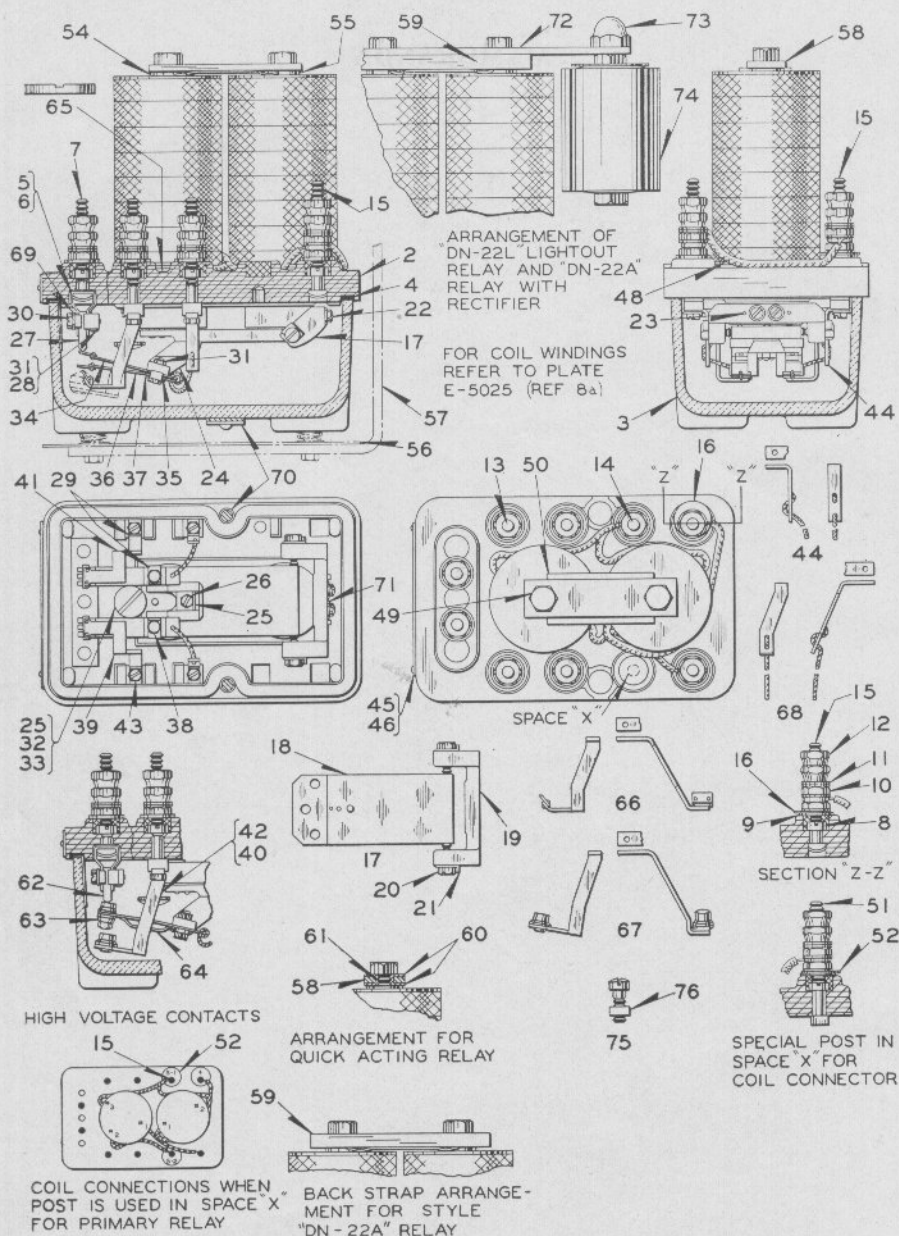




Styles "DN-22", "DN-22A" and "DN-22L" Relays

Detail Parts

UNION SWITCH & SIGNAL CO.

PLATE **E-4978**

Styles "DN-22", "DN-22A" D.C. Neutral and "DN-22L" Lightout Relays

Detail Parts

For complete relays refer to Plates E-4935, E-4936 and E-4938. For Coil Windings refer to Ref. 8a, Plate E-5025.

