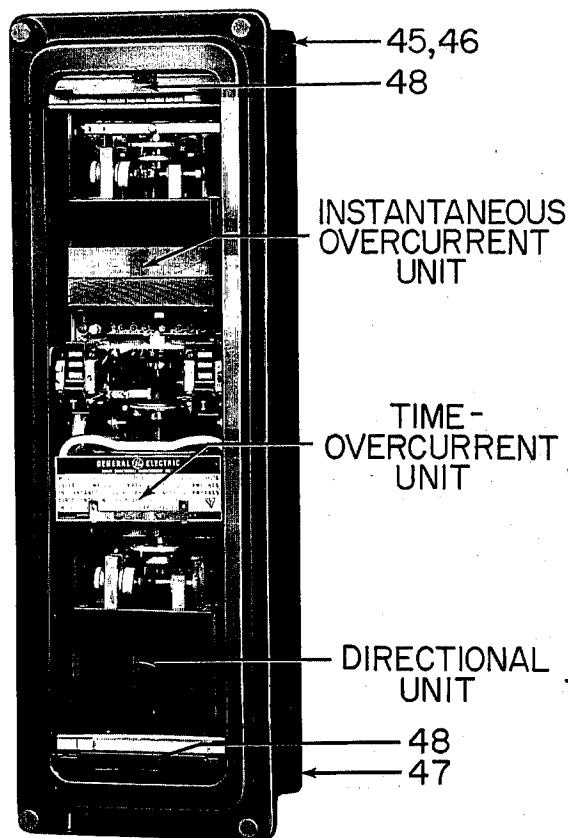


RENEWAL PARTS

GEF-4086
Supersedes GEF-3900, in part

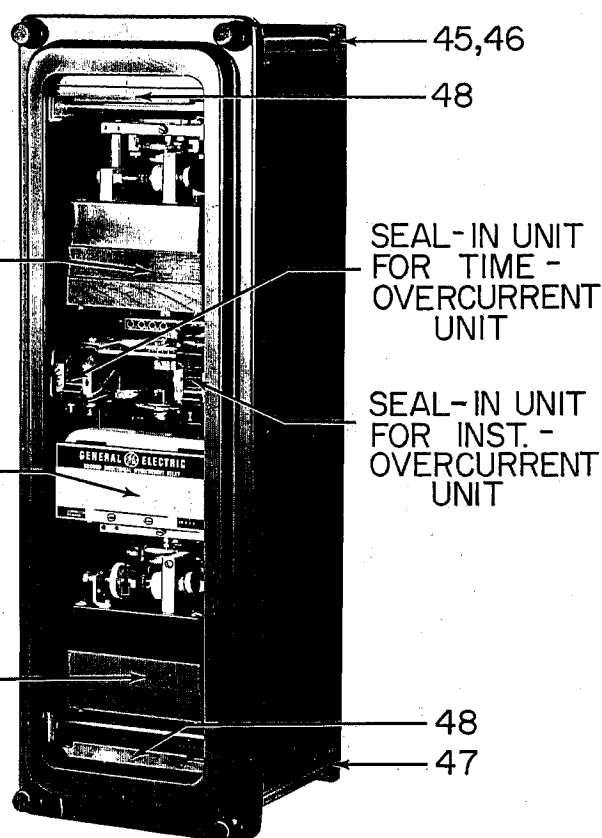


TYPE JBC DIRECTIONAL-OVERCURRENT RELAYS



(PHOTO 8013713)

Fig. 1. Type JBC51N relay
(see pages 2, 3, 4, and 5)



(PHOTO 8023347)

Fig. 2. Type JBC51E relay
(see pages 6, 7, and 8)

