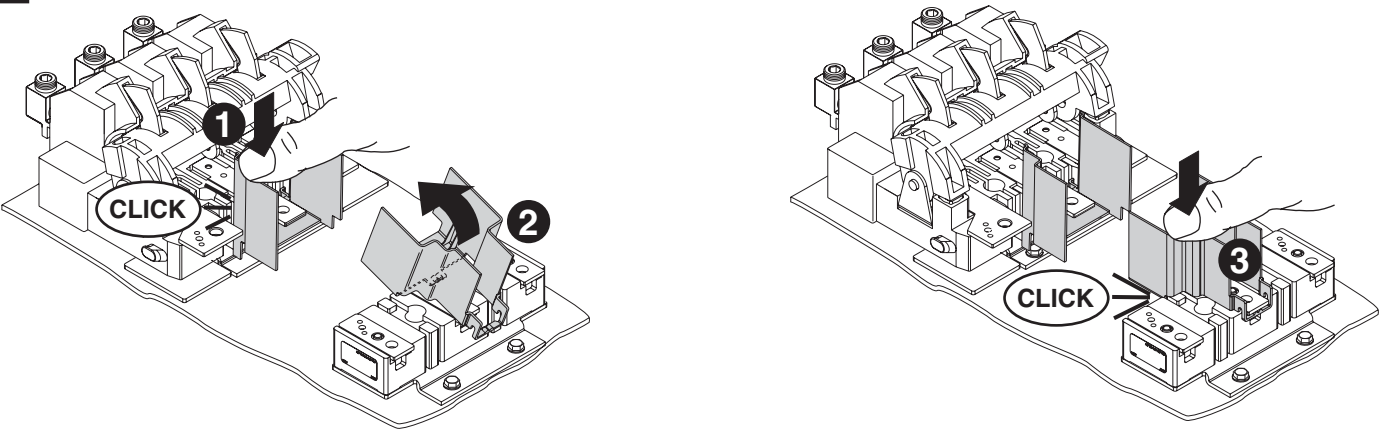


Phase Barrier Replacement Kit (Switch Rating 200A)
1494F-PH4

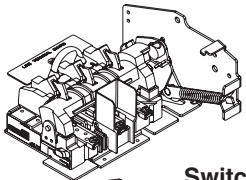
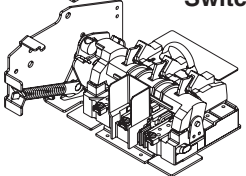
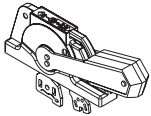
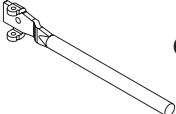
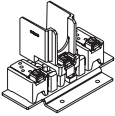
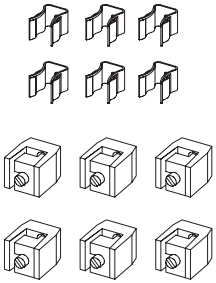
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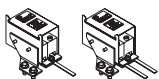
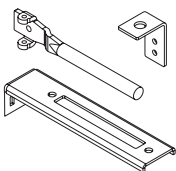
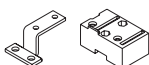
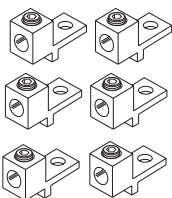
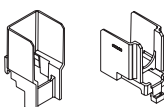
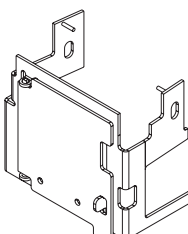
2



