Fusible Disconnect Switch, Trailer Fuse Block and Fuse Clip Repair Parts

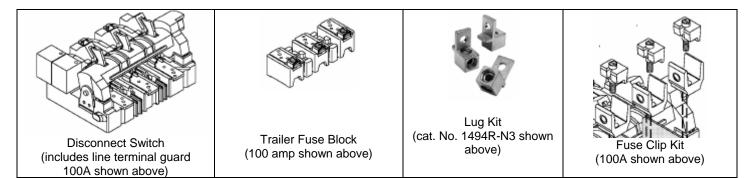
Ŕ						Lug Kit	The second s		
(incl	Disconne ludes line			railer Fuse Block	(cat. No	o. 1494R-N3 sho above)		Fuse Clip I 100A shown a	
NEMA	Line	Fuse	Catalog Number of	Disconnect Switch	Trailer Fuse	Lug Kit (1 kit			
Size	Voltage	Clip	Starter	less Lugs, Fuse	Block less Lugs		Class R	Class H	Kit Class J
		Rating	(D) = 120V sep. ctrl.		Fuse Clips and	lugs)	(includes 6	(includes 6	(includes 6
		(A)	* = fuse clip class	Barriers	Phase Barriers		clips)	clips)	clips)
1	208	30	1232X-BNH-24*	1494F-D30	1494F-FS30	1	1401-N50	1401-N41	1401-N42
	240	30	1232X-BNA(D)-24*						
1	480	30	1232X-BNB-24*	1494F-D30	1494F-FS30	1	1401-N51	1401-N42	1401-N42
	600	30	1232X-BNC(D)-24*						
1	208	60	1232X-BNH-25*	1494F-D30	1494F-FS30	1	1401-N51	1401-N42	1401-N43
	240	60	1232X-BNA(D)-25*						
1	480	60	1232X-BNB-25*	1494F-D30	1494F-FS30	1	1401-N52	1401-N43	1401-N43
	600	60	1232X-BNC(D)-25*						
2	480	30	1232X-CNB-24*	1494F-D60	1494F-FS60	1494R-N1	1401-N51	1401-N42	1401-N42
	600	30	1232X-CNC(D)-24*			(qty 1 req'd)			
2	208	60	1232X-CNH-25*	1494F-D60	1494F-FS60	1494R-N1	1401-N51	1401-N42	1401-N43
	240	60	1232X-CNA(D)-25*			(qty 1 req'd)			
2	480	60	1232X-CNB-25*	1494F-D60	1494F-FS60	1494R-N1	1401-N52	1401-N43	1401-N43
	600	60	1232X-CNC(D)-25*			(qty 1 req'd)			
2	208	100	1232X-CNH-26*	1494F-D60	1494F-FS60	1494R-N1	1401-N53	1401-N44	1401-N44
	240	100	1232X-CNA(D)-26*			(qty 1 req'd)			
2	480	100	1232X-CNB-26*	1494F-D60	1494F-FS60	1494R-N1	1401-N53	1401-N44	1401-N44
	600	100	1232X-CNC(D)-26*			(qty 1 req'd)			
3	480	60	1232X-DNB-25*	1494F-D100	1494F-FS100	1494R-N2	1401-N52	1401-N43	1401-N43
	600	60	1232X-DNC(D)-25*			(qty 1 req'd)			
3	208	100	1232X-DNH-26*	1494F-D100	1494F-FS100	1494R-N2	1401-N53	1401-N44	1401-N44
	240	100	1232X-DNA(D)-26*			(qty 1 req'd)			
3	480	100	1232X-DNB-26*	1494F-D100	1494F-FS100	1494R-N2	1401-N53	1401-N44	1401-N44
	600	100	1232X-DNC(D)-26*			(qty 1 req'd)			
3	208	200	1232X-DNH-27*	1494F-D100	1494F-FS100	1494R-N2	1401-N54	1401-N45	1401-N45
	240	200	1232X-DNA(D)-27*		44045 50400	(qty 1 req'd)	4404 1154		1 404 145
3	480		1232X-DNB-27*	1494F-D100	1494F-FS100	1494R-N2	1401-N54	1401-N45	1401-N45
4	600		1232X-DNC(D)-27*			(qty 1 req'd)	4404 NEO	4 404 1144	4 404 1144
4	480	100	1232X-ENB-26*	1494F-D200	1494F-FS200	1494R-N3	1401-N53	1401-N44	1401-N44
4	600	100	1232X-ENC(D)-26* 1232X-ENH-27*	1494F-D200	14045 5000	(qty 1 req'd)	1401-N54	1401 N45	1401-N45
4	208	200 200	1232X-ENH-27* 1232X-ENA(D)-27*	14946-0200	1494F-FS200	1494R-N3	1401-1104	1401-N45	1401-145
4	240 480	200	1232X-ENA(D)-27 1232X-ENB-27*	1494F-D200	1494F-FS200	(qty 1 req'd) 1494R-N3	1401-N54	1401-N45	1401-N45
4	480 600	200	1232X-ENC(D)-27*	14346-0200	14941-13200	(qty 1 req'd)	1401-1104	1401-1140	1401-143
4	208		1232X-ENH-28*	1494F-D200	1494F-FS200	1494R-N3	1401-N55	1401-N46	1401-N46
	240	400	1232X-ENA(D)-28*			(qty 1 req'd)			1 101 10-0
4	480	400	1232X-ENB-28*	1494F-D200	1494F-FS200	1494R-N3	1401-N55	1401-N46	1401-N46
	600	400	1232X-ENC(D)-28*			(qty 1 req'd)			
5	208	200	1232X-FNH-27*	1494F-D400	1494F-FS400	1494R-N15	1401-N54	1401-N45	1401-N45
	240	200	1232X-FNA(D)-27*			(qty 1 req'd)			
5	480	200	1232X-FNB-27*	1494F-D400	1494F-FS400	1494R-N15	1401-N54	1401-N45	1401-N45
	600	200	1232X-FNC(D)-27*			(qty 1 req'd)			
5	208	400	1232X-FNH-28*	1494F-D400	1494F-FS400	1494R-N15	1401-N55	1401-N46	1401-N46
-	240	400	1232X-FNA(D)-28*			(qty 1 req'd)			
5	480		1232X-FNB-28*	1494F-D400	1494F-FS400	1494R-N15	1401-N55	1401-N46	1401-N46
-	600		1232X-FNC(D)-28*			(qty 1 req'd)			
			onnect switch and tra	ilar fuas black		/ /			