ORDERING INSTRUCTIONS

1. Always specify complete nameplate data of the relay.
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.

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

GENERAL  ELECTRIC

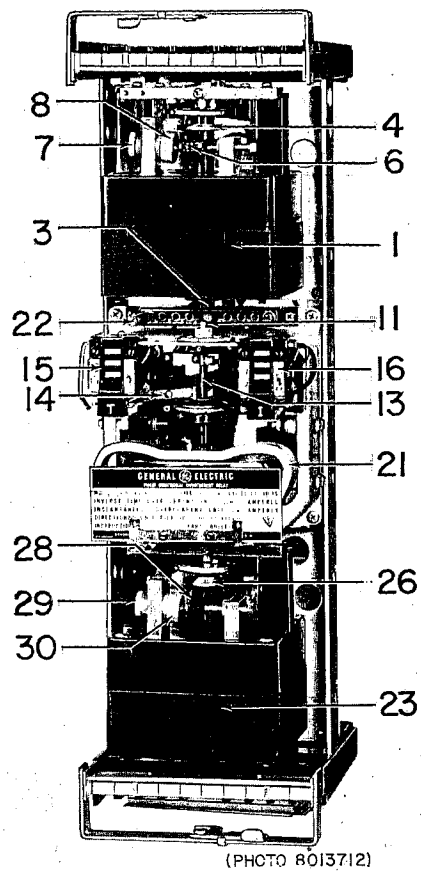


Fig. 3. Type JBC51N relay unit, front view

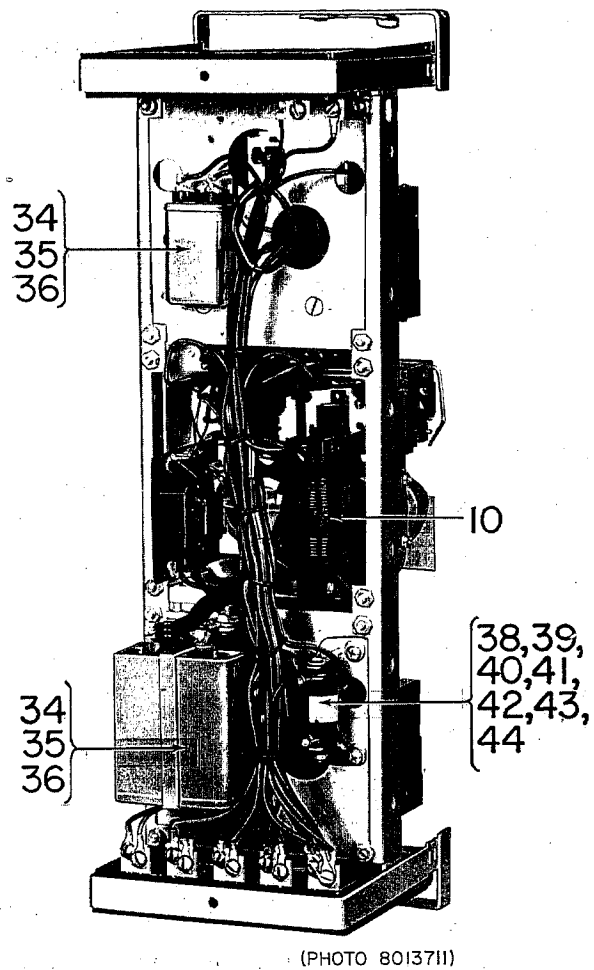


Fig. 4. Type JBC51N relay unit, back view

ILLUSTRATIONS ALSO TYPICAL OF TYPES JBC51R,
JBC52N, JBC52R, JBC53N, JBC53R, AND JBC54N RELAYS

TYPE JBC RELAYS

GEF-4086

Ref. No.	Quantity Required for Model 12JBC-																Catalog Number	Description	
	51N1A	51N2A	51N3A	51N4A	51N5A	51N6A	51N7A	51N8A	51N9A	51N10A	51N11A	51N12A	51N13A	51N14A	51N15A	51N16A			51N17A
INSTANTANEOUS-OVERCURRENT UNIT																			
*1	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	6193015G54	‡Operating coil assembly
*1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	G59	‡Operating coil assembly
†2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3538599G4	Upper bearing pivot
3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6152189G1	Jewel bearing assembly
*4	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	6074259P1	Control spring
*4	-	-	-	1	1	-	-	-	-	-	-	1	1	-	-	1	-	6078992P2	Control spring
*4	1	1	-	-	1	1	-	1	1	1	-	-	-	1	1	-	1	P6	Control spring
†5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6118582P1	Spring anchor
*6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6178803G1	Moving contact brush and tip
7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6178872G1	Stationary contact barrel assembly
*8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	G10	Contact and spiral only
†9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6418040G24	Clutch sleeve assembly
TIME-OVERCURRENT UNIT																			
*10	1	-	1	-	1	-	1	1	-	-	-	-	-	-	-	-	-	6293205G23	\$Operating coil assembly
*10	-	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	G24	\$Operating coil assembly
*10	-	-	-	-	-	-	-	-	-	1	-	1	-	1	-	1	-	G136	\$Operating coil assembly
*10	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	G137	\$Operating coil assembly
*10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	G195	\$Operating coil assembly
11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6209409G1	Upper bearing pivot
†12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6209457G1	Jewel bearing assembly
*13	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6158531G1	Moving contact and spring assembly
*14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6209430G1	Stationary contact
15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6293203G3	Seal-in unit, left
16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	G43	Seal-in unit, right
†17	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	6275062G1	Operating coil
