

Renewal Parts

Low-Voltage Power Circuit Breakers

Type LK and LKE 800 thru 4200 Amperes
Type LKD 800 and 1600 Amperes
600 Volts

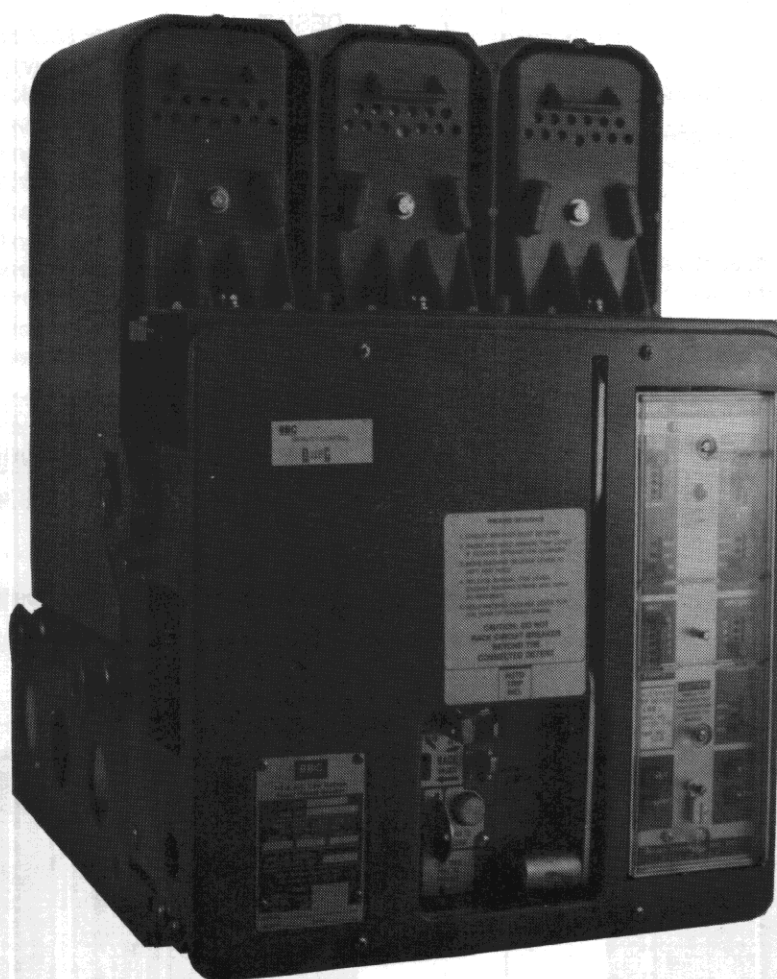
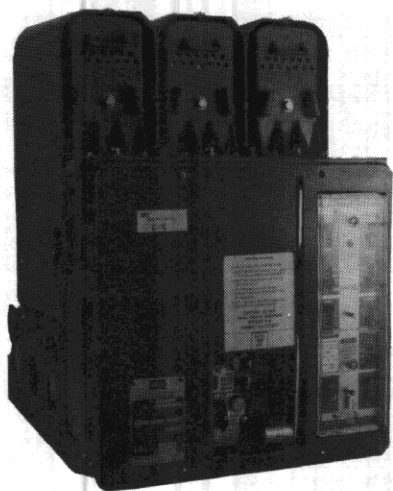
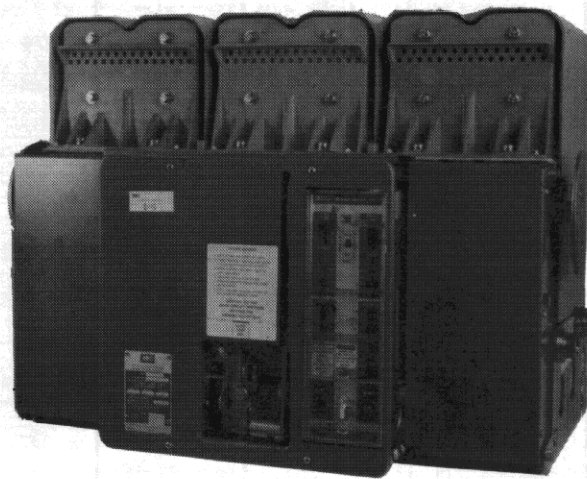


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Typical LK16 (Small Frame Size)



Typical LK42 (Large Frame Size)

INTRODUCTION

These renewal parts apply to types LK and LKE Circuit Breakers with AC continuous ratings of 800, 1600, 2000, 2500, 3000, 3200, 4000 and 4200 amperes and type LKD with AC continuous ratings of 800, and 1600 amperes.

A supply of renewal parts is recommended to insure proper and timely maintenance for normal operation of the circuit breakers. The minimum quantity of assemblies and items recommended in this bulletin is predicated on infrequent replacement of parts based on accumulated tests and operating experience. Total assemblies are recommended for fast replacement, to return the breaker to service as quickly as possible. For assistance, contact the nearest District Office.

RECOMMENDED QUANTITIES

1. Minimum Recommended Quantities are based on the following categories of service:

Domestic – One (1) complete set for each ten (10) circuit breakers or fraction thereof installed for each type and rating.

Foreign – One (1) complete set for each five (5) circuit breakers or fraction thereof installed for each type and rating.

Note: Renewal Parts Listing cover all types and ratings of circuit breakers. Use caution in selecting parts to assure they are applicable to the circuit breaker(s) on hand.

2. The parts listed cover an indefinite period of time. With normal duty and maintenance, replacement will be infrequent.
3. Where continuity of service is mandatory, a spare circuit breaker of each type and rating is recommended.

ORDERING INSTRUCTIONS

When ordering, always specify circuit breaker type(s) and serial number(s) from the nameplate(s), in addition to the quantity, description, and ordering number of each assembly or part, as applicable.

Example: To order Lower Terminal and Moving Contact assemblies for a type LK 8 Drawout Circuit Breaker, specify the following:

For a type LK 8 Drawout Circuit Breaker Serial No. 54000A — 212-01211

Quantity 3 Number 713917-T1 Lower Terminal and Moving Contact Assembly.

Only those parts that normally require replacement have been shown and listed. If the part(s) required are not listed, completely describe the part(s), using reference in the instruction sections, actual photographs or a sample.

ADDITIONAL INFORMATION

For Installation/Maintenance Instructions for I-T-E Low-Voltage Power Circuit Breakers see IB 6.1.1.7-1 (For use with Solid-State Trip Device-Type LSS) and IB 6.1.1.7-3 (For use with Solid-State Trip Device-Type MPS.).

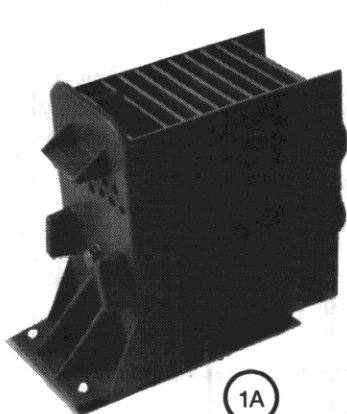
For Installation/Maintenance Instructions for I-T-E Low-Voltage AC Metal Enclosed Power Switchgear see IB 3.1.1.7-1.

LK Circuit Breakers designated as Model-1A employ Type-LSS Trip Devices. LK Circuit Breakers designated as Model-2A employ Type-MPS Trip Devices.