0 Lugs included on disconnect switch and trailer fuse block.

#### Knowledgebase Technote ID # Q18919

#### Repair Parts for Bulletin 1232X NEMA Pump Control Panels with Fusible Disconnect Switches Sizes 1 through 7, Series One Construction

### Disconnect Switch, Trailer Fuse Block and Fuse Clip Repair Parts



NEMA Size	Line Voltage	Fuse Clip Rating (A)	Catalog Number of Starter	Disconnect Switch less Lugs	Single Pole Top & Bottom Fuse Block Assembly	Line Side Disconnect Lug Kit (1 kit contains 3 lugs)	Fuse Clips Class R (on bottom fuse block)	Fuse Clip (on top fuse block)
6	208	600	1232X-GNH-29R	1494V-DS600	1491-R621 (qty 3 req'd)	1494R-N10 (qty 1 req'd)	Included in single pole fuse block	40115-426-51
	240	600	1232X-GNA-29R	1494V-DS600	1491-R621 (qty 3 req'd)	1494R-N10 (qty 1 req'd)	Included in single pole fuse block	40115-426-51
	480	600	1232X-GNB-29R	1494V-DS600	1491-R621 (qty 3 req'd)	1494R-N10 (qty 1 req'd)	Included in single pole fuse block	40115-426-51
	600	600	1232X-GNC-29R	1494V-DS600	1491-R621 (qty 3 req'd)	1494R-N10 (qty 1 req'd)	Included in single pole fuse block	40115-426-51

For Class R applications:

1. Class R fuse clips are not available as separate parts, they are riveted to the bottom fuse block.

2. Three fuse blocks are required per installation, catalog number 1491-R621, (single pole fuse block assembly).

In addition, the purchase of the 1494R-N11 lug kit is required to complete the wiring from the disconnect switch to the 1491-R621 fuse blocks.