†18	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	6158533G1	Moving contact assembly
†19	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	6209416G1	Stationary contact, left
†20	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	G2	Stationary contact, right
21	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	237C731G1	Drag magnet (380 points strength)
22	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3539529G1	Tap plug
DIRECTIONAL UNIT																			
*23	1	-	1	-	1	-	1	-	1	-	1	-	1	-	1	-	-	6193015G1	‡Operating coil assembly
*23	-	1	-	1	-	1	-	-	-	-	1	-	1	-	-	-	-	G2	‡Operating coil assembly
*23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	G110	‡Operating coil assembly
*23	-	-	-	-	-	-	-	1	-	-	-	-	1	-	1	-	-	G111	‡Operating coil assembly
†24	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3538599G4	Upper bearing pivot
†25	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6152189G1	Jewel bearing assembly
*26	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6078992P1	Control spring
†27	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6118582P1	Spring anchor
*28	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	6178803G1	Moving contact brush and tip
29	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	6178872G1	Stationary contact barrel assembly
*30	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	G10	Contact and spiral only
†33	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6418040G24	Clutch sleeve assembly
MISCELLANEOUS																			
34	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-	1	1	21F805	Capacitor C1 (1.0 mfd.)
34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	807	Capacitor C1 (1.25 mfd.)
35	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	1	804	Capacitor C2 (0.75 mfd.)
35	1	1	1	1	1	1	1	-	1	1	1	1	1	-	-	-	-	809	Capacitor C2 (2.0 mfd.)
35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	810	Capacitor C2 (2.5 mfd.)
36	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	1	804	Capacitor C3 (0.75 mfd.)
36	1	1	1	1	1	1	1	-	1	1	1	1	1	-	-	-	-	810	Capacitor C3 (2.5 mfd.)
36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	811	Capacitor C3 (3 mfd.)
38	1	1	1	1	1	1	1	-	1	1	1	1	1	-	1	-	-	403A322P64	Resistor (500 ohms)
41	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	1	1	P77	Resistor (2500 ohms)
CASE																			
45	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6128447P1	End plate, upper
47	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6418058G269	Terminal block, lower
48	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6118736G1	Connecting plug

* Recommended for stock for normal maintenance. ‡ Includes laminations, coils, and leads.

\$ Includes laminations, pole pieces, coils, leads, and tap block. † Not shown.

