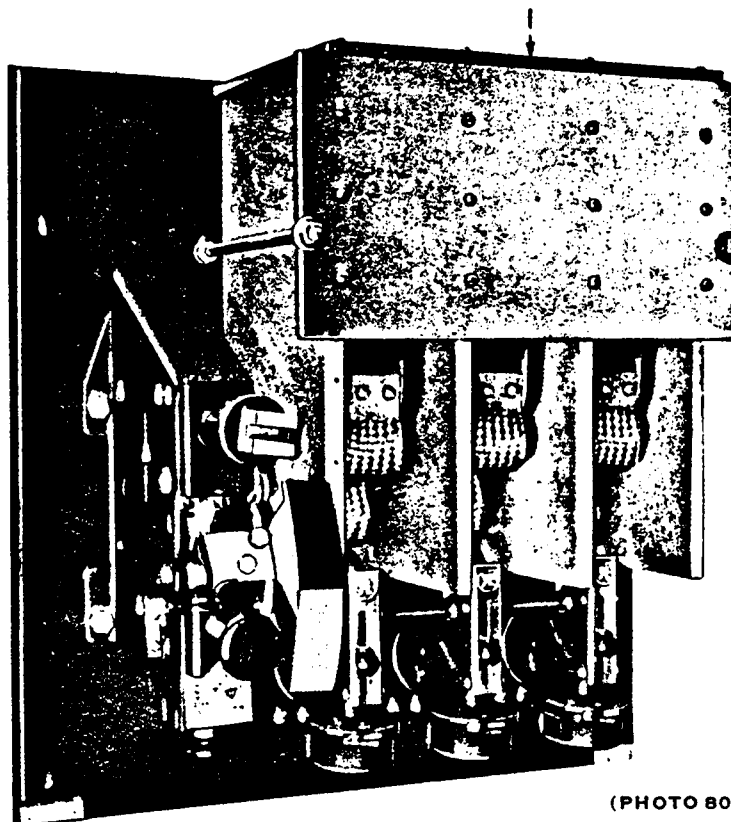


TYPE AE-1-25 AIR CIRCUIT BREAKERS AND TYPE AEF-1 FIELD BREAKERS

(Formerly Types AE-1, AE-1-B, and AEF-1-B)



(PHOTO 8001433)

Fig. 1. Type AE-1-25 air circuit breaker for dead-front switchgear mounting, manually operated, less operating handle, with box barrier

ORDERING INSTRUCTIONS

1. Always specify the complete nameplate reading of the breaker.
2. Specify the quantity, catalog number, reference number, description of part, and this bulletin number.
3. CAUTION - When local facilities for breaker recalibration are not available, springs should not be replaced. For repair, the breaker should be forwarded to the nearest G-E Service Shop, or to the General Electric Company, 6901 Elmwood Avenue, Philadelphia, Pa.
4. Standard hardware, such as screws, bolts, nuts, washers, etc., is not listed in this bulletin. These items should be purchased locally, if feasible. Special hardware is included in the Cat. No. of the listed part.
5. For prices, refer to the nearest office of the General Electric Company.

When ordering renewal parts, give quantity, catalog number, description of each item required, and complete nameplate reading.

