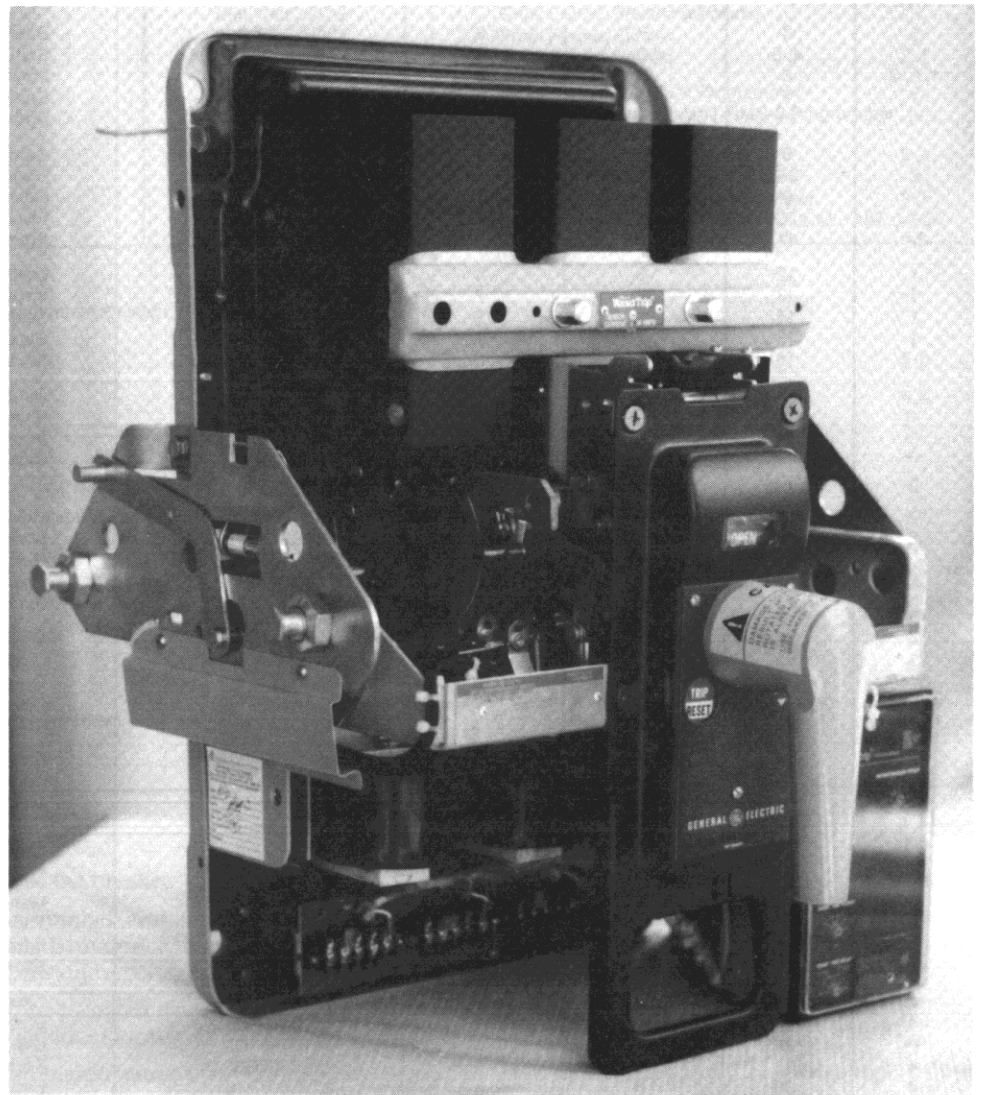




Power Circuit Breakers

Types	
225 Ampere Frame Size	600 Ampere Frame Size
AK-2-15 AK-2A-15	AK-2/3/5/6/7-25 AK-2A/3A/5A/6A/7A-25 AKU-2/3/5/6/7-25 AKU-2A/3A/5A/6A/7A-25 AKF-2/2A-25



INTRODUCTION

This manual provides a listing of the parts and assemblies that are available as replacement parts for the circuit breakers listed on cover.