NEMA Size	Line Voltage	Fuse Clip Rating (A)	Catalog Number of Starter	Disconnect Switch less Lugs	Trailer Fuse Block Assembly	Line Side Disconnect Lug Kit (1 kit contains	Load Side Trailer Block Lug Kit (1 kit contains 3	Mounting Bolt for Class J Fuse
		(,,)				3 lugs)	lugs)	1 400
6	208	600	1232X-GNH-29R	1494V-DS600	1494V-FS600	1494R-N10	1494R-N10 (qty	M-756
						(qty 1 req'd)	1 req'd)	
	240	600	1232X-GNA-29R	1494V-DS600	1494V-FS600	1494R-N10	1494R-N10 (qty	M-756
						(qty 1 req'd)	1 req'd)	
	480	600	1232X-GNB-29R	1494V-DS600	1494V-FS600	1494R-N10	1494R-N10 (qty	M-756
						(qty 1 req'd)	1 req'd)	
	600	600	1232X-GNC-29R	1494V-DS600	1494V-FS600	1494R-N10	1494R-N10 (qty	M-756
						(qty 1 req'd)	1 req'd)	

For Class J applications:

- 1. Class J fuses mount directly to the bottom of the 1494V-DS600 (mounting bolts are provided with the 1494V-DS600).
- 2. The 1494V-FS600 trailer block assembly is a 3 pole fuse block that does not require fuse clips. Class J fuses mount directly to the 1494V-FS600 (mounting bolts are provided with the 1494V-FS600).

### Disconnect Switch, Trailer Fuse Block and Fuse Clip Repair Parts

NEMA Size	Line Voltage	Fuse Clip Rating (A)	Catalog Number of Starter	Molded Case Switch (800A) Less Lugs	Single Pole Top & Bottom Fuse Block Assembly ① (for Class L fuses)	Line or Load Side Disconnect Lug (3 wires of 3/0 – 500 mcm)	Line or Load Side Fuse Block Lug (2 wires of 1/0 to 350 mcm)
7	240	800	1232X-HNA-25L	25103-462-03	40023-853-51	25109-476-01 (qty	
					(qty 3 req'd)	6 req'd)	(kit contains 3 lugs)
	480	800	1232X-HNB-25L	25103-462-03	40023-853-51	25109-476-01 (qty	1494R-N11
					(qty 3 req'd)	6 req'd)	(kit contains 3 lugs)
	600	800	1232X-HNC-25L	25103-462-03	40023-853-51	25109-476-01 (qty	1494R-N11
					(qty 3 req'd)	6 req'd)	(kit contains 3 lugs)

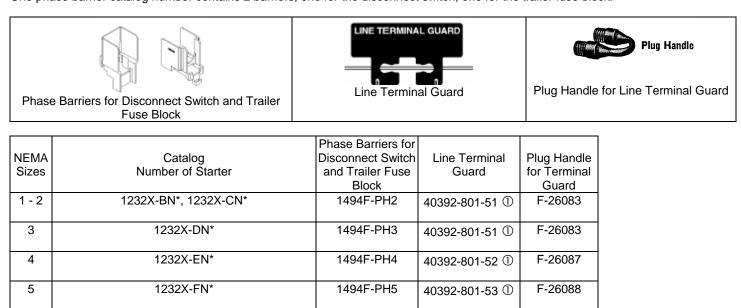
① Lugs and Class L Fuse Clips are included with part number 40023-853-51. Fuse Clips are not available separately.

### Replacement Control Circuit Transformers for Size 6 and Size 7 Bulletin 1232X Pump Panels

As standard, size 6 and size 7 starters include a control circuit transformer. All transformers have a secondary voltage of 120V 60Hz which matches the coil voltage and frequency of the 'across the line' bulletin 509 starter, included as part of the bulletin 1232X starter.

NEMA Size	Line Voltage	Fuse Clip Rating (A)	Catalog Number of Starter	Control Circuit Transformer	Primary Fuse Size and Type (qty 2 req'd)	Secondary Fuse Size and Type
6	208	600	1232X-GNH-29J 1232X-GNH-29R	1497-G-HXSX-3-N (500VA)	6.0A 600V Class CC Types KLDR, ATDR, or FNQ-R	6.25A 250V Types FNM, TRM or FLM
	240	600	1232X-GNA-29J 1497-G-BASX-3-N Class CC 1232X-GNA-29R (500VA) Types KLDR, A		5.0A 600V Class CC Types KLDR, ATDR, or FNQ-R	6.25A 250V Types FNM, TRM or FLM
	480	600	1232X-GNB-29J 1232X-GNB-29R	1497-C-BASX-3-N (130VA)	1.25A 600V Class CC Types KLDR, ATDR, or FNQ-R	1.8A 600V Class CC Types KLDR, ATDR, or FNQ-R
	600	600	1232X-GNC-29J 1232X-GNC-29R	1497-G-CXSX-3-N (500VA)	4.0A 600V Class CC Types KLDR, ATDR, or FNQ-R	6.25A 250V Types FNM, TRM or FLM
7	240	800	1232X-HNA-25L	1497-E-BASX-3-N (250VA)	5.0A 600V Class CC Types KLDR, ATDR, or FNQ-R	3.2A 250V Types FNM, TRM or FLM
	480	800	1232X-HNB-25L	1497-E-BASX-3-N (250VA)	2.5A 600V Class CC Types KLDR, ATDR, or FNQ-R	3.2A 250V Types FNM, TRM or FLM
	600	800	1232X-HNC-25L	1497-E-CXSX-3-N (250VA)	2.0A 600V Class CC Types KLDR, ATDR, or FNQ-R	3.2A 250V Types FNM, TRM or FLM