GENERAL  ELECTRIC

TYPE AE-1-25 AIR CIRCUIT BREAKERS

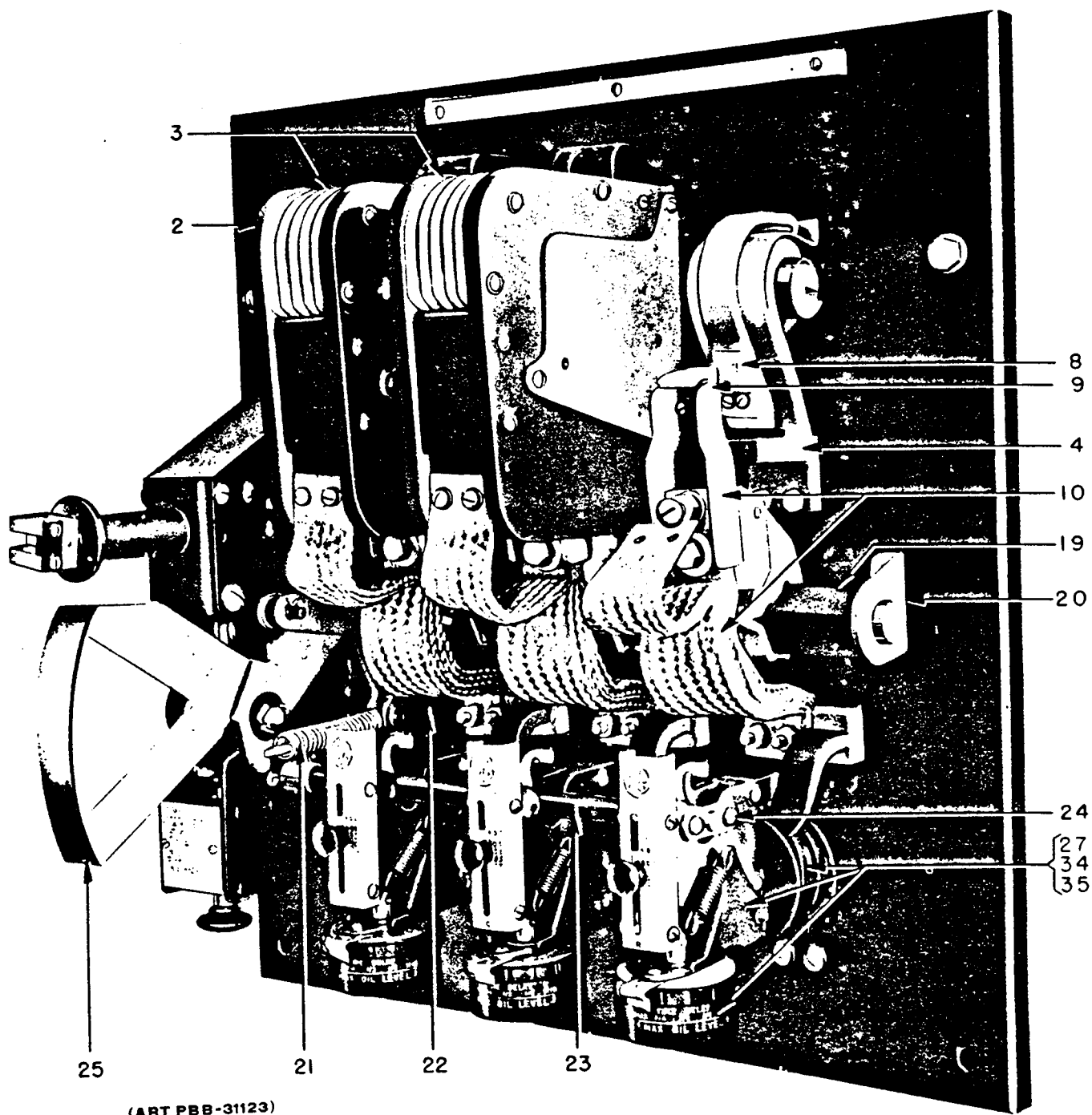


Fig. 2. Type AE-1-25 air circuit breaker, manually operated, less operating handle, one pole partially disassembled. (See pages 8 and 9 for manual operating mechanism.)

TYPE AE-1-25 AIR CIRCUIT BREAKERS

GEF-2723A

Ref. No.	Cat. No.	Description
1	6125574G1	Box barrier for single-pole breaker
	6125564G1	Box barrier for 2-pole breaker
	6125478G1	Box barrier for 3-pole breaker or field breaker
	6125602G1	Box barrier for 4-pole breaker
2	6125393G1	Arc quencher assembly
3	6172103P1	Arc quencher baffle
4	(See Page 4)	Upper stud and blowout coil assembly
8	6403666G3	Stationary arcing contact tip
9	6275555G2	Movable arcing contact tip
10	(See Page 5)	Movable contact, braid, and support assembly
19	-----	Main shaft and crank for:
	6317304G1	Single-pole breaker with reverse current device on pole
	6317304G2	2-pole breaker with reverse current device on pole
	6317304G2	Single-pole breaker with reverse current device off pole
	6317304G3	3-pole breaker with reverse current device on pole
	6317304G3	2-pole field breaker with reverse current device off pole
	6317304G3	2-pole breaker with reverse current device off pole
20	6055775	Bearing for main shaft and crank
	6074295	Opening springs for main shaft and crank. (One of each Cat. No. required)
	6079830	
	6372503G1	Buffer for main shaft and crank
23	-----	Trip shaft for:
	6078490G2	Single-pole and 2-pole breaker with one trip and without undervoltage device or reverse current device
	6172076G2	2-pole breaker with two trips and without undervoltage device or reverse current device
	6076748G1	3- or 4-pole breaker with two or three trips and without undervoltage device
	6078490G1	4-pole breaker with four trips and without undervoltage device
	6201002G2	Single-pole breaker with undervoltage device but without reverse current device
	6201002G1	2-pole breaker with undervoltage device but without reverse current device (one or two trips)
	6150924G1	3-pole breaker with undervoltage device (two or three trips)
	6201812G1	4-pole breaker with undervoltage device (three or four trips)
	6175473G1	Single-pole breaker with reverse current device and no trips
	6175473G2	Single- or 2-pole breaker with one trip and reverse current device
	6175486G1	2-pole breaker with two trips and reverse current device
24	-----	Trip shaft bearing
	6115611P4	For any breaker equipped with overcurrent trips, except for the following applications:
	6125825P27	For breaker with short-circuit trip <u>only</u>
	6271128P1	For 2-pole breaker equipped with one overcurrent trip and undervoltage device, or for 4-pole breaker equipped with two overcurrent trips and undervoltage device
	6271975P1	For breaker with thermal trip <u>only</u>
25	6115460G4	Indicator extending approximately 10 1/4 in. from front of breaker mounting base
25	6172313G1	Indicator extending approximately 8 9/16 in. from front of breaker mounting base
27,34,35	(See Pages 6 & 7)	Overcurrent trip device, series coil, and lower stud assemblies