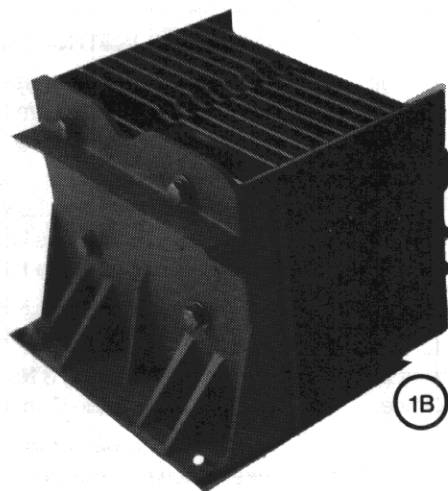
FOR PRICES SEE PS 6.1.1.8-1

FOR TECHNICAL INFORMATION,
CONTACT OUR NEAREST DISTRICT OFFICE

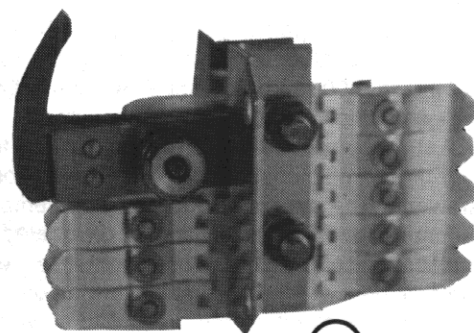
The photographs reproduced in this bulletin are furnished only to serve as a guide in the identification of assemblies and parts, and do not purport to cover all details or variations in equipment.



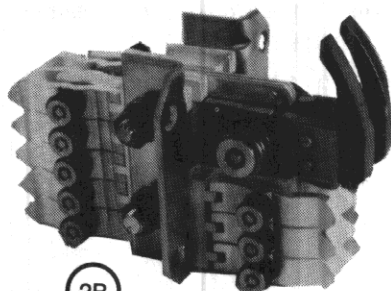
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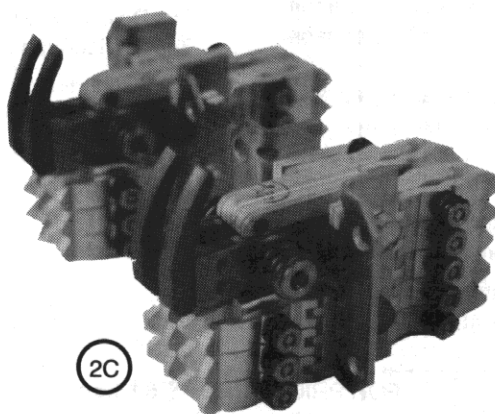
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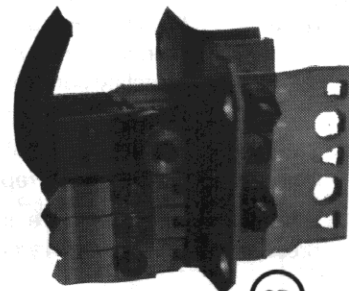
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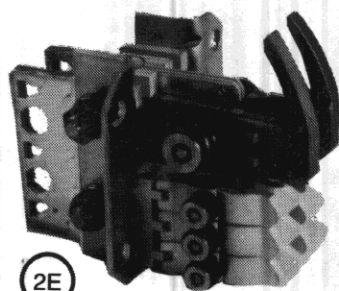
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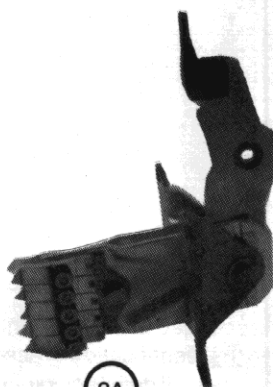
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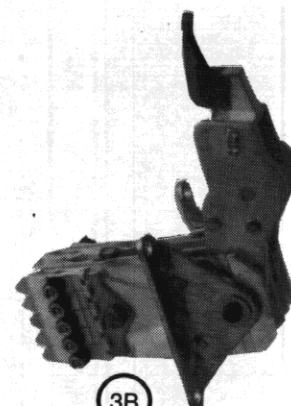
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2E



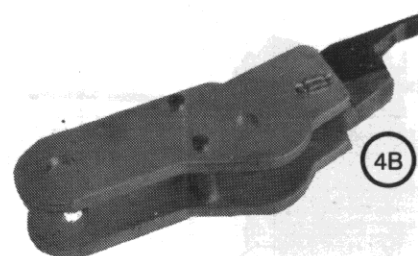
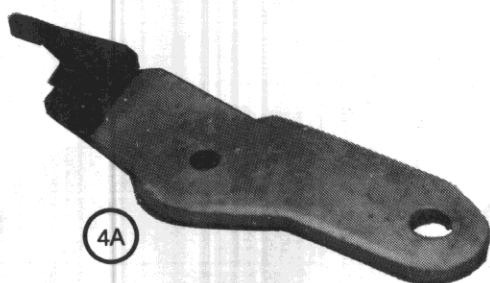
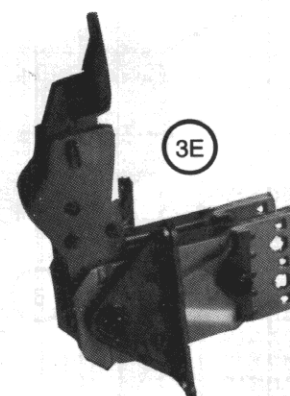
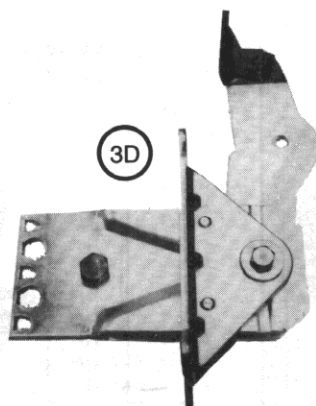
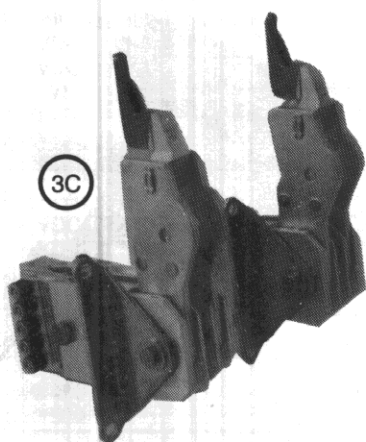
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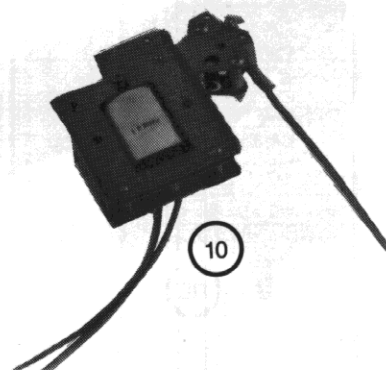
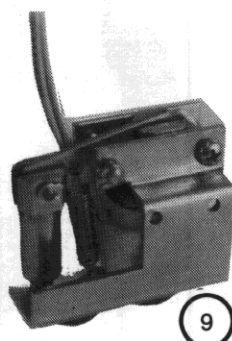
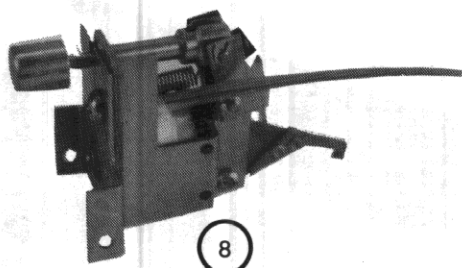
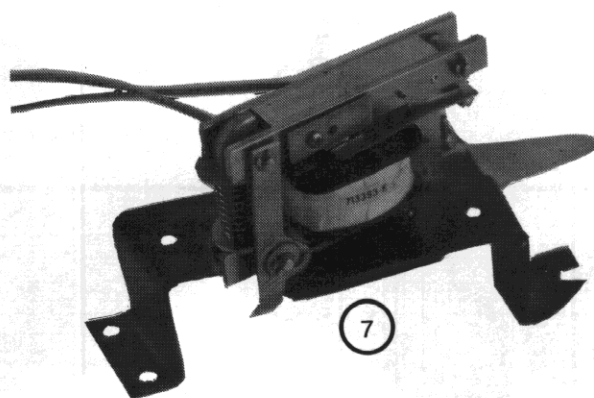
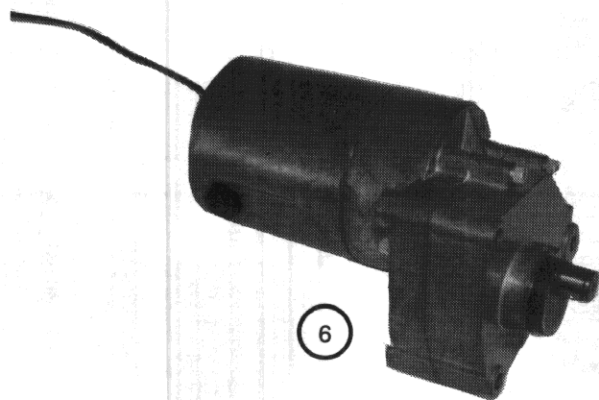
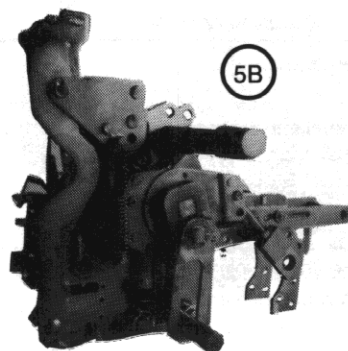
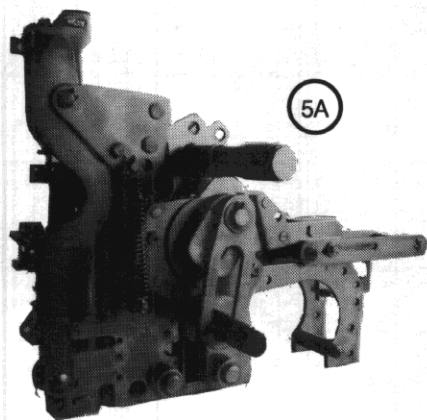


