



RENEWAL PARTS

GEF-3933B
Supersedes GEF-3933A

CR9503 SOLENOIDS

CR9503-207E, -207F, -207G, -208D, -209C, -209D, -209M, -210C

NOTE:—When ordering parts for a form of the solenoid not covered by this bulletin, give reference number, description of part, complete nameplate reading, and above bulletin (GEF) number. Do not use catalog number when form for which the parts are needed is not covered by the bulletin.

Table with columns: (For Illustration See Fig.1), Ref. No. 1, Ref. No. 3, Ref. No. 4, Ref. No. 5, Ref. No. 7, Ref. No. 8. Rows include solenoid models like 207E, 207F, 207G, 208D, 209C, 209D, 209M, 210C with their respective part numbers and descriptions.

Table with columns: Coil Cat. No., Volts, Cycles, Solenoid Group No., Leads or Terms. This table provides electrical specifications for the solenoids.

Ref. No. 6 COIL TABLE A

Table with columns: Ref. No., Coil Cat. No., Volts, Cycles, Solenoid Group No., Leads or Terms. This table lists specific coil configurations and their characteristics.

Δ The last number in the nameplate rating, which designates the operating coil, has been omitted from this table. Tables of operating coils will be found on pages 1 to 4

† Includes links and spacer. © — SPECIAL LEADS

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



CR9503 SOLENOIDS

Coil Cat. No.	Volts	Cycles	Solenoid Group No.	Leads or Terms	Coil Cat. No.	Volts	Cycles	Solenoid Group No.	Leads or Terms
Ref. No. 6 COIL TABLE A (cont'd)									
22D3 G 3	220*	50/60	293	Leads	22D3 G 7	230	DC	414	Terms
22D3 G 4	440*	50/60	294	Leads	22D3 G189	110 x	60	420	Leads
22D3 G104	110	60	296 ⊙	Leads	22D3 G199	110	60	430 ⊙	Leads
22D3 G 6	110 x	DC	300	Terms	22D3 G 81	110 x	60	439	Leads
22D3 G 26	115*	DC	301	Leads	22D3 G206	440	60	440 ^{oo}	Leads
22D3 G113	15.5	60	306	Leads	22D3 G 8	250*	DC	442	Terms
22D3 G115	220	60	308 ⊙	Terms	22D3 G159	24 x	DC	444	Terms
22D3 G 78	6* x	DC	309	Leads	22D3 G227	110 x	60	449	Terms
22D3 G118	16	60	313	Terms	22D3 G124	46	25	452	Terms
22D3 G 35	115 x	DC	319	Terms	22D3 G 7	125 x	DC	456	Terms
22D3 G 59	12 x	25	331	Terms	22D3 G 30	115*	50/60	459	Terms
22D3 G 75	20	50/60	334	Leads	22D3 G 9	200	DC	472	Terms
22D3 G100	290	60	353	Leads	22D3 G 81	10	DC	475	Leads
22D3 G 59	12 x	60	363	Terms	22D3 G103	440*	60	478	Leads
22D3 G145	30 x	60	368	Leads	22D3 G252	140	60	483	Leads
22D3 G148	140	60	370	Terms	22D3 G 8	380	50	491	Terms
22D3 G 58	110 x	60	382	Leads	22D3 G257	117	60	492	Terms
22D3 G159	12 x	DC	390	Terms	22D3 G260	80	60	496 ⊙	Leads
22D3 G 67	115 x	DC	398	Leads	22D3 G257	115	60	498	Terms
22D3 G176	78	60	404	Leads	22D3 G264	115 x	60	502 ⊙	Leads
22D3 G159	16	50	407	Terms	22D3 G199	125	DC	507	Leads
22D3 G135	108*	25	409	Terms	22D3 G257	120	60	508	Terms
22D3 G181	440	60	410	Leads					