TYPE AE-1-25 AIR CIRCUIT BREAKERS

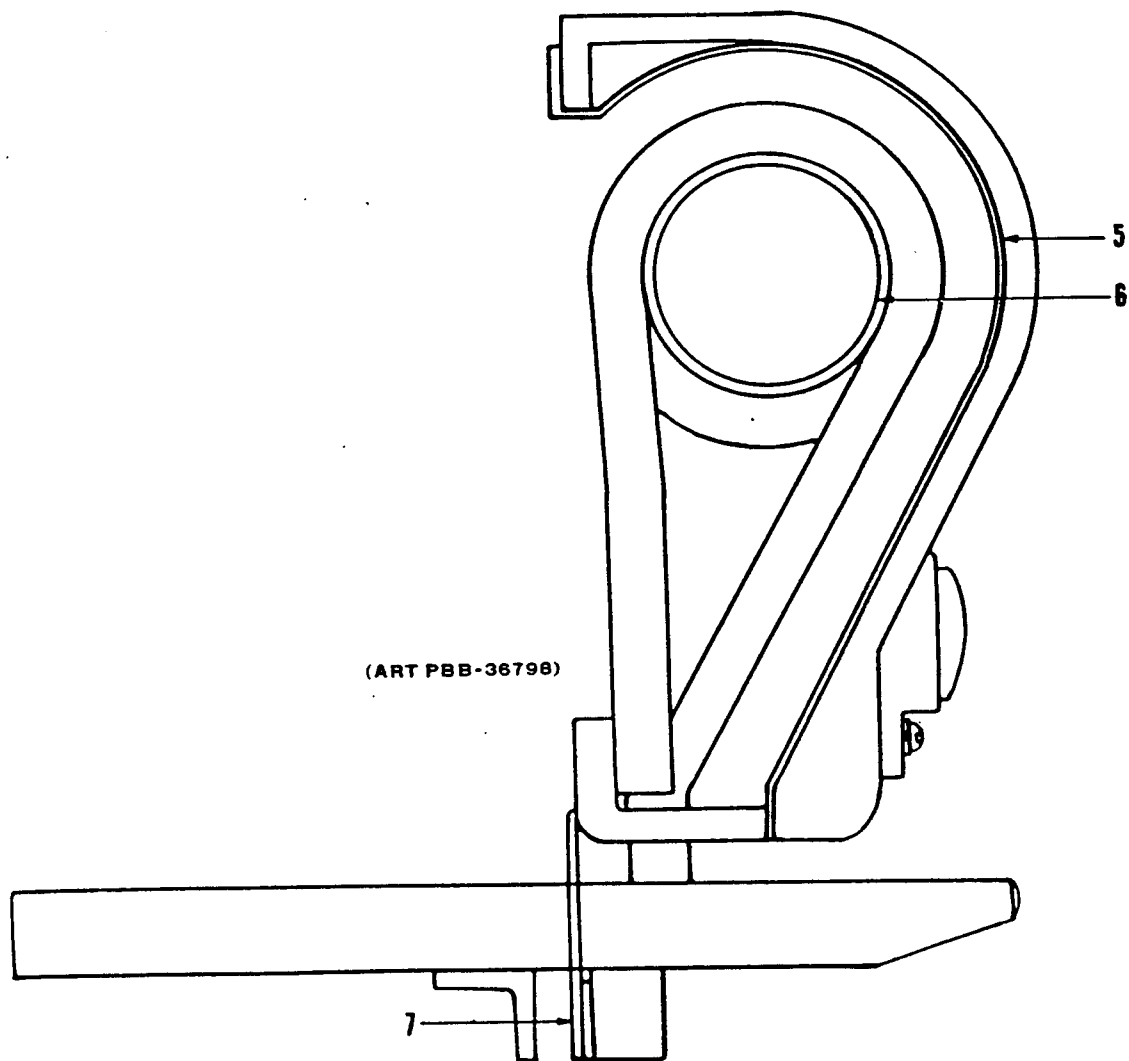


Fig. 3. Outline of upper stud, blowout coil, core and insulation (Ref. No. 4)

Ref. No.	Cat. No.	Description
4	6403666G1	For nonenclosed breaker
4	6403666G2	For enclosed wall mounted breaker
5	6076787P1	Blowout coil insulation
6	6403666P7	Core insulation
7	6246051	Upper stud insulation

MOVABLE CONTACT, BRAID AND SUPPORT ASSEMBLY (REF. NO. 10)

NOTE:

1. Three designs of this assembly have been furnished in these breakers. Fig. 4 illustrates this complete assembly for breakers of the modern design. Fig. 4A and 4B illustrate only the contact and braid assembly of the earlier designs. The supports for Fig. 4A and 4B are neither illustrated, nor listed, because they are no longer manufactured. The only parts of the first two designs of the contact and braid assembly which are now manufactured, and can be furnished, are the arcing contact tips (Ref. No. 9) and the copper braids (Ref. No. 13 and 14).

2. If any parts other than Ref. No. 9 and 14 of the Earliest Design (Fig. 4B) are required, it will be necessary to replace the complete assembly by the Modern Design as shown in Fig. 4 (Fig. 2, Ref. No. 10) plus the arc quencher assembly, Ref. No. 2 (Page 3).

3. If any parts other than Ref. No. 9 and 13 of the Second Design as shown in Fig. 4A are required, it will be necessary to replace the complete assembly with the Modern Design (Fig. 4).

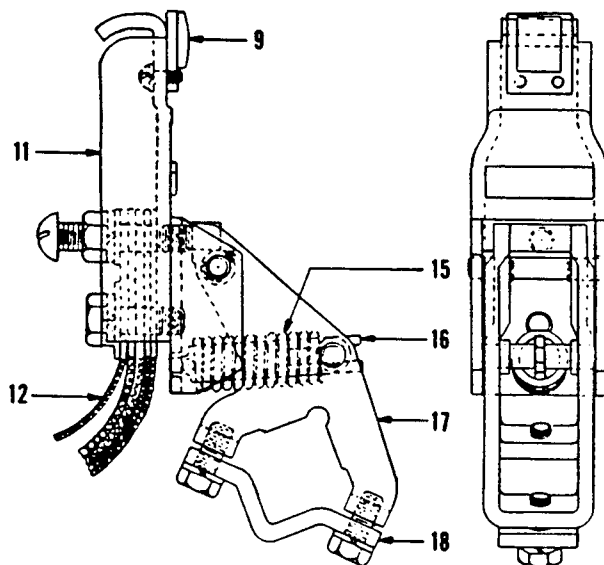


Fig. 4. Modern design
(Ref. No. 10)

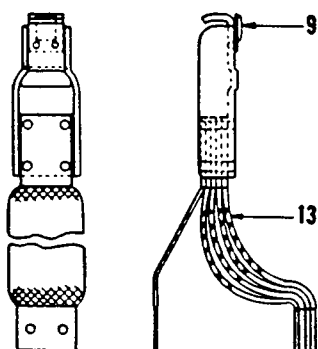


Fig. 4A. Second design
(See Note 3 above)

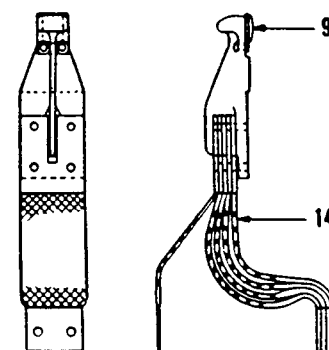


Fig. 4B. Earliest design
(See Note 2 above)

(ART PBB-36779)

Ref. No.	Cat. No.	Description
9	(See Page 3)	Movable arcing contact tip
10	6329450G3	Movable contact, braid and support assembly
11	6303280G1	Movable contact
12	6212487P12	Braid
13	6212487P8	Braid
14	6115249P11	Braid
15	6076100	Movable contact spring
16	6242564P1	Movable contact spring guide
17	6303281G1	Movable contact support
18	6241892P1	Movable contact clamp