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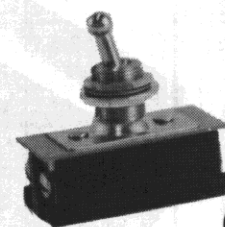
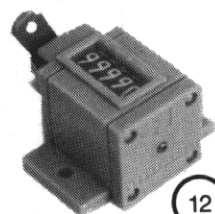
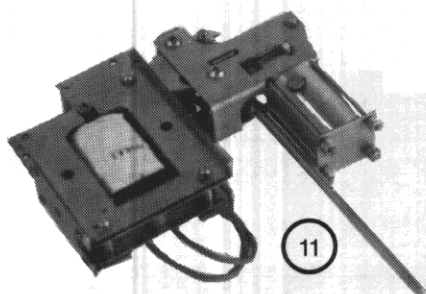
Description of Assembly or Part	Fig. Ref.	Quantity for 3-Pole Breaker							Ordering Number
		LK8 LKE8	LK16 LKE16 LK20	LK25 LKE25	LK32 LKE32	LK40 LK42 LKE42	LKD8	LKD16	
Arc Chute Assembly	1A 1B	3	3	3	3	3	3	3	712207-T2 712207-T3
Upper Terminal and Stationary Contact Assembly – (Includes Stationary Main and Arc Contacts)	2A 2B 2C 2D 2E	3	3	6	6	6	3	3	713908-T7 713908-T8 713908-T3 713908-T10 713908-T11
Lower Terminal and Moving Contact Assembly – (Includes Moving Main and Arc Contacts)	3A 3B 3C 3C 3D 3E	3	3	3 3	3 3	3 3	3	3	713917-T1 713917-T2 713917-T3 713917-T4 713917-T8 713917-T9
Moving Contact Assembly – (Bridge Blade includes Moving Main and Arc Contact) ①	4A 4B	3	3	6	6	6	3	3	714145-K1 714750-K2

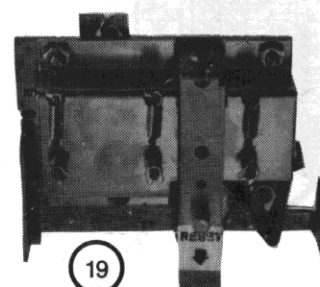
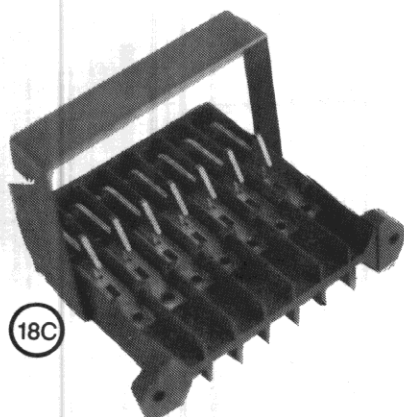
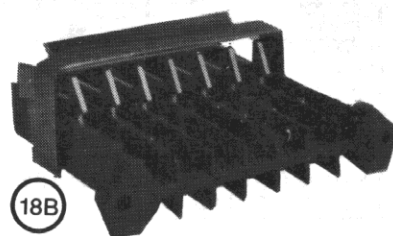
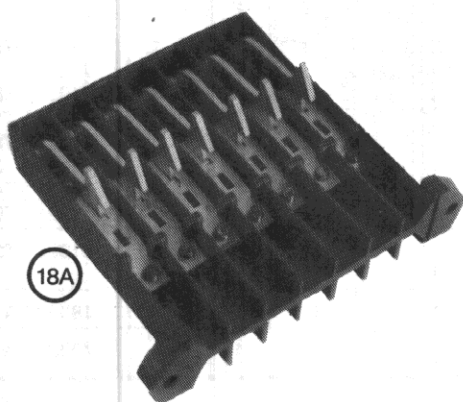
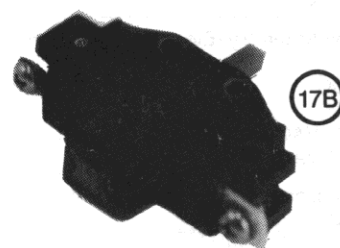
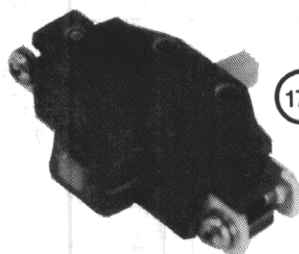
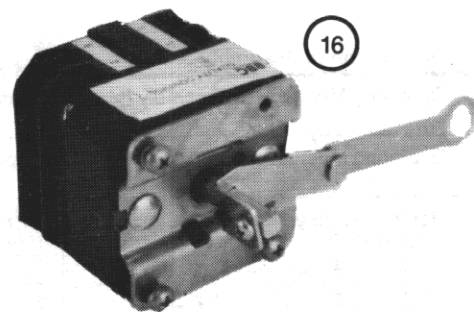
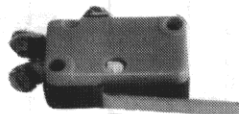
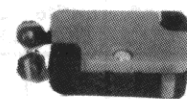
① Not interchangeable with Embossed Bridge Blades per 714382-K2 or 714320-K2 (not shown). Replace Embossed Bridge Blades with Lower Terminal Assembly per 713917 (Figure 3).