TYPE JBC RELAYS

Ref. No.	Quantity Required for Model 12JBC-														Catalog Number	Description	
	51R1A	51R2A	51R3A	51R4A	51R5A	51R6A	51R7A	52N1A	52N2A	52N3A	52N4A	52N5A	52N6A	52R1A			52R2A
INSTANTANEOUS-OVERCURRENT UNIT																	
*1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	6193015G53	†Operating coil assembly
*1	1	1	1	1	1	-	1	-	-	-	-	1	1	1	1	G54	†Operating coil assembly
*1	-	-	-	-	-	-	-	1	1	1	1	-	-	-	-	G59	†Operating coil assembly
†2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3538599G4	Upper bearing pivot
3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6152189G1	Jewel bearing assembly
*4	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	6078992P2	Control spring
*4	1	1	1	1	1	1	1	1	1	-	-	1	1	1	1	P6	Control spring
†5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6118582P1	Spring anchor
*6	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	6178803G1	Moving contact brush and tip
7	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	6178872G1	Stationary contact barrel assembly
*8	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	G10	Contact and spiral only
†9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6418040G24	Clutch sleeve assembly
TIME-OVERCURRENT UNIT																	
*10	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6293205G23	§Operating coil assembly
*10	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	G24	§Operating coil assembly
*10	-	-	1	-	-	-	-	1	-	1	-	1	-	1	-	G136	§Operating coil assembly
*10	-	-	-	-	1	-	1	-	1	-	1	-	1	-	1	G137	§Operating coil assembly
*10	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	G195	§Operating coil assembly
11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6209409G1	Upper bearing pivot
†12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6209457G1	Jewel bearing assembly
*13	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	6158531G1	Moving contact and spring assembly
*13	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	G4	Moving contact and spring assembly
*14	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	6209430G1	Stationary contact
*14	-	-	-	-	-	-	-	2	2	2	2	2	2	2	2	G4	Stationary contact
15	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	6293203G3	Seal-in unit, left
15	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	G4	Seal-in unit, left
16	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	G43	Seal-in unit, right
16	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	G44	Seal-in unit, right
†17	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	6275062G1	Operating coil
†18	2	2	2	2	2	2	2	-	-	-	-	-	-	-	-	6158533G1	Moving contact assembly
†18	-	-	-	-	-	-	-	2	2	2	2	2	2	2	2	G3	Moving contact assembly
†19	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	6209416G1	Stationary contact, left
†20	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	G2	Stationary contact, right
21	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	237C731G1	Drag magnet (550 points strength)
22	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3539529G1	Tap plug
DIRECTIONAL UNIT																	
*23	1	-	1	-	-	-	-	1	-	1	-	1	-	1	-	6193015G1	†Operating coil assembly
*23	-	1	-	1	1	1	1	-	1	-	1	-	1	-	1	G2	†Operating coil assembly
†24	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3538599G4	Upper bearing pivot
†25	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6152189G1	Jewel bearing assembly
*26	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6078992P1	Control spring
†27	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6118582P1	Spring anchor
*28	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	6178803G1	Moving contact brush and tip
29	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	6178872G1	Stationary contact barrel assembly
*30	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	G10	Contact and spiral only
33	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6418040G24	Clutch sleeve assembly
MISCELLANEOUS																	
34	1	1	1	1	-	1	1	1	1	1	1	1	1	1	1	21F805	Capacitor C1 (1.0 mfd.)
34	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	807	Capacitor C1 (1.25 mfd.)
35	1	1	1	1	-	1	1	1	1	1	1	1	1	1	1	809	Capacitor C2 (2.0 mfd.)
35	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	810	Capacitor C2 (2.5 mfd.)
36	1	1	1	1	-	1	1	1	1	1	1	1	1	1	1	810	Capacitor C3 (2.5 mfd.)
36	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	811	Capacitor C3 (3.0 mfd.)
38	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	403A322P64	Resistor (500 ohms)
39	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	P67	Resistor (50 ohms)
40	1	1	1	1	1	1	-	-	-	-	-	-	-	-	1	P68	Resistor (300 ohms)
42	1	1	1	1	1	1	-	-	-	-	-	-	-	-	1	403A401P4	Resistor (2000 ohms)
43	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	P6	Resistor (800 ohms)
CASE																	
45	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	6128447P1	End plate, upper
46	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	6418058G64	Terminal block, upper
47	-	-	-	-	-	-	-	1	1	1	1	1	1	-	-	G267	Terminal block, lower
47	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	G269	Terminal block, lower
47	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	G340	Terminal block, lower
48	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	6118736G1	Connecting plug

* Recommended for stock for normal maintenance.

† Includes laminations, coils, and leads.

§ Includes laminations, pole pieces, coils, leads, and tap block.

‡ Not shown.