TYPE AE-1-25 AIR CIRCUIT BREAKERS

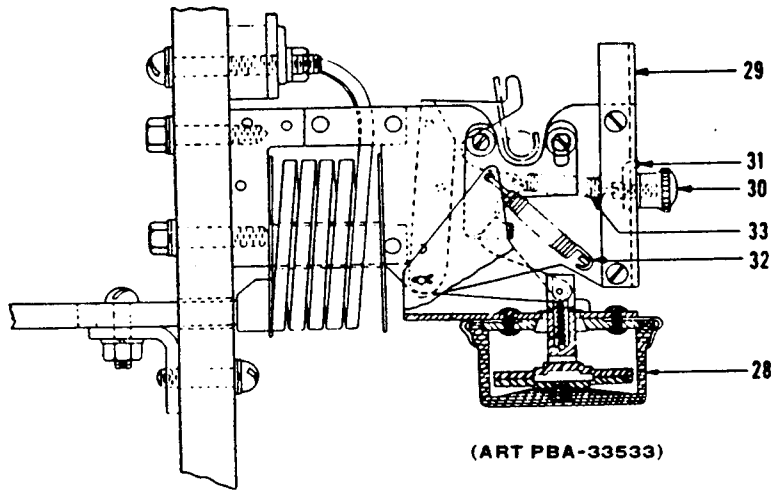


Fig. 5. Outline of dual magnetic overcurrent trip device, series coil, and stud assembly (Fig. 2, Ref. No. 27)

Ref. No.	Cat. No.	Description
†27	-----	Dual magnetic overcurrent trip device, series coil and stud assembly for:
	6329505G2	Enclosed breaker only
	6329505G1	Other than enclosed breakers
28	6329505G5	Cup and disk
29	6055563	Calibrating plate
30	6043479	Calibrating knob
31	6077192G1	Index pointer
32	6175736	Spring
33	-----	Spring for:
	6175763	Up to 390 ampere ratings only
	6175733	400 to 600 ampere ratings only

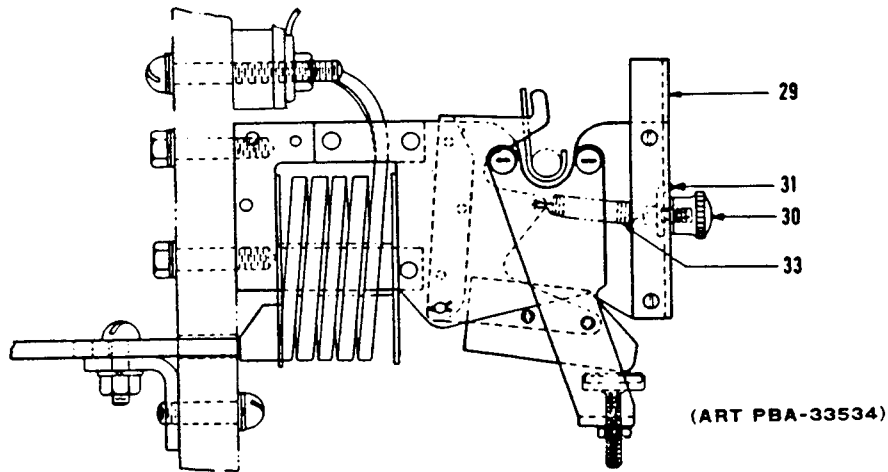
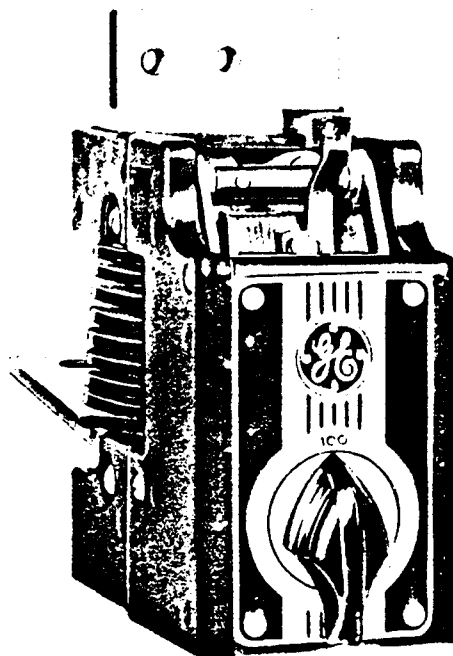


Fig. 6. Outline of magnetic instantaneous overcurrent trip device, series coil, and stud assembly (Fig. 2, Ref. No. 34)

Ref. No.	Cat. No.	Description
†34	-----	Instantaneous overcurrent trip device, series coil and stud assembly for:
	6329501G1	Other than enclosed breaker only
	6329501G2	Enclosed breaker only
29,30 31,33	Specify as listed above for Fig. No. 5	

† NOTE: Always specify required ampere rating of series coil

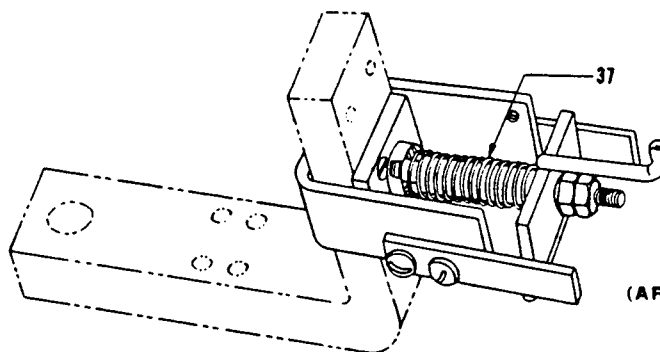


(PHOTO 352921)

Fig. 7. Thermal magnetic overcurrent trip device, series coil, and stud assembly (Fig. 2, Ref. No. 35)

