

RENEWAL PARTS



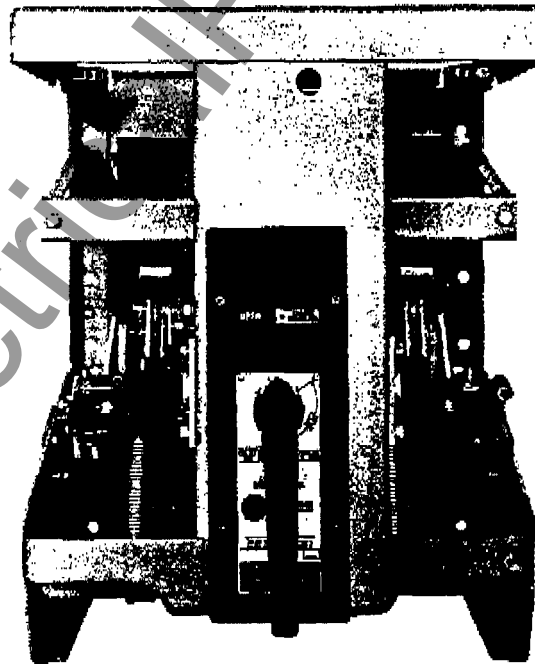
POWER CIRCUIT BREAKERS

Greg Messels
272-7983

**TYPES AK-2/3/2A/3A-50,
AKU-2/3/2A/3A-50,
AKT-2/3/2A/3A-50**

ORDERING INSTRUCTIONS

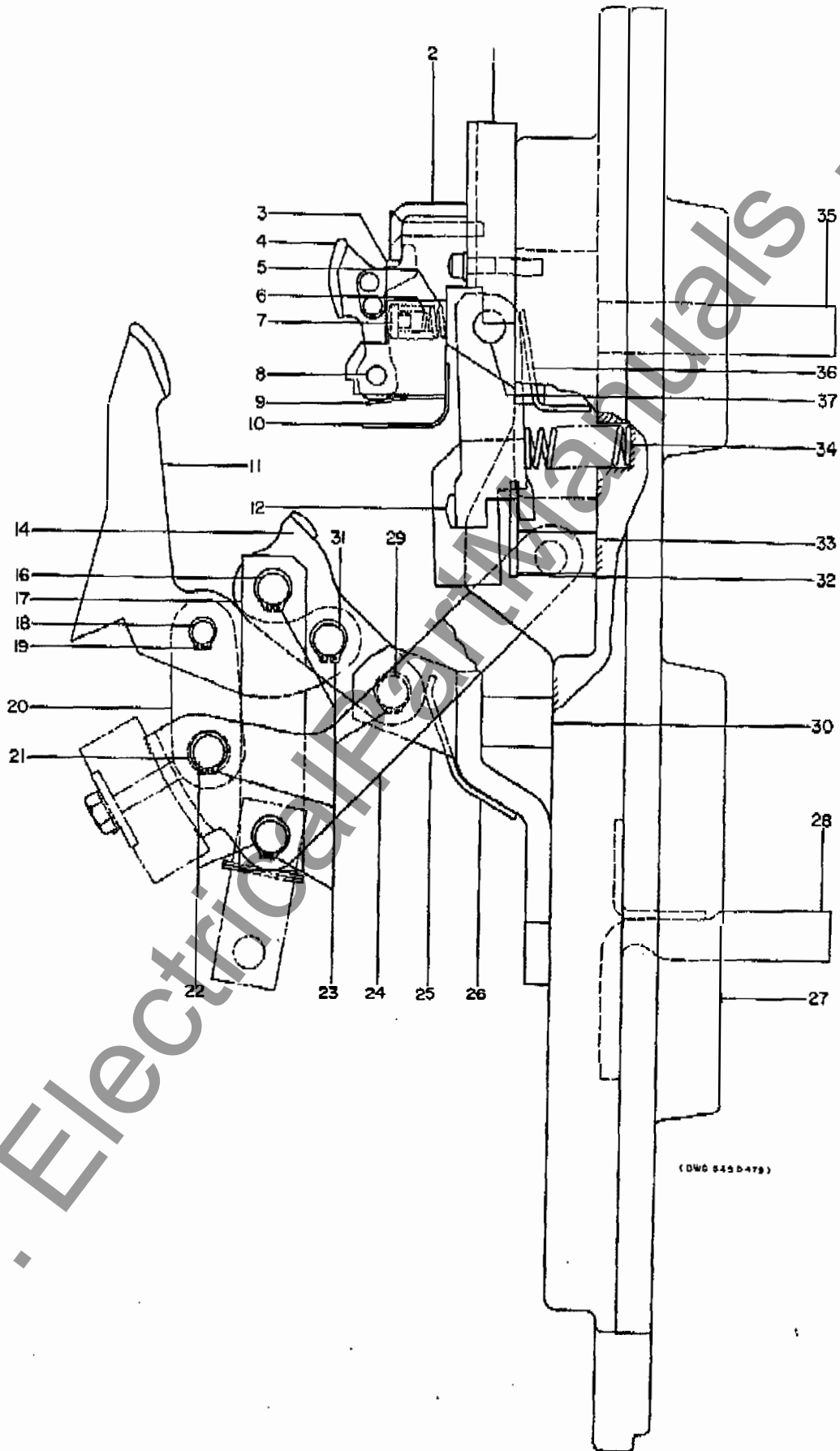
1. Always specify complete nameplate data of the breaker.
2. Specify the quantity, catalog number (if listed), reference number (if listed), description, and this bulletin number.
3. Standard hardware such as screws, bolts, nuts, washers, etc., is not listed in this bulletin. Such items should be purchased locally.
4. For prices, refer to the nearest office of the General Electric Company.



(PHOTO 8029416)

Manual breaker, Type AK-2-50

TYPE AK POWER CIRCUIT BREAKERS



(DWG 843 B-478)

Fig. 1. Pole unit

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TYPE AK POWER CIRCUIT BREAKERS