TYPE JBC RELAYS

GEF-4086

Ref. No.	Quantity Required for Model 12JBC-																			Catalog Number	Description
	53N1A	53N2A	53N3A	53N4A	53N5A	53N6A	53N7A	53N8A	53N9A	53N10A	53N11A	53N12A	53N13A	53N14A	53R1A	53R2A	53R3A	53R4A	54N1A		
INSTANTANEOUS-OVERCURRENT UNIT																					
*1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6193015G54	‡Operating coil assembly
*1	-	-	-	-	1	1	-	-	-	-	-	-	-	1	1	1	1	1	1	G59	‡Operating coil assembly
†2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3538599G4	Upper bearing pivot
3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6152189G1	Jewel bearing assembly
*4	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	6074259P1	Control spring
*4	-	-	-	1	1	-	-	-	-	1	1	1	1	-	-	-	-	-	-	6078992P2	Control spring
*4	1	1	-	-	1	1	-	1	-	-	-	-	-	1	1	1	1	1	1	P6	Control spring
†5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6118582P1	Spring anchor
*6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	6178803G1	Moving contact brush and tip
7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	6178872G1	Stationary contact barrel assembly
*8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	G10	Contact and spiral only
†9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6418040G24	Clutch sleeve assembly
TIME-OVERCURRENT UNIT																					
*10	-	1	-	1	-	1	1	1	1	-	-	-	-	-	1	1	1	1	-	6293912G2	‡Operating coil assembly
*10	1	-	1	-	1	-	-	-	-	-	-	-	-	1	1	1	-	-	1	G3	‡Operating coil assembly
*10	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	G5	‡Operating coil assembly
*10	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	G6	‡Operating coil assembly
*10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	G9	‡Operating coil assembly
11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6209409G1	Upper bearing pivot
†12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6209457G1	Jewel bearing assembly
*13	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6158531G18	Moving contact and spring assembly
*13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	G19	Moving contact and spring assembly
*14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-	6209430G1	Stationary contact
*14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	G4	Stationary contact
15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-	6293203G3	Seal-in unit, left
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	G4	Seal-in unit, left
16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-	G43	Seal-in unit, right
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	G44	Seal-in unit, right
†17	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	6275062G1	Operating coil
†18	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	6158533G1	Moving contact assembly
†18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	G3	Moving contact assembly
†19	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	6209416G1	Stationary contact, left
†20	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	G2	Stationary contact, right
21	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	237C731G2	Drag magnet (1300 points strength)
22	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3539529G1	Tap plug
DIRECTIONAL UNIT																					
*23	1	-	1	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-	1	6193015G1	‡Operating coil assembly
*23	-	1	-	1	-	1	1	-	-	-	1	1	-	-	-	1	1	1	-	G2	‡Operating coil assembly
*23	-	-	-	-	-	-	-	1	1	-	-	-	1	1	-	-	-	-	-	G110	‡Operating coil assembly
†24	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3538599G4	Upper bearing pivot
†25	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6152189G1	Jewel bearing assembly
*26	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6078992P1	Control spring
†27	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6118582P1	Spring anchor
*28	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	6178803G1	Moving contact brush and tip
29	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	6178872G1	Stationary contact barrel assembly
*30	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	G10	Contact and spiral only
33	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6418040G24	Clutch sleeve assembly
MISCELLANEOUS																					
34	1	1	1	1	1	1	1	1	1	-	-	-	1	1	1	1	1	1	1	21F805	Capacitor C1 (1.0 mfd.)
34	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	807	Capacitor C1 (1.25 mfd.)
35	-	-	-	-	-	-	-	1	1	-	-	-	-	1	1	-	-	-	-	804	Capacitor C2 (0.75 mfd.)
35	1	1	1	1	1	1	1	-	-	-	-	-	-	-	1	1	1	1	1	809	Capacitor C2 (2.0 mfd.)
35	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	810	Capacitor C2 (2.5 mfd.)
36	-	-	-	-	-	-	-	1	1	-	-	-	-	1	1	-	-	-	-	804	Capacitor C3 (0.75 mfd.)
36	1	1	1	1	1	1	1	-	-	-	-	-	-	-	1	1	1	1	1	810	Capacitor C3 (2.5 mfd.)
36	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	811	Capacitor C3 (3.0 mfd.)
38	1	1	1	1	1	1	1	-	-	1	1	1	-	-	1	1	1	1	1	403A322P64	Resistor (500 ohms)
41	-	-	-	-	-	-	-	1	1	-	-	-	-	1	1	-	-	-	-	P77	Resistor (2500 ohms)
42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	403A401P4	Resistor (2000 ohms)
43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	P6	Resistor (800 ohms)
44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	P7	Resistor (200 ohms)
CASE																					
45	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6128447P1	End plate, upper
46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	6418058G64	Terminal block, upper
47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	G267	Terminal block, lower
47	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	G269	Terminal block, lower
48	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	6118736G1	Connecting plug

* Recommended for stock for normal maintenance.

‡ Includes laminations, coils, and leads.

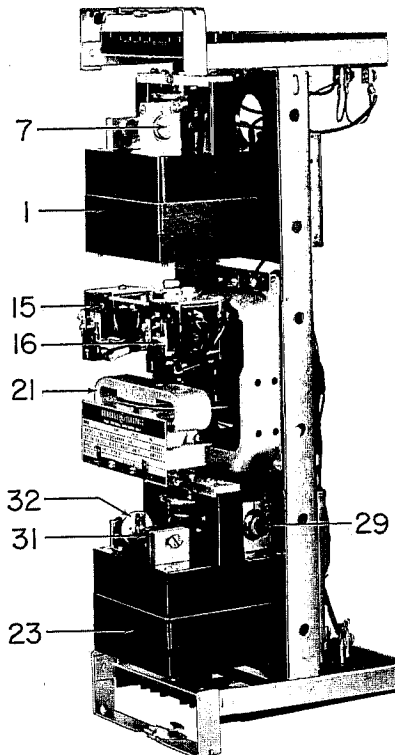
§ Includes laminations, pole pieces, coils, leads, and tap block.

† Not shown.