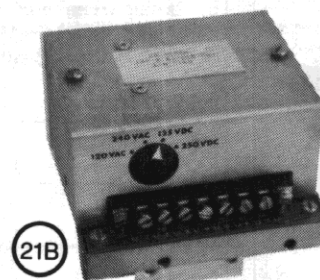
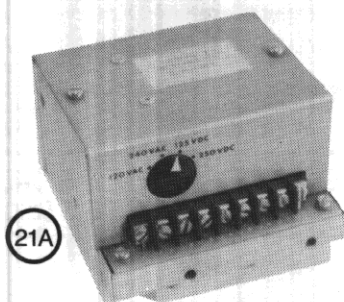
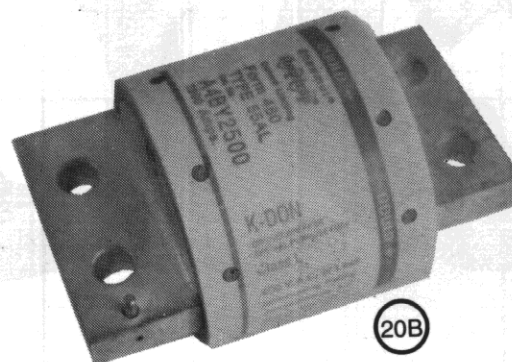


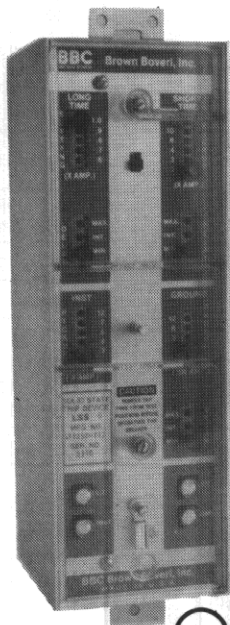
Description of Assembly or Part	Fig. Ref.	Quantity for 3-Pole Breaker							Ordering Number
		LK8 LKE8	LK16 LKE16 LK20	LK25 LKE25	LK32 LKE32	LK40 LK42 LKE42	LKD8	LKD16	
Operating Mechanism Assembly (Manual Operation)	5A 5A	1	1	1	1	1	1	1	713911-T9 713911-T11
Operating Mechanism Assembly (Electrical Operation)	5B 5B	1	1	1	1	1	1	1	713911-T10 713911-T12
Motor Assembly (When Used)									
48 VDC	6	1	1	1	1	1	1	1	709799-T8
110/120 VAC or 125 VDC	6	1	1	1	1	1	1	1	709799-T6
208/240 VAC or 250 VDC	6	1	1	1	1	1	1	1	709799-T7
"Y" Relay Assembly (Electrical Operation Only)									
48 VDC	7	1	1	1	1	1	1	1	712218-T6
125 VDC	7	1	1	1	1	1	1	1	712218-T7
250 VDC	7	1	1	1	1	1	1	1	712218-T8
110 VDC	7	1	1	1	1	1	1	1	712218-T1
208/240 VAC	7	1	1	1	1	1	1	1	712218-T3
Close Coil Assembly (Electrical Operation Only)									
48 VDC	8	1	1	1	1	1	1	1	712217-T6
125 VDC	8	1	1	1	1	1	1	1	712217-T7
250 VDC	8	1	1	1	1	1	1	1	712217-T8
110/120 VAC	8	1	1	1	1	1	1	1	712217-T1
208/240 VAC	8	1	1	1	1	1	1	1	712217-T3
Trip Coil Assembly (Electrical or Manual Operation)									
24 VDC	9	1	1	1	1	1	1	1	712214-T9
48 VDC	9	1	1	1	1	1	1	1	712214-T6
125 VDC	9	1	1	1	1	1	1	1	712214-T7
250 VDC	9	1	1	1	1	1	1	1	712214-T8
110/120 VAC	9	1	1	1	1	1	1	1	712214-T1
208/240 VAC	9	1	1	1	1	1	1	1	712214-T3
Undervoltage Trip Device – Instantaneous (When Used)									
24 VDC	10	1	1	1	1	1	1	1	712215-T9
48 VDC	10	1	1	1	1	1	1	1	712215-T6
125 VDC	10	1	1	1	1	1	1	1	712215-T7
250 VDC	10	1	1	1	1	1	1	1	712215-T8
110/120 VAC	10	1	1	1	1	1	1	1	712215-T1
208 VAC	10	1	1	1	1	1	1	1	712215-T2
220/240 VAC	10	1	1	1	1	1	1	1	712215-T3
440/480 VAC	10	1	1	1	1	1	1	1	712215-T4
550/600 VAC	10	1	1	1	1	1	1	1	712215-T5
Undervoltage Trip Device – Time Delay (When Used) Used with 712215-T1 through T9	11	1	1	1	1	1	1	1	713921-T3
Operation Counter (When Used)	12	1	1	1	1	1	1	1	180522-A
Motor Disconnect Switch (Electrical Operation Only)	13	1	1	1	1	1	1	1	703270-A