Fig. No.	Ref. No.	No. Required per Pole †												Cat. No.	Description
		AK-2-50			AK-2A-50			AK-3-50			AK-3A-50				
		Man.	Elec.	Man.	Elec.	Man.	Elec.	Man.	Elec.	Man.	Elec.				
1	1	1	1	1	1	1	1	1	1	1	1	1	1	371A208P1	Spacer
1	2	1	1	1	1	1	1	1	1	1	1	1	1	9921587P1	Stop, AK-50 AC
1	2	1	1	1	1	1	1	1	1	1	1	1	1	449A994P3	Stop, AK50 DC, AKU-50, AKT-50
1	3	1	1	1	1	1	1	1	1	1	1	1	1	117A512P1	Block, AK-50 AC
1	3	1	1	1	1	1	1	1	1	1	1	1	1	452A542P1	Block, AK50 DC, AKU-50, AKT-50*
1	*4	-	-	-	2	-	-	-	-	-	-	-	-	295B408G1	Stationary arcing contact, AK-50 AC
1	*4	-	-	-	3	-	-	-	-	-	-	-	-	295B408G1	Stationary arcing contact, AK-50 DC, AKU-50, AKT-50
1	*4	2	2	2	-	2	2	2	2	2	2	2	2	295B408G3	Stationary arcing contact, AK-50 AC
1	*4	3	3	3	-	3	3	3	3	3	3	3	3	295B408G3	Stationary arcing contact, AK-50 DC, AKU-50, AKT-50
1	*5	2	2	2	2	2	2	2	2	2	2	2	2	6509858P1	Spring for stationary arcing contacts, (outer) AK-50 AC
1	*5	3	3	3	3	3	3	3	3	3	3	3	3	6509858P1	Spring for stationary arcing contacts, (outer) AK50 DC, AKU-50, AKT-50
1	*6	2	2	2	2	2	2	2	2	2	2	2	2	6509859P1	Spring for stationary arcing contacts, (inner) AK-50 AC
1	*6	3	3	3	3	3	3	3	3	3	3	3	3	6509859P1	Spring for stationary arcing contacts, (inner) AK-50 DC, AKU-50, AKT-50
1	7	2	2	2	2	2	2	2	2	2	2	2	2	6447046P1	Spring guide for stationary arcing contact springs, AK-50 AC
1	7	3	3	3	3	3	3	3	3	3	3	3	3	6447046P1	Spring guide for stationary arcing contact springs, AK-50 DC, AKU-50, AKT-50
1	8	1	1	1	1	1	1	1	1	1	1	1	1	6404793P3	Pivot pin for stationary arcing contacts, AK-50 AC
1	8	1	1	1	1	1	1	1	1	1	1	1	1	6404793P2	Pivot pin for stationary arcing contacts, AK-50 DC, AKU-50, AKT-50
1	9	1	1	1	1	1	1	1	1	1	1	1	1	433A319P2	Leaf spring for stationary arcing contacts, AK-50 AC
1	9	1	1	1	1	1	1	1	1	1	1	1	1	433A319P1	Leaf spring for stationary arcing contacts, AK-50 DC, AKU-50, AKT-50
1	10	1	1	1	1	1	1	1	1	1	1	1	1	459A373P3	Insulation for stationary arcing contacts, AK-50 AC
1	10	1	1	1	1	1	1	1	1	1	1	1	1	459A373P1	Insulation for stationary arcing contacts, AK-50 DC, AKU-50, AKT-50
1	*11	2	2	2	2	2	2	2	2	2	2	2	2	9921572G2	Moving arcing contact, AK-50 AC
1	*11	3	3	3	3	3	3	3	3	3	3	3	3	9921572G2	Moving arcing contact, AK-50 DC, AKU-50, AKT-50
1	*12	3	3	3	3	3	3	3	3	3	3	3	3	293B221G1	Stationary main contact
2	*13	1	1	1	1	1	1	1	1	1	1	1	1	469A385G1	Stationary intermediate contact (includes barrier)
1	*14	3	3	3	3	3	3	3	3	3	3	3	3	293B220G7	Moving main contacts
2	*15	1	1	1	1	1	1	1	1	1	1	1	1	293B220G4	Moving intermediate contact
1	16	1	1	1	1	1	1	1	1	1	1	1	1	462A528P1	Pin for movable main contact
1	17	2	2	2	2	2	2	2	2	2	2	2	2	6404784P4	Link for movable main contact
1	18	1	1	1	1	1	1	1	1	1	1	1	1	6447153P3	Pin for movable arcing contact link, AK-50 AC
1	18	1	1	1	1	1	1	1	1	1	1	1	1	6447153P1	Pin for movable arcing contact link, AK-50 DC, AKU-50, AKT-50
1	19	2	2	2	2	2	2	2	2	2	2	2	2	394A133P9	Retainer
1	20	1	1	1	1	1	1	1	1	1	1	1	1	275B975P1	Link for movable arcing contact, AK-50 AC
1	20	2	2	2	2	2	2	2	2	2	2	2	2	275B975P1	Link for movable arcing contact, AK-50 DC, AKU-50, AKT-50
1	21	1	1	1	1	1	1	1	1	1	1	1	1	6447741P1	Insulating tube
1	22	2	2	2	2	2	2	2	2	2	2	2	2	8203981P1	Pin for side link
1	23	10	10	10	10	10	10	10	10	10	10	10	10	394A133P10	Retainer
1	24	1	1	1	1	1	1	1	1	1	1	1	1	457A624G1	Side link, right
1	24	1	1	1	1	1	1	1	1	1	1	1	1	457A624G2	Side link, left
1	25	1	1	1	1	1	1	1	1	1	1	1	1	452A569G2	Terminal
1	26	1	1	1	1	1	1	1	1	1	1	1	1	452A529P1	Leaf spring for movable main contacts
1	27	1	1	1	1	1	1	1	1	1	1	1	1	6414314P2	Pole unit base
1	28	1	1	1	1	1	1	1	1	1	1	1	1	452A564G1	Lower stud
1	29	1	1	1	1	1	1	1	1	1	1	1	1	6203981P9	Pivot pin for movable main contacts
1	30	1	1	1	1	1	1	1	1	1	1	1	1	293B287P3	Spacer for terminal
1	31	1	1	1	1	1	1	1	1	1	1	1	1	6203981P13	Pivot pin for movable arcing contact
1	32	1	1	1	1	1	1	1	1	1	1	1	1	453A116P1	Stop for stationary main contacts
1	33	-	-	-	-	-	-	-	-	-	-	-	-	453A118P2	Spacer for stationary main contact stop
1	33	1	1	1	1	1	1	1	1	1	1	1	1	453A118P3	Spacer for stationary main contact stop
1	34	-	-	-	4	-	-	-	-	-	-	-	-	6509893P1	Spring for stationary main contacts
1	34	4	4	4	-	4	4	4	4	4	4	4	4	412A0287P1	Spring for stationary main contacts
1	35	1	1	1	1	1	1	1	1	1	1	1	1	293B240G1	Upper stud, AK-50 AC
1	35	1	1	1	1	1	1	1	1	1	1	1	1	293B240G2	Upper stud, AK-50 DC, AKU-50, AKT-50
1	36	1	1	1	1	1	1	1	1	1	1	1	1	449A995P1	Leaf spring for stationary main contacts
1	37	1	1	1	1	1	1	1	1	1	1	1	1	6447734P2	Pivot pin for stationary main contacts
3	38	1	1	1	1	1	1	1	1	1	1	1	1	238D674G1	Arc quencher, AK-50 AC
3	38	1	1	1	1	1	1	1	1	1	1	1	1	238D674G2	Arc quencher, AK-50 DC, AKU-50, AKT-50

† To determine quantity required per breaker multiply by number of poles (2, 3 or 4).
 ‡ Original breaker had no suffix letter or numeral.
 * Recommended for stock for normal maintenance.

TYPE AK POWER CIRCUIT BREAKERS

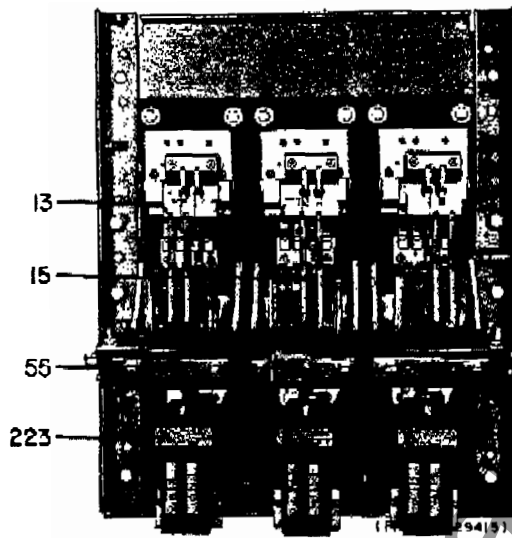


Fig. 2. Back frame assembly

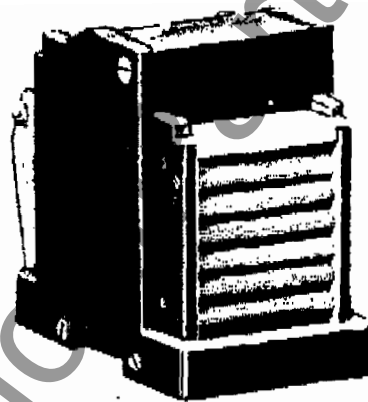


Fig. 3. Arc quencher (Ref. No. 38)