TYPE JBC RELAYS

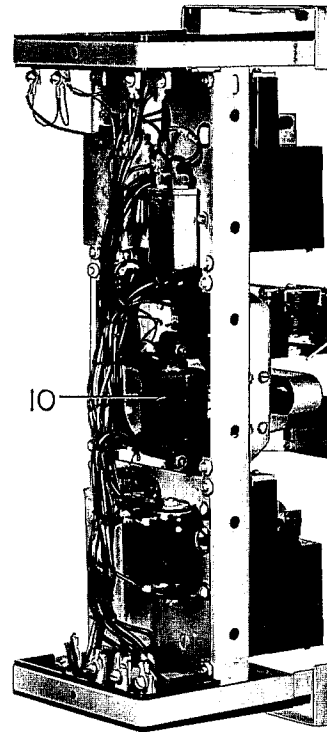
Latest Types JBC51E, -51H, -52E, -52H, -53E, -53H, and -54E relays have the same general appearance as the superseded JBC51N, -51R, -52N, -52R, -53N, -53R, and -54N relays. Mainly, the new relays differ in the following ways:

- (1) The stationary contacts of the instantaneous-overcurrent (top) unit are mounted at right front (and left rear) rather than left front (and right rear).
- (2) The front contacts of the directional (bottom) unit are of a new low-gradient design (see Figures 7 and 8 below).



(PHOTO 8023335)

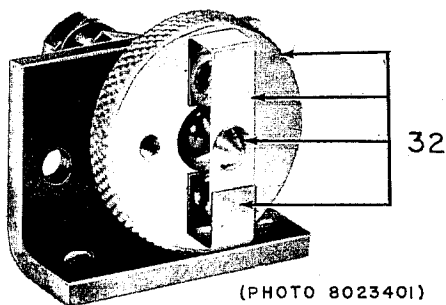
Fig. 5. Type JBC51E relay unit, front view



(PHOTO 8023332)

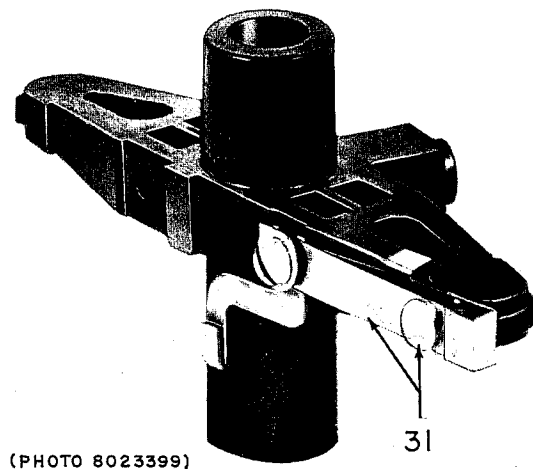
Fig. 6. Type JBC51E relay unit, back view

ILLUSTRATIONS ALSO TYPICAL OF TYPES JBC51H, JBC52E, JBC52H, JBC53E, JBC53H, AND JBC54E RELAYS



(PHOTO 8023401)

Fig. 7. Stationary contact assembly (low-gradient), directional unit



(PHOTO 8023399)