Ref. No.	Cat. No.	Description
†35	-----	Thermal magnetic overcurrent trip device, series coil and stud assembly For breakers mounted in enclosing cases only:
	6159967G1	Breaker ratings 50 to 400 amperes, and 50 to 60 cycles only
	6159967G2	Breaker ratings 50 to 400 amperes, and 25 cycles only
	6159967G3	Breaker ratings 450 to 500 amperes, and 50 to 60 cycles only
	6159967G4	Breaker ratings 450 to 500 amperes, and 25 cycles only
	6159967G5	Breaker ratings 550 to 600 amperes, and 50 to 60 cycles only
		For all other breaker mountings:
	6159966G1	Breaker ratings 50 to 400 amperes, and 50 to 60 cycles only
	6159966G2	Breaker ratings 50 to 400 amperes, and 25 cycles only
	6159966G3	Breaker ratings 450 to 500 amperes, and 50 to 60 cycles only
	6159966G4	Breaker ratings 450 to 500 amperes, and 25 cycles only
	6159966G5	Breaker ratings 550 to 600 amperes, and 50 to 60 cycles only

† NOTE: Always specify required ampere rating of series coils



(ART PBB-36795)

Fig. 8. Outline of instantaneous short circuit trip device assembly (Ref. No. 36)

Ref. No.	Cat. No.	Description
36	6125825G1	Instantaneous short circuit trip device assembly
37	-----	Spring for:
	6175705	Up to 350 ampere ratings only
	6175715	400 to 600 ampere ratings only

TYPE AE-1-25 AIR CIRCUIT BREAKERS

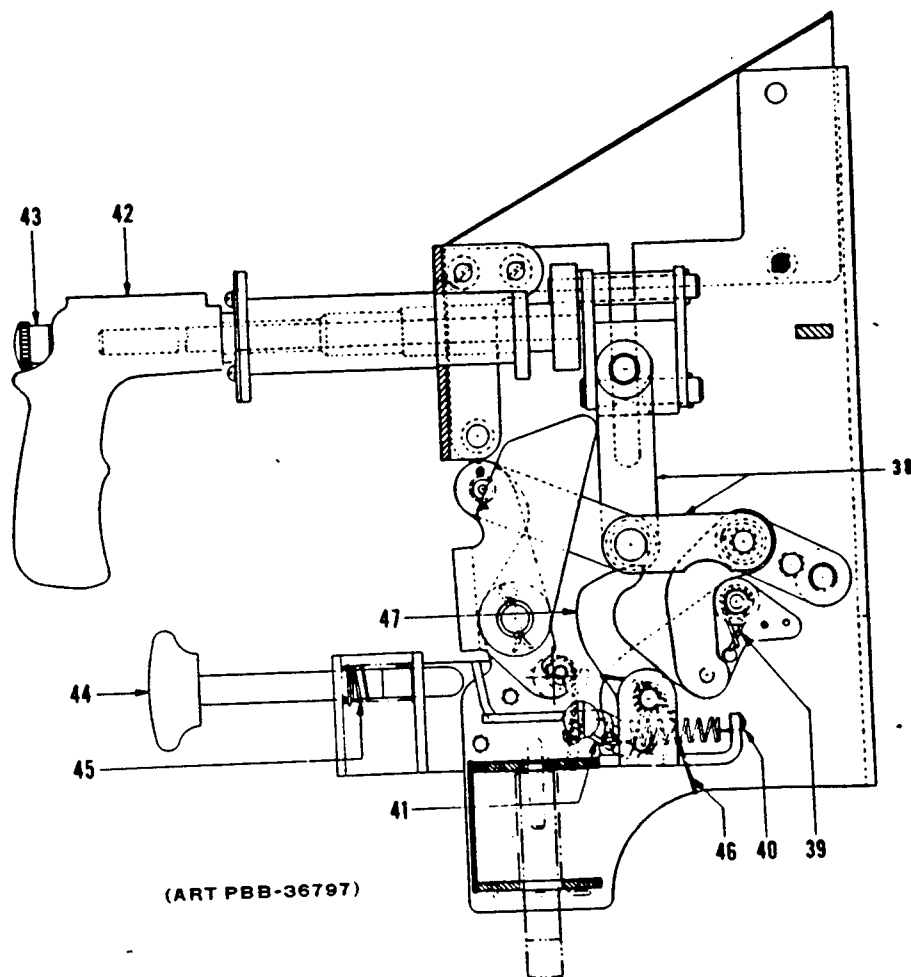


Fig. 9. Outline of manual operating mechanism
(with direct-connected handle for other than
drawout equipment mounted breakers)

NOTE: For drawout mounted breakers, mechanism is identical to above except for the handle and support as outlined in Fig. 10.

Ref. No.	Cat. No.	Description
38	6115261G2	Toggle mechanism assembly
39	6079847	Latch return spring
40	6079812	Trip spring
41	6241107	Latch plate
42	6175021P1	Handle
43	6244511	Knob and screws for modern design only
43	6043479	Knob for superseded designs only
44	6246018	Trip button
45	6074299	Trip button spring
46	6302770	Reset spring
47	6076717P1	Prop

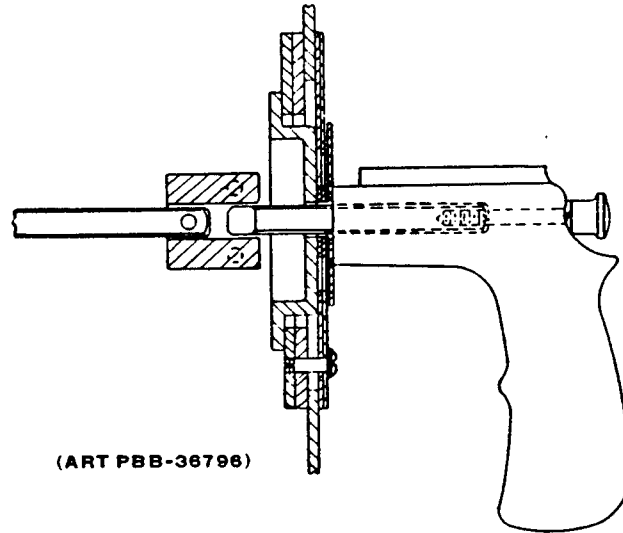


Fig. 10. Outline of operating handle, shaft and support for drawout equipment mounted breakers only (Ref. No. 48)

Ref. No.	Cat. No.	Description
48	6228118G17	Operating handle, shaft and support assembly