Coil Cat. No.	Volts	Cycles	Solenoid Group No.	Leads or Terms	Coil Cat. No.	Volts	Cycles	Solenoid Group No.	Leads or Terms
Ref. No. 6 COIL TABLE B									
22D2 G 21	110	60	202	Terms	22D2 G 33	220 x	60	371	Leads
22D2 G 22	220	60	203	Terms	22D2 G214	110 x	50	372	Leads
22D2 G 23	440	60	204	Terms	22D2 G220	220	60	374 Δ	Leads
22D2 G 24	550	60	205	Terms	22D2 G226	120	60	377	Terms
22D2 G 25	600	60	206	Terms	22D2 G168	230	60	380 ⊙	
22D2 G 39	110	50	207	Terms	22D2 G 40	230	60	381 ⊙	
22D2 G 40	220	50	208	Terms	22D2 G 39	125	DC	383	Terms
22D2 G 24	440	50	209	Terms	22D2 G 39	125	60	385	Terms
22D2 G 43	110	40	212	Terms	22D2 G244	440	60	386 Δ	Leads
22D2 G-22	110	25	217	Terms	22D2 G246	500	60	388 Δ	Leads
22D2 G 35	220	25	218	Terms	22D2 G261	550	60	397 Δ	Leads
22D2 G 47	440	25	219	Terms	22D2 G262	110	50	398 Δ	Leads
22D2 G 27	220	60	223	Leads	22D2 G263	220	50	399 Δ	Leads
22D2 G 28	440	60	224	Leads	22D2 G261	440	50	400 Δ	Leads
22D2 G 9	600	60	226	Leads	22D2 G 39	115*	60	403	Terms
22D2 G 10	600	50	231	Leads	22D2 G 40	230*	60	405	Terms
22D2 G 33	110	40	232	Leads	22D2 G271	240	50	408	Terms
22D2 G 34	220	40	233	Leads	22D2 G273	400	50	409 Δ	Terms
22D2 G 11	550	40	235	Leads	22D2 G 12	208 x	60	414	Leads
22D2 G 16	600	40	236	Leads	22D2 G 66	110 x	60	416	Leads
22D2 G 27	110	25	237	Leads	22D2 G214	120 x	60	417	Leads
22D2 G 36	220	25	238	Leads	22D2 G 33	208	60	419	Leads
22D2 G 17	600	25	241	Leads	22D2 G 12	220 x	60	420	Leads
22D2 G 54	200	60	246	Leads	22D2 G 54	240 x	60	421	Leads
22D2 G 56	55	40	248	Leads	22D2 G 33	200 x	60	422	Leads
22D2 G 66	60	40	255	Leads	22D2 G 54	200 x	60	428	Leads
22D2 G 92	14	25	259	Leads	22D2 G 54	208 x	50	429	Leads
22D2 G 20	200*	60	263	Leads	22D2 G 27	220 x	50	430	Leads
22D2 G 7	125	50	269	Leads	22D2 G 20	240 x	50	431	Leads
22D2 G 8	250	50	270	Leads	22D2 G 30	208*	60	442	Leads
22D2 G 12	125	40	271	Leads	22D2 G321	110	60	449 Δ	Leads
22D2 G 13	250	40	272	Leads	22D2 G325	220	60	450 Δ	Leads
22D2 G 14	600	40	273	Leads	22D2 G326	440	60	451 Δ	Leads
22D2 G 30	225	60	276	Leads	22D2 G226	115	60	454	Terms
22D2 G 52	395	50	279	Leads	22D2 G273	400/440 x	50	455 Δ	Terms
22D2 G 69	110	60	285 ⊙	Leads	22D2 G225	110	60	459 Δ	Leads
22D2 G 70	220	60	286 ⊙	Leads	22D2 G345	12	60	462	Leads
22D2 G 71	440	60	287 ⊙	Leads	22D2 G 39	115*	50/60	471	Terms
22D2 G 72	550	60	288 ⊙	Leads	22D2 G290	115	60	474	Leads
22D2 G 84	110	25	300	Leads	22D2 G361	115*	50/60	475 ⊙	Leads
22D2 G 96	28	60	306	Leads	22D2 G373	115	60	484 Δ	Terms
22D2 G 97 Δ	208/110	60	307	Leads	22D2 G381	240	60	491	Leads
22D2 G102	68	60	311	Leads	22D2 G383	208	60	492	Terms
22D2 G103	125	60	312	Leads	22D2 G140	380*	50	493	Leads
22D2 G104	45	60	313	Leads	22D2 G 7	110*	50	499	Leads
22D2 G106	208	60	315	Leads	22D2 G 25	550 x	25	501	Terms
22D2 G114	330	25	318	Leads	22D2 G403	115	60	504	Leads
22D2 G122	440	60	324 □	Terms	22D2 G404	115	60	505	Leads
22D2 G123	550	60	325 □	Terms	22D2 G 40	250 x x	DC	506	Terms
22D2 G 24	440	60	335 ⊙	Terms	22D2 G 24	500	DC	507	Terms
22D2 G177	137	60	354	Leads	22D2 G 56	110	60	508	Leads
22D2 G114	450	60	358 ⊙	Leads	22D2 G413	440	60	514	Terms
22D2 G 8	220	60	367 ⊙	Leads	22D2 G 22	190	50	515	Terms
22D2 G209	110	60	368 Δ	Leads	22D2 G 40	230 x	50	516	Terms
22D2 G 56	110 x	50/60	370	Leads	22D2 G 3	220	60	521	Terms