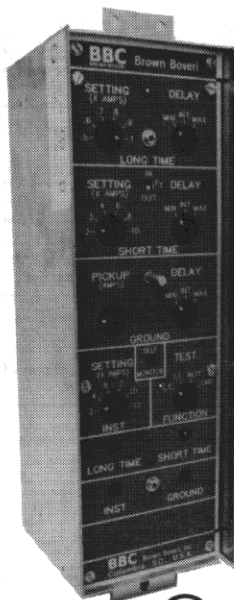


Description of Assembly or Part	Fig. Ref.	Quantity for 3-Pole Breaker							Ordering Number
		LK8 LKE8	LK16 LKE16 LK20	LK25 LKE25	LK32 LKE32	LK40 LKE40 LK42	LKD8	LKD16	
Close/Trip Switch (Electrical Operation Only)	14	1	1	1	1	1	1	1	712780-A
Overcurrent Alarm Switch (r & s Contacts)	15A	As Required (1 or 2 per Breaker)							713008-A
Undervoltage Alarm Switch	15B	As Required (1 or 2 per Breaker)							713365-A
Auxiliary Switch – Type L3 (E.O. or M.O. With Shunt Trip)	16	1	1	1	1	1	1	1	712210-T1
Limit Switch – LS1 and LS3 (Electrical Operation Only)	17A	1	1	1	1	1	1	1	713916-T2
Limit Switch – LS2 (Electrical Operation Only)	17B	1	1	1	1	1	1	1	713916-T1
Secondary Disconnect Assembly – Moving (7 Contacts) Without Guide (Model-1A) Single Guide (Model-0A) Double Guide (Model-0A)	18A 18B 18C	Order As Required (1 to 4 per Breaker)							712208-T1 712208-T3 712208-T4
Open Fuse Trip Device	19						1	1	712219-T1
Current Limiting Fuse *		* Warning: Fuse is Current Limiting and must be coordinated with Trip Device.							
300 Amp (Non-UL)	20A						3	3	710316-A1
400 Amp (Non-UL)	20A						3	3	710316-A2
600 Amp (Non-UL)	20A						3	3	710316-A3
800 Amp (UL)	20A						3	3	710316-A4
1000 Amp (UL)	20A						3	3	710316-A5
1200 Amp (UL)	20A						3	3	710316-A6
1600 Amp (UL)	20A						3	3	710316-A7
2000 Amp (UL)	20A						3	3	710316-A8
2500 Amp (UL)	20B							3	712652-A
High Load Alarm Device (When Used) 48 VDC 125/250 VDSC or 120/240 VAC	21A 21A	1 1	1 1	1 1	1 1	1 1	1 1	1 1	611068-T48 611068-T1
Ground Trip Alarm Device (When Used) 48 VDC 125/250 VDC or 120/240 VAC	21B 21B	1 1	1 1	1 1	1 1	1 1	1 1	1 1	611068-T49 611068-T2





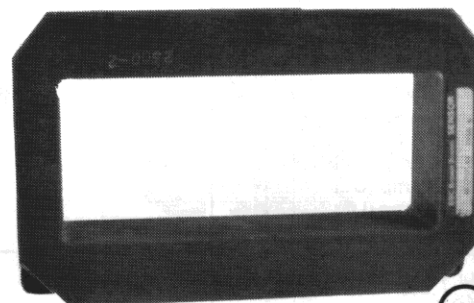
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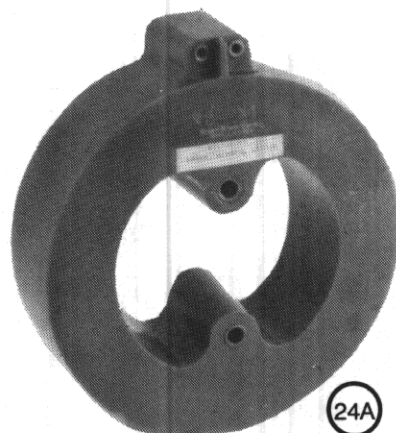
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23A



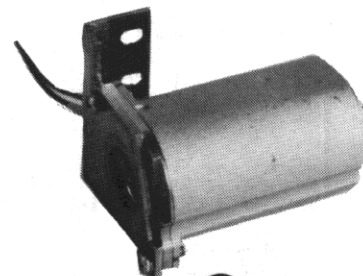
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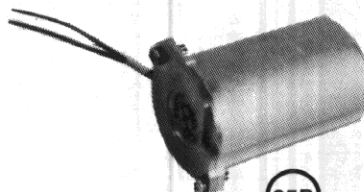
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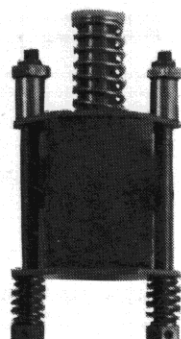
24B



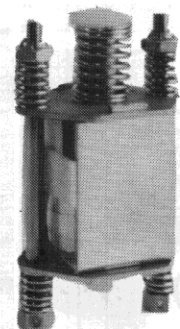
25A



25B



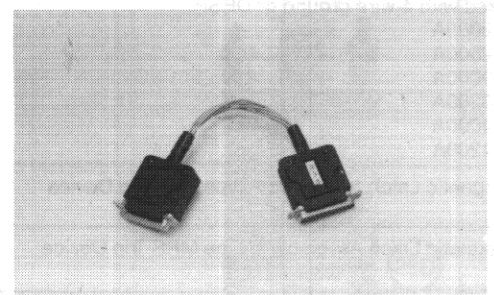
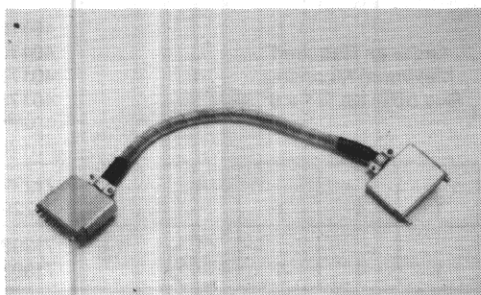
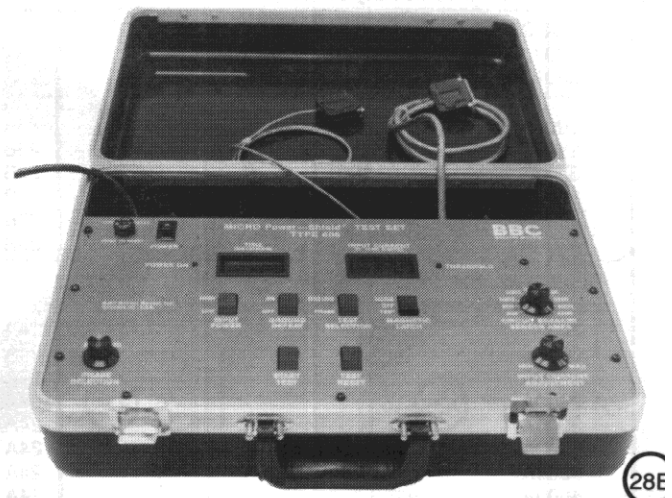
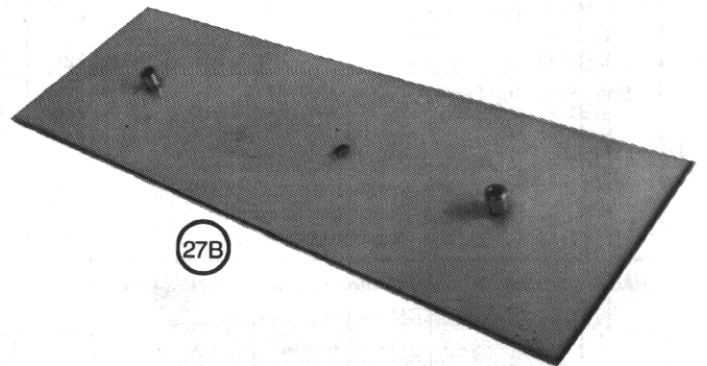
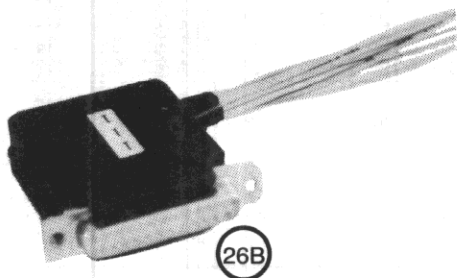
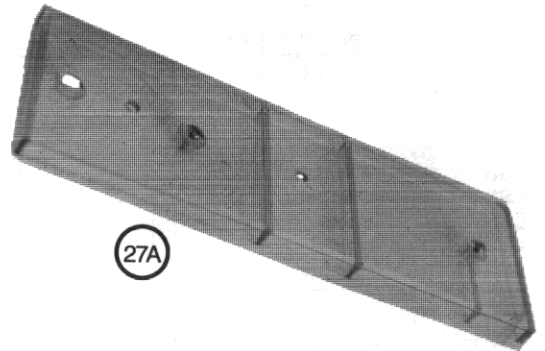
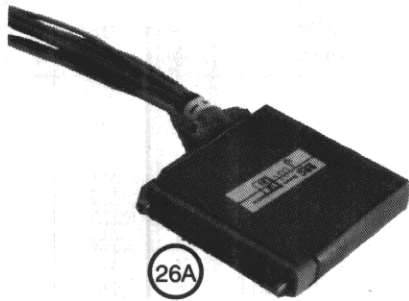
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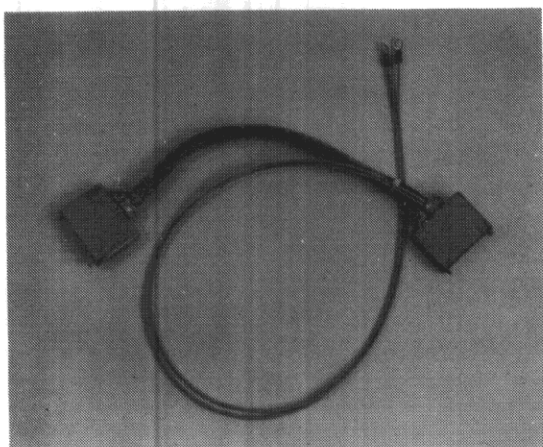
25D