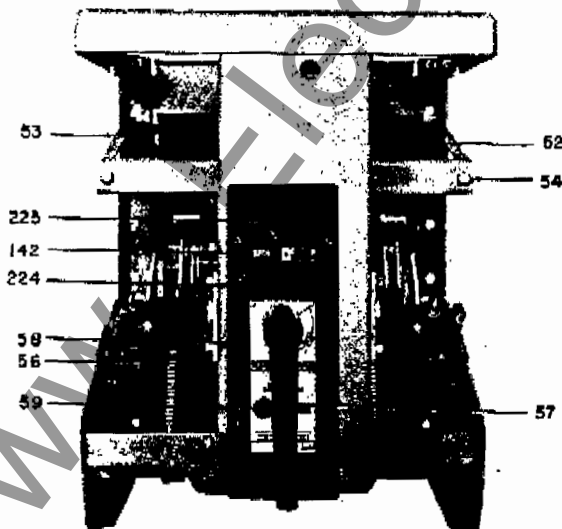


Fig. 4. AK-2-50 manual

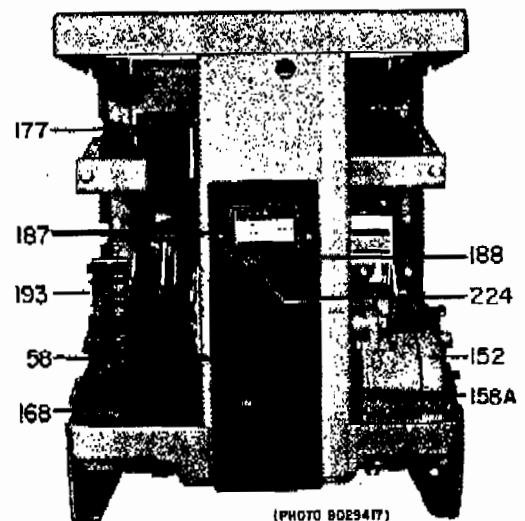


Fig. 5. AK-2-50 electrical

TYPE AK POWER CIRCUIT BREAKERS

Fig. No.	Ref. No.	No. Required per Pole †										Cat. No.	Description	
		AK-2-50					AK-2A-50		AK-3-50		AK-3A-50			
		Man.	-1	-2	†	-1	-2	†	†	†	†			†
*	51	2	2	2	2	2	2	2	2	2	2	2	6414763P1	Phase barrier
4	52	1	1	1	1	1	1	-	-	-	-	-	372A275G1	Lifting bracket, right (pearl gray)
4	52	1	1	1	1	1	1	-	-	1	1	-	372A275G3	Lifting bracket, right (sand gray)
4	53	1	1	1	1	1	1	-	-	-	-	-	372A275G2	Lifting bracket, left (pearl gray)
4	53	1	1	1	1	1	1	-	-	1	1	-	372A275G4	Lifting bracket, left (sand gray)
4	54	1	1	1	1	1	1	-	-	-	-	-	9921630P1	Arc quencher tie bar (pearl gray)
4	54	1	1	1	1	1	1	-	-	1	1	-	9921630P3	Arc quencher tie bar (sand gray)
4	54	-	-	-	-	-	-	1	1	-	-	1	9921630P2	Arc quencher tie bar
2	55	1	1	1	1	1	1	1	1	1	1	1	267B101P2	Gross bar
4	56	2	2	2	2	2	2	2	2	2	2	2	6509914P1	Opening spring, AC (not used on AKU or AKT)
4	56	2	2	2	2	2	2	2	2	2	2	2	6509813P1	Opening spring, AC (AKU or AKT)
4	56	2	2	2	2	2	2	2	2	-	-	-	6509813P1	Opening spring, DC
4	57	1	1	1	-	-	-	-	-	-	-	-	6546046P3	Handle (black)
17	57	-	-	1	-	-	-	-	-	-	-	1	669D0807P2	Handle (gray)
4	58	1	1	1	-	-	-	-	-	-	-	-	608C007P1	Front escutcheon (black)
5	58	-	-	-	1	1	1	-	-	-	-	-	275B997P2	Front escutcheon (w/o closing switch, black)
*	58	-	-	-	1	1	1	-	-	-	1	-	805B075P1	Front escutcheon (with closing switch black)
*	58	-	-	1	-	-	-	1	-	-	-	1	608C007P5	Front escutcheon (blue)
*	58	-	-	-	-	-	1	-	-	-	-	1	805B075P2	Front escutcheon (blue)
4	59	1	1	1	1	1	1	1	1	1	1	1	411A904G5	Trip button and rod assembly
*	60	1	1	1	1	1	1	1	1	1	1	1	412A139	Trip button spring
7	61	1	1	1	1	1	1	1	1	1	1	1	6203939P3	Hand, trip paddle
*	62	1	1	1	1	1	1	1	1	1	1	1	102A0567P1	Clamp
7	63	2	2	2	2	2	2	2	2	2	2	2	276B250P1	Trip shaft (outside)
7	64	2	2	2	2	2	2	2	2	2	2	2	174V536P1	Coupling
7	65	2	2	2	2	2	2	2	2	2	2	2	127A0493P2	Dowel pin
8	66	1	1	1	1	1	1	1	1	1	1	1	276B250P2	Trip shaft (center)
*	67	2	2	2	2	2	2	2	2	2	2	2	394A133P1	Retainer
*	68	4	4	4	4	4	4	4	4	4	4	4	192A9653P4	Trip shaft bearing (side sheets and mechanism frame)
*	69	2	2	2	2	2	2	2	2	2	2	2	394A133P16	Retainer
6	74	1	1	1	1	1	1	1	1	1	1	1	174V531P1	Pin
6	75	6	6	6	6	6	6	6	6	6	6	6	394A183P10	Retainer

† To determine quantity required per breaker multiply by number of poles (2 or 3).

* Not shown.

† Original breaker had no suffix letter or numeral.

FIG. NO. 5, REF. NO. 152 - GEAR BOXES

177L316 and 177L362 gear boxes are no longer manufactured for AK-50, 75, 100 breakers. A modification of the AKR design electrical closing assembly is available to replace these units. The replacement unit will include a new closing motor. Select replacement for 175L316G1 or G2 gear box from Column 1. Replacements for 177L362G2 should be selected from Columns 1 to 4, for G3 select from Columns 5 to 8.

REPLACEMENT KIT CAT. NO. 343L761 (Select Group Number Below)

Column		Conventional Close Type				Quick Close Type			
		1	2	3	4	5	6	7	8
Volts	Hertz	AK-1-50, 75, 100	AK-2A-50	AKT-2A-50	AK-2A-75, 100	AK-2-50, 75, 100	AK-2A-50	AKT-2A-50	AK-2A-75, 100
		AK-2-50, 75, 100	AK-3A-50	AKT-3A-50	AK-3A-75, 100	AK-3-50, 75, 100	AK-3A-50	AKT-3A-50	AK-3A-75, 100
		AK-3-50, 75, 100	Includes AKU				Includes AKU		
48	DC	G37	G49	G61	G37	G28	G49	G61	G37
125	DC	G38	G50	G62	G38	G29	G50	G62	G38
250	DC	G39	G51	G63	G39	G30	G51	G63	G39
120	60	G40	G52	G64	G40	G31	G52	G64	G40
208	60	G44	G56	G68	G44	G34	G56	G68	G44
240	60	G43	G55	G67	G43	G34	G55	G67	G43
120	50	G41	G53	G65	G41	G32	G53	G65	G41
208	50	G46	G58	G70	G46	G35	G58	G70	G46
240	50	G45	G57	G69	G45	G35	G57	G69	G45