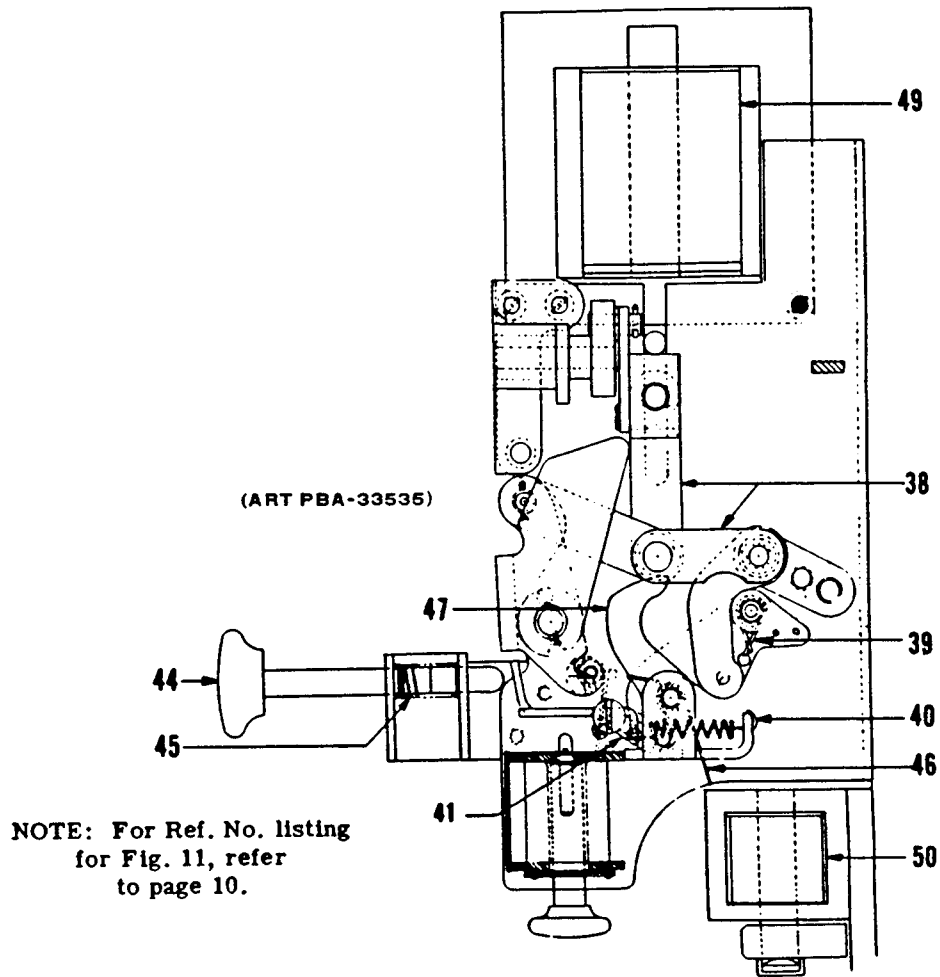


Fig. 11. Outline of solenoid operating mechanism assembly

TYPE AE-1-25 AIR CIRCUIT BREAKERS

Ref. No.	Cat. No.	Description
38	6115261G2	Toggle mechanism assembly
39	6079847	Latch return spring
40	6079812	Trip spring
41	6241107	Latch plate
44	6246018	Trip button
45	6074299	Trip button spring
46	6302770	Reset spring
47	6076717P1	Prop
49	(See table below)	Closing coil
50	(See table below)	Closing relay coil

SOLENOID CLOSING COILS (REF. NO. 49)

OPERATING VOLTS	CYCLES	BREAKER POLES			
		1	2	3	4
		CATALOG NUMBERS			
110 AC	60	-----	3192828	3192828	3192828
110 AC	25	-----	3192831	3192831	3192830
220 AC	60	-----	3192830	3192830	3192830
220 AC	25	-----	3192832	3192832	3192832
440 AC	60	-----	3192832	6275025G3	6275025G3
440 AC	25	-----	3192834	3192834	3192834
550 AC	60	-----	3192833	3192832	3192832
550 AC	25	-----	3192835	3192835	3192835
125 DC	--	3192836	3192835	3192834	3192834
250 DC	--	3192838	3192876	3192837	3192837
48 DC	--	-----	3192832	3192894	-----

CLOSING RELAY COILS (REF. NO. 50)

OPERATING VOLTS	CYCLES	CAT. NO.
110 AC	60	6275084G1
110 AC	25	6275084G2
220 AC	60	6275084G2
220 AC	25	6275084G3
440 AC	60	6275084G3
440 AC	25	6275084G5
550 AC	60	6275084G8
550 AC	25	6275084G5
125 DC	--	6275084G2
250 DC	--	6275084G3
48 DC	--	6275084G6