* — NON-STANDARD PULL CURVE
 x — INTERMITTENT SERVICE
 Δ — MOISTURE RESISTING
 oo — 2 FT. LEADS
 □ — DERATED
 + — FURNISHED WITH TERMINAL WASHER
 □ — SPECIAL RATINGS
 ⊙ — NAVY RATING
 LW — LOW WATTAGE

⊙ — GLASS WIRE — METAL SPOOL —
 ⊙ — SPECIAL LEADS
 ⊙ — MID TAP
 □ — SPECIAL TERMINALS
 ⊙ — USED ON I099 RELAY
 ⊙ — USED FOR LATCH RELAY
 x x — HOLDING RESISTANCE
 ⊙ — MAX. RATED
 ⊙ — TERMINALS ON OPPOSITE ENDS

CR9503 SOLENOIDS

Ref. No.	No. Req. for Cat. No.						Cat. No.	Description
	2833232G1	2833232G2	2833232G3	2833232G7	2833232G8	2833232G9		
57						1	2238080	Compression spring for plunger
57a	1	1	1	1	1	1	2480067	Insulation spacer for contact plate
58	1	1	1	1	1	1	2480066P1	Guide for plunger
58a	1	1	1	1	1	1	2236477	Washer between guide and plunger
	1					1	N44P9026B	Screw fastening guide to plunger (4-40)
		1					N44P 9005B	Screw fastening guide to plunger (4-40)
			1	1			N44P 9020B	Screw fastening guide to plunger (4-40)
59	2	2	1	1	2	1	542A964G3	Movable contact plate, upper or lower
60	1	1	1	1	1	1	2414612	Compression spring for contact plates
61	1	1	1	1	1	1	3845729G1	Operating lever
62	2	2	2	2	2	2	2412699	Compression spring for operating lever
63	2	2	2	2	2	2	2436838	Retaining pin for compression spring
64	2	2	2	2	2	2	541A526P3	Spring seat for compression spring
65	2	2	2	2	2	2	N503P606B	Cotter pin for retaining pin
66	2	2	2	2	2	2	2437146	Roller for operating lever
67	1	1	1	1	1	1	2239800	Hinge pin for roller and plunger of solenoid
68	1	1	1	1	1	1	N503P606B	Cotter pin for hinge pin

Ref. No.	No. Required for Cat. No. 2833234G3	Cat. No.	Description
(For illustration see Fig. 2)			
52	4	542A987G3	Stationary contact
59	2	542A964G4	Movable contact
60	1	2412980	Spring for movable contact
57	1	2412979	Spring for plunger