TYPE AK POWER CIRCUIT BREAKERS

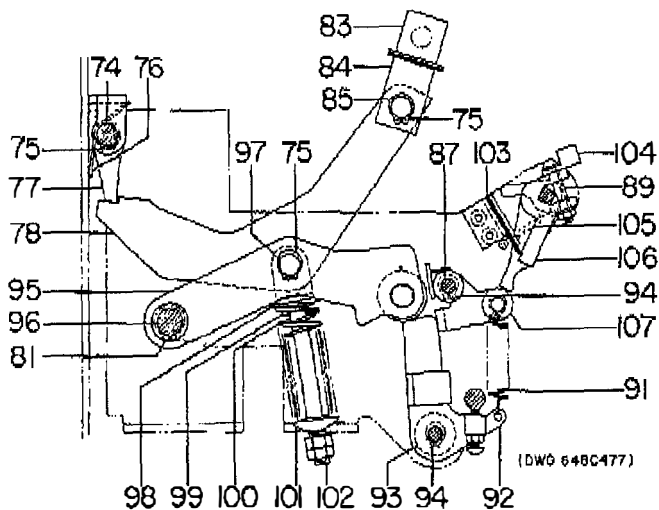


Fig. 6. AK-2-50 mechanism assembly

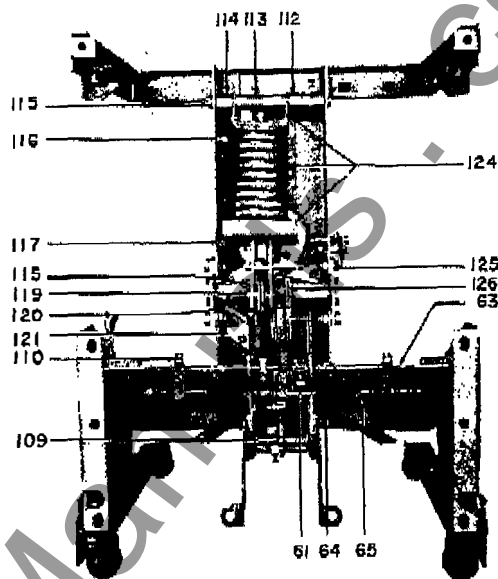


Fig. 7. AK-2-50 manual front frame assembly

Fig No.	Ref. No.	No. Required per Breaker								Cat. No.	Description			
		AK-2-50		AK-2A-50		AK-3-50		AK-3A-50						
		Man.	Elec.	Man.	Elec.	Man.	Elec.	Man.	Elec.					
6	76	1	1	1	1	1	1	1	1	1	1	412A140P1	Spring	
6	77	1	1	1	1	1	1	1	1	1	1	419A366P1	Prop	
6	78	1	1	1	1	1	1	1	1	1	1	6414743P1	Cam	
6	83	1	1	1	1	1	1	1	1	1	1	6555414P2	Coupling	
6	84	1	1	1	1	1	1	1	1	1	1	412A413P3	Clevis	
6	85	1	1	1	1	1	1	1	1	1	1	412A405P414	Pin	
6	87	1	1	1	1	1	1	1	1	1	1	6447744P1	Pin	
*	88	-	-	-	-	-	-	-	-	-	-	-	457A610G1	Reset latch
6	89	1	1	1	1	1	1	1	1	1	1	6444916P1	Latch bolt	
*	90	-	-	-	-	-	-	-	-	-	-	-	6414764P1	Latch
6	91	1	1	1	1	1	1	1	1	1	1	6403348P1	Spring	
6	92	1	1	1	1	1	1	1	1	1	1	698C993G1	Prop	
6	93	2	2	2	2	2	2	2	2	2	2	377A871P2	Prop shaft bearing	
6	94	4	4	4	4	4	4	4	4	4	4	394A133P9	Retainer	
6	95	1	1	1	1	1	1	1	1	1	1	457A622G1	Link assembly	
6	96	1	1	1	1	1	1	1	1	1	1	6447099P1	Pin	
6	97	1	1	1	1	1	1	1	1	1	1	6447091P1	Pin	
6	98	1	1	1	1	1	1	1	1	1	1	6447331P1	Spring guide (upper)	
6	99	1	1	1	1	1	1	1	1	1	1	148A2213P1	Spring reset (inner)	
6	100	1	1	1	1	1	1	1	1	1	1	148A2214P1	Spring reset (outer)	
6	101	1	1	1	1	1	1	1	1	1	1	6447353P1	Spring guide (lower)	
6	102	1	1	1	1	1	1	1	1	1	1	6203914G1	Spring support assembly	
6	103	1	1	1	-	-	1	1	1	-	1	1	457A627G1	Buffer assembly
6	104	1	1	1	1	1	1	1	1	1	1	1	383A671G2	Counter weight
6	105	1	1	1	1	1	1	1	1	1	1	1	6403366P1	Trip shaft return spring
6	106	1	1	1	-	-	1	1	1	-	1	1	848C0487P1	Latch
6	107	1	1	1	-	-	1	1	1	-	1	1	889B0410G1	Reset latch
7	109	1	1	1	1	1	1	1	1	1	1	1	412A412P2	Prop stop
7	110	3	3	3	3	3	3	3	3	3	3	3	269C267G5	Trip paddle

* Not shown.

† Original breaker had no suffix letter or numeral.

TYPE AK POWER CIRCUIT BREAKERS

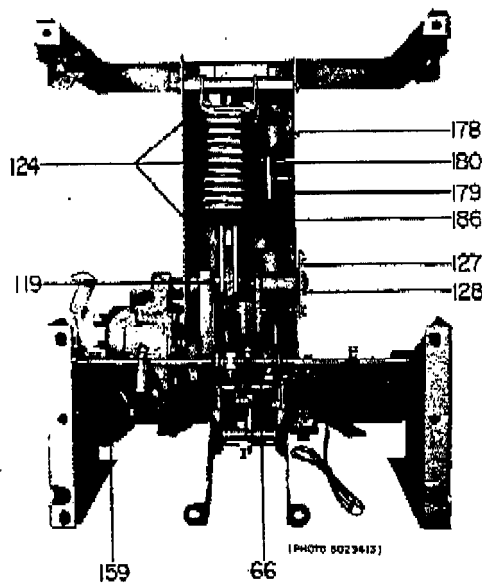


Fig. 8. AK-2-50 electrical front frame assembly

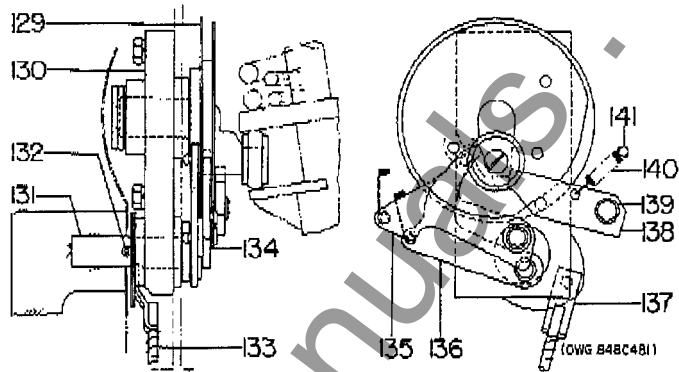


Fig. 9. AK-2-50 manual closing mechanism

Fig. No.	Ref. No.	No. Required per Breaker										Cat. No.	Description
		AK-2-50		AK-2A-50		AK-3-50		AK-3A-50					
		Man.	Elec.	Man.	Elec.	Man.	Elec.	Man.	Elec.				
		†	†	†	†	†	†	†	†				
*	111	1	1	1	1	1	1	1	1	1	1	6447787P1	Trip shaft stop
7	112	1	1	1	1	1	1	1	1	1	1	148A1946P10	Spacer
7	113	1	1	1	1	1	1	1	1	1	1	6447010P1	Upper spring guide assembly pin
7	114	1	1	1	1	1	1	1	1	1	1	148A1946P1	Spacer
7	115	4	4	4	4	4	4	4	4	4	4	394A133P4	Retaining ring
7	116	1	1	1	1	1	1	1	1	1	1	698C996G5	Pawl spring support (upper)
7	117	1	1	1	1	1	1	1	1	1	1	698C996G4	Pawl spring support (lower)
*	118	2	2	2	2	2	2	2	2	2	2	698C996P13	Pawl spring rollers
7	119	1	1	1	1	1	1	1	1	1	1	6447032P2	Lower spring guide assembly pin
8	119	1	1	1	1	1	1	1	1	1	1	6447032P1	Lower spring guide assembly pin
7	120	1	1	1	1	1	1	1	1	1	1	698C993P4	Buffer pin
7	121	1	1	1	1	1	1	1	1	1	1	698C993P3	Buffer support
*	122	1	1	1	1	1	1	1	1	1	1	698C993P5	Buffer washer
*	123	1	1	1	1	1	1	1	1	1	1	393A993P24	Buffer stop nut
7	124	1	1	1	1	1	1	1	1	1	1	889B0408G1	Spring guide assembly (closing)
8	124	1	1	1	1	1	1	1	1	1	1	273B569G9	Spring guide assembly (closing)
7	125	2	2	2	2	2	2	2	2	2	2	698C992G5	Support (includes bearing less outer race)
7	126	1	1	1	1	1	1	1	1	1	1	698C992G4	Crank (includes outer race of bearing)
8	127	1	1	1	1	1	1	1	1	1	1	893A554P1	Support
8	128	1	1	1	1	1	1	1	1	1	1	393A796P3	Bearing
9	129	1	1	1	1	1	1	1	1	1	1	698C987G2	Ratchet assembly
9	130	1	1	1	1	1	1	1	1	1	1	698C988G3	Support assembly
9	131	1	1	1	1	1	1	1	1	1	1	698C990G2	Shaft assembly
9	132	1	1	1	1	1	1	1	1	1	1	394A137P13	Roll pin
9	133	1	1	1	1	1	1	1	1	1	1	127A8306P1	Spring
9	134	1	1	1	1	1	1	1	1	1	1	394A133P28	Retainer
9	135	1	1	1	1	1	1	1	1	1	1	698C985G1	Pawl with spring (rear)
9	136	1	1	1	1	1	1	1	1	1	1	698C985G2	Pawl with spring (front)
9	137	1	1	1	1	1	1	1	1	1	1	846C817G1	Spring arm
9	138	1	1	1	1	1	1	1	1	1	1	698C991G5	Prop
9	139	1	1	1	1	1	1	1	1	1	1	394A133P3	Retainer
9	140	1	1	1	1	1	1	1	1	1	1	412A280 P1	Prop spring
9	141	1	1	1	1	1	1	1	1	1	1	698C991P10	Pin
4, 10	142	1	1	1	1	1	1	1	1	1	1	698C996G1	Indicator (when ordering indicator include label ref. No. 151)

* Not shown.
† Original breaker had no suffix letter or numeral.