Parts and assemblies included in this list are from the basic breaker. To order parts and assemblies for breaker accessories, refer to summary list or the breaker nameplate data.

When ordering renewal parts, specify catalog number and the quantity required. Complete nameplate data of breaker involved should be given, as well as an accurate description and part number of each part required. Direct your order to your local GE ED&C sales office.

Renewal parts which are furnished may not be identical to the original parts since, from time to time, design changes may be made. The parts supplied, however, will be interchangeable with the original parts.

INDEX OF RENEWAL PARTS COVERED BY THIS PUBLICATION

Fig. No.	Ref. No.	Quantity Required		Catalog Number	Description
		225 Amp	600 Amp		
1	—	—	1	184L700BFG23	Back Frame
1	1A	1	3	107D7564P1	Back Plate
1	1	3	3	269C260G1	Insulation for Upper Stud, Rear
**	**	3	3	269C260G2	Insulation for Upper Stud, Front
1, 2	2	3	3	269C283G2	Upper Stud Assembly
1	3	3	3	295B460P1	Barrier
1, 2	4, 5	3	6	805B910G1 & G2	Stationary Contact*
1, 2, 3	6	3	3	269C257G15	Moving Contact*
1	7	2	2	412A250P1	Spring (outside poles)*
**	**	1	1	269C280P5	Spring Clip (center pole)*
1, 2	8	1	1	269C277P9	Barrier
2	8A	1	1	269C277P10	Barrier
1, 2	9	1	1	269C277G1	Cross Bar Assembly
1	10	3	3	269C258G3	Pivot
2A	11	3	3	269C280P8	Spring (back of pivot)*
1	12	3	3	269C258G1	Lower Stud Assembly (not used on AK-3 / 3A)
1	13	2	2	193A1873P1	Insulation (under lower stud)
1	14	2	2	269C280P7	Support (outside)
1	15	2	2	269C280P6	Support (intermediate)
3, 4	16	3	3	293B288G1	Arc Quencher
3, 4	17	1	1	269C273G2	Arc Quencher Clamp
1	18	2	2	269C280P4	Stud, Arc Quencher Clamp
**	**	2	2	148A1926P4	Insulation for Ref. 18
**	**	2	2	393A993P9	Stop Nut for Ref. 18
3	19	6	12	412A286P1	Stationary Contact Spring*
2	20	3	3	412A208P1	Movable Contact Spring
2	21	6	6	269C277P11	Spring Clip
**	**	1	1	269C280P1	Moving Contact Pivot Pin (center pole)
3	22	2	2	269C280P2	Moving Contact Pivot Pin (outside pole)
3	23	1	1	412A290P1	Spring*
3	24	1	1	622C521G3	Magnet/Armature Assembly*
3	25	1	1	See Table A	Closing Solenoid Coil
3, 4	26	3	3	See Table E	Overcurrent Trip Device
3	27	6	6	386A163P1	Clamp for EC-2 Trip Device
3	28	3	3	845C276G4	Primary Disconnect Assembly
3	29	6	6	192A6990P166	Spring
3	30	24	24	192A9669P1	Contact Finger*
4	31	4 (max.)	4 (max.)	386A110G2	Movable Secondary Disconnect
4, 8	32	1	1	622C505G1	Cut-off Switch (electric breaker)
4, 11	33	1	1	432A671G2	Auxiliary Switch, 2 Stages
4, 11	33	1	1	432A671G5	Auxiliary Switch, 5 Stages
4	34	1	1	269C268P1	Manual Trip Button
**	**	1	1	269C268P12	Trip Label
**	**	1	1	412A133P1	Spring for Manual Trip Button*
4, 5	35	1	1	See Table A	Shunt Trip Device w/Coil
4	36	1	1	622C529G1	Closing Switch
4	37	1	1	101C7891G1	Shift Assembly (manual breaker) (order with link assembly)
**	**	1	1	101C7891G2	Link Assembly
4	38	1	1	259C607G3	Escutcheon, Manual Breaker (black)
4	38	1	1	259C607P10	Escutcheon, Electric Breaker (black)

* Recommended for stock for normal maintenance.