① Add indicated "T" number (Item) to basic order number.

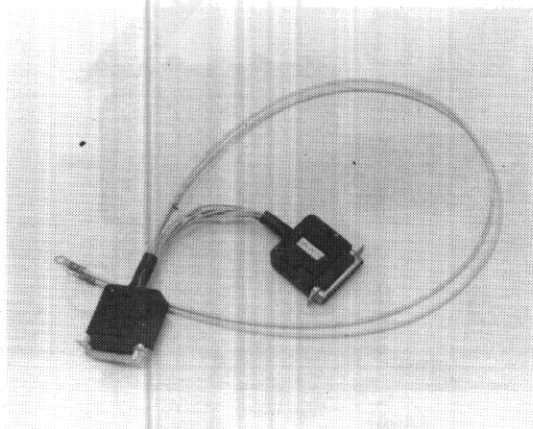
Description of Assembly or Part	Fig. Ref.	Quantity for 3-Pole Breaker							Ordering Number
		LK8 LKE8	LK16 LKE16 LK20	LK25 LKE25	LK32 LKE32	LK40 LK42 LKE42	LKD8	LKD16	
Phase Sensors									
200A	23A	3	3				3	3	401740-K4
800A	23A	3	3				3	3	401740-K5
1600A	23A		3					3	401740-K6
2000A	23A		3						401740-K7
2500A	23B			3	3	3			401717-K6
3000A	23B				3	3			401717-K7
3200A	23B				3	3			401717-K8
4000A	23B					3			401717-K9
4200A	23B					3			401717-K10
Remote Neutral Sensor – (ID = 4¼") Used with 4-wire ground or DESP.		Order as Required Maximum Mounting Bus Size: 1½" x 4"							
200A	24A								401786-K1
800A	24A								401786-K2
1600A	24A								401786-K3
2000A	24A								401786-K9
2500A	24A								401786-K4
3000A	24A								401786-K5
3200A	24A								401786-K6
4000A	24A								401786-K7
4200A	24A								401786-K8
Remote Neutral Sensor – (ID = 6¼") Used with 4-wire ground or DESP.		Order as Required Maximum Mounting Bus Size: (3) ¼" x 6"							
2000A	24B								401781-K6
2500A	24B								401781-K1
3000A	24B								401781-K2
3200A	24B								401781-K3
4000A	24B								401781-K4
4200A	24B								401781-K5
Magnetic Latch Assembly – Type LSS Trip Device	25A 25B	1	1	1	1	1	1	1	712293-T4 712293-T5
Magnetic Latch Assembly – Type MPS Trip Device	25C 25D	1	1	1	1	1	1	1	713939-T1 713939-T2



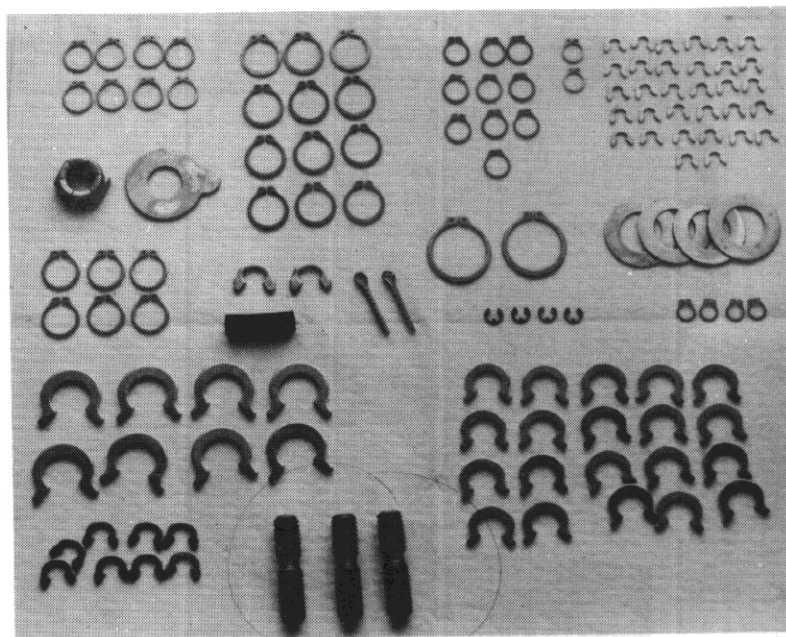
Description of Assembly or Part	Fig. Ref.	Quantity for 3-Pole Breaker							Ordering Number
		LK8 LKE8	LK16 LKE16 LK20	LK25 LKE25	LK32 LKE32	LK40 LK42 LKE42	LKD8	LKD16	
LSS Control Cable Assembly – Standard	26A	1	1				1	1	713918-T1
For Use with Alarm Devices	26A 26A 26A	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	713918-T3 713918-T2 713918-T4
MPS Control Cable Assembly – Standard	26B	1	1	1	1	1	1	1	713918-T6
For Use with Alarm Devices	26B	1	1	1	1	1	1	1	713918-T7
Transparent Cover – LSS Trip Device	27A	1	1	1	1	1	1	1	611092-A
MPS Trip Device	27B	1	1	1	1	1	1	1	715619-A
Test Set – Type 505 – LSS Trip Device Type 606 – MPS Trip Device	28A 28B	Order As Required							611120-T1 715609-A
Ground Defeat Test Cable – LSS Trip Device MPS Trip Device	29A 29B	Order as Required							611786-T1 713918-T9
DESP Test Cable – LSS Trip Device MPS Trip Device	30A 30B	Order as Required							611786-T2 713918-T10
Hardware Kit	31	Order As Required							713999-T1