#### Phase Barriers and Line Terminal Guard for Fusible Disconnect Switches and Trailer Fuse Block Assemblies One phase barrier catalog number contains 2 barriers; one for the disconnect switch, one for the trailer fuse block.



① Part number includes plug handle for line terminal guard and the line terminal guard.

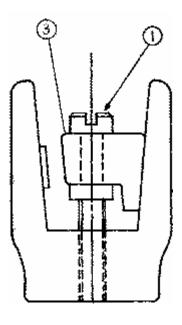
Renewal parts for size 6 bulletin 1232X starters using 600 amp fusible disconnects, see knowledgebase technote Q45537412, which lists renewal part numbers for the line terminal guard and phase barriers.

### Fuse Clip Kit Repair Parts (Class H, J fuse clips)

Fuse Clip Rating (A)	Fuse Clip Part No.	Clamp Screw (Item 1)	Clamp Block (Item 3)
100	1401-N44 ①	40023-110-02	40023-108-02
200	1401-N45 ①	40023-110-04	40023-108-02
400	1401-N46 ①	40023-111-02	40023-109-02

 $\ensuremath{\textcircled{}}$  Contains six fuse clips and mounting hardware.

② Contains one fuse clip and mounting hardware.



### Handle and Mechanism Repair Parts

Operating Handle part numbers include two bags of hardware which include the defeater lever, door cover catch, and handle gasket.

Operatin	g Handle		Mechanism for Operating Handle		
NEMA Sizes	Catalog Number of Starter	Enclosure NEMA Type	Operating Handle	Mechanism for Operating Handle	
1 - 2	1232X-BN* 1232X-CN*	3R/12	1494F-P1	1494F-MS36	
3	1232X-DN*	3R/12	1494F-P1	1494F-MS100	
4	1232X-EN*	3R/12	1494F-P1	1494F-MS200	
5	1232X-FN*	3R/12	1494F-M2	1494F-MS400	
6	1232X-GN*	3R/12	1494V-H2	1494V-RB2	
7	1232X-HN*	3R/12	40021-656-01	40021-662-04	

### **Enclosure Repair Parts**

Enclosure Only repair parts include the external overload reset button (mounted in the cover). Enclosure hole plugs are included in the Enclosure Only repair part assemblies.

NEMA Sizes	Catalog Number of Starter	Enclosure Only (less Mounting Plate)	Enclosure Mounting Plate	External Overload Reset Button	Wing Lever Cover Screw Kit ①	Enclosure Hole Plugs for External Reset, Door Hardware or Pilot Devices
1 - 2	1232X-BN* 1232X-CN*	598-DN302010T	598-P302010T1	1493-N21	598-N4	800T-N1 (for pilot devices) 598-N1 (for resets and door hardware)
3	1232X-DN*	598-DN502210T1	598-P502210T	1493-N21	598-N4	800T-N1 (for pilot devices) 598-N1 (for resets and door hardware)
4	1232X-EN*	598-DN502210T1	598-P502210T	1493-N21	598-N4	800T-N1 (for pilot devices) 598-N1 (for resets and door hardware)
5	1232X-FN*	598-DN563014T ③	598-P5630T1	1493-N21	598-N4	800T-N1 (for pilot devices) 598-N1 (for resets and door hardware)
6	1232X-GN*-29R	598-DN603816T ② ③	Included with enclosure	1493-N21	Not Used	800T-N1 (for pilot devices) 598-N1 (for resets and door hardware)
6	1232X-GN*-29J	598-DN563014T ② ③	598-P5630T1	1493-N21	Not Used	800T-N1 (for pilot devices) 598-N1 (for resets and door hardware)
7	1232X-HN*	598-DN844018T ② ③	Included with enclosure	1493-N21	Not Used	800T-N1 (for pilot devices) 598-N1 (for resets and door hardware)

 $\odot$  Each kit contains two wing lever cover screws, two rubber o-rings, two retaining clips for cover screws.