** Not shown.

INDEX OF RENEWAL PARTS COVERED BY THIS PUBLICATION

Fig. No.	Ref. No.	Quantity Required		Catalog Number	Description
		225 Amp	600 Amp		
4	38	1	1	259C607G3	Escutcheon, Electric Breaker w / Handle
**	**	1	1	259C607G3	Escutcheon, Manual Breaker
**	**	1	1	259C607P11	Escutcheon, Electric Breaker
**	**	1	1	259C607G4	Escutcheon, Electric Breaker (pistol grip handle)
4	39	1	1	259C608G1	Indicator
4	40	1	1	669D807P1	Handle
4	41	1	1	See Table C	"X" Relay
4, 7	42	1	1	See Table C	"Y" Relay*
**	**	1	1	148A2238P1	Return Spring*
5	43	1	1	See Table A	Coil for Shunt Trip Device*
**	**	1	1	See Table B	Instantaneous Undervoltage Device (AC with coil)
**	**	1	1	See Table B	Instantaneous Undervoltage Device (DC with coil)
6	44	1	1	See Table B	Time Delay Undervoltage Device, AC
6	44	1	1	See Table B	Time Delay Undervoltage Device, DC
6	45	1	1	See Table B	Coil for Undervoltage Device*
**	**	1	1	192A6990P227	Spring for Undervoltage Device*
9	—	1	1	269C299G2	Bell Alarm Device
10	—	1	1	6293908G275	Terminal Board, 6 Terminals
10	—	1	1	6293908G274	Terminal Board, 10 Terminals
11	46	1	1	846C865G1	Link and Bushing for Auxiliary Switch
12	—	1	1	++	Static Time Delay, AC or DC
13	—	—	1	184L700FMG25	Front Frame, Manual
13A	—	—	1	184L700FMG26	Front Frame, Electric w/Handle
13A	—	—	1	184L700FMG27	Front Frame, Electric
14	—	1	1	286A8863G1	Maintenance Handle
15	47	1	1	+	MicroVersaTrip RMS-9 Programmer
15	48	1	1	TR2SX	Fixed Rating Plug for MVT RMS-9 Programmer With Tapped Current Sensor
15	49	1	1	See Table D	MVT Tapped Current Sensor
15	50	1	1	588B397G2	MVT Flux Shifter
15	51	1	1	See Table D	MVT Tapped 4th Wire Neutral Sensor
16, 16A	—	—	—	—	Additional Parts List for Types AKF-2-25 / AKF 2A-25

* Recommended for stock for normal maintenance.

** Not shown.

+ Refer to side sticker on programmer unit for replacement information.

++ Order using circuit breaker serial number.

NOTES:**Overcurrent Trip Devices:**

- no parts furnished for field installation on EC-1 devices.
- only part furnished for field installation on EC-2 or EC-2A devices is plastic cover, catalog number 242C645P1.
- orders for replacement trip devices should include nameplate information, ampere rating, time-current characteristics, and trip setting desired, see Table E.

Operating Mechanism:

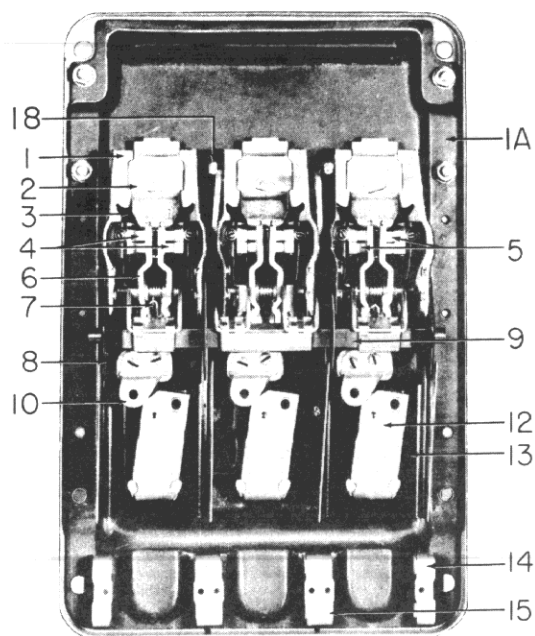
- individual parts cannot be furnished for mechanism
- provide complete nameplate information when ordering.