GENERAL PURPOSE CONTROL DEPARTMENT

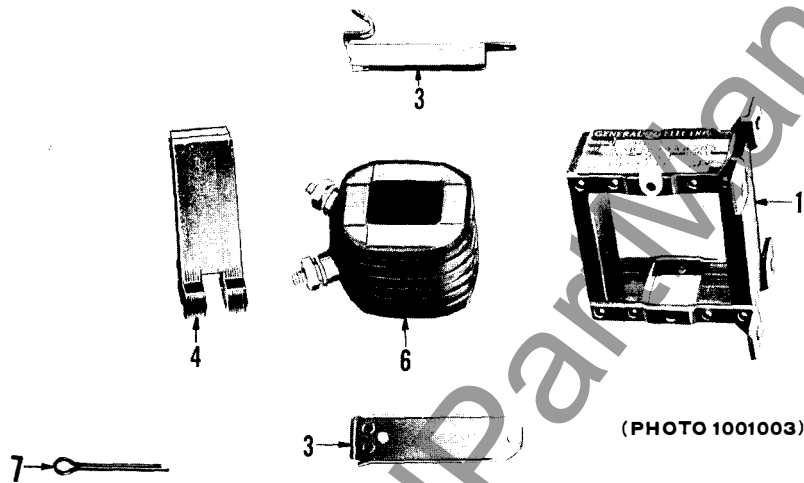


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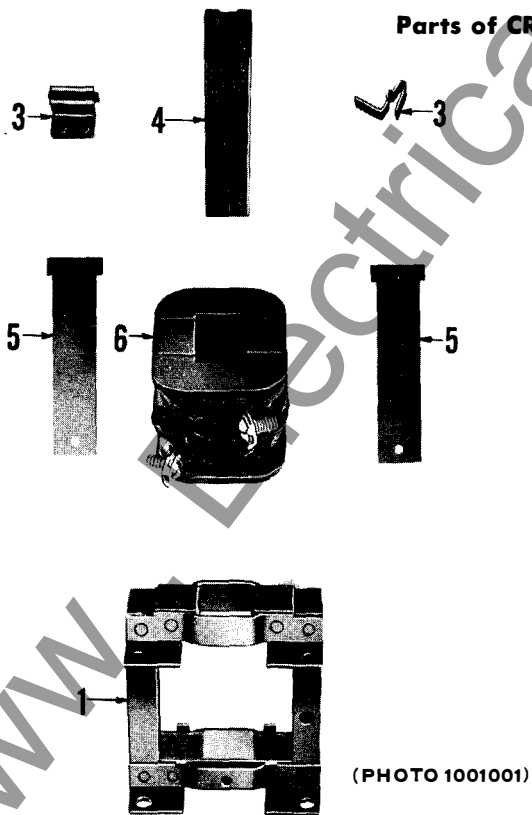
CR9503 SOLENOIDS