TYPE AK POWER CIRCUIT BREAKERS

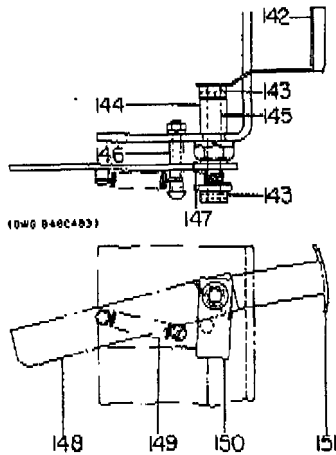


Fig. 10. AK-2-50 manual indicator assembly

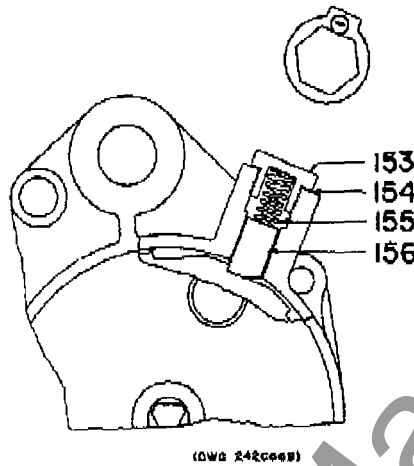


Fig. 11. Section of gear box

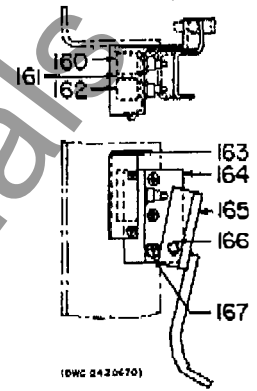


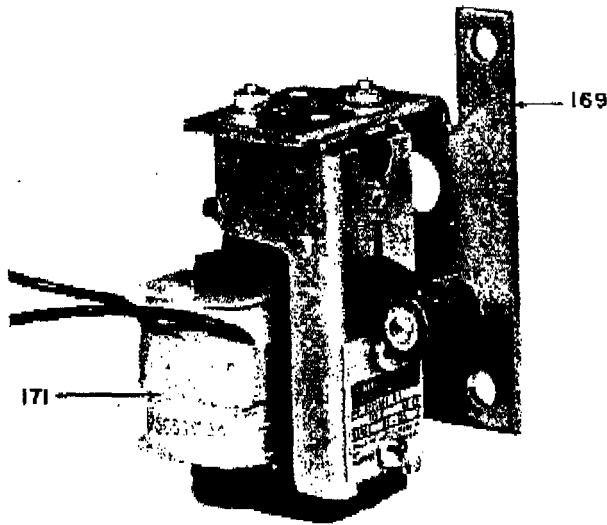
Fig. 12. Motor cut-off switch

Fig. No.	Ref. No.	No. Required per Breaker										Cat. No.	Description	
		AK-2-50		AK-2A-50		AK-3-50		AK-3A-50						
		Man.	Elec.	Man.	Elec.	Man.	Elec.	Man.	Elec.					
		†	†	†	†	†	†	†	†	†	†			
10	143	2	2	2	-	-	2	-	2	-	2	-	394A137P11	Roll Pin
10	144	1	1	1	-	-	1	-	1	-	1	-	698C995P2	Bearing
10	145	1	1	1	-	-	1	-	1	-	1	-	127A6493P3	Rod
10	146	1	1	1	-	-	1	-	1	-	1	-	698C995P14	Tube
10	147	1	1	1	-	-	1	-	1	-	1	-	412A267P1	Spring
10	148	1	1	1	-	-	1	-	1	-	1	-	698C995G1	Indicator lever assembly
10	149	1	1	1	-	-	1	-	1	-	1	-	412A0292P1	Spring
10	150	1	1	1	-	-	1	-	1	-	1	-	698C995G2	Indicator crank assembly
10	151	1	1	1	-	-	1	-	1	-	1	-	259C608P3	Open-close label
11	153	-	-	1	1	1	-	1	-	1	-	1	6447398P1	Plug
11	154	-	-	1	1	1	-	1	-	1	-	1	393A992P2	"O" ring for plug
11	155	-	-	1	1	1	-	1	-	1	-	1	6509871P1	Spring for ratchet pin
11	156	-	-	1	1	1	-	1	-	1	-	1	372A383P1	Ratchet pin
*	157	-	-	1	1	1	-	1	-	1	-	1	393A991P1	Lubricant for gear box (4 oz.)
*	158	-	-	1	1	1	-	1	-	1	-	1	6447101P1	Gasket motor
5	158A	-	-	1	1	1	-	1	-	1	-	1	6447102P1	Gasket, gear box end plate
8	159	-	-	1	1	1	-	1	-	1	-	1	5P66MA6A	Motor, 115 volts, 25, 50, 60 cycles and 125 volt DC
8	159	-	-	1	1	1	-	1	-	1	-	1	5P66MA7A	Motor, 208-230 volts, 25, 50, 60 cycles and 250 volt DC
12	160	-	-	1	1	1	-	1	-	1	-	1	192A7153P8	Cut-off switch "G"
12	161	-	-	1	1	1	-	1	-	1	-	1	192A9792P1	Cut-off switch insulation
12	162	-	-	1	1	1	-	1	-	1	-	1	192A7153P7	Cut-off switch "F"
12	163	-	-	1	1	1	-	1	-	1	-	1	371A235P1	Cut-off switch cover
12	164	-	-	1	1	1	-	1	-	1	-	1	371A233G1	Cut-off switch mounting bracket
12	165	-	-	1	1	1	-	1	-	1	-	1	371A234G1	Cut-off switch lever bracket
12	166	-	-	1	1	1	-	1	-	1	-	1	394A133P9	Cut-off switch retainer

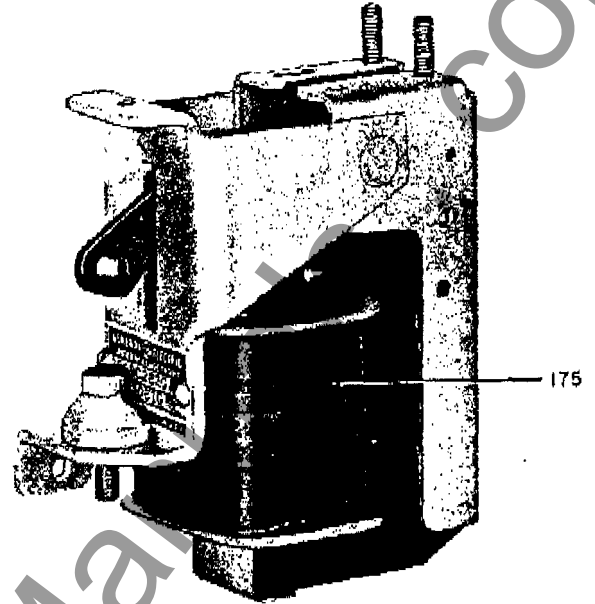
* Not shown.

† Original breaker had no suffix letter or numeral.