Relays:

- replacement parts for type 295B445 relays no longer furnished.
- see Table C, Note 1.

ORDERING DIRECTIONS

- Furnish the complete nameplate data of the breaker.
- Specify quantity, catalog number, item number, and description for each part, and state this bulletin number. When adding shunt trip, undervoltage device, or bell alarm device to a breaker, order must also include: desired voltage of device, whether AC or DC (if AC, the frequency) and, for undervoltage devices, whether instantaneous or time delay.
- Standard hardware items (zinc dichromate-coated screws, grade 5 bolts, nuts, washers, etc.) are not listed in this bulletin. These items or equivalent, should be obtained locally.
- For pricing and proper installation and maintenance instructions, contact your local GE ED&C sales and / or service representative.



(PHOTO 8026295)

Figure 1. Type AK-2-25 power circuit breaker back frame (operating mechanism removed)

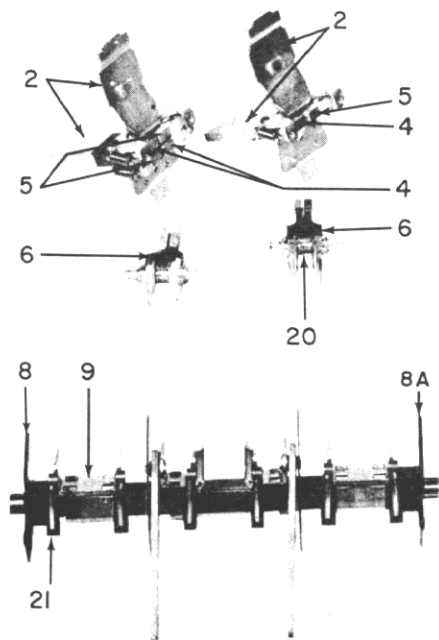


Figure 2. Moving and stationary contacts and cross bar assembly

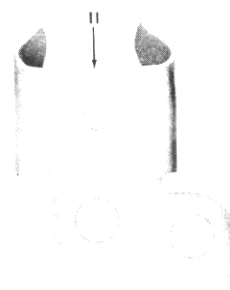


Figure 2A. Spring (back of pivot)

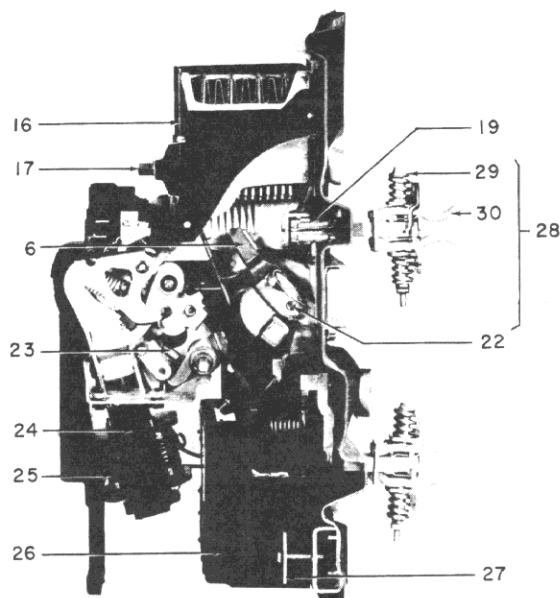


Figure 3. Cutaway view of type AK-2-25 electrically operated power circuit breaker