Fig. 8. Moving contact assembly (low-gradient), directional unit

TYPE JBC RELAYS

GEF-4086

Ref. No.	Quantity Required for Model 12JBC-														Catalog Number	Description					
	51E1A	51E2A	51E3A	51E4A	51E5A	51E6A	51E7A	51E8A	51E9A	51H1A	51H2A	51H3A	51H4A	52E1A			52E2A	52E3A	52E4A	52H1A	52H2A
INSTANTANEOUS-OVERCURRENT UNIT																					
*1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	6193015G53	†Operating coil assembly
*1	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	1	1	G54	†Operating coil assembly
*1	-	1	1	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	G59	†Operating coil assembly
*1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	G127	†Operating coil assembly
†2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3538599G4	Upper bearing pivot
3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6152189G1	Jewel bearing assembly
*4	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6074259P1	Control spring
*4	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	6978992P2	Control spring
*4	-	-	-	-	-	-	-	-	-	-	1	1	1	1	-	-	-	1	1	P6	Control spring
*4	1	-	-	-	1	-	-	-	1	1	-	-	-	-	1	-	1	-	-	P7	Control spring
†5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6118582P1	Spring anchor
*6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	6178803G1	Moving contact brush and tip
7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	6178872G1	Stationary contact barrel assembly
*8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	G10	Contact and spiral only
†9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6418040G24	Clutch sleeve assembly
TIME-OVERCURRENT UNIT																					
*10	1	1	1	-	-	1	1	-	-	-	1	-	-	-	1	-	-	1	-	6293205G136	§Operating coil assembly
*10	-	-	-	-	1	1	-	-	-	-	-	1	-	-	-	-	1	1	-	G137	§Operating coil assembly
*10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	G192	§Operating coil assembly
*10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	G195	§Operating coil assembly
11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6209409G1	Upper bearing pivot
†12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6209457G1	Jewel bearing assembly
*13	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-	-	-	-	-	6158531G1	Moving contact and spring assembly
*13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	G4	Moving contact and spring assembly
*14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-	-	-	-	-	6209430G1	Stationary contact
*14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	2	2	G4	Stationary contact
15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-	-	-	-	-	6293203G3	Seal-in unit, left
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	G4	Seal-in unit, left
16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-	-	-	-	-	G43	Seal-in unit, right
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	G44	Seal-in unit, right
†17	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	6275062G1	Operating coil
†18	2	2	2	2	2	2	2	2	2	2	2	2	2	2	-	-	-	-	-	6158533G1	Moving contact assembly
†18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	2	2	G3	Moving contact assembly
†19	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	6209416G1	Stationary contact, left
†20	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	G2	Stationary contact, right
21	1	1	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	237C731G1	Drag magnet (380 points strength)
21	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	G1	Drag magnet (550 points strength)
DIRECTIONAL UNIT																					
*23	1	1	1	-	-	-	-	-	1	1	-	-	-	1	1	-	-	1	-	6193015G1	†Operating coil assembly
*23	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	1	1	-	G2	†Operating coil assembly
*23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	G111	†Operating coil assembly
†24	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3538599G4	Upper bearing pivot
†25	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6152189G1	Jewel bearing assembly
*26	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6078992P1	Control spring
†27	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6118582P1	Spring anchor
*28	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6178803G1	Moving contact brush and tip
29	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6178872G1	Stationary contact barrel assembly
*30	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	G10	Contact and spiral only
*31	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6507818G2	Moving contact brush and tip (low-gradient)
*32	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	403A315G3	Stationary contact (low-gradient)
33	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6418040G24	Clutch sleeve assembly
MISCELLANEOUS																					
34	1	1	1	1	1	1	1	-	-	1	1	1	-	1	1	1	1	1	1	21F805	Capacitor C1 (1.0 mfd.)
34	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	807	Capacitor C1 (1.25 mfd.)
35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	804	Capacitor C2 (0.75 mfd.)
35	1	1	1	1	1	-	-	-	-	-	1	1	1	-	1	1	1	1	1	809	Capacitor C2 (2.0 mfd.)
35	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	810	Capacitor C2 (2.5 mfd.)
36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	804	Capacitor C3 (0.75 mfd.)
36	1	1	1	1	1	-	-	-	1	1	-	-	-	-	1	1	1	1	1	810	Capacitor C3 (2.5 mfd.)
36	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	811	Capacitor C3 (3.0 mfd.)
37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	403A322P56	Resistor (2000 ohms)
38	1	1	1	1	1	-	-	-	1	1	1	1	1	1	1	1	1	1	1	P64	Resistor (500 ohms)
40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P68	Resistor (300 ohms)
41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P77	Resistor (2500 ohms)
CASE																					
46	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	6418058G228	Terminal block, upper
46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	-	G258	Terminal block, upper
46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	G359	Terminal block, upper
46	-	-	-	-	-	-	-	-	-	1	1	1	1	-	-	-	-	-	-	G363	Terminal block, upper
47	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	G267	Terminal block, lower
48	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	6118736G1	Connecting plug

* Recommended for stock for normal maintenance.

§ Includes laminations, pole pieces, coils, leads, and tap block.

† Includes laminations, coils, and leads.

† Not shown.