Bulletin 1494V Disconnect Switch Kit

Disconnect Kit	Cat No.
 Switch 	Switch with Right Hand Mechanism 1494V-DS30 (30A) 1494V-DS60 (60A) 1494V-DS100 (100A) 1494V-DS200 (200A) Switch with Left Hand Mechanism 1494V-DSX30 (30A) 1494V-DSX60 (60A) 1494V-DSX100 (100A) 1494V-DSX200 (200A)
 Handle	1494F-M1 (5-1/2" Painted Metal) (30A - 200A) 1494F-P1 (5-1/2" Molded) (30A - 200A) 1494F-S1 (5-1/2" Stainless Steel) (30A - 200A)
 Connecting Rod	1494V-RA3 (Standard) (30A - 100A) Enclosure Working Depth: 6-3/4" to 9-1/8" 1494V-RA3 (Standard) (200A) Enclosure Working Depth: 8-1/2" to 10-1/4" 1494V-RA4 (Extended)(30A - 100A) Enclosure Working Depth: 6-3/4" to 21-5/8" 1494V-RA4 (Standard) (200A) Enclosure Working Depth: 8-1/2" to 23-3/4"
 Fuse Block	1494V-FS30 (30A) 1494V-FS60 (60A) 1494V-FS100 (100A) 1494V-FS200 (200A)
 Fuse Clips	1401-N41 (Class H, 30A - 250V) 1401-N42 (Class H,J, 30A - 600V, Class H, 60A-250V) 1401-N43 (Class H,J, 60A - 600V) 1401-N44 (Class H,J, 100A-250V, 100A-600V) 1401-N45 (Class H,J, 200A-250V, 200A-600V) 1401-N50 (Class R, 30A - 250V) 1401-N51 (Class R, 30A - 600V, 60A-250V) 1401-N52 (Class R, 60A - 600V) 1401-N53 (Class R, 100A - 250V, 100A-600V) 1401-N54 (Class R, 200A-250V, 200A-600V)

Bulletin 1494V Disconnect Switch Optional Accessory List

Optional Accessories (Installation Instructions Included with Accessory Kits)		Cat No.			
 Electrical Interlock	Switch with Right Hand Mechanism 1495-N34 (1-N.O./N.C.) 1495-N35 (2-N.O./N.C.) Switch with Left Hand Mechanism 1495-N37 (1-N.O./N.C.) (30A - 100A) 1495-N38 (2-N.O./N.C.) (30A - 100A) 1495-N39 (1-N.O./N.C.) (200A) 1495-N40 (2-N.O./N.C.) (200A)				
 Channel Support Kit	1494V-H15 (30A - 200A)				
 Auxiliary Contact	1495-N8 (1-N.O.) (30A - 200A) 1495-N9 (1-N.C.) (30A - 200A)				
 Auxiliary Contact Adapter Kit	1495-N24 (30A - 100A) (Required only for Switch with Left Hand Mechanism) 1495-N25 (200A - 400A) (Required only for Switch with Left Hand Mechanism)				
 Lug Connectors	(Included) (CU Wire Size #14 . . #8 AWG) (30A) 1494R-N1 (CU Wire Size #14 . . #4 AWG) (60A) 1494R-N2 (CU Wire Size #8 . . #1/0 AWG) (100A) 1494R-N3 (CU Wire Size #6 . . #4/0 AWG) (200A)				
 Phase Barrier	1494F-PH2 (30A / 60A) 1494F-PH3 (100A) 1494F-PH4 (200A)				
 Fuse Cover with Door	Switch Rating	Fuse Class	Fuse Clip Rating		Cat No.
			250V	600V	
	30A	Non-Fusible	----	----	1495-N64
	30A	H, R	30A	----	
	60A	H, R	60A	----	
	30A	J	30A	30A	
	60A	J	60A	60A	
	60A	Non-Fusible	----	----	1495-N65
	100A	Non-Fusible	----	----	
	30A	H, R	----	30A	
	60A	H, R	----	60A	1495-N66
	100A	J	100A	100A	
	100A	H, R	100A	100A	1495-N67①
	200A	H, J, R	200A	200A	1495-N67①
	200A	H, J, R	200A	200A	1495-N62②

① Switch with right hand mechanism

② Switch with left hand mechanism