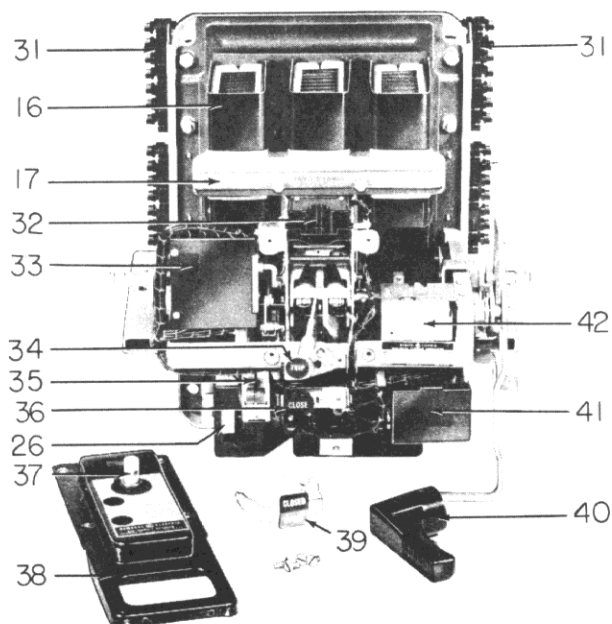


Figure 4. Type AK-2-25 electrically operated power circuit breaker (escutcheon removed and dismantled.)

TABLE A. SOLENOID COIL AND SHUNT TRIP

Rating		Closing Solenoid Coil Cat. No.	Shunt Trip Device Cat. No.	Shunt Trip Device Coil Cat. No.
Volts	Hertz			
24	DC		139C4378G1	6275081G55
48	DC	366A773G17	139C4378G3	6275081G28
125	DC	366A773G13	139C4378G4	6275081G29
250	DC	366A773G15	139C4378G5	6275081G30
70	60		139C4378G6	
120	60	366A773G1	139C 4378G7	6275081G25
120	50	366A773G2	139C4378G8	6275081G56
208	60	366A773G3	139C4378G10	6275081G26
208	50	366A773G3	139C4378G11	6275081G26
230	60	366A773G4		
230	50	366A773G5		
230	25	366A773G14		
240	60		139C4378G13	6275081G26
240	50		139C4378G14	6275081G26
380	50	366A773G6	139C4378G17	6275081G27
460	60	366A773G7		
460	50	366A773G8		
480	60		139C4378G18	6275081G27
480	50		139C4378G19	6275081G4
575	60	366A773G9	139C4378G21	6275081G7
575	50	366A773G10	139C4378G22	6275081G29

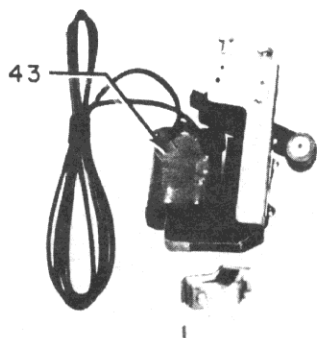
Figure 5. Shunt trip device
(Ref. 35)

TABLE B. UNDERVOLTAGE DEVICE

Rating		Instantaneous—Cat. No.		Time Delay—Cat. No.	
Volts	Hertz	Coil	Complete	Coil	Complete
24	DC	6275081G15	568B309G1		
48	DC	6275081G9	568B309G2		
125	DC	6275081G18	568B309G3	6275081G61*	568B309G5
155	DC	6275081G57	568B309G27		
250	DC	6275081G19	568B309G4	6275081G59*	568B309G6
240	40	6275081G9	568B309G15		
120	50	6275081G4	568B309G8		
208	50	6275081G12	568B309G1		
230	50			6275081G59	568B309G24
240	50	6275081G12	568B309G14		
380	50	6275081G31	568B309G17		
480	50	6275081G3	568B309G19		
575	50	6275081G8	568B309G22		
120	60	6275081G26	568B309G7		
208	60	6275081G27	568B309G10		
230	60			6275081G59*	568B309G5
240	60	6275081G7	568B309G13		
480	60	6275081G31	568B309G18		
575	60	6275081G20	568B309G21		

* Input voltage to static timing unit (Figure 13A) indicated.

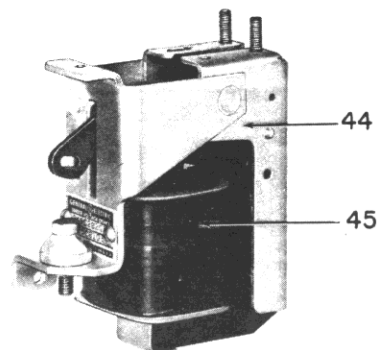


Figure 6. Time delay undervoltage device.