GEF-3933B

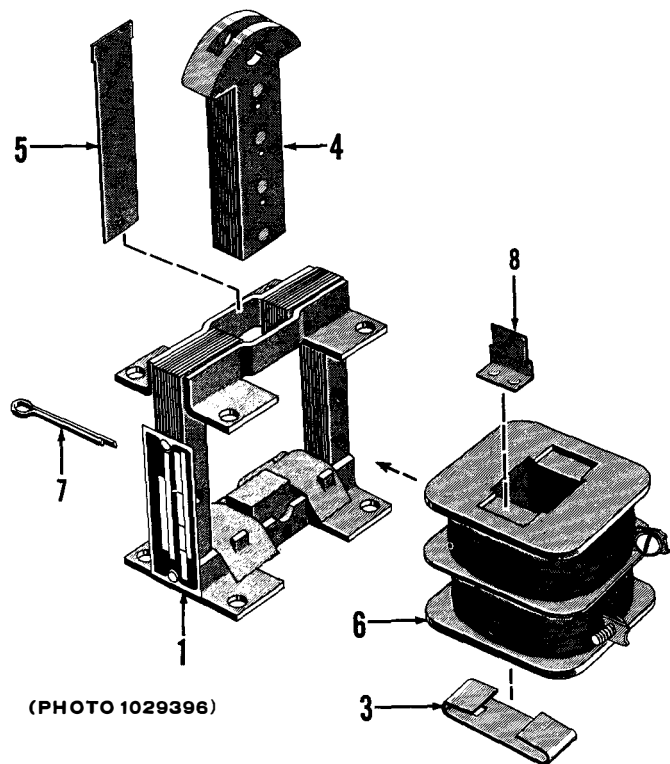
Coil Cat. No.	Volts	Series Resistor	Solenoid Group No.	Leads or Terms	Coil Cat. No.	Volts	Series Resistor	Solenoid Group No.	Leads or Terms
Ref. No. 6									
COIL TABLE C									
3021150	250		1	Terms	3175771	12		74	Terms
3021539	125		5	Terms	3023808	125 ×		82	Leads
3022047	125		11 √	Leads	3028147	125*		89 √	Leads
3022048	250		12 √	Leads	3194118	110		93	Terms
3022075	32		14	Terms	3198827	230		104	Terms
3075408	22 □		16	Leads	3199066	230*		107	Terms
3022285	45 □		17	Leads	3021744	230 ×		114	Leads
3022319	24		18	Terms	3198827	230		125	Terms
3023810	60		21	Terms	3027823	115/125		128 √	Leads
3023888	12		22 √	Leads	3027824	230/250		129 √	Leads
3023930	24		26	Leads	3021539	115/125		131	Terms
3023981	560	4000Ohms	28 √	Leads	3021150	230/250		132	Terms
3024013	230 □		31	Leads	3021707	230 ×		136	Terms
3024120	32		33 √	Leads	3241202	250		142 √	Leads ∞
3027823	125		38	Leads	3241219	230		144 √	Leads
3027824	250		39 √	Leads	3021571	110*		146	Terms
3023981	600		49 √	Leads	3242056	125		150	Leads ∞
3028147	125		51 √	Leads	3243107	170/345*		155 √	Leads
3028148	250		52 √	Leads	3023810	65		168	Terms
3027823	125		56 √	Leads	3021539	120		169	Terms
3027824	250		57 √	Leads	3023810	70		170	Terms
3175377	32		58 √	Leads	3198827	210		173	Terms
3023981	230 ×	8600Ohms	61	Leads	3247671	115		176	Leads



Parts of CR9503-208D solenoid



Parts of CR9503-209C solenoid



Parts of CR9503-210C solenoid

Fig. 1

CR9503 SOLENOIDS

Pos.	Coil Cat. No.	Volts	Cycles	Solenoid Group No.	Leads or Terms	Pos.	Coil Cat. No.	Volts	Cycles	Solenoid Group No.	Leads or Terms
Ref. No. 6 COIL TABLE C											
T/B	3021145	220	60	201	Terms	T/B	3175568	208 ×	60	447	Terms
T/B	3021571	110	60	202	Terms	T/B	3198600	110 Δ	60	449	Leads
T/B	3198600	110	60	203	Leads	T/B	3198601	440 Δ	60	450	Leads
T/B	3021704	440	60	204	Terms	T/B	3199043	220 Δ	60	455	Leads
T/B	3021708	110	25	206	Terms	T/B	3175699	110 ×	60	457	Terms
T/B	3021707	220	25	207	Terms	T/B	3021918		60	460	Terms
T/B	3021729	440	25	208	Terms	T/B	3199367	550 Δ	60	472	Leads
T/B	3199043	220	60	212	Leads	T/B	3199717	220 Δ	50	477	Leads
T/B	3198601	440	60	213	Leads	T/B	3021704	440 Δ	60	483	Terms
T/B	3021756	440	25	216	Leads	T/B	3028010	240 Δ *	60	488	Terms
T/B	3199363	110	50	218	Leads	T/B	3021571	110 * Δ	60	489	Terms
T/B	3021762	110	50	222	Terms	T/B	3021145	220 Δ	60	490	Terms
T/B	3021763	220	50	223	Terms	T/B	3021762	110	60	508	Terms
T/B	3021764	440	50	224	Terms	T/B	3021763	220	60	509	Terms
T/B	3021751	550	60	226	Terms	T/B	3021764	440	60	510	Terms
T/B	3021744	220	25	227	Leads	T/B	3027958	110 × ×	60	524	Terms
T/B	3023860	500	50	241	Terms	T/B	3240649	240	60	527	Leads
T/B	3199718	600	60	243	Leads	T/B	3027959	240	60	529	Terms
T/B	3021918	440	30	263	Terms	T/B	3240795	220 ∞	60	536	Leads
T/B	3027820	220	60	271	Leads	T	3241220	380 ∞	50	537	Leads
T/B	3027821	440	60	272	Leads	B	3241220	440 ∞	60	539	Leads
T/B	3027822	550	60	273	Leads	T/B	3027959	208 □	60	538	Terms
T/B	3027900	16	60	278	Terms	T/B	3241258	110 ∞	60	542	Leads
T/B	3027958	100	60	288	Terms		3198600	92	50	549	Leads
T/B	3243181	120	60	289	Terms	T/B	3242074	220 ∞	50	559	Leads
T/B	3027959	250	60	290	Terms	T/B	3021704	440 × Δ	50	562	Terms
T/B	3028010	200	60	293	Terms	T/B	3021762	130	60	578	Terms
	3027959	200	50	413	Terms	T/B	3021704	380	50	582	Terms
	3175699	60	50	415 ∞	Terms		3243181	125	60	596	Terms
	3175831	208	60	427	Terms		3021751	380	42	607	Terms
	3023860	600	60	434	Terms		3027959	208	50	610	Terms
	3021751	440*	60	436	Terms		3243181	110*	60	617	Terms
T/B	3199718	500	50	444	Leads						