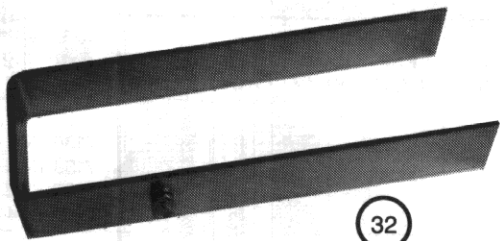
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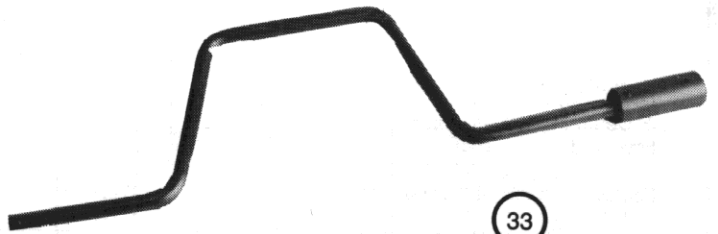
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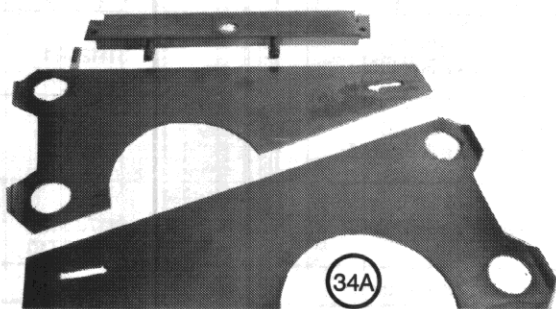
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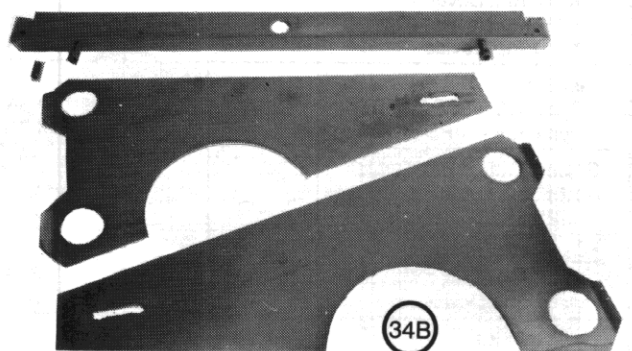
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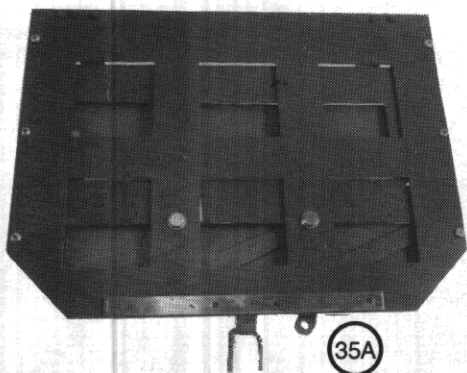
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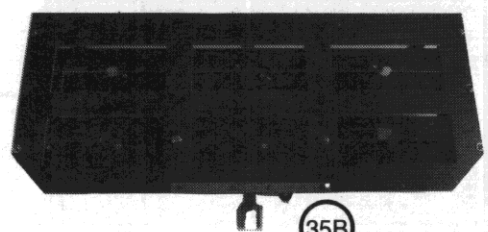
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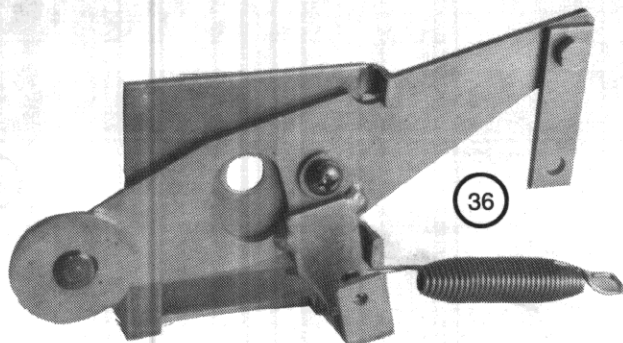
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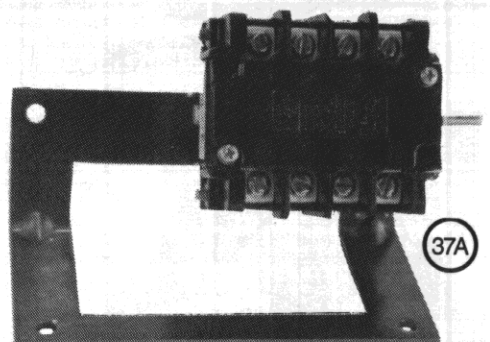
35A



35B

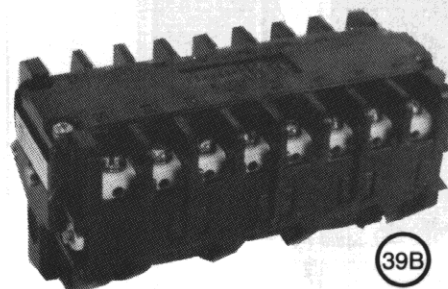
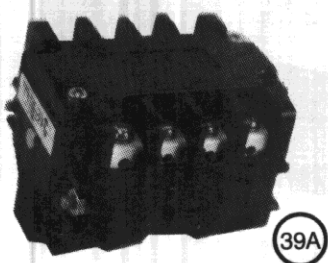
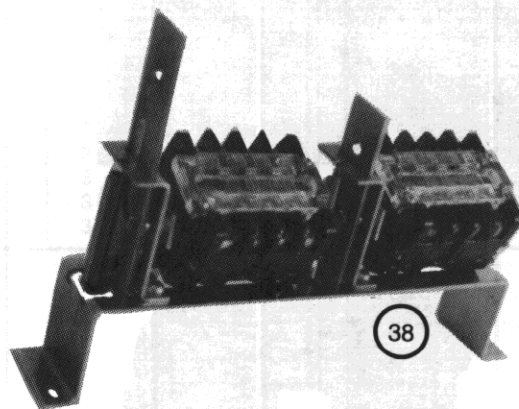
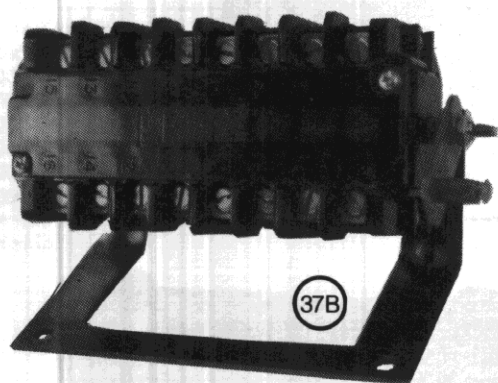


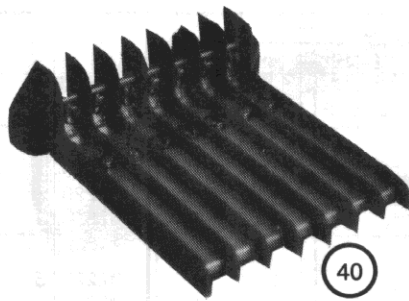
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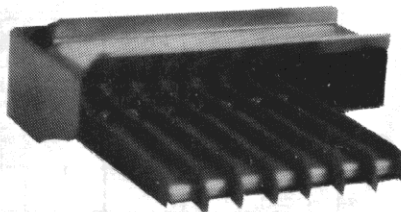
37A