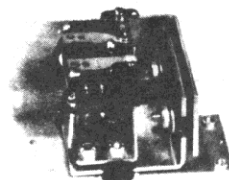
Figure 7. "Y" relay.
(Ref. 42)

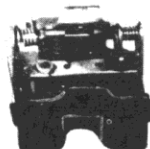
TABLE C. RELAYS

Rating		"X" Relay—Cat. No.		"Y" Relay—Cat. No.
Volts	Hertz	Complete①	Coil Only②	Complete③
24	DC	116B7197P1	116B7197P201	295B444P1
48	DC		116B7197P202	295B444P2
125	DC	116B7197P3	116B7197P203	295B444P3
250	DC	116B7197P4	116B7197P204	295B444P4
230	40			295B444P11
115	50	116B7197P6	116B7197P206	295B444P5
208	50	116B7197P9	116B7197P209	295B444P8
230	50	116B7197P12	116B7197P212	295B444P11
380	50	116B7197P17	116B7197P217	295B444P17
460	50	116B7197P15	116B7197P215	295B444P14
115	60	116B7197P5	116B7197P205	295B444P5
208	60			295B444P8
230	60		116B7197P211	295B444P11
460	60	116B7197P14	116B7197P214	295B444P14

① Original and Early-1 breakers were equipped with Type 295B445 relays which are no longer available and must be replaced with Type 116B7197 relays which are found in Late-1 and all -2 breakers.

② For use with Type 116B7197 relays only. Replacement coils for Type 295B445 relays are no longer furnished. (See Note 1)

③ For all breakers and only complete relay is furnished.

Figure 8. Cutoff switch
(Ref. 32)

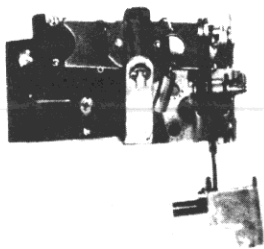


Figure 9.
Bell alarm device.

Figure 10.
Terminal board

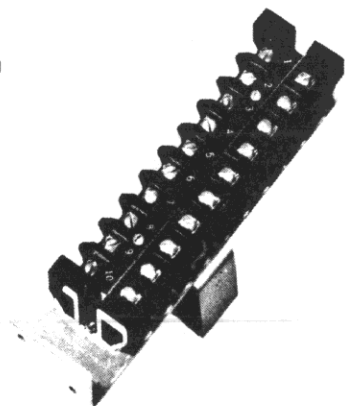


Figure 11.
Auxiliary switch
(Ref. 33)

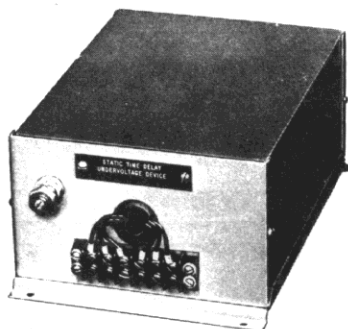
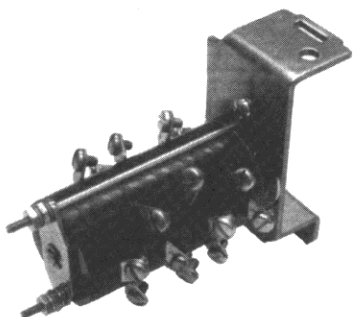


Figure 12. Static time delay

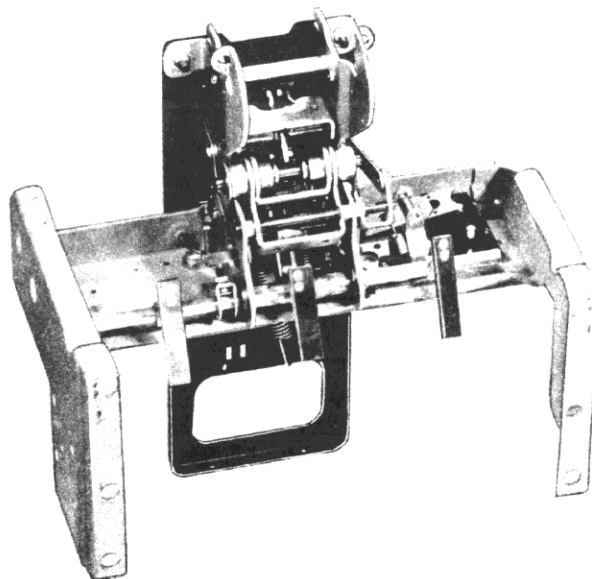


Figure 13. Front frame assembly, manual.