Order by Plate, Piece, Reference and Abbreviated
Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
184904	2	Top Plate, without Cores.....	C-9433-1
184908	3	Glass Case.....	8163-215
184893	4	Gasket.....	8078-729
131245	5	Front Terminal Post (Contact Holder).....	8094-2122
134400	6	Lock Washer.....	8486-371
	7	Terminal Post with Nuts and Washers (Inc. 1-7a, 1-8, 1-9, 1-10, 2-11 and 2-12).....	12451-
115706	7a	Terminal Post Only, for Ref. 7.....	8094-1192
72948	8	Nut.....	8109-388
69705	9	Washer.....	7828-287
29103	10	Nut.....	8109-194
29102	11	Washer.....	7828-139
29101	12	Nut.....	8109-193
	13	Terminal Post with Nuts and Washers (Inc. 1-13a, 1-8, 1-9, 1-10, 2-11 and 2-12).....	12451-
131234	13a	Terminal Post Only, for Ref. 13.....	8094-2125
	14	Terminal Post with Nuts and Washers (Inc. 1-14a, 1-8, 1-9, 3-10 and 2-11).....	12451-
199852	14a	Terminal Post Only, for Ref. 14.....	8094-2207
	15	Terminal Post with Nuts and Washers (Inc. 1-15a, 1-8, 1-9, 2-10, 4-11 and 2-12).....	12451-
113978	15a	Terminal Post Only, for Ref. 15.....	8094-1192
142777	16	Tag (Marked +).....	8988-75
185123	17	Armature and Bracket (Inc. 1-18, 1-19, 2-20 and 2-21).....	C-9433-2
	17a	Armature and Bracket with Dowels (Inc. 1-17 and 2-23).....	C-9433-2

PLATE **E-4978**

UNION SWITCH & SIGNAL CO.

Styles "DN-22", "DN-22A" D.C. Neutral and "DN-22L" Lightout Relays

(Continued)

Detail Parts

For complete relays refer to Plates E-4935, E-4936 and E-4938. For Coil Windings refer to Ref. 8a, Plate E-5025.

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
184891	18	Armature Assembled with Stop Pins, for Ref. 17...	8157-415
183695	19	Bracket for Ref. 17.....	8303-128
159814	20	Pivot Screw for Ref. 17.....	8378-354
159815	21	Lock Washer for Ref. 17.....	8486-395
	22	Machine Screw, No. 8-36x $\frac{1}{2}$ " Fil. Hd. Br. (N.P.).	
57497	23	Dowel Pin.....	8097-872
150113	24	Contact Spring Support (2-Way).....	9968-849
170966	24a	Contact Spring Support (3-Way).....	9968-1014
149339	25	Lock Washer (for 2-Way Support and Back Stop Screw Ref. 32).....	8486-368
178251	25a	Lock Washer (for 3-Way Support).....	8486-405
142673	26	Screw.....	8098-1300
158043	27	Contact Tip (Silver Imp. Carbon).....	8341-476
173737	28	Nut Lock.....	8486-403
134516	29	Lock Washer (for 2 and 3-Way Support).....	8486-368
171092	29a	Lock Washer (for middle spring of 3-Way Support)	8486-405
57996	30	Screw.....	8098-845
	30a	Screw with Nut, Washer and Lock Washer (Inc. 1-28, 1-29, 1-30, 1-31 and 1-69).....	12471-
151836	31	Nut.....	8109-445
184898	32	Back Stop Screw Only, for Ref. 32a.....	8098-549
	32a	Back Stop Screw with Nut and Lock Washer (Inc. 1-32, 1-33 and 1-25).....	12471-
1506	33	Nut for Ref. 32a.....	8109-12
150268	34	Contact Spring Complete (without connector).....	8385-1996

UNION SWITCH & SIGNAL CO.

PLATE **E-4978**

Styles "DN-22", "DN-22A" D.C. Neutral and "DN-22L" Lightout Relays

(Continued)

Detail Parts

For complete relays refer to Plates E-4935, E-4936 and E-4938. For Coil Windings refer to Ref. 8a, Plate E-5025.

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
140833	34a	Contact Spring Complete (without connector) (For Primary Relay)	8385-1996
184902	35	Washer (Between contact springs)	7828-379
	36	Back Contact Spring (With flexible connector. Not Soldered)	8385-2376
184901	36a	Back Contact Spring (Without connector)	8385-2376
150140	37	Clamp Washer for contact springs	8486-367
150166	38	Screw	8098-550
	38a	Screw with Lock Washer and Nut (Inc. 1-29, 1-31 and 1-38)	12471-
185134	39	L.H. Back Post Complete (Low Voltage)	8094-2334
189079	39a	L.H. Back Post Complete (With Silver Imp. Carbon Tip for use with Silver Contact Spring) (As shown in dot and dash lines)	8094-981
186906	40	L.H. Back Post Complete (High Voltage)	8094-2338
185135	41	R.H. Back Post Complete (Low Voltage)	8094-2334
189080	41a	R.H. Back Post Complete (With Silver Imp. Carbon Tip for use with Silver Contact Spring) (As shown in dot and dash lines)	8094-981
186905	42	R.H. Back Post Complete (High Voltage)	8094-2338
62977	43	Screw	8098-845
184900	44	Connector with Flexible Connector Ref. 44b	8244-151
184899	44a	Connector (without Flexible Connector)	8244-151
169336	44b	Flexible Connector Only	10934-87
184892	45	Name Plate (For Relays having 2F and 2B dependent contacts)	8225-455
193864	45a	Name Plate (For Relays having 2F and 1B independent contacts)	8225-455

Zachary C. Gillihan 2008

PLATE **E-4978**

UNION SWITCH & SIGNAL CO.