Description of Assembly or Part	Fig. Ref.	Quantity for 3-Pole Breaker							Ordering Number
		LK8 LKE8	LK16 LKE16 LK20	LK25 LKE25	LK32 LKE32	LK40 LK42 LKE42	LKD8	LKD16	
Accessory Kit – (Includes Slow Close Bracket, Racking Crank and Lift Yoke)	32-34	1	1				1	1	712229-T1
	32-34			1	1	1			712229-T2
	32-34	1	1	1	1	1	1	1	712229-T3
Individual Accessories – Slow Close Bracket Racking Crank Lifting Yoke – Small (Furnished with Accessory Kit 712229-T1 and T3) Lifting Yoke – Large (Furnished with Accessory Kit 712229-T2 and T3)	32	1	1	1	1	1	1	1	712229-T5
	33	1	1	1	1	1	1	1	712229-T6
	34A	1	1				1	1	712229-T7
	34B			1	1	1			712229-T8
Shutter Assembly – Small – Large	35A	1	1				1	1	712250-T1
	35B			1	1	1			712250-T2
MOC Actuator Kit – Connected Position – Connected and Test Position	36	1	1	1	1	1	1	1	713930-T8
	36	1	1	1	1	1	1	1	713930-T10
MOC Auxiliary Switch Kit – 4 Contact Switch – 8 Contact Switch	37A	1	1	1	1	1	1	1	713930-T5
	37B	1	1	1	1	1	1	1	713930-T6
TOC Auxiliary Switch Kit – (Operates between Test and Connected Positions) 4 Contact Switch 8 Contact Switch (Operates between Test and Disconnect Positions) 4 Contact Switch 8 Contact Switch (Operates between Test and Connected and Test and Disconnect Positions) 4 Contact Switch Each (as shown)	38	1	1	1	1	1	1	1	713931-T7
	38	1	1	1	1	1	1	1	713931-T8
	38	1	1	1	1	1	1	1	713931-T9
	38	1	1	1	1	1	1	1	713931-T10
	38	1	1	1	1	1	1	1	713931-T11
	38	1	1	1	1	1	1	1	713931-T11
Auxiliary Switch – Type L2 4 Contact Switch 8 Contact Switch	39A	1	1	1	1	1	1	1	700034-K1
	39B	1	1	1	1	1	1	1	700038-K1

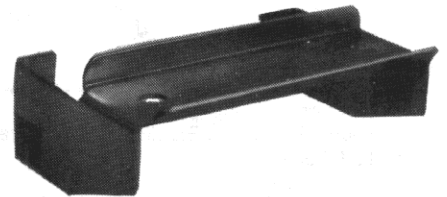




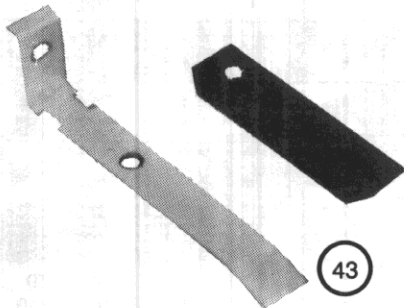
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41



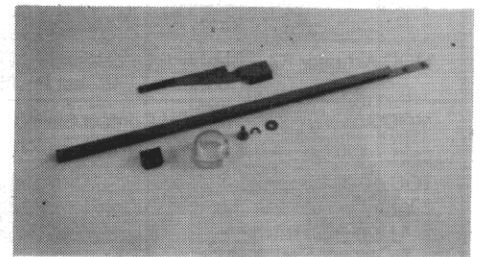
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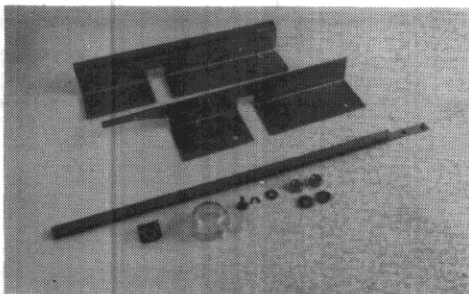
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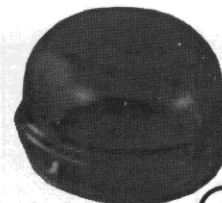
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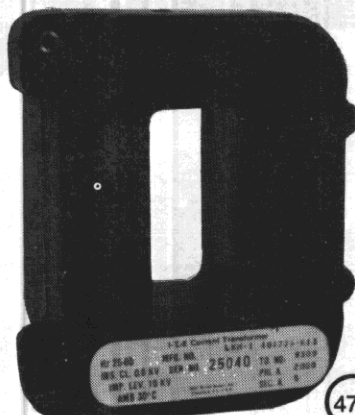
45A



45B



46



47A



47B

Description of Assembly or Part	Fig. Ref.	Quantity for 3-Pole Breaker							Ordering Number
		LK8 LKE8	LK16 LKE16 LK20	LK25 LKE25	LK32 LKE32	LK40 LK42 LKE42	LKD8	LKD16	
Secondary Disconnect Stationary – 7 Contacts	40	Order As Required ①							712209-T2
Secondary Disconnect Stationary with Guide Support Bracket –	41 41	Order As Required ①					① Order as Required		712209-T8 712209-T9
Guide Support Bracket – Secondary Disconnect	42	Order As Required ①							714844-A
Insulation Strip – Secondary Disconnect – “TP” Function	43	Order As Required							712692-A
Short Contact – Secondary Disconnect – “OP” Function	43	Order As Required							712638-A
Emergency Trip Button – Door Mounted	44	1	1	1	1	1	1	1	883213-T1
Position Indicator Kit – Requires 713930-T8 or T10	45A	1	1				1	1	713930-T14
Position Indicator Kit – Requires 713930-T8 or T10	45B			1	1	1			713930-T16
Transparent Door Mounted Position Indicator Cover – (Furnished as Part of Kit 713930-T14 or T16)	46	1	1	1	1	1	1	1	883132-A
Current Transformers – Type LKM-1 (Order As Required – Maximum 3 per Cradle)									
100/5A	47A	3	3				3	3	401775-K1
150/5A	47A	3	3				3	3	401775-K2
200/5A	47A	3	3				3	3	401775-K3
300/5A	47A	3	3				3	3	401775-K4
400/5A	47A	3	3				3	3	401775-K5
500/5A	47A	3	3				3	3	401775-K6
600/5A	47A	3	3				3	3	401775-K7
800/5A	47A	3	3				3	3	401775-K8
1000/5A	47A	3	3				3	3	401775-K9
1200/5A	47A	3	3				3	3	401775-K10
1500/5A	47A	3	3				3	3	401775-K11
1600/5A	47A	3	3				3	3	401775-K12
2000/5A	47A	3	3				3	3	401775-K13
2500/5A	47A	3	3				3	3	401775-K14
Current Transformers – Type LKM-2 (Order As Required – Maximum 3 per Cradle)									
2000/5A	47B			3	3	3			401739-K1
2500/5A	47B			3	3	3			401739-K2
3000/5A	47B			3	3	3			401739-K3
4000/5A	47B			3	3	3			401739-K4
5000/5A	47B			3	3	3			401739-K5
6000/5A	47B			3	3	3			401739-K6

① Maximum 4



BBC Brown Boveri, Inc.

Circuit Breaker Division
W. Columbia, SC 29169

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