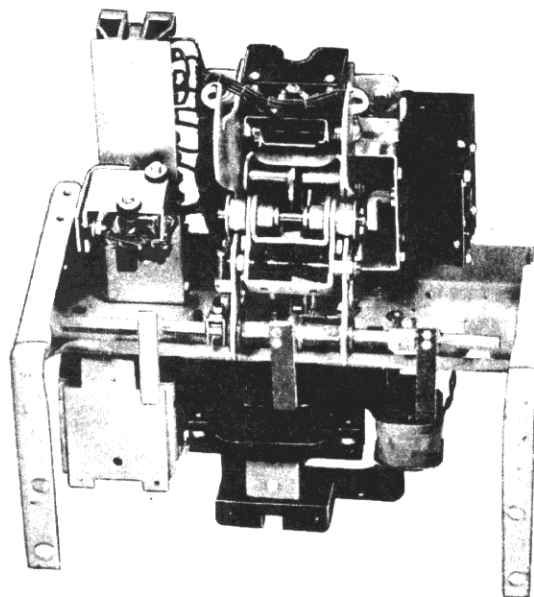
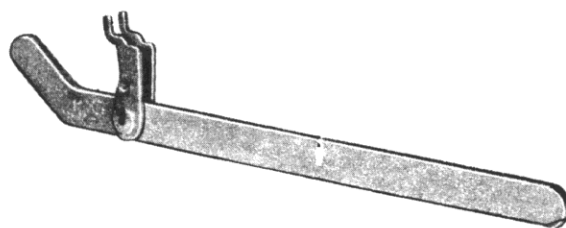
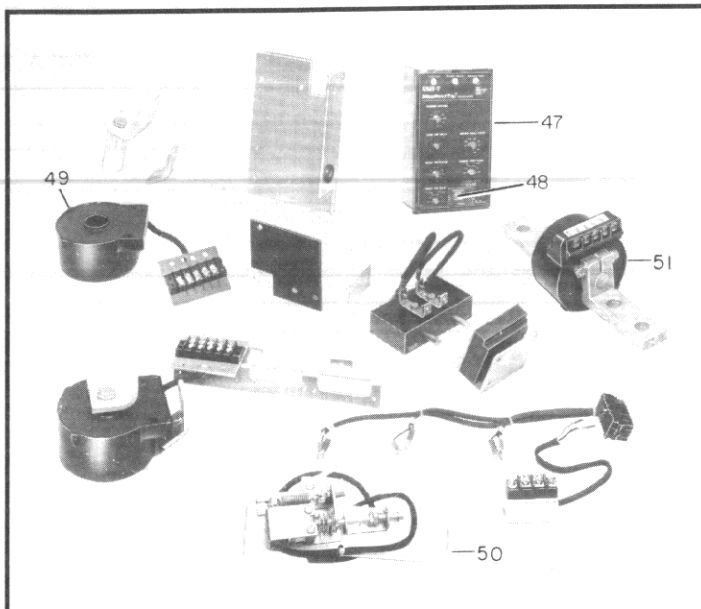


Figure 13A. Front frame assembly, electric.

Figure 14. Maintenance handle for electrically operated breakers not equipped with manual handles.



**TABLE D. MICROVERSATRIIP TAPPED CURRENT SENSORS**

Sensor Amp Range	Phase Sensor Catalog Number	4th Wire Neutral Sensor Catalog Number
70-225	568B632G25	TSVG225BK
200-600	568B632G26	TSV206BK

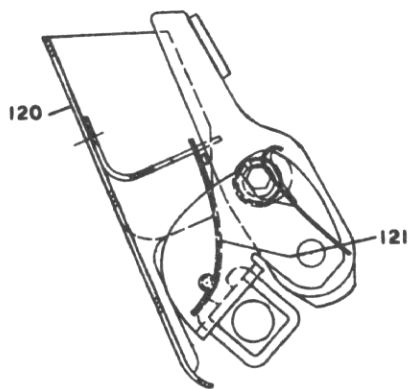
**OUTSIDE POLE
CONTACTS AND BARRIER**

Figure 16.