Styles "DN-22", "DN-22A" D.C. Neutral and "DN-22L" Lightout Relays

(Continued)

Detail Parts

For complete relays refer to Plates E-4935, E-4936 and E-4938. For Coil Windings refer to Ref. 8a, Plate E-5025.

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
	46	Screw, No. $4 \times \frac{5}{16}$ " Rd. Hd. Type "Z" Hardened (Tin Pl.).	
168826	48	Coil Spacing Washer.....	8078-1499
	49	Cap Screw, $\frac{5}{16}$ "-18x $\frac{3}{4}$ " Hex. Hd. S. (Cad. Plated)	
184909	50	Coil Lock.....	8735-784
	51	Terminal Post with Nuts and Washers (Inc. 1-51a, 1-8, 1-9, 2-10, 4-11 and 2-12).....	12451-
118271	51a	Terminal Post Only, for Ref. 51.....	8094-1192
142777	52	Tag (Marked "S-1").....	8988-75
142777	52a	Tag (Marked "S-2").....	8988-75
184906	54	Front Magnet Core.....	8101-365
184907	55	Rear Magnet Core.....	8101-365
185129	56	Shelf Type Shock Absorber Complete for Styles "DN-22," "DN-22A," "DN-22L" and "DN-22P" Relays. (For details see Plate E-5030).....	12404-27
185131	57	Wall Type Shock Absorber Complete for Styles "DN-22," "DN-22A" and "DN-22L" Relays without Rectifiers. (For details see Plate E-5030) ...	12404-28
196403	57a	Wall Type Shock Absorber Complete for Styles "DN-22A," "DN-22L" and "DN-22P" Relays with Rectifiers. (For details see Plate E-5030)....	12404-28
184894	58	Back Strap (Approx. $\frac{5}{32}$ "x $\frac{3}{4}$ "x3") for Style "DN-22" Relays.....	8162-253
184895	59	Back Strap ($\frac{13}{64}$ "x1 $\frac{1}{4}$ "x3 $\frac{1}{2}$ ") for Styles "DN-22A" and "DN-22L" Relays.....	8162-253
145747	60	Washer.....	7828-218
188132	61	Bushing.....	8161-144
168308	62	Contact Tip (Silver Imp. Carbon).....	8341-485

Styles "DN-22", "DN-22A" D.C. Neutral and "DN-22L" Lightout Relays

(Continued)

Detail Parts

For complete relays refer to Plates E-4935, E-4936 and E-4938. For Coil Windings refer to Ref. 8a, Plate E-5025.

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
180978	63	Contact Spring with Silver Imp. Carbon Tip (with Flexible Connector) (High Voltage Front and Back).....	8385-2098
180977	63a	Contact Spring with Silver Imp. Carbon Tip (without Connector) (High Voltage Front and Back).....	8385-2098
180980	63b	Front Spring Only (High Voltage) with Silver Imp. Carbon Tip (with Flexible Connector).....	8385-2099
180979	63c	Front Spring Only (High Voltage) with Silver Imp. Carbon Tip (without Connector).....	8385-2099
180975	64	Stop Spring.....	8735-769
131210	65	Nut for Magnet Cores.....	8109-426
187058	66	R.H. Back Post Complete (Low Voltage) (For relay with 1 back contact).....	8094-2340
187071	67	R.H. Back Post Complete (High Voltage) (For relay with 1 back contact).....	8094-2341
194343	68	Connector with Flexible Connector Ref. 44b.....	8244-155
194342	68a	Connector (Without Flexible Connector).....	8244-155
20686	69	Washer for Ref. 30a.....	7828-108
	70	Clamp Plate with Studs (Inc. 1-70a, 2-70b, 2-70c, 2-70d and 2-70e).....	9999-
195622	70a	Clamp Plate.....	9999-1175
195626	70b	Clamp Stud.....	8114-889
56349	70c	Washer used under Top Plate.....	7826-180
190681	70d	Nut for Ref. 70.....	8109-383
44618	70e	Washer used under Nut Ref. 70d.....	7828-184
181617	71	Washer for Ref. 22.....	7828-368
196409	72	Mounting Strap.....	12538-154
141603	73	Nut.....	8265-253

PLATE **E-4978**

UNION SWITCH & SIGNAL CO.

Styles "DN-22", "DN-22A" D.C. Neutral and "DN-22L" Lightout Relays

(Continued)

Detail Parts

For complete relays refer to Plates E-4935, E-4936 and E-4938. For Coil Windings refer to Ref. 8a, Plate E-5025.

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
	74	Rectifier with Cover for "DN-22A" or "DN-22L" Relay. (Order piece number shown on Rectifier nameplate, or state piece number of relay with which Rectifier is to be used).	
	75	Screw with Nut Ref. 76 (Used in place of Ref. 14 for Style "DN-22L" Relays).....	12471-
141245	75a	Screw Only for Ref. 75.....	8098-589
410442	76	Nut.	