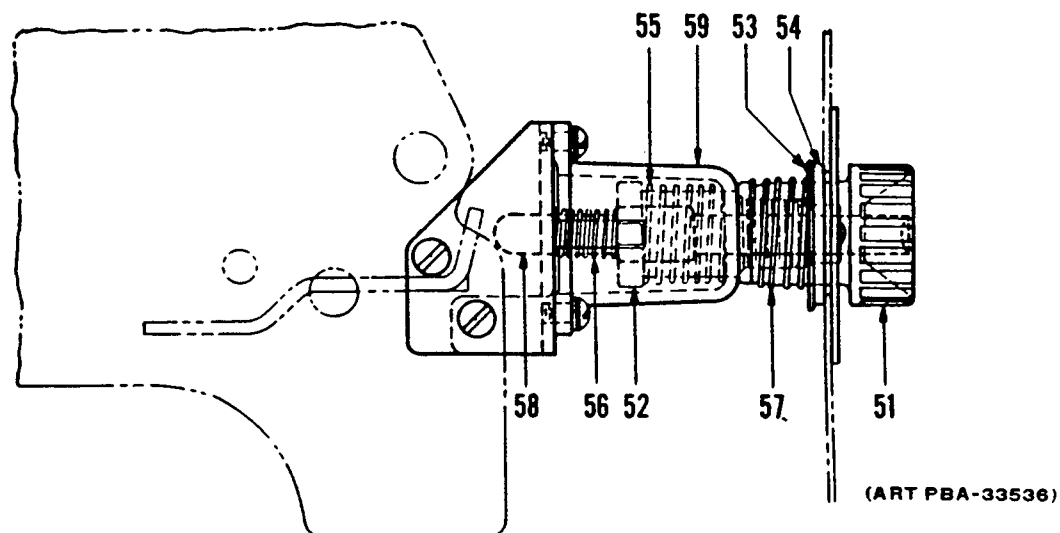


Fig. 12. Outline of trip interlock for breakers mounted in enclosing cases only

Ref. No.	Cat. No.	Description
51	6317058P1	Molded knob
52	6317059P1	Trip rod guide
53	6244485P1	Retaining washer
54	6244486P1	Sealing washer
55	6302710	Spring
56	6302711	Spring
57	6302712	Spring
58	6303547P4	Trip rod
59	6317080P1	Support

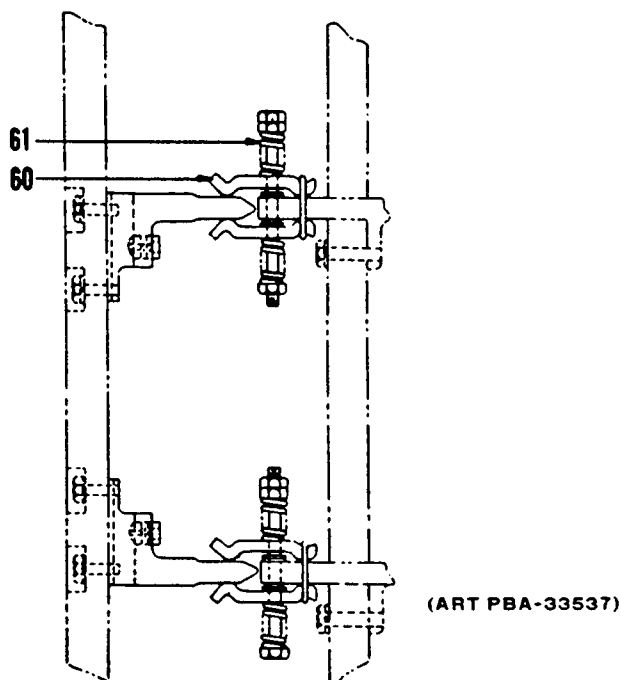
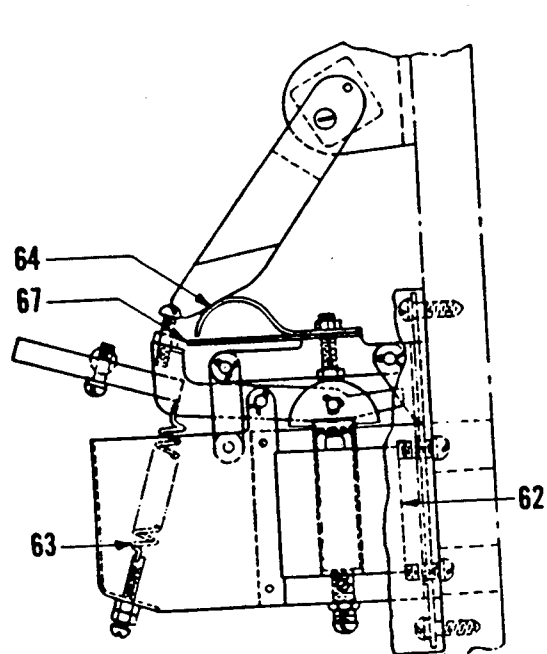


Fig. 13. Outline of disconnecting devices for breakers mounted in enclosing cases or drawout equipment

Ref. No.	Cat. No.	Description
60	6241087	Contact finger only
61	6175730	Spring

TYPE AE-1-25 AIR CIRCUIT BREAKERS

UNDervOLTAGE DEVICES



(ART PBA-33538)

Fig. 14. Outline of instantaneous undervoltage trip device with breaker in open position

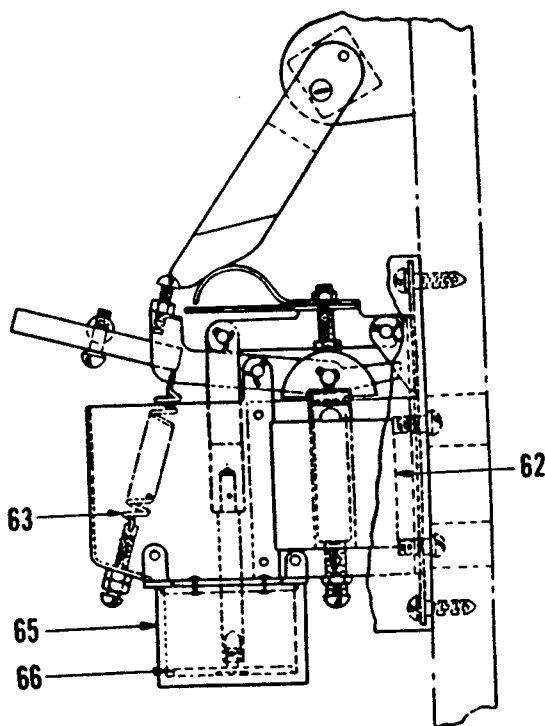


Fig. 15. Outline of time delay undervoltage trip device with breaker in open position

Ref. No.	Cat. No.	Description
62	(See table below)	Coil
63	6175763	Spring
64	6212509P3	Spring
65	6144364	Time delay cup
66	6144405	Disk
67	6212509P8	Spring

COILS FOR UNDervOLTAGE DEVICE (REF. NO. 62)