TYPE AK POWER CIRCUIT BREAKER



**Fig. 13. Shunt trip
(Ref. No. 170)**



**Fig. 14. Time delay undervoltage device
(Ref. No. 173)**

Fig. No.	Ref. No.	No. Required per Pole †												Cat. No.	Description
		AK-2-50				AK-2A-50		AK-3-50		AK-3A-50					
		Man	-1	-2	Elec.	Man	Elec.	Man	Elec.	Man	Elec.				
12	167	-	-	-	1	1	1	-	1	-	1	-	1	192A8404P41	Cut-off switch spacer
5	168	-	-	-	1	1	1	-	1	-	1	-	1	See Table "B"	Closing relay (X) - standard
5	168A	-	-	-	1	1	1	-	1	-	1	-	1	See Table "B"	Closing relay (X) - quick close
*	168B	-	-	-	1	1	1	-	1	-	1	-	1	See Table "B"	Anti-pump relay (W) - quick close
*	168C	-	-	-	1	1	1	-	1	-	1	-	1	See Table "B"	Closing solenoid - quick close
13	169	1	1	1	1	1	1	1	1	1	1	1	1	449A537P1	Shunt trip device support
13	170	1	1	1	1	1	1	1	1	1	1	1	1	See Table "A"	Shunt trip device (with coil)
13	171	1	1	1	1	1	1	1	1	1	1	1	1	See Table "A"	Shunt trip coil
*	172	1	1	1	1	1	1	1	1	1	1	1	1	423A380P1	Undervoltage device support
14	173	1	1	1	1	1	1	1	1	1	1	1	6	6	Time delay undervoltage device, AC
14	173	1	1	1	1	1	1	1	1	1	1	1	6	6	Time delay undervoltage device, DC
15	174	1	1	1	1	1	1	1	1	1	1	1	#	#	Static time delay, AC or DC (replaces complete oil displacement time delay undervoltage device)
14	175	1	1	1	1	1	1	1	1	1	1	1	1	See Table "A"	Undervoltage device coil
*	176	1	1	1	1	1	1	1	1	1	1	1	1	See Table "A"	Instantaneous undervoltage device, AC (with coil)
*	176	1	1	1	1	1	1	1	1	1	1	1	1	See Table "A"	Instantaneous undervoltage device, DC (with coil)
5	177	-	-	-	1	1	1	-	1	-	1	-	1	192A9791P3	Auxiliary switch 3 stage
5	177	-	-	-	1	1	1	-	1	-	1	-	1	192A9791P6	Auxiliary switch 6 stage
*	177	1	1	1	-	-	-	1	-	1	-	1	-	192A9791P2	Auxiliary switch 2 stage
*	177	1	1	1	-	-	-	1	-	1	-	1	-	192A9791P5	Auxiliary switch 5 stage
8	178	1	1	1	1	1	1	1	1	1	1	1	1	411A952G1	Auxiliary switch crank bracket
8	179	-	-	-	1	1	1	-	1	-	1	-	1	887B386G2	Auxiliary switch link assembly
8	179	1	1	1	-	-	-	1	-	1	-	1	-	887B386G1	Auxiliary switch link assembly
8	180	1	1	1	1	1	1	1	1	1	1	1	1	6447157P1	Tube
*	181	1	1	1	1	1	1	1	1	1	1	1	1	457A643P8	Groove pin
*	182	1	1	1	1	1	1	1	1	1	1	1	1	127A6483G2	Auxiliary switch operating rod
*	183	1	1	1	1	1	1	1	1	1	1	1	1	127A6439P1	Auxiliary switch coupling
*	184	2	2	2	2	2	2	2	2	2	2	2	2	6076402P203	Pin
*	185	1	1	1	-	-	-	1	-	1	-	1	-	887B387G1	Adjusting plate
8	186	-	-	-	1	1	1	-	1	-	1	-	1	6203934P1	Open and close indicator link
5	187	-	-	-	1	1	1	-	1	-	1	-	1	265E268G1	Open and close indicator
5	188	-	-	-	1	1	1	-	1	-	1	-	1	265E268G2	Charged and discharged indicator

* Not shown.

† Original breaker had no suffix letter or numeral.

‡ When ordering time delay undervoltage devices, the following information must be included:

(1) Complete nameplate reading of breaker involved.

(2) Desired voltage rating of device, whether a-c or d-c, and if a-c, the frequency.

Order by circuit breaker Serial No.

TYPE AK POWER CIRCUIT BREAKERS

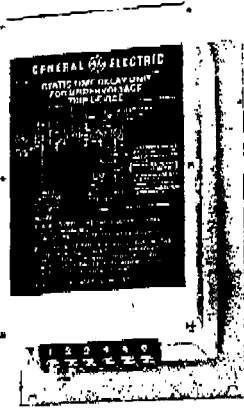


Fig. 15. Static time delay, (Ref. No. 174)

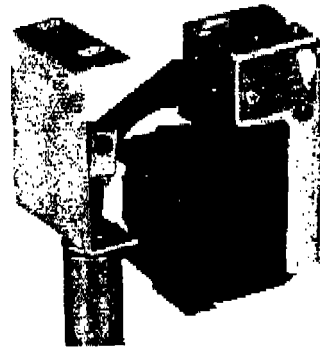


Fig. 15A. Oil-displacement type time-delay undervoltage tripping device.

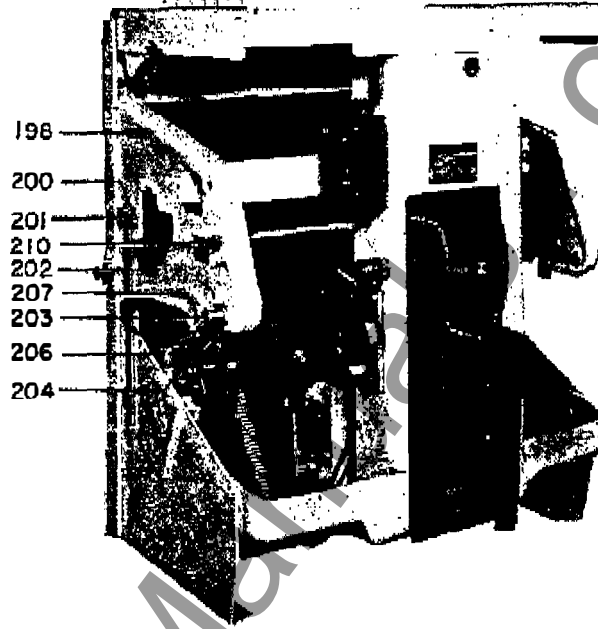


Fig. 16. AK-2A-50 manual

TABLE A

Volts	Hertz	Shunt Trip Device		Instantaneous Undervoltage Device		Time Delay Undervoltage Device†	
		Complete with Coil (less mounting) Reference 170 (Fig. 13)	Coil Only Reference 171	Complete with Coil (less mounting)	Coil Only for Instantaneous or Old Design Dashpot Type Time Delay	Complete with Coil (less mounting) Reference 173 (Fig. 14)	Coil Only Reference 175
24	DC	139C4378G1	6275081G55	568B309G1	6275081G15	-----	-----
48	DC	139C4378G3	6275081G38	568B309G2	6275081G9	-----	-----
125	DC	139C4378G4	6275081G29	568B309G3	6275081G18	568B309G5	6275081G61
250	DC	139C4378G5	6275081G30	568B309G4	6275081G19	568B309G6	6275081G59
70	60	139C4378G6	6275081G62	-----	-----	-----	-----
120	60	139C4378G7	6275081G25	568B309G7	6275081G28	-----	-----
120	50	139C4378G8	6275081G56	568B309G8	6275081G4	-----	-----
208	60	139C4378G10	6275081G28	568B309G10	6275081G27	568B309G24	6275081G59
208	50	139C4378G11	6275081G26	568B309G11	6275081G12	568B309G24	6275081G59
240	60	139C4378G13	6275081G26	568B309G13	6275081G7	568B309G24	6275081G59
240	50	139C4378G14	6275081G26	568B309G14	6275081G12	568B309G24	6275081G59
380	50	139C4378G17	6275081G27	568B309G17	6275081G31	-----	-----
480	50	139C4378G18	6275081G27	568B309G18	6275081G31	-----	-----
480	50	139C4378G19	6275081G4	568B309G19	6275081G3	-----	-----
575	60	139C4378G21	6275081G7	568B309G21	6275081G20	-----	-----
575	50	139C4378G22	6275081G29	568B309G22	6275081G8	-----	-----

NOTE: The static time undervoltage device (Fig. 14, Ref. 173) when used in combination with the static timing device (Fig. 15, Ref. 174) and a slight modification of breaker wiring will replace the older design oil-displacement type time delay undervoltage device shown in Fig. 15A.

TABLE B

CLOSING RELAYS AND COILS FOR CONVENTIONAL CLOSE AND QUICK CLOSE BREAKERS

Quick close breakers are identified by the letter "S" following the breaker type (i. e., AK-2A-50S-3).

Rating		For Conventional Close Breaker Closing Relay "X"	For Quick Close Breaker			
Volts	Hertz		"X" Relay		"W" Relay, Complete 6	*Closing Solenoid, Complete 6
			Relay, Complete	*Coil, Only		
125	D-C	12HGA11H52	192A9770P2	116B7197P203	192A9771P2	CR9500B202H3A
250		12HGA11H51	192A9770P3	116B7197P204	192A9771P3	CR9500B202H4A
115		12HGA11H74	192A9770P5	116B7197P206	192A9771P4	CR9500B102A6A
208	50	12HGA11H75	192A9770P7	116B7197P209	192A9771P5	CR9500B102A7A
230		12HGA11H75	192A9770P9	116B7197P212	192A9771P6	CR9500B102A7A
115		12HGA11H70	192A9770P4	116B7197P205	192A9771P4	CR9500B102A2A
208	60	12HGA11H71	192A9770P6	116B7197P208	192A9771P5	CR9500B102A3A
230		12HGA11H71	192A9770P8	116B7197P211	192A9771P6	CR9500B102A3A

* Recommended for stock for normal maintenance.
6 Only complete relay furnished.