② Enclosure catalog number does not include the enclosure flange handle adapter plate. Order separately as catalog number 598-N7.
③ Enclosure catalog number does not include mounting pad foot kit. Order separately as catalog number 598-N5.

### **Miscellaneous Repair Parts**

<b>!</b>	Catalog No. Starts with 1232X-BN* (Size 1)	Catalog No. Starts with 1232X-CN* (Size 2)	Catalog No. Starts with 1232X-DN* (Size 3)	Catalog No. Starts with 1232X-EN* (Size 4)	Catalog No. Starts with 1232X-FN* (Size 5)
Description of Renewal Part	Repair Part Number	Repair Part Number	Repair Part Number	Repair Part Number	Repair Part Number
Line Lug for Disconnect Switch and Load Lug for Trailer Fuse Block	X-225492	1494R-N1 ①	1494R-N2 ①	1494R-N3 ①	1494R-N15 ① ②
Enclosure Conduit Hub (Type 3R)	1232-N11	1232-N12	1232-N13	1232-N14	1232-N15
Replacement Full Voltage Starter w/120V Coil	509-BOD	509-COD	509-DOD	509-EOD	509-FOD
'Hand-Off-Auto' 3 Position Selector Switch	800T-J2A 800T-X511 ('Hand-Off-Auto' Legend Plate)	800T-J2A 800T-X511 ('Hand- Off-Auto' Legend Plate)	800T-J2A 800T-X511 ('Hand- Off-Auto' Legend Plate)	800T-J2A 800T-X511 ('Hand- Off-Auto' Legend Plate)	800T-J2A 800T-X511 ('Hand- Off-Auto' Legend Plate)
'Start' Push Button	800T-A1D1 800T-X511 ('Start' Legend Plate)	800T-A1D1 800T-X511 ('Start' Legend Plate)	800T-A1D1 800T-X511 ('Start' Legend Plate)	800T-A1D1 800T-X511 ('Start' Legend Plate)	800T-A1D1 800T-X511 ('Start' Legend Plate)

0 Part number contains 3 lugs.

2 Lug accommodates single strand of #4 - 500MCM wire; for two wire #1/0 to 350MCM order lug kit 1494R-N10 (3 double lugs per kit).

# Important User Information

Because of the variety of uses for the products described in this publication, those responsible for the application and use of this control equipment must satisfy themselves that all necessary steps have been taken to assure that each application and use meets all performance and safety requirements, including any applicable laws, regulations, codes and standards.

The illustrations, charts, sample programs and layout examples shown in this guide are intended solely for purposes of example. Since there are many variables and requirements associated with any particular installation, Rockwell Automation does not assume responsibility or liability (to include intellectual property liability) for actual use based upon the examples shown in this publication.

Allen-Bradley publication SGI-1.1, *Safety Guidelines for the Application, Installation and Maintenance of Solid-State Control* (available from your local Allen-Bradley office), describes some important differences between solid-state equipment and electromechanical devices that should be taken into consideration when applying products such as those described in this publication.

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Throughout this document we use notes to make you aware of safety considerations:



Identifies information about practices or circumstances that can lead to personal injury or death, property damage or economic loss

# IMPORTANT

Identifies information that is critical for successful application and understanding of the product.

Use only replacement parts and devices recommended by Rockwell Automation to maintain the integrity of the equipment. It is the user's responsibility to ensure that the renewal part number selected is properly matched to the model, series and revision level of the equipment being serviced.



Servicing energized Industrial Control Equipment can be hazardous. Severe injury or death can result from electrical shock, burn, or unintended actuation of controlled equipment. Recommended practice is to disconnect and lockout control equipment from power sources, and release stored energy, if present.

Refer to National Fire Protection Association Standard No. NFPA70E, Part 2 and (as applicable) OSHA rules for Control of Hazardous Energy Sources (Lockout/Tagout) and OSHA Electrical Safety Related Work Practices for safety related work practices, including procedural requirements for lockout/tagout, and appropriate work practices, personnel qualifications and training requirements where it is not feasible to de-energize and lockout or tagout electric circuits and equipment before working on or near exposed circuit parts.

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