TYPE JBC RELAYS

Ref. No.	Quantity Required for Model 12JBC-															Catalog Number	Description
	53E1A	53E2A	53E3A	53E4A	53E5A	53E6A	53E7A	53E8A	53E9A	53E10A	53E11A	53E12A	53H1A	53H2A	54E1A		
INSTANTANEOUS-OVERCURRENT UNIT																	
*1	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	6193015G54	†Operating coil assembly
*1	-	1	-	-	1	-	-	-	1	1	1	1	-	-	-	G59	†Operating coil assembly
*1	1	-	1	-	-	1	-	1	-	-	-	-	-	-	1	G127	†Operating coil assembly
†2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3538599G4	Upper bearing pivot
3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6152189G1	Jewel bearing assembly
*4	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	6074259P1	Control spring
*4	-	-	1	-	-	-	-	1	-	1	1	1	-	-	-	6078992P2	Control spring
*4	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	P6	Control spring
*4	1	-	-	1	-	-	-	1	-	-	-	-	-	-	1	P7	Control spring
†5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6118582P1	Spring anchor
*6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	6178803G1	Moving contact brush and tip
7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	6178872G1	Stationary contact barrel assembly
*8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	G10	Contact and spiral only
†9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6418040G24	Clutch sleeve assembly
TIME-OVERCURRENT UNIT																	
*10	-	-	1	1	1	-	-	1	1	-	-	-	-	1	-	6293912G2	§Operating coil assembly
*10	1	1	-	-	-	-	1	1	-	-	-	-	1	-	1	G3	§Operating coil assembly
*10	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	G5	§Operating coil assembly
*10	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	G6	§Operating coil assembly
11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6209409G1	Upper bearing pivot
†12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6209457G1	Jewel bearing assembly
*13	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-	6158531G18	Moving contact and spring assembly
*13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	G19	Moving contact and spring assembly
*14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-	6209430G1	Stationary contact
*14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	G4	Stationary contact
15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-	6293203G3	Seal-in unit, left
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	G4	Seal-in unit, left
16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-	G43	Seal-in unit, right
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	G44	Seal-in unit, right
†17	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	6275062G1	Operating coil
†18	2	2	2	2	2	2	2	2	2	2	2	2	2	2	-	6158533G1	Moving contact assembly
†18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	G3	Moving contact assembly
†19	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	6209416G1	Stationary contact, left
†20	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	G2	Stationary contact, right
21	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	237C731G2	Drag magnet (1300 points strength)
22	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3539529G1	Tap plug
DIRECTIONAL UNIT																	
*23	1	1	-	-	-	-	-	-	-	1	-	-	1	-	1	6193015G1	†Operating coil assembly
*23	-	-	1	1	1	-	-	-	-	-	1	1	-	1	-	G2	†Operating coil assembly
*23	-	-	-	-	-	1	1	1	1	-	-	-	-	-	-	G110	†Operating coil assembly
†24	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3538599G4	Upper bearing pivot
†25	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6152189G1	Jewel bearing assembly
*26	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6078992P1	Control spring
†27	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6118582P1	Spring anchor
*28	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6178803G1	Moving contact brush and tip
29	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6178872G1	Stationary contact barrel assembly
*30	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	G10	Contact and spiral only
*31	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6507818G2	Moving contact brush and tip (low-gradient)
*32	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	403A315G3	Stationary contact (low-gradient)
33	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6418040G24	Clutch sleeve assembly
MISCELLANEOUS																	
34	1	1	1	1	1	1	1	1	1	1	-	-	1	1	1	21F805	Capacitor C1 (1.0 mfd.)
34	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-	807	Capacitor C1 (1.25 mfd.)
35	-	-	-	-	-	1	1	1	1	-	-	-	-	-	-	804	Capacitor C2 (0.75 mfd.)
35	1	1	1	1	1	-	-	-	-	-	-	-	1	1	1	809	Capacitor C2 (2.0 mfd.)
35	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	810	Capacitor C2 (2.5 mfd.)
36	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	804	Capacitor C3 (0.75 mfd.)
36	1	1	1	1	1	-	-	-	-	-	-	-	1	1	1	810	Capacitor C3 (2.5 mfd.)
36	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	811	Capacitor C3 (3.0 mfd.)
38	1	1	1	1	1	-	-	-	-	1	1	1	1	1	1	403A322P64	Resistor (500 ohms)
40	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	P68	Resistor (300 ohms)
41	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	P77	Resistor (2500 ohms)
42	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	403A401P4	Resistor (2000 ohms)
CASE																	
46	1	1	1	1	1	1	1	1	1	1	1	1	-	-	-	6418058G228	Terminal block, upper
46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	G258	Terminal block, upper
46	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	G363	Terminal block, upper
47	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	G287	Terminal block, lower
48	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	6118736G1	Connecting plug

* Recommended for stock for normal maintenance.

† Includes laminations, pole pieces, coils, leads, and tap block.

‡ Includes laminations, coils, and leads.

† Not shown.

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SWITCHGEAR DEPARTMENT, GENERAL ELECTRIC COMPANY, PHILADELPHIA, PA.