Coil Cat. No.	Volts	Cycles	Solenoid Group No.	Leads or Terms	Coil Cat. No.	Volts	Cycles	Solenoid Group No.	Leads or Terms
Ref. No. 6 COIL TABLE D									
3245054	110	60	202	Leads	3249708	220	60	234	Terms
3245065	220	60	203	Leads	3249709	440	60	235	Terms
3246824	110	60	204	Terms	3249713	110	50	239	Terms
3247578	550	60	213	Leads	3249716	220	50	242	Terms
3247585	200	50	215	Leads	3249756	110	60	253	Leads ∞
3247585	240	60	223	Leads	3249787	110	60	257	Leads
3245065	190	50	231	Leads	3249795	220	40	258	Terms
3249706	120	60	232	Terms					

Coil Cat. No.	Volts	Cycles	Solenoid Group No.	Leads or Terms	Coil Cat. No.	Volts	Cycles	Solenoid Group No.	Leads or Terms
Ref. No. 6 COIL TABLE E									
3194956	110 □	60	201	Terms	3194960	500	50	263	Terms
3194957	220	60	202	Terms	3194956	110	60	264	Terms
3194958	440	60	203	Terms	3194957	220 □	60	265	Terms
3194958	550	60	204	Terms	3194958	440 □	60	266	Terms
3194960	600	60	205	Terms	3194971	110 □	50	267	Terms
3194971	110	50	206	Terms	3040136	110	60	274	Leads
3194973	440	50	208	Terms	3199793	110 ⊙	60	305	Terms
3194975	600	50	210	Terms	3194971	24 ×	DC	327	Terms
3194971	110 *	60	218	Terms	3021089	208	50	335	Terms
3198629	220	60	231	Leads	3021506	250 □	DC	336	Leads
3194973	440 *	60	244	Terms	3194971	130	60	338	Terms
3199340	110	60	251	Leads ∞	3198629	190	50	340	Terms
3199793	120 □	60	260	Terms					

CUTOUT SWITCHES FOR CR9503 -209C, 209M, 210A

CR9503-	Cat. No.	∠Cutout Switch	#Superseding Type of Cutout Switch	CR9503-	Cat. No.	∠Cutout Switch	#Superseding Type of Cutout Switch
209C	2233923AD	2833232G1		209C	2233923BB	2833232G9	

- * — NON-STANDARD PULL CURVE
- ∠ — INTERMITTENT SERVICE
- Δ — MOISTURE RESISTING
- ∞ — 2 FT. LEADS
- — DERATED
- ∠ — FURNISHED WITH TERMINAL WASHER
- — SPECIAL RATINGS
- ⊙ — NAVY RATING
- LW — LOW WATTAGE
- ⊙ — GLASS WIRE — METAL SPOOL
- ⊙ — SPECIAL LEADS
- ⊙ — MID TAP
- — SPECIAL TERMINALS
- ⊙ — USED ON I099 RELAY
- ⊙ — USED FOR LATCH RELAY
- ×× — HOLDING RESISTANCE
- ∅ — MAX. RATED

∠ See pages 4 to 6 for parts. If parts needed are not listed, order a complete superseding type of cutout switch.