TYPE AK POWER CIRCUIT BREAKERS

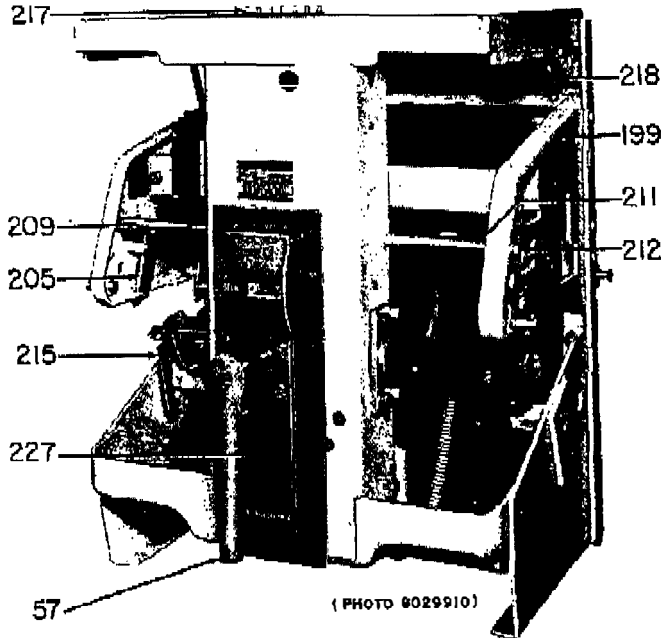


Fig. 17. AK-2A-50 manual

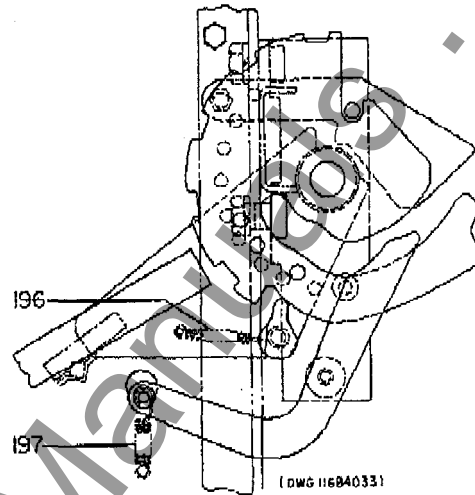


Fig. 18. Drawout racking mechanism, (Ref. No. 195)

Fig. No.	Ref. No.	No. Required per Breaker										Cat. No.	Description	
		AK-2-50		AK-2A-50		AK-3-50		AK-3A-50						
		Man.	Elec.	Man.	Elec.	Man.	Elec.	Man.	Elec.	Man.	Elec.			
		†-1	-2	†-1	-2	†	†	†	†	†	†			
*	189	-	-	1	1	1	-	1	-	1	-	1	174V532P1	Pin for indicator
*	190	-	-	3	3	3	-	3	-	3	-	3	394A133P1	Retainer for indicator
*	191	-	-	2	2	2	-	2	-	2	-	2	6176109P7	Spacer for indicator
*	192	-	-	1	1	1	-	1	-	1	-	1	365A305P1	Spring for indicator
5	193	-	-	1	1	1	-	-	-	1	-	-	6293908G186	Terminal board (4 point)
5	193	1	1	1	1	1	-	-	1	1	-	-	6293908G168	Terminal board (6 point)
*	194	1	1	1	1	1	-	-	1	1	-	-	6423721P4	Terminal board support
*	194	-	-	-	-	-	-	-	-	-	-	-	9921543P1	Terminal board support
18	195	1	1	1	1	1	-	-	1	1	-	-	238D689G1	Drawout racking mechanism assembly
18	196	1	1	1	1	1	-	-	1	1	-	-	365A313P1	Pawl spring
18	197	1	1	1	1	1	-	-	1	1	-	-	412A135P1	Link spring
16	198	-	-	-	-	-	1	1	-	-	1	1	669D0819G1	Upper side sheet (left hand side)
17	199	-	-	-	-	-	1	1	-	-	1	1	669D0819G2	Upper side sheet (right hand side)
16	200	-	-	-	-	2	2	-	-	2	2	-	888B0420P1	Wheel
16	201	-	-	-	-	2	2	-	-	2	2	-	888B0420P2	Shaft
18	202	-	-	-	-	1	1	-	-	1	1	-	846C0839G1	Interlock link assembly
16	203	-	-	-	-	4	4	-	-	4	4	-	192A6976P53	Mounting stud
16	204	-	-	-	-	4	4	-	-	4	4	-	148A1988P1	Jam nut
17	205	-	-	-	-	1	1	-	-	1	1	-	846C0839P1	Latch
16	206	-	-	-	-	1	1	-	-	1	1	-	6076401P12	Pin
16	207	-	-	-	-	1	1	-	-	1	1	-	177L292P53	Rivet
*	208	-	-	-	-	1	1	-	-	1	1	-	846C0839P10	Latch spring, in back of Ref. 205
17	209	-	-	-	-	1	1	-	-	1	1	-	148A1946P5	Spacer (left)
16	210	-	-	-	-	1	1	-	-	1	1	-	177L292P58	Screw (left)
17	211	-	-	-	-	1	1	-	-	1	1	-	148A1946P6	Spacer (right)
17	212	-	-	-	-	1	1	-	-	1	1	-	177L292P59	Screw (right)
*	213	-	-	-	-	1	1	-	-	1	1	-	6203939P5	Trip paddle
*	214	-	-	-	-	1	1	-	-	1	1	-	192A9567P1	Clamp
17	215	-	-	-	-	1	1	-	-	1	1	-	801B138G4	Anti rebound hook and slider
*	216	1	1	1	1	1	1	1	1	1	1	1	265B237P1	Secondary disconnect support
17	217	x	x	x	x	x	x	x	x	x	x	x	385A110G2	Secondary disconnect device (7 pt.)
17	218	1	1	1	1	1	1	1	1	1	1	1	362A494P1	Insulation
*	219	2	2	2	2	2	2	2	2	2	2	2	6176109P7Z	Spacer

† Original breaker had no suffix letter or numeral.
 x Order as required. Quantity of 3 maximum for AK-50 Breakers.
 * Not shown.

TYPE AK POWER CIRCUIT BREAKERS

Fig. No.	Ref. No.	No. Required per Breaker										Cat. No.	Description		
		AK-2-50		AK-2A-50		AK-3-50		AK-3A-50							
		Man.	Elec.	Man.	Elec.	Man.	Elec.	Man.	Elec.						
		†	1-2	†	1-2	†	†	†	†	†	†				
19A	220	3	3	3	3	3	3	3	3	3	3	846C278G6	Movable primary disconnect (not used on AKT)		
19B	220A	3	3	3	3	3	3	6	6	6	6	6	6	132C2655G1	Movable primary disconnect (for AKT only)
*	221	-	-	1	1	1	-	1	-	1	-	1	568B386G1	Maintenance handle	
*	222	-	-	1	1	1	-	1	-	1	-	1	805B949G1	Closing switch	
2	223	3	3	3	3	3	3	3	3	3	3	3	0	Overcurrent trip device	
5	224	-	-	2	2	2	-	2	-	2	-	2	174V595P1	Window	
4	224	1	1	1	-	-	1	-	1	-	1	-	289C272P8	Window (open and close)	
4	225	1	1	1	-	-	1	-	1	-	1	-	698C997P2	Window (charge indicator) (when ordering window include label Ref. No. 226)	
*	226	1	1	1	-	-	1	-	1	-	1	-	698C997P4	Label (charge indicator)	
17	227	-	-	1	-	-	1	-	-	-	1	-	NP148A1048	Bib for front esc. (manual) (blue)	
17	227	-	-	-	-	1	-	1	-	-	-	1	NP148A1049	Bib for front esc. (elec. breaker w/o closing switch) (blue)	
17	227	-	-	-	-	1	-	1	-	-	-	1	NP148A1050	Bib for front esc. (elec. breaker with closing switch) (blue)	

* Not shown.

† Original breaker had no suffix letter or numeral.

0 (1) No parts furnished for field installation on EC-1 trip devices.

(2) Only part furnished for field installation on EC-2 or EC-2A trip devices is plastic cover, Cat. No. 242C645P1.

(3) When replacement trip devices are ordered, it is imperative that order includes complete nameplate reading of the breaker or breakers involved and, if a contemplated ampere rating change is involved, the order should also include information as to ampere rating, time-current characteristic, and instantaneous trip setting desired.

NOTE:

Illustrations and catalog numbers listed on the following pages apply only to Type AK-3-50 and AK-3A-50 breakers.