TABLE E. TRIP DEVICE REPLACEMENTS

The trip device type is identified by the first middle digit in the breakers nameplate designation.

Example: AK-25-25 is trip device code number.

Trip Device Code Number	Trip Device	Replacement Information
2	EC	Orders for DC replacement EC trip devices should include nameplate information, ampere rating, time current characteristics and trip setting desired. Orders for AC replacement EC trip devices should be converted to RMS-9 Conversion Kits.
3	Power Sensor	
4	ECS	
5	SST	
6	MicroVersaTrip	
7	MicroVersaTrip RMS-9	

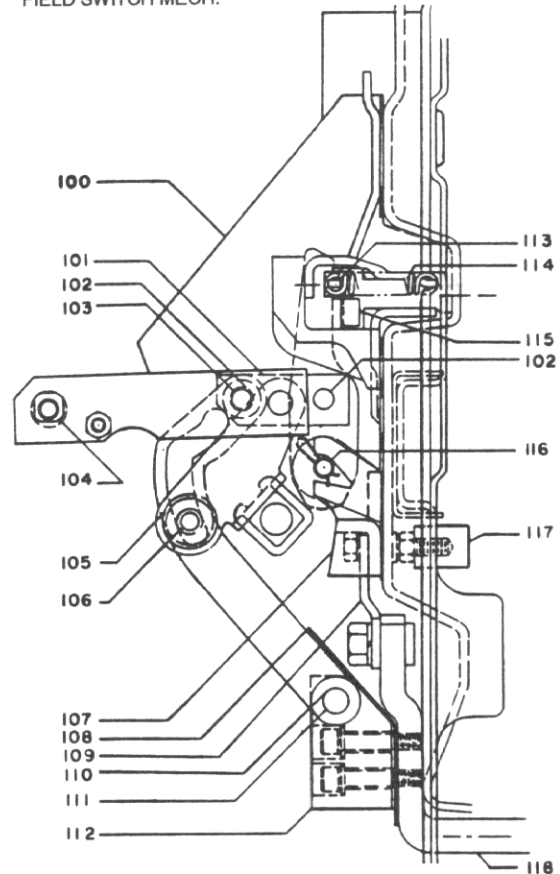
**CENTER POLE AND
FIELD SWITCH MECH.**

Figure 16A.

Figure 16 and Figure 16A. Field switch mechanism and contact assemblies.

Note: Parts listed below apply only to Types AKF-2-25 and AKF-2A-25. All other parts are identical to those used on Type AK-2-25.

Ref. No.	Qty. Per Center Pole	Catalog Number	Description	Ref. No.	Qty. Per Center Pole	Catalog Number	Description
100	1	073-108C9697P9	Insulation	112	1	073-108C9694P7	Lower pivot
101	2	073-108C9695P2	Link	113*	1	805B910G1	Stationary contact
102	4	073-394A133P8	Retaining ring	113*	1	805B910G2	Stationary contact
103	1	073-108C9695P9	Pin	114	2	073-412A286P1	Stationary contact spring
104	2	073-148A2279P1	Adjustable bushing	115	1	073-108C9697P11	Contact spacer, right side
105	2	073-377A871P12	Bearing	115	1	073-108C9697P12	Contact spacer, left side
106	1	073-108C9695P10	Cam follower	116	1	073-269C280P1	Moving contact pivot pin
107	1	073-108C9695P6	Pivot	117	1	073-108C9698P14	Spacer
108	1	073-108C9694P8	Lower stud insulation	118	1	073-269C258G13	Lower stud
109	1	073-108C9695P3	Connector	119†	1	073-293B288G1	Arc quencher
110	2	073-394A133P9	Retaining ring	120	1	073-108C9697G3	Insulation
111	1	073-412A404P136	Pin	121	2	073-108C9694P5	Spring

* Recommended for stock for normal maintenance.

† Not shown.



GE Electrical Distribution & Control