When ordering a superseding type of cutout switch, also order one nameplate and give complete nameplate reading of present solenoid.

† No parts furnished for this cutout switch.

CR9503 SOLENOIDS

GEF-3933B

CUTOUT SWITCHES FOR CR9503-209C,209M,210A (con't)

CR9503-	Cat. No.	∕Cutout Switch	#Superseding Type of Cutout Switch	CR9503-	Cat. No.	∕Cutout Switch	#Superseding Type of Cutout Switch
209C	2233923AE	2833232G1		209C	2233923AO	2833232G1	
209C	2233923AK	2833232G3		209C	2233923AR	2833232G7	
209C	2233923AL	† 4960133G1	2833232G1	209C	2233923AT	2833232G8	
209C	2233923AM	† 4960133G1	2833232G1	209C	2233923AU	Δ 5965104P1	
209C	2233923AN	2833232G1		209D	4988879AE	2833232G9	
209C	2233923AW	Δ 5965104P1		210A	2825810AW	Δ 3819725G10	
209C	2233923AY	2833232G2		210A	2825810BC	Δ 3819725G10	

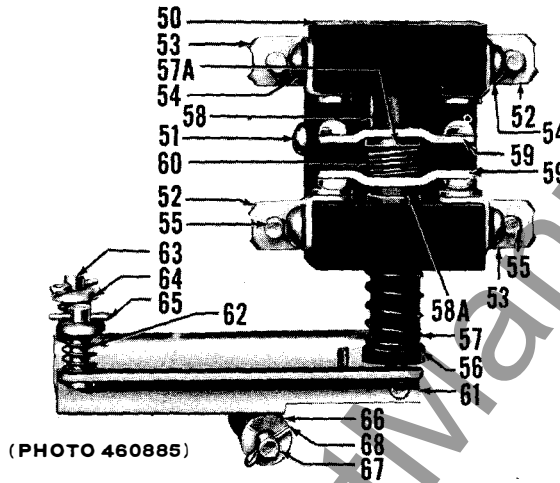


Fig. 2. PARTS OF CUTOUT SWITCHES

Ref. No.	No. Req. for Cat. No.						Cat. No.	Description
	2833232G1	2833232G2	2833232G3	2833232G7	2833232G8	2833232G9		
	1						3845750G7	Switch unit, complete
		1					2833535G8	Switch unit, complete
			1				2238877G1	Switch unit, complete
				1			2239460G22	Switch unit, complete
					1		3845750G8	Switch unit, complete
						1	3845750G15	Switch unit, complete
50	1	1	1	1	1	1	542A959G1	Base
51	1	1	1	1	1	1	444P15020B	Screw fastening base in position (8-32)
52	2		2	2	2	1	542A987G1	Stationary contact with connection block, upper right-hand or lower left-hand
53	2		1	2	2	1	542A987G2	Stationary contact with connection block, upper left-hand or lower right-hand
52,53		4					542A987G3	Stationary contact with connection block
54	4		3	4	4	2	N44P16006B	Screw fastening stationary contact to base (10-32)
							2492200	Connection stud for stationary contact
55	4		3	4	4	2	541A502P12	Binding screw for connection block
56	1	1	1	1	1	1	542A989G1	Operating plunger for contact plate
57	1						2416189	Compression spring for plunger
57		1	1		1		2413639	Compression spring for plunger
57				1			2247245	Compression spring for plunger

∕ See pages 4 to 6 for parts. If parts needed are not listed, order a complete superseding type of cutout switch.

When ordering a superseding type of cutout switch, also order one nameplate and give complete nameplate reading of present solenoid.

† No parts furnished for this cutout switch.

Δ Order parts by description.