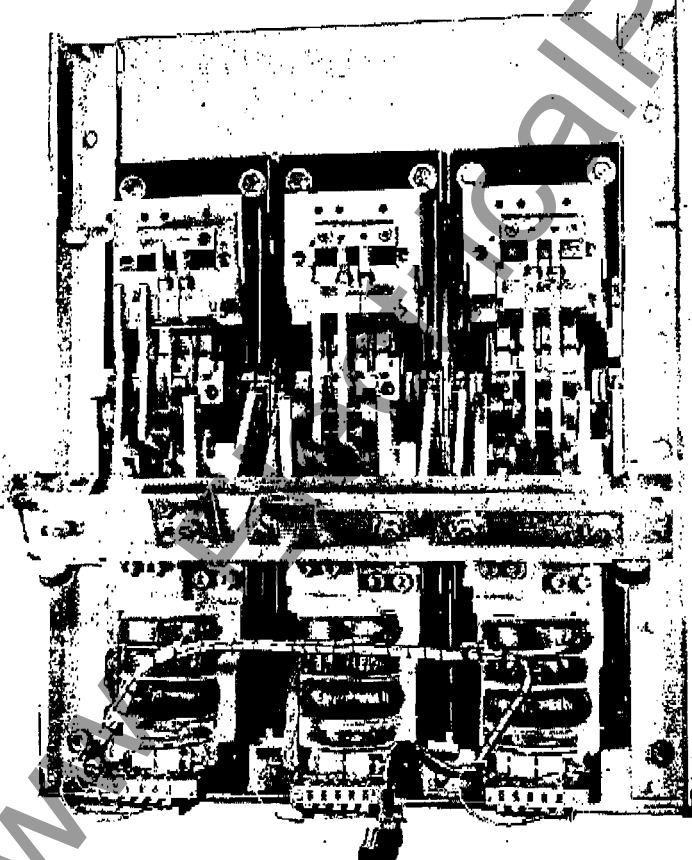


Fig. 19. Front view of backframe assembly—AK-3-50

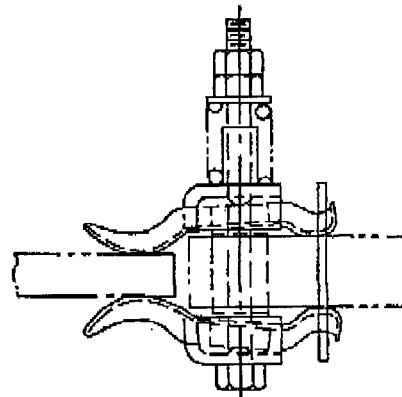


Fig. 19A. Primary disconnect assembly (for AK-50), Ref. No. 220.

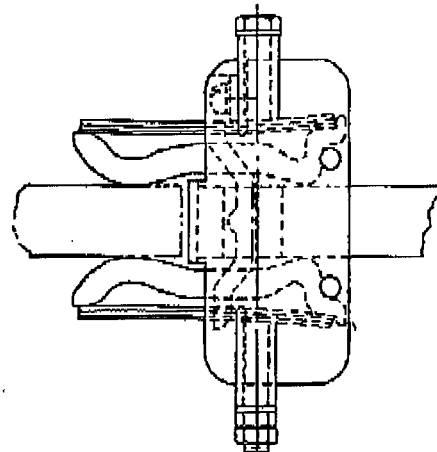


Fig. 19B. Primary disconnect assembly (for AKT-50), Ref. No. 220A.

TYPE AK POWER CIRCUIT BREAKERS

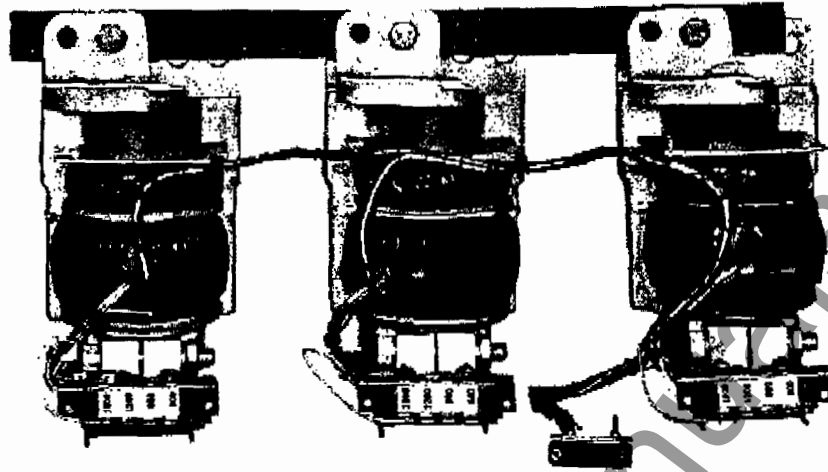


Fig. 20. Magnetic coil assembly for AK-3-50 breakers

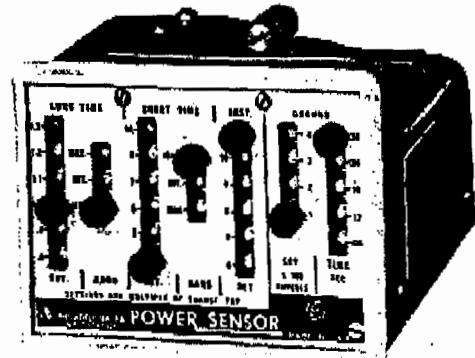
Magnetic Sensor Coils - Assembly

TABLE C

Without ground trip			With ground trip		
Pole	Rating	Cat. No.	Pole	Rating	Cat. No.
3P	200/600	0133C1555 G5	3P	200/600	0133C1555 G9
3P	600/1600	0133C1555 G7	3P	600/1600	0133C1555 G11
3P For AKT-3/3A-50	800/2000	0133C1555 G14	3P For AKT-3/3A-50	800/2000	0133C1555 G16



Fig. 21. Power supply unit



**Fig. 22. Power sensor unit
(See Table D)**

Power Supply Units - Cat. No. 0152C9262G10

TYPE AK POWER CIRCUIT BREAKERS

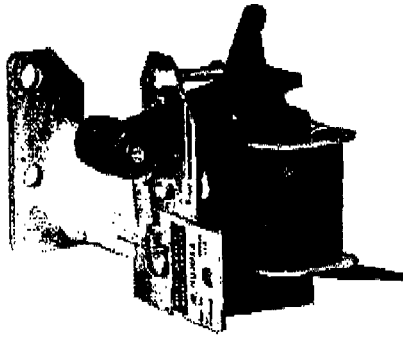


Fig. 23. Magnet trip device with mounting bracket

Magnet Trip Device with Mounting
Bracket - Cat. No. 184L389G1

**TABLE D POWER SENSOR LOGIC UNIT,
 TYPE PS-1A**

Trip Elements				Cat. No.
L	S _(LO)	I	G	184L410G52
L	S _(HI)	I	G	184L410G55
L	S _(LO)	-	G	184L410G61
L	S _(HI)	-	G	184L410G64
L	-	I	G	184L410G58
-	S _(LO)	I	G	184L410G67
-	S _(HI)	I	G	184L410G70
-	S _(LO)	-	G	184L410G73
-	S _(HI)	-	G	184L410G76
-	-	I	G	184L410G79
L	S _(LO)	I	-	184L410G41
L	S _(HI)	I	-	184L410G42
L	S _(LO)	-	-	184L410G44
L	S _(HI)	-	-	184L410G45
L	-	I	-	184L410G43
-	S _(LO)	I	-	184L410G46
-	S _(HI)	I	-	184L410G47
-	S _(LO)	-	-	184L410G48
-	S _(HI)	-	-	184L410G49
-	-	I	-	184L410G50

L = Long time-delay element
 S_(LO) = Short time-delay element (2 to 5X range)
 S_(HI) = Short time-delay element (4 to 10X range)
 I = Instantaneous trip element
 G = Ground fault protective element



Fig. 24. Ground sensor coil with neutral mounting

Fourth Wire Grid Sensor Coils - Cat. No. 0152C9219G1

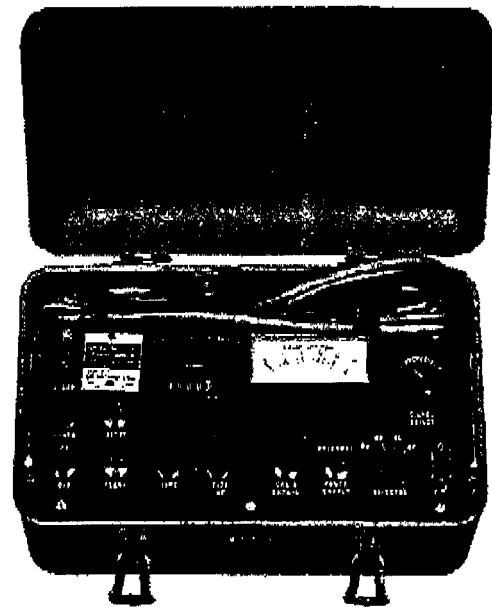


Fig. 25. Power sensor kit

Power Sensor Test Kit - Cat. No. 0102D2526G10