OPERATING VOLTS	CAT. NO.
110 AC	6275081G4
220 AC	6275081G5
440 AC	6275081G3
125 DC	6275081G1
250 DC	6275081G2

SHUNT TRIP DEVICE

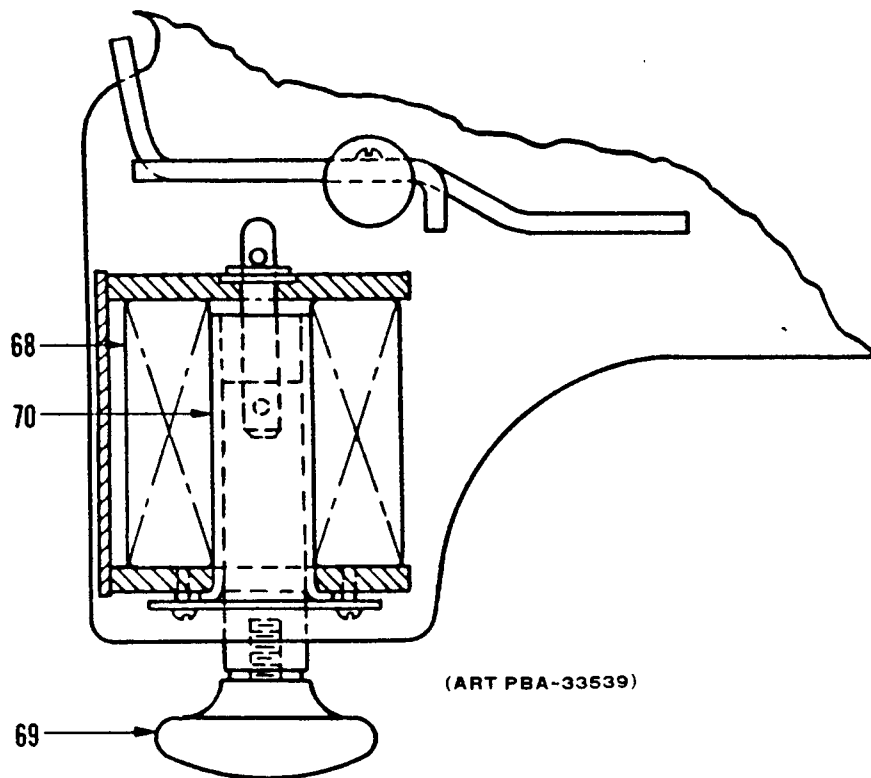


Fig. 16. Shunt trip device

Ref. No.	Cat. No.	Description
68	(See table below)	Shunt trip coil
69	424399	Button
70	6055772	Guide tube

COILS AND GUIDE TUBES
FOR SHUNT TRIP DEVICE (REF. NO. 68)

OPERATING VOLTS	CAT. NO.
12 DC	6174323G3
24 DC	6174323G1
48 DC	6174323G5
110 AC	6174323G5
220 AC	6174323G5
125 DC	6174323G4
250 DC	6174323G4
440 AC	6174323G4
550 AC	6174323G4

TYPE AE-1-25 AIR CIRCUIT BREAKERS

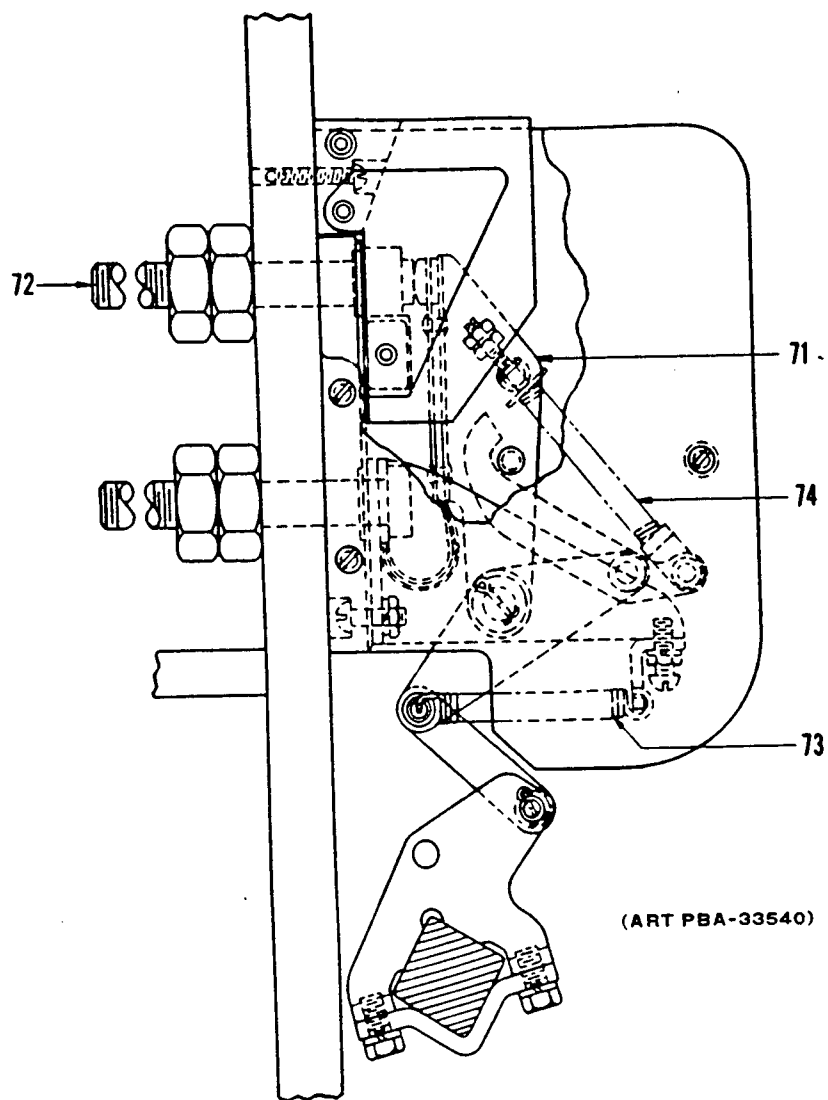


Fig. 17. Outline of field breaker to illustrate field discharge switch parts

Ref. No.	Cat. No.	Description
71	6079337G1	Movable contact, lever and braid assembly
72	-----	Stationary contact and stud assembly for:
	6079332G1	Other than enclosed breakers
	6079332G2	Enclosed breakers only
73	6076113	Spring
74	